

# EDUCATION

PROSPECTS and CHALLENGES  
in the OIC MEMBER COUNTRIES



Organisation of the Islamic Conference

Statistical Economic and Social Research  
and Training Centre for Islamic Countries  
(SESRIC)

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## Foreword

**I**n the rapidly changing world of today, with sweeping developments taking place in all facets of life, education is fundamental to the future prospects of most of the developing countries. Clearly, a good education policy must extend far beyond formal education, encompassing areas such as social policy, health policy and economic policy as well. Education does, however, remain at the core of human capital formation. The benefits of a good quality education not only provide returns to the individuals educated, but it also helps in alleviating poverty, facilitates economic growth and brings other social benefits to the society. According to the modern growth theory, the accumulation of human capital is an important contributor to economic growth. There are also many studies that have shown a positive relationship between education and productivity.

The worldwide recognition of the importance of education has led to significant improvements in providing wider access to formal education in many developing countries. The international commitment reflected in the Millennium Development Goal that relates to the achievement of universal primary education has undoubtedly contributed to this development, especially in increasing the school enrolments. There is however, an urgent need to develop awareness among the OIC member countries about the critical role and impact of education in socio-economic development and in equipping the future generations with new skills and knowledge. The education systems in many member countries face a myriad of challenges, such as insufficient financing and staff development, scarce skill-based training, low quality of teaching, and lack of proper research facilities.

Considering these constraints and limitations faced by most of the member countries, the Third Extraordinary Session of the Islamic Summit Conference, held in Makkah Al Mukarramah on 7-8 December 2005, adopted a Ten-Year Program of Action to Meet the Challenges Facing the Muslim Ummah in the 21<sup>st</sup> Century. Among other aims, this Program, in the domain of Higher Education, Science and Technology, calls for effectively improving and reforming educational institutions and curricula in all levels in the OIC member countries, and urges them to strive for quality education that promotes creativity, innovation, and research and development. The overall target is to promote quality higher education in the member countries.

The present report on education provides an evaluation of the recent developments relating to the various dimensions of education in the member countries. It is our hope that this report will contribute to the creation of a greater awareness on the current state of education and the importance of investing in education for a better future.

Dr. Savas Alpay  
Director General  
S E S R I C



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## 1 Introduction

Scientific research and innovation remains as one of the features that distinguish developed and developing economies of the world of the 21st century. In the golden age of Islam, Muslim world was at the forefront of science, philosophy, culture and economic development. However, the contemporary conditions of the member countries present a contrite state in their contributions to science and technology and the circumstances of their scientific and technological infrastructures. Yet, the accomplishments of some East Asian, European and Central Asian countries provide some hope for optimism with their rapid economic growth and achievements in higher education.

It is widely accepted that investment in education at primary and secondary levels and quality research at universities and private laboratories of the corporate sector is vital in achieving higher economic growth. This in turn is an instrument to alleviate poverty and reduce inequality. Quality education generates benefits to the society that go beyond the gains secured by the individuals involved. There is overwhelming evidence that education improves personal health, encourages stronger national identity and promotes peace and stability. One of the Millennium Development Goals makes specific reference to the rights of individuals to free primary education with an international consensus on the issue (see Box 2.2). Primary education is therefore considered as the minimum that countries should ensure for their children.

The benefits from investing in human capital, however, are not necessarily linked with attaining higher enrolment ratios, since poor quality may decrease returns of education and lead to high dropout rates. With a comprehensive approach to education in the twenty first century, it is important that the education policy should provide people with learning opportunities that will assist them in developing skills to embark on new undertakings.

The report discusses the current situation in the OIC member countries and the progress made to ensure access to primary education and its completion. It also examines the developments in secondary and higher education. The report goes on to explore the commitments of the member countries to invest in education at various levels. It also highlights some of the achievements of the member countries in improving the quality of education and their contributions to research in various fields of academic interest. Finally the report contains a section including comprehensive country profiles of the member countries on various education-related variables.

A brief review of the progress made by the OIC member countries towards the achievement of the Millennium Development Goal of universal primary education has been presented in Section 2. It also compares achievements in secondary education and literacy rates with different income groups, regions and the world. Furthermore, the trends in public spending on education are also evaluated. In Section 3, the report analyzes the progress and achievements at regional level. Section 4 highlights some of the achievements and accomplishments of member countries in the field of higher education.

## 2 Investment in Education: An Overview

There are a number of measures to evaluate a country's effort in increasing the level of human capital and to examine the progress achieved towards the second Millennium Development Goal, i.e., universal primary education. These include the net enrolment in primary and secondary education, primary completion rate, progression to secondary education, literacy rate and public spending on education. In this section, a brief review of some of the key education indicators of OIC member countries, at the aggregate and regional levels have been reviewed.

### 2.1 School Enrolment

In order to ensure that children complete their primary schooling, first they need to have access to it. The net enrolment in primary education and secondary education for OIC member countries and the regional averages are reported in Table 2.1. The average of net primary enrolment for the OIC as a whole has increased from 69.56% to 76.25% from 1990s to 2000s. It is significantly lower than the world average and is comparable only to the average of the low income countries. However, the member countries in East Asia, and Europe and Central Asia have achieved high access rates at the beginning of this decade. Meanwhile, the average access rates to primary education are the lowest in the Sub-Saharan Africa at 47.26%. Similar trends are observed for the net enrolment in secondary education for the overall OIC. The member countries in Europe and Central Asia have maintained very high net enrolment ratios (NER) close to those of high income group of countries for secondary education. The NER in secondary education has been very low in South Asia and Sub-Saharan regions. Comparison of the trends in primary and secondary enrolment among various income groups suggests that most of the OIC member countries in various income groups have been able to achieve fairly good stable progress. However, the averages of the lower income group, both for the primary and secondary NER, is significantly lower than the average for the non-OIC countries in the same group.

### 2.2 Completion at Primary and Progress to Secondary

Completion rate in primary and progression to secondary level are two other measures of progress towards achieving universal education. At the regional level, except for the Sub-Saharan Africa, the completion rate in primary education has been fairly comparable to rates achieved by non-OIC regions. In 2000s, the member countries in the Sub-Saharan region reported a 7 points lower completion rate in primary education than the non-OIC countries in the same group (see Table 2-1). The comparisons of progression to secondary education, due to unavailability of data for several regions, were not possible. At the regional level, most of the OIC countries belonging to Sub-Saharan Africa and South Asia regions have been lagging behind. The average rate of progression to secondary level stayed stable around 77% at the beginning of this decade. Evaluation of the progression rate of various income groups indicates similar trends. The member countries in the lower income group could record an average progression rate of 64.66% as compared to 80.12% for the non-OIC countries in this group.

Table 2-1: Education Indicators – An Overview

	NER* Primary		NER* Secondary		Primary Completion		Progression to Secondary		Adult Literacy Rate		Educational Spending as % of GDP		Educational Spending as % of Government Expenditure	
	1990s	2000s	1990s	2000s	1990s	2000s	1990s	2000s	1990s	2000s	1990s	2000s	1990s	2000s
World	83.13	84.26	52.25	55.05	80.55	84.60	..	..	76.36	82.38	4.06	4.43	14.76	..
OIC	69.56	76.25	41.88	48.74	62.88	73.79	70.15	76.66	65.20	67.06	3.97	4.19	16.31	17.66
East Asia	96.48	94.13	..	62.38	100.85	99.71	..	..	80.11	90.77	2.25	2.87	15.35	15.19
East Asia- OIC	95.36	94.76	58.34	70.11	96.96	102.51	99.04	85.60	84.08	90.58	3.61	4.53	15.46	14.19
Europe and Central Asia	90.26	90.51	..	82.61	94.63	94.72	..	94.75	96.18	97.44	4.45	3.94	..	13.79
Europe and Central Asia - OIC	86.31	89.99	61.31	76.31	92.46	94.96	96.02	97.47	95.00	95.18	4.97	3.21	19.79	15.95
Latin America & Caribbean	88.77	93.17	44.63	65.59	89.41	98.01	..	89.33	87.58	89.85	3.74	4.29	14.97	14.14
Latin America & Caribbean - OIC	85.01	93.59	66.63	64.44	87.77	100.31	67.61	..	..	89.60	6.19	7.82	14.43	16.17
Middle East and North Africa	83.13	87.83	..	62.49	79.99	85.98	78.59	85.23	58.21	72.96	4.57	..	19.06	..
Middle East and North Africa - OIC	80.88	85.05	60.01	64.72	78.79	85.30	82.45	88.01	69.11	79.09	4.40	5.39	16.15	21.82
South Asia	..	79.50	..	..	64.95	73.58	87.46	85.82	46.81	58.42	2.80	2.60	10.61	14.03
South Asia - OIC	71.34	82.13	36.11	42.13	44.43	78.14	81.90	78.15	58.11	54.56	3.25	4.12	11.46	13.34
Sub-Saharan Africa	52.68	62.48	18.76	22.98	50.46	55.29	..	..	54.16	59.26	3.34	3.93	..	..
Sub-Saharan Africa - OIC	47.26	57.84	12.05	16.67	32.04	48.20	46.85	53.39	36.78	46.32	3.17	3.49	16.27	17.11
High Income	95.39	95.05	87.10	89.82	97.84	98.26	..	..	98.37	98.66	5.01	5.25	13.37	12.67
High Income- OIC	84.99	90.56	69.23	79.97	86.20	97.12	97.08	95.51	80.63	88.54	4.30	4.24	12.48	18.26
Upper Middle Income	92.07	93.27	69.27	74.67	92.87	98.54	..	90.86	92.27	93.07	4.09	4.17	16.93	13.97
Upper Middle Income - OIC	87.61	88.21	57.38	73.60	82.89	88.29	93.01	94.07	81.71	85.12	3.44	4.04	15.39	18.26
Lower Middle Income	93.08	92.57	..	63.82	95.05	96.71	..	..	79.75	88.92	4.16	4.40	15.58	16.22
Lower Middle Income - OIC	84.51	87.33	55.67	60.75	80.10	89.33	73.86	81.28	78.48	80.67	4.74	5.27	17.84	17.15
Low Income	68.72	73.53	32.87	36.01	60.31	68.49	80.58	80.12	51.47	60.79	2.86	3.13	..	..
Low Income - OIC	49.84	61.53	18.64	25.32	37.97	54.16	58.52	64.66	39.63	45.51	3.52	3.67	16.62	17.67

\* NER: Net Enrolment Ratio

### **Box 2.1 Literacy and Development**

The traditional definition of literacy involves the ability to read and write. In modern contexts, the word refers to reading and writing at a level adequate for communication. It was defined by The United Nations Educational, Scientific and Cultural Organisation (UNESCO) as:

*"Literacy is the ability to identify, understand, interpret, create, communicate, compute and use printed and written materials associated with varying contexts. Literacy involves a continuum of learning to enable an individual to achieve his or her goals, to develop his or her knowledge and potential, and to participate fully in the wider society."*

Literacy is not, however, the solution to the host of social ills, including poverty, malnutrition and unemployment. To blame those problems on illiteracy alone deflects attention from the more basic social causes such as political oppression, injustice, lack of political representation and sometimes even absence of land reforms. It does not follow that literacy should play no role in social development and cultural change. While literacy is a useful skill, it is useful only if it is tied to the literate resources of a society. Literacy, unlike mass immunization, cannot simply be imposed on adults. Most of the mass adult literacy programs had extremely low returns and are now seen as failures. Quality public education for children, on the other hand, is now recognized as a human right and it is the responsibility of the governments everywhere to see that this opportunity is provided. Quality education, at various levels, helps in building up human capital resources and is vital for economic development.

### **2.3 Literacy Rates**

The OIC average of adult literacy rates have been approximately 15 points lower than the world average. Only member countries in East Asia and Europe and Central Asia could achieve significantly higher average literacy rates when compared to the world average. The performance of the MENA region has been fairly at par with the world average, while both South Asia and Sub-Saharan regions recorded low literacy rates of 55% and 46%, respectively (see Table 2-1).

At the regional level, there have been some improvements in the average literacy rates for most of the regions. The average literacy rates for the members in the South Asian region, however, show a decline of 3.5 points. The averages for East Asia and Europe and Central Asian countries are significantly higher than both the world average and the average of the OIC as a whole.

### **2.4 Public Spending on Education**

Effective policies and programs have to be in place in order to achieve universal access to primary education and to move rapidly towards universal secondary education and to achieve eradication of adult illiteracy.

## Box 2.2 Education for All: the Dakar World Education Forum

In March 1990, the World Conference on Education for all, in Jomtien, Thailand, agreed to the *World Declaration on Education for All*. It stated that “...everyone has the right to education” and acknowledged the poor and inefficient education prevailing in most of the developing countries in the 1980’s. Article 1 of the *World Declaration on Education for All* (EFA), defined its purpose as follows (UNESCO 1990):

- ⌘ Every Person –child youth and adult– shall be able to benefit from educational opportunities designed to meet their basic learning needs;
- ⌘ The satisfaction of these needs empowers individuals in any society and confers upon them a responsibility to respect and build upon their collective cultural, linguistic and spiritual heritage, to promote education to others, to further cause of social justice, to achieve environmental protection, to be tolerant towards social, political and religious systems.

In late 1990s, it has been realized that EFA agenda, adopted in Jomtien, has been neglected by most of the developing countries. An EFA assessment in 1999-2000 made the following revelations:

- ⌘ Less than one third of 800 million children of age under 6 years benefited from early childhood education;
- ⌘ More than 113 million children, mostly girls, had no access to primary education;
- ⌘ There are at least 880 million adults in the world who are illiterate.

It also concluded that the state of education was particularly a matter of concern in the countries of Sub-Saharan Africa, South Asia, in some Arab Countries. In April 2000, at the World Education Forum in Dakar, in which delegates from 164 countries, representatives of regional groups and international organizations have participated, the agenda of Jomtien on EFA had been reaffirmed.

*Source: EFA Global Monitoring Report 2008, UNESCO*

Two ratios (see Table 2-1), the percentage of GDP allocated to education and the percentage of government spending on education, are generally employed to make an overall assessment of the efforts of the government to achieve universal access to education at various levels. The percentage of GDP allocated to education for the OIC as a whole is reasonably comparable to the world average of 4.43%. At the regional level, the member countries in the MENA and East Asia have been allocating fairly high percentages of the GDP on education, namely 5.39% and 4.53%, respectively. Similar trends are being observed for the averages of the percentage of government spending allocated to the education. This ratio is highest for the member countries in the MENA region with an average of 21.82% between 2000 and 2005.

The education expenditure per student as a percentage of GDP per capita, both at the primary and the secondary levels (see Figures 2.4-1 and 2.4-2), has been plotted against GDP per capita to explore the existence of a systematic relationship between the two. Although one would expect a positive relationship between the two variables, in both cases a clear relationship in that direction could not be established. In the case of the primary education, there seems to be a high variation in expenditure per student among the low and upper middle income countries, namely between 6% and 25%. The ratio for the high income countries, at primary level, is fairly close to the average of low and upper middle income group countries. At the secondary level, a similar variation in the ratio is apparent. However, the ratio for the higher income countries is below the average ratios of the low and upper middle income countries.

Figure 2.4-1: Expenditure per Student (Primary) versus GDP per Capita

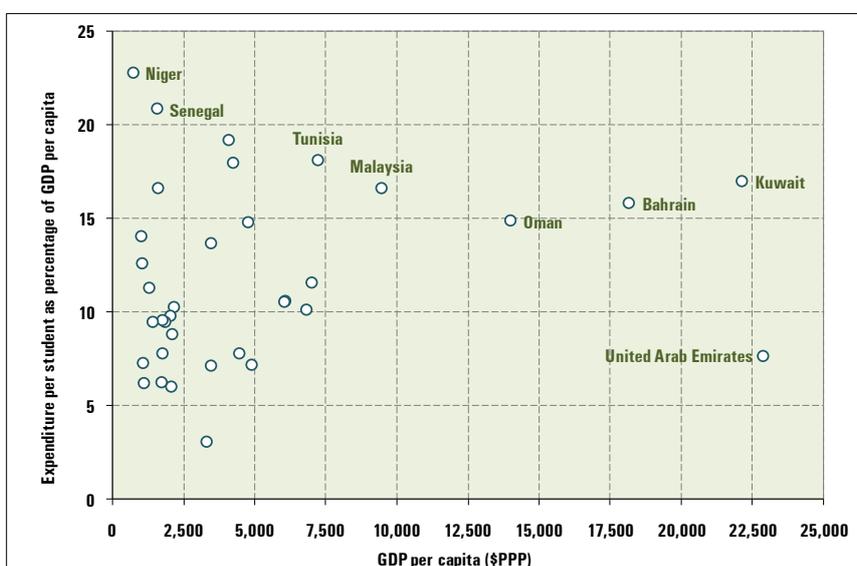
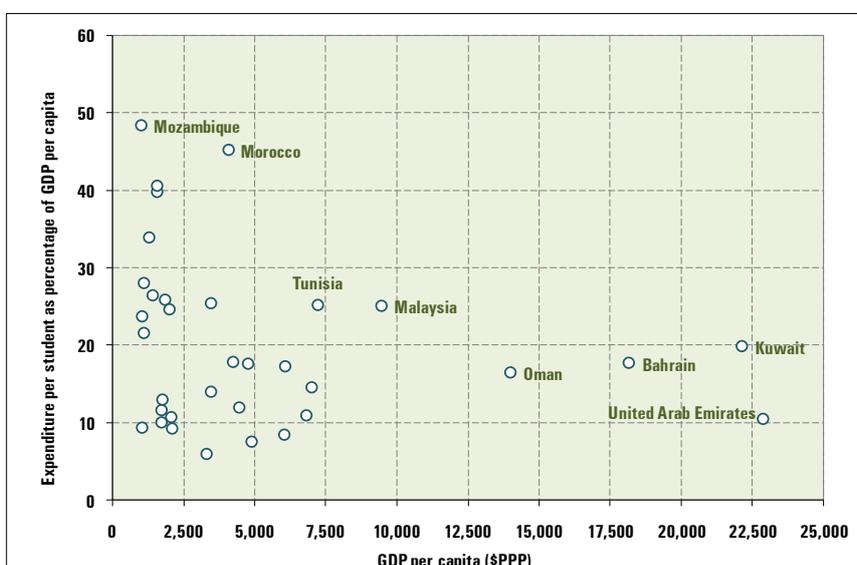


Figure 2.4-2: Expenditure per Student (Secondary) versus GDP per Capita



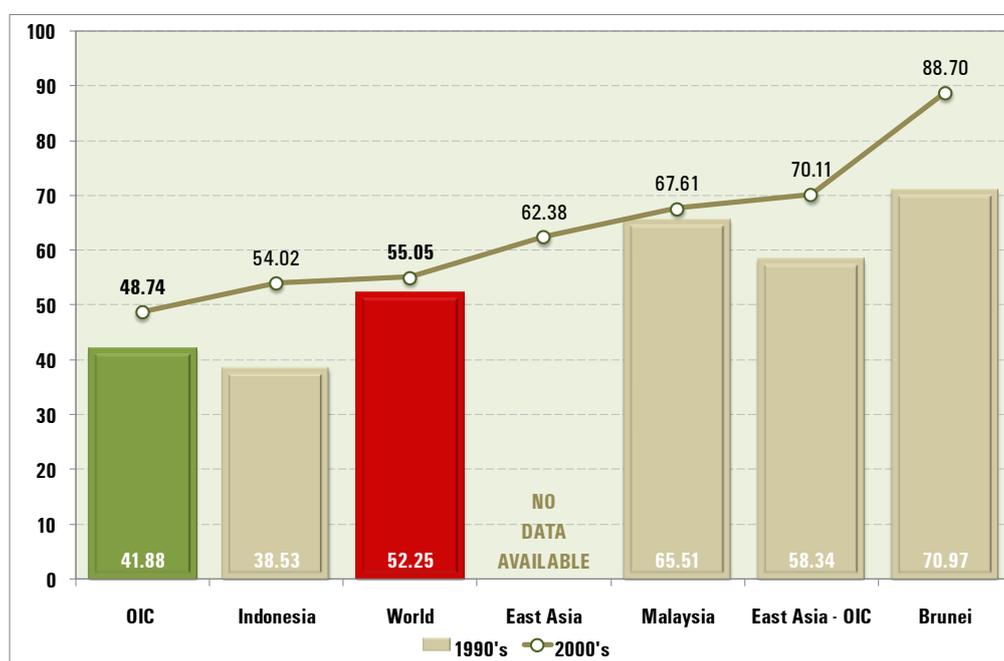
### 3 Regional Comparisons

#### 3.1 East Asia

The region as a whole has fairly high primary enrolment ratios but the enrolment ratios in the secondary education have been relatively low. According to UNESCO statistics some 9.2 million children of the primary age, in the region, could not get enrolled into secondary school in 2005. The three OIC member countries in the region, Brunei, Indonesia and Malaysia, have been maintaining high NER of primary education. Although they did not achieve such remarkable net enrolment rates for secondary education, their average NER of secondary education have been significantly above the world and OIC averages. Moreover, Brunei and Indonesia could achieve significant increases with more than 10 points change, despite the fact that the world and OIC as a whole did not record significant increases in the average NER of secondary education from 1990's to 2000's. The data also show that the OIC member countries have been performing better than the average of the non-OIC members in East Asia region for this decade (see Table 7-1 and Figure 3.1-1).

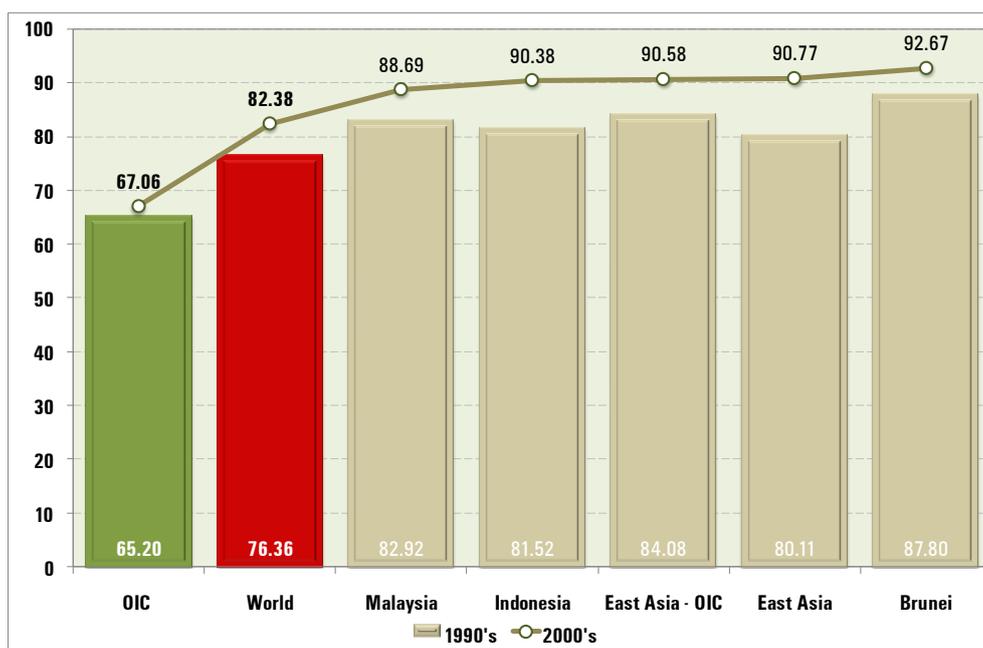
*In the World Bank's ranking of educational achievements (KEI), Malaysia is ranked at the top, among all the OIC-member countries.*

Figure 3.1-1: Secondary Net Enrolment Ratio – East Asia



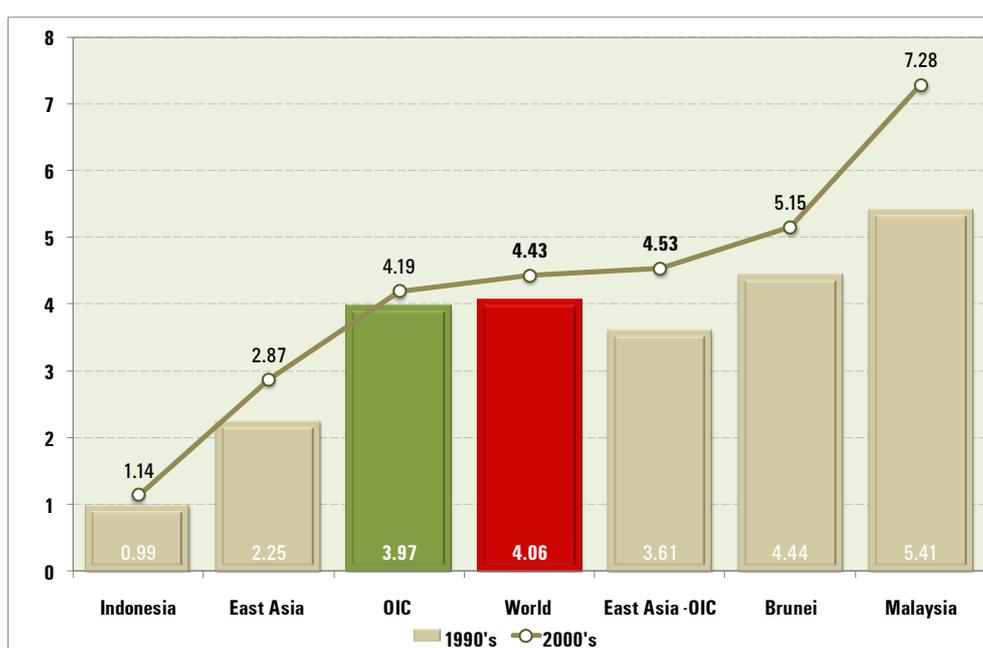
The average literacy rate, in the region as a whole, has increased from 80.11% in 1990's to 90.77% in the recent years, showing that there has been a significant decrease in the total number of illiterates in the region as a whole. Among the member countries, Brunei could reach the top average literacy rate of 93%. The average literacy rates for all three members in the region not only exceeded the world and OIC averages, but all of them have shown noteworthy progress in increasing their literacy rates (see Figure 3.1-2).

Figure 3.1-2: Literacy Rate – East Asia



The trend in public spending on education as a ratio of the GDP and the total government spending on education shows significant variation across the member countries in the region. Malaysia has been consistently spending significantly higher amounts according to the two measures. For example, the ratio of education spending to GDP in Malaysia reached 7.28% in recent years, which is the highest in the region and notably higher than the world and the OIC averages (see Figure 3.1-3 and Table 7-1). Similarly, the ratio of education spending to total government spending shows similar trends. Indonesia, on the other hand, has the lowest ratio of education spending to GDP and there has not been a notable change in this ratio in recent years.

Figure 3.1-3: Education Expenditure as % of GDP – East Asia

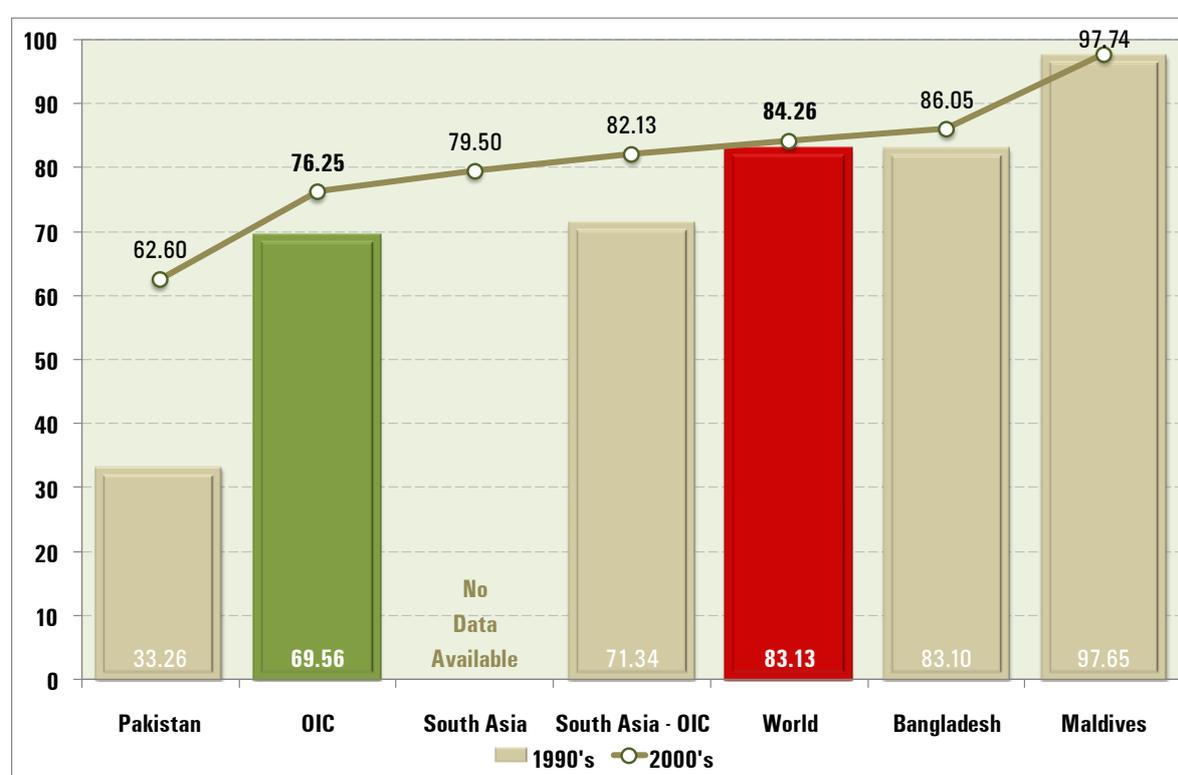


### 3.2 South Asia

The years since 2000 have witnessed sustained and accelerated economic growth in South Asia. However, extreme poverty remains widespread in the region and income inequality has been increasing. Overall progress towards universal primary education has accelerated (UNESCO 2005). The new enrolments, between years 1999 and 2005, have grown by more than 10 points. All countries, with data reported, increased their primary NER with little progress. But Pakistan's case should be highlighted as they have achieved a remarkable 30 points increase in its primary net enrolment ratio from 33% to 63% (see Figure 3.2-1).

This upwards trend has led to a primary NER of 79.5% for the region and 82.13% for the OIC member countries in the region. At the secondary level, Maldives could appreciably increase its NER and approach to the world average of 55 % (see Table 7-2).

Figure 3.2-1: Primary Net Enrolment Ratio – South Asia



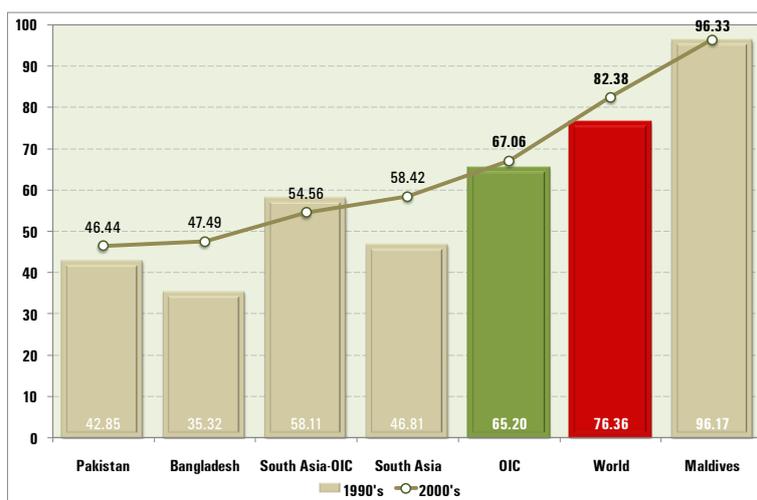
Although participation in primary schooling has increased since 1999, slow progression and completion of primary cycle has been one of the major concerns. According to the UNESCO reports, the median level of repeaters was at 5% in 2005 and the repetition rate has been fairly high at 37% in the region.

Similarly the median survival rate to the last grade of primary education has been at 78% in the region as whole. The average progression to secondary education varied significantly among the member countries in the region. The progression has been as low as 71.45% in Pakistan extending to 89.53% in Bangladesh (See *Country Profiles* in the Appendix).

*The average literacy rate, for most of the member countries in South Asia, is far below the world average.*

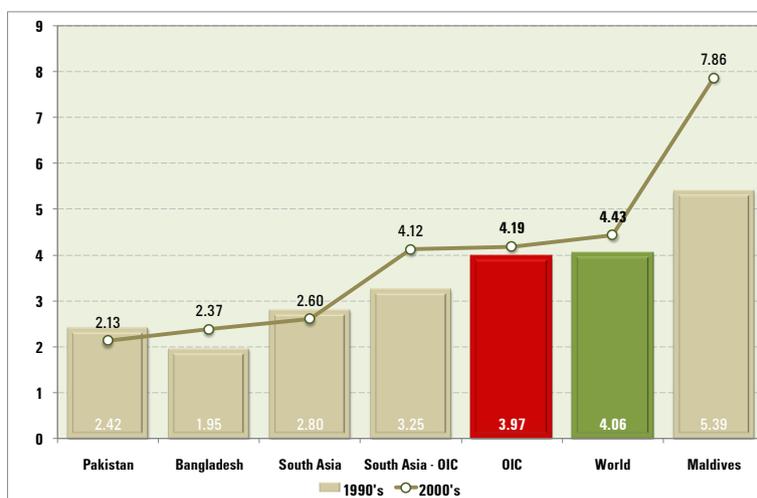
Literacy is one of the fundamental rights of people and is considered as one of the important tools in reducing poverty and increasing participation of people in the society. All the countries in the region have recorded some improvements in their literacy rates. Despite this increase in the rate, most of the member countries are still differentiated with low literacy rates below 50%, with the exception of Maldives which has maintained a very high literacy rate of 96% (see Figure 3.2-2 and *Country Profiles* part).

**Figure 3.2-2: Literacy Rate – South Asia**



The public spending on education by the member countries in the region again shows a significant variation. Pakistan and Bangladesh have very low spending/GDP ratios of around 2%. On the other hand Maldives has been spending around 7% of the GDP on education, which is higher than the OIC and world averages. On the other hand, Bangladesh's percentage of government spending on education out of total spending is comparable to Maldives. All of the South Asia countries are below the OIC and world averages in terms of educational spending/public expenditure ratios. Pakistan is even significantly lower than the regional average (see Figure 3.2-3 and Table 7-2).

**Figure 3.2-3: Education Expenditure as % of GDP – South Asia**



### 3.3 Middle East and North Africa

The average net enrolment ratios of the member countries show much variation in the region. The NER varies from 32% to 97% at the primary level and from 35% to 90% at the secondary level. Although Yemen has one of the lowest primary NER, the ratio has significantly improved recently, from a mere 52.8% to 68.9%. Similarly several other member countries have shown considerable improvements in the NER in 2000's as compared to the 1990's. These include Saudi Arabia, Morocco and Kuwait. Most of the other member countries, with NER higher than those of the world and the OIC, have maintained higher rates in recent years. The secondary NER shows steady progress for most of the member countries while Saudi Arabia could almost double its secondary NER from 35% to 66%. The average secondary net enrolment ratio of the region is higher than OIC and world averages (see Figures 3.3-1 and 3.3-2).

Figure 3.3-1: Primary Net Enrolment Ratio – Middle East and North Africa

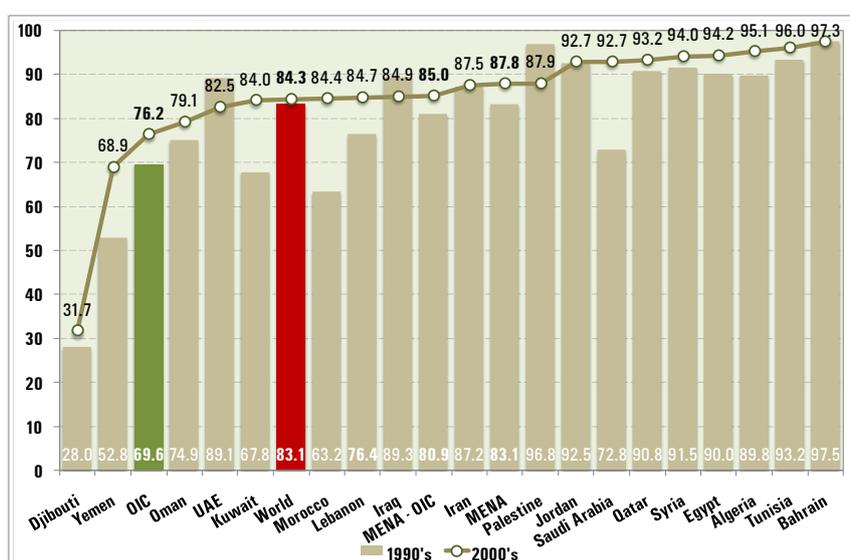
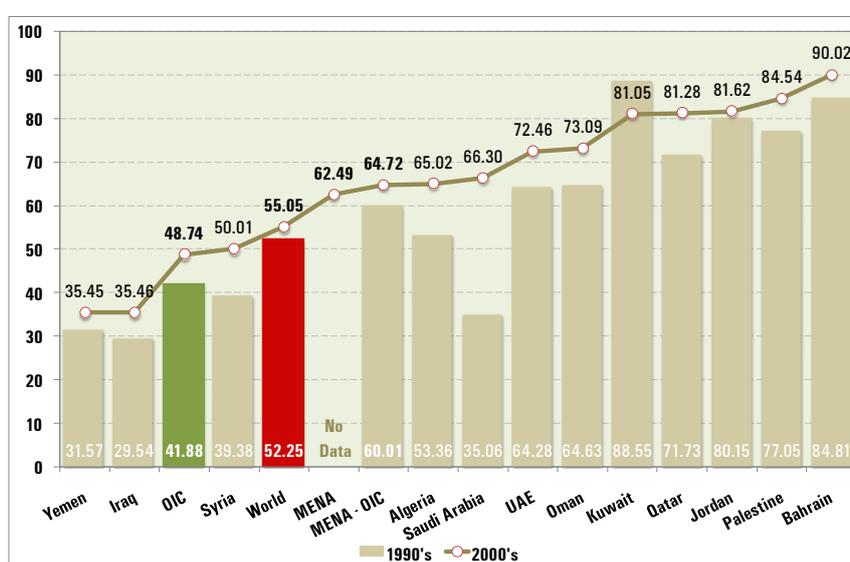


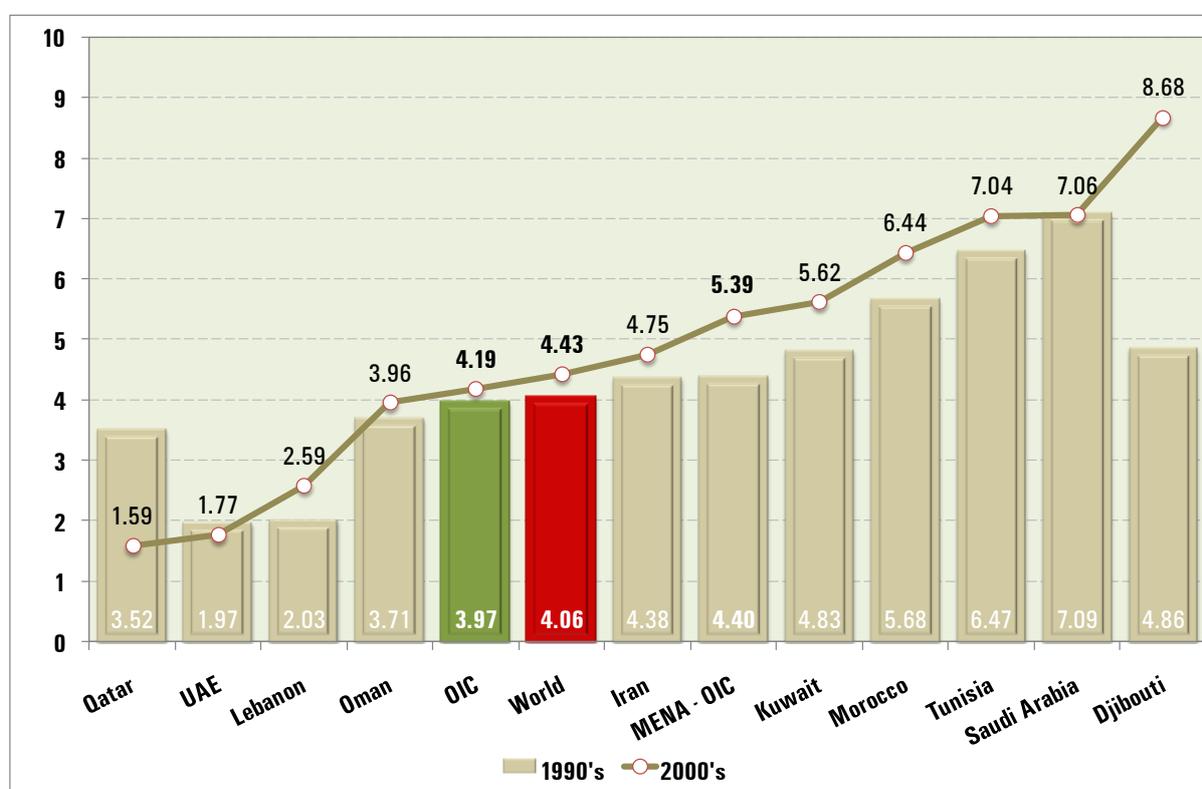
Figure 3.3-2: Secondary Net Enrolment Ratio – Middle East and North Africa



Literacy rates have improved in all of the member countries with available data. The recent statistics show that most of the member countries could increase their rates above the OIC average. Morocco and Yemen are the only two members who are lagging behind the OIC average, although their rates have improved in recent years. Kuwait and Palestine could achieve the highest literacy rates at 93.27% and 92.39%, respectively. Libya, Bahrain, UAE and Qatar could also attain literacy rates above the world average (see Table 7-3).

As could be gauged to the extent the data are available, public spending on education in most of the member countries of the region is close to the OIC and the world averages. While, Djibouti could achieve significantly higher average ratios of education spending to GDP (8.68%), some such as Kuwait, Morocco, Tunisia and Saudi Arabia have also been spending well above the world average in recent years (see Figure 3.3-3).

Figure 3.3-3: Education Expenditure as % of GDP – Middle East and North Africa



The allocation of public spending on education in terms of the percentage of total public spending shows better averages for several member countries in the region, as compared to the OIC average of 17.66%. Saudi Arabia, Morocco and Yemen have recorded the highest averages among the member countries in the region. The trends in the spending ratios in the region also indicate an overall upward trend. The increase in the spending ratio for Kuwait has been very prominent; the ratio has nearly quadrupled from a mere 3.37% to 13.48% (see Table 7-3).

### 3.4 Sub-Saharan Africa

There has been a significant rise in the net primary enrolment ratio between 1999 and 2005 in the region as a whole (UNESCO 2005). Benin, Guinea, Mauritania and Mali were able to increase this rate by more than 20 points. This may reflect the impact of policy measures adopted by these countries, such as the abolition of school fees in the early 2000s. Despite the overall progress, there are nearly 33 million children of primary school age who could not get enrolled. Burkina Faso, Guinea-Bissau, Niger, Somalia and Sudan have primary NER below 50% (see Figure 3.4-1). Gabon and Togo are the only two member countries in the region who could realize primary NER averages above the OIC average.

Figure 3.4-1: Primary Net Enrolment Ratio - Sub-Saharan Africa

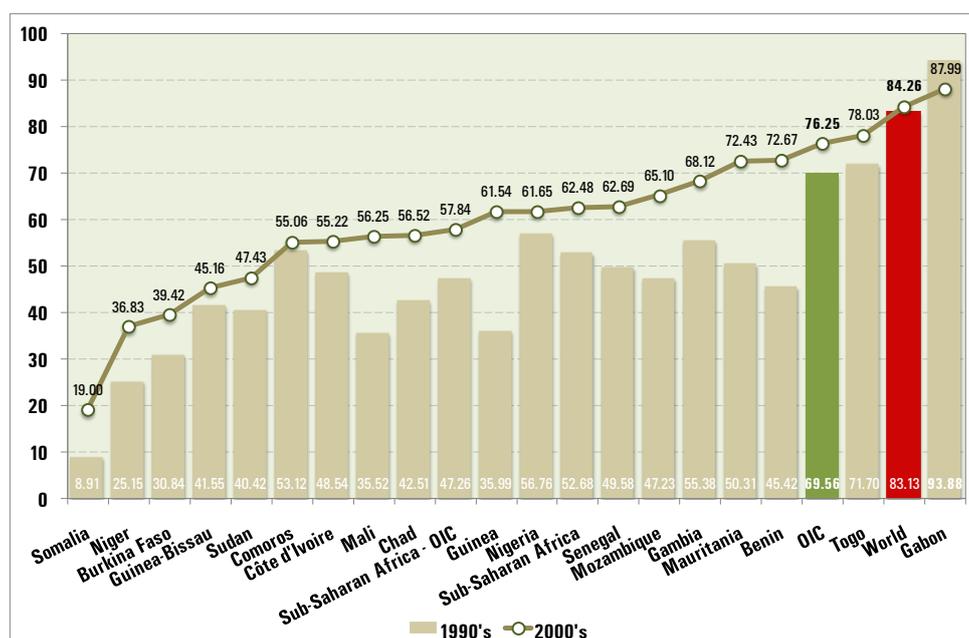
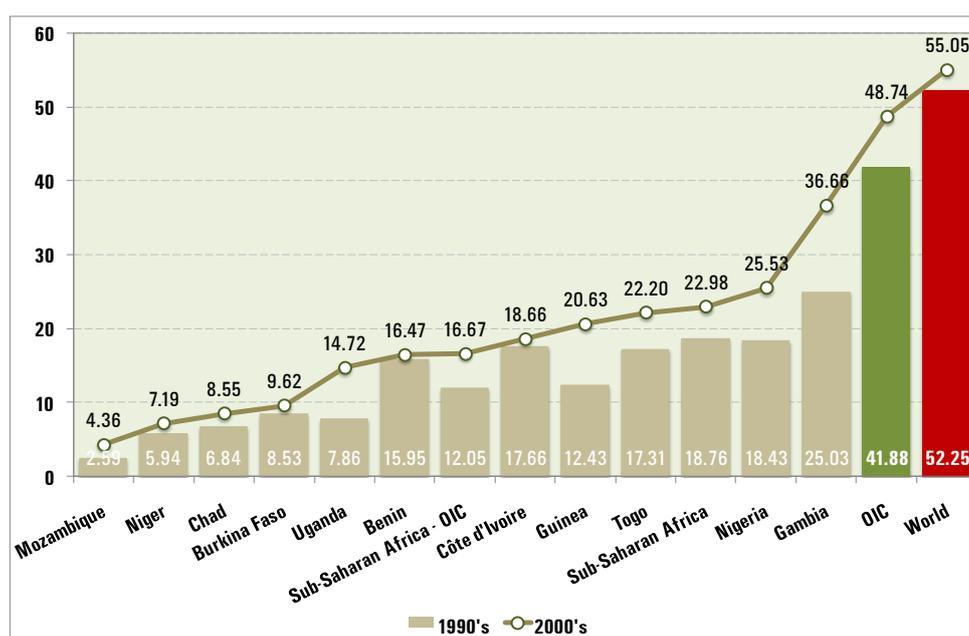


Figure 3.4-2: Secondary Net Enrolment Ratio - Sub-Saharan Africa



Most of the governments in the region are cognizant of the importance of primary and secondary education. However, Burkina Faso, Cameroon, Guinea, Guinea-Bissau, Mozambique and Niger still fail to provide public support to their lower secondary education (UNESCO 2005). That is why most of these countries have recorded very poor secondary enrolment ratios. The average secondary NER for all the member countries is well below the world and the OIC averages. On the other hand, although Gambia, Guinea and Nigeria have low average NER, they have shown reasonable increases (more than 7 points change) in their enrolment ratios (see Figure 3.4-2).

*According to world statistics, about one in five of the world's 774 million illiterates is in the region.*

Literacy rate remains a major challenge in the region as a whole. According to world statistics, about one in five of the world's 774 million illiterates is in the region. Among the member countries, Burkina Faso, Mali, Chad, Guinea and Niger have recorded very low literacy rates (below 30%). Gabon is the only member country in the region that has achieved an average literacy rate above the world average (see Table 7-4).

*Uganda, Mozambique and Côte d'Ivoire have shown noteworthy increase in education spending in recent years.*

The ratios of public spending on education to the GDP and to the total public expenditures, in the region as a whole, are well below the average ratios of the OIC. Despite this overall dismal scenario, some member countries have shown encouraging trends in their educational spending ratios as a percentage of their GDP. These include Burkina Faso, Mozambique, Sierra Leone and Côte d'Ivoire, While Burkina Faso and Mozambique have spent more than the OIC average on education; Sierra Leone and Cote d'Ivoire have recorded a spending ratio even higher than the world average in this decade. The average percentage of public spending on education to total public spending is comparable to the overall average of OIC. Countries like Uganda, Mozambique and Cote d'Ivoire have shown noteworthy increases (more than 5 points change) in educational spending over time. Furthermore, Guinea and Comoros have allocated nearly one fourth of their public spending to education (see Table 7-4).

### 3.5 Europe and Central Asia

The primary NER has been fairly high in the region with an average above those of OIC and the world. However, some member countries, such as, Azerbaijan, Kyrgyzstan and Albania have recorded some decrease in this ratio (see Figure 3.5-1). Most of the countries in the region have made good progress in the provision of secondary education during the period. The secondary net enrolment rates of Tajikistan and Turkey have increased by 14.26 and 24.04 points, respectively (see Figure 3.5-2). All of the member countries in Europe and Central Asia have maintained the secondary NER above the OIC and world averages. The literacy rates are also seen to be very high in the region with Albania and Tajikistan having achieved average rates over 98% in 2000's (see Table 7-5).

Figure 3.5-1: Primary Net Enrolment Ratio - Europe and Central Asia

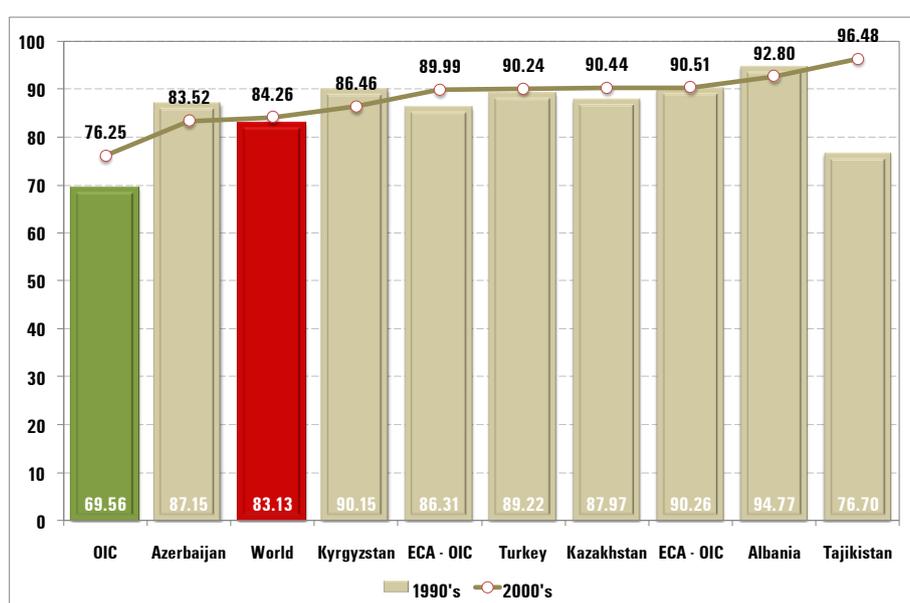
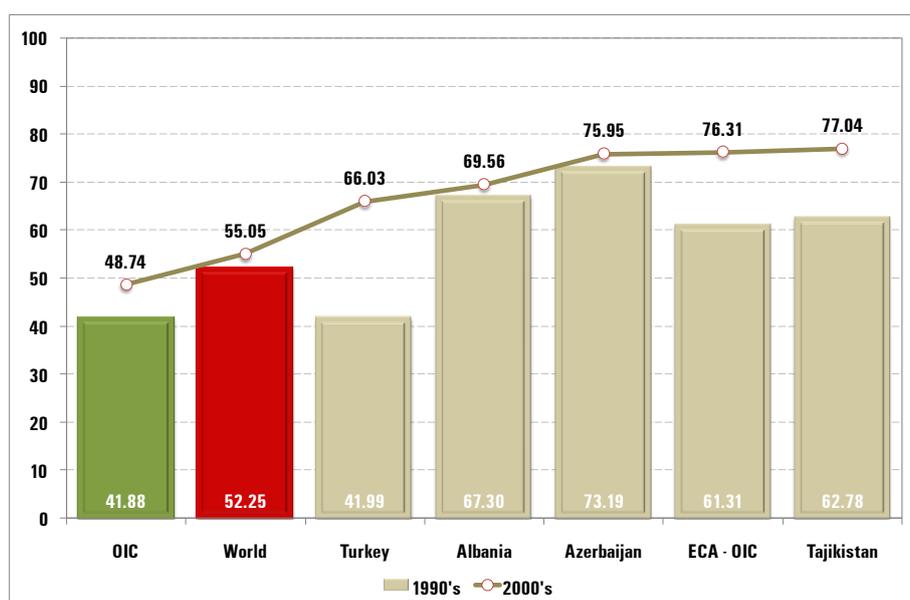


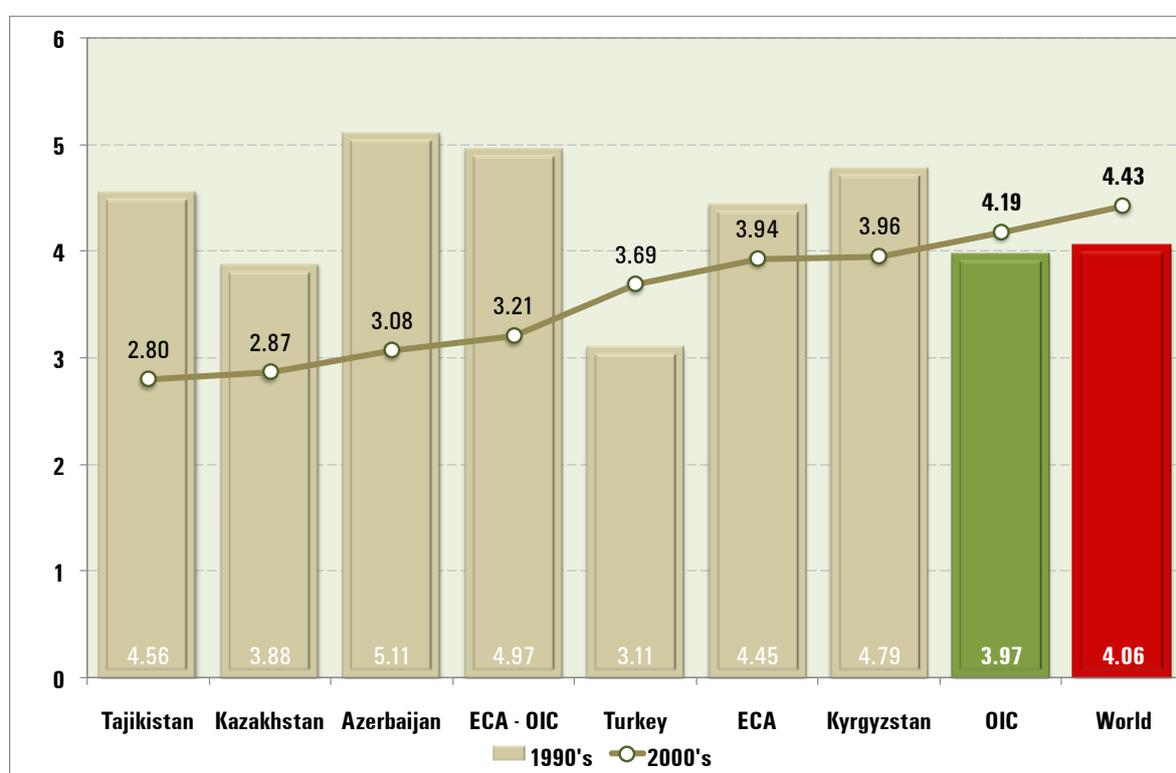
Figure 3.5-2: Secondary Net Enrolment Ratio - Europe and Central Asia



*Turkey is the only member country in the region that has shown improvement in the education spending ratio.*

The average public spending on education as a percentage of the GDP has been below the world average for most of the member countries in the region (see Figure 3.5-3). In fact, in most of the cases, the ratio has dropped in the recent years. Turkey is the only member country in the region that has shown an improvement in the ratio. Similar trends have also been observed for the education spending as a percent of total public spending. The recent trends show that the spending ratios of the countries other than Turkey have systematic declines which is reflected by a 1.76 point overall decrease in the regional average.

Figure 3.5-3: Education Expenditure as % of GDP – Europe and Central Asia



## 4 Appraisals of Attainments and Accomplishments in Education

National education policies to increase net enrolments both at primary and secondary levels and to improve literacy rates are indispensable in building human capital to achieve sustainable economic growth. However, increasing enrolments and improving literacy rates by themselves are not sufficient to bear the fruits of these policies (see Box 2.2). It is equally important to improve and sustain the quality of education at all levels. Furthermore, investing and supporting scientific research at the higher education level is vital for a developing country in securing the transition to a knowledge-based economy.

This section discusses and evaluates the achievements and attainments of the member countries in developing a knowledge economy. The section also documents the research contributions of member countries at the higher education level, and identifies the fields of scientific research in which some of the leading member countries have specialized. The section also includes a discussion of education policies and reforms of Malaysia, a country that has shown a prominence at the global level in several indicators of achievements in education.

### 4.1 Knowledge Index (KI) and Knowledge Economy Index (KEI)

Higher education institutions and research and development (R&D) programs are the main forces in helping to attain economic growth and competitiveness for the knowledge-based societies. Better applications of knowledge can provide comparative advantages in producing goods and services more efficiently. However, for most of the developing countries, the transition to the Knowledge Economy is not an easy goal to achieve, as it warrants sustainable and coordinated education policies and development of effective strategies.

The World Bank initiated “The Knowledge for Development (K4D) Program” to assist countries identify the challenges and opportunities they face in making the transition to the knowledge economy (KE).

An interactive benchmarking tool, Knowledge Assessment Methodology (KAM), has been developed to measure the comparative performances of 140 countries<sup>1</sup> on 83 structural and qualitative variables<sup>2</sup> that are normalized on a scale of 0 to 10 relative to other countries in the selected comparison groups. KAM also presents two indices - the Knowledge Index (KI) and Knowledge Economy Index (KEI) – to track the overall level of preparedness of the countries towards a knowledge-based economy. While KEI is an aggregate index involving four KE pillars: Economic and Institutional Regime, Education and Human Resources, Innovation System, Information and Communication Technologies (ICTs), the simple averages of three pillars, excluding Economic and Institutional Regime, have been employed to calculate KI.

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<sup>1</sup> <http://go.worldbank.org/CY9PINAVF0>

<sup>2</sup> <http://go.worldbank.org/E7ISX99P10>

From the 6 different display modes<sup>3</sup> of KAM, the regression graphs have been drawn for different time periods. These graphs demonstrate the progress of countries on KE pillars and indexes (KEI) from 1995 to the most recent year. So the data points above the 45 degree line demonstrate an improvement in the KEI performance of the country throughout the period under consideration, while a decline is indicated by a point below the line. However, it should be noted that improvements may occur when the country has either actually gained in absolute terms over time or improved faster than the comparative group.

Following this methodology, an analysis have been undertaken on the performance of 40 OIC countries<sup>4</sup> that are included in KEI methodology under six regional (Africa, East Asia and Pacific, Europe and Central Asia, Latin America, Middle East and North Africa, South Asia) and four income groups (High, Upper Middle, Lower Middle, Low). Moreover, to better benchmark the place of each OIC member country relative to their groups, regional and income group averages have also been included for all the countries (see Figure 4.1-1).

For the sub-groups having less than 3 OIC countries, non-OIC countries were added to graphs to get more meaningful comparisons. Furthermore, in every one-unit interval, a non-OIC country has been selected to get a representation in that range.

In the comparisons of regional averages, KEI progress has been observed only in Europe - Central Asia and South Asia, though the increase of the South Asia group was undiscernibly small. The East Asia - Pacific and the Africa regions, with scores 6.67 and 2.72, respectively, had lost approximately half a point on the average since 1995. Despite having recorded declines, the group averages of Middle East-North Africa and Latin America regions were still above 5 points (see Figure 4.1-1).

In Africa, the regional average and the scores of Sierra Leone and Mali declined by nearly half a point since 1995. But Sudan, Uganda, Mauritania, Senegal, Mozambique and Burkina Faso, constituting half of the OIC countries in this region, were above the diagonal indicating improvements in their performances (see Figure 4.1-1).

In Europe and Central Asia, although not achieving the regional average of 6.3, Turkey led the way among the OIC countries. Moreover, compared to the 1995 scores, the KE situation of Albania, Azerbaijan and Kazakhstan improved albeit the progress has been relatively moderate.

In the Middle East North Africa (MENA), ten out of sixteen OIC countries have made progress. Furthermore, Kuwait, Qatar, UAE and Bahrain could succeed in surpassing the regional average of 5.30, but their scores have declined relative to 1995 values (see Figure 4.1-1).

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<sup>3</sup> Basic Scorecard, Custom Scorecard, KEI and KI indexes, Cross-Country Comparison, and World Map are the other available display modes.

<sup>4</sup> 17 OIC countries that are not included in KAM website are Afghanistan, Brunei, Chad, Comoros, Gabon, Gambia, Guinea, Guinea-Bissau, Iraq, Libya, Maldives, Niger, Palestine, Somalia, Suriname, Togo and Turkmenistan.

Figure 4.1-1: Regional KEI Performance (1995-Most Recent)

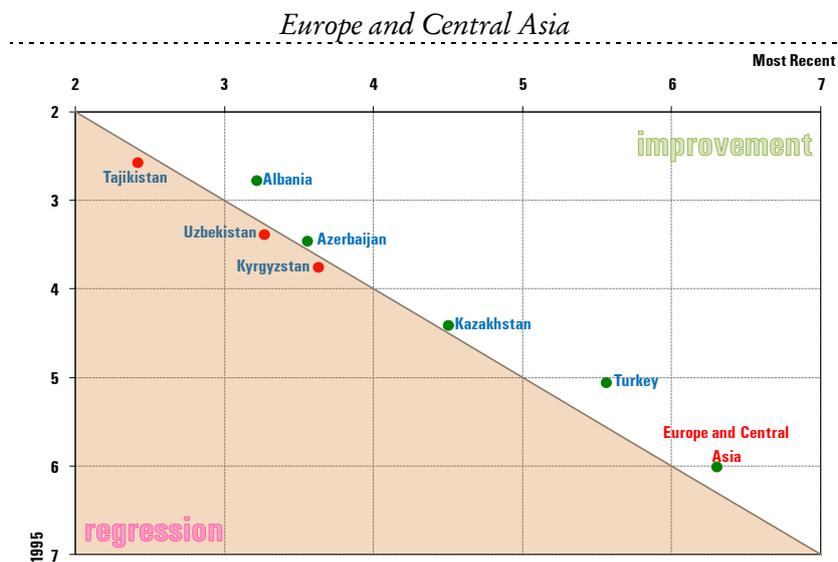
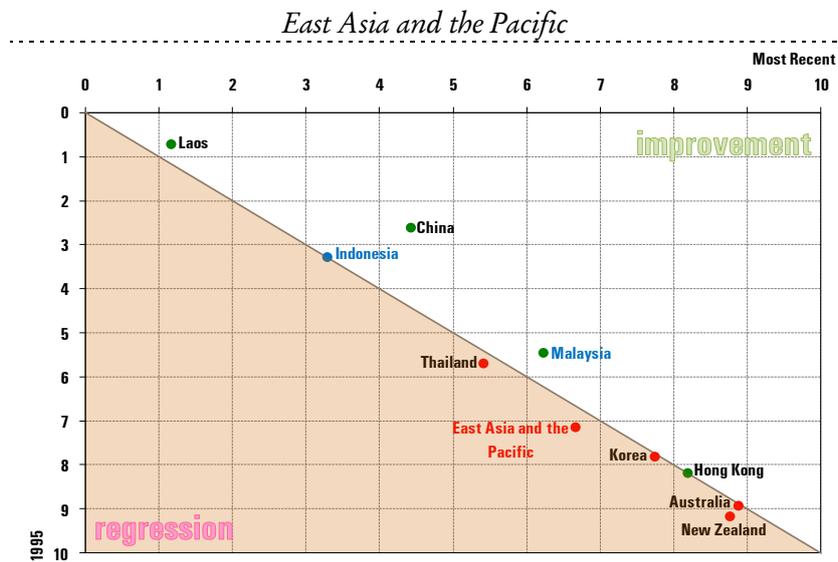
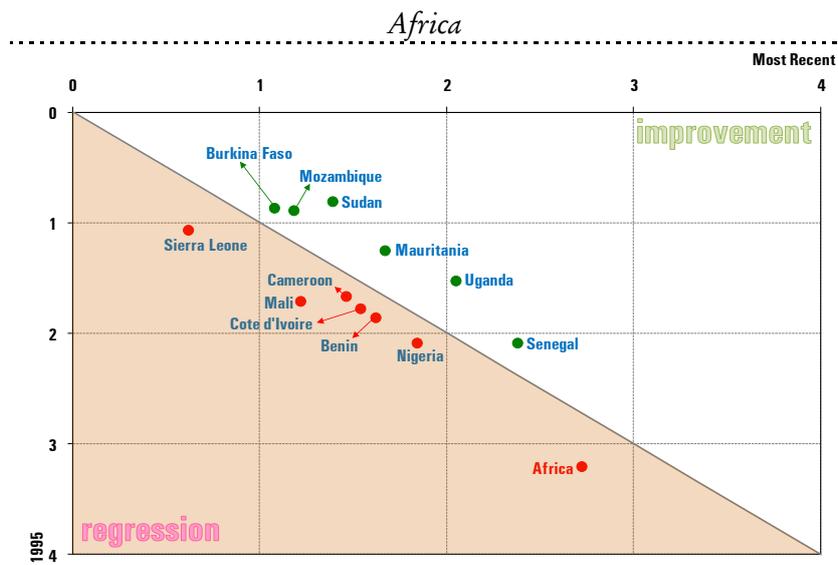


Figure 4.1-1 (cont.): Regional KEI Performance (1995-Most Recent)

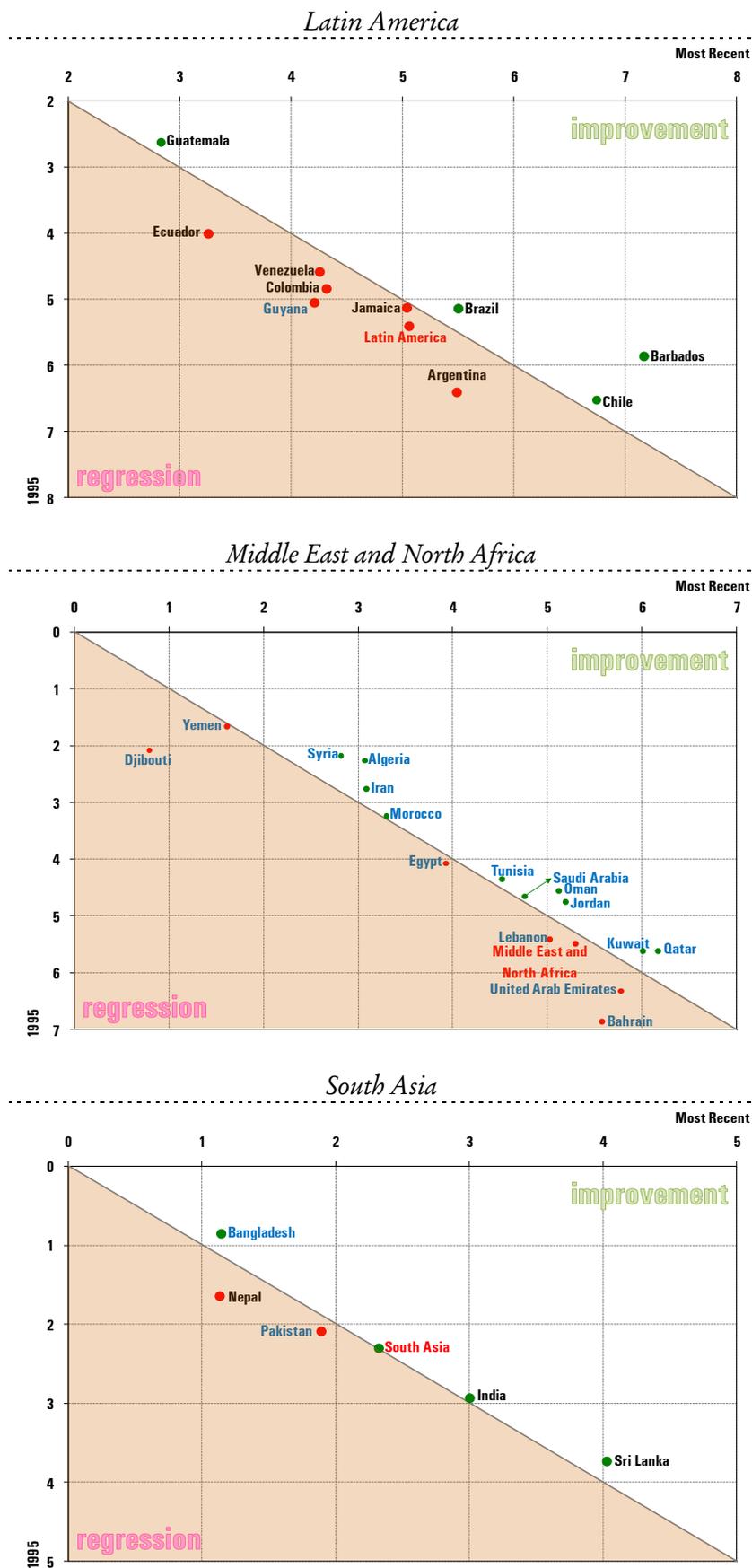
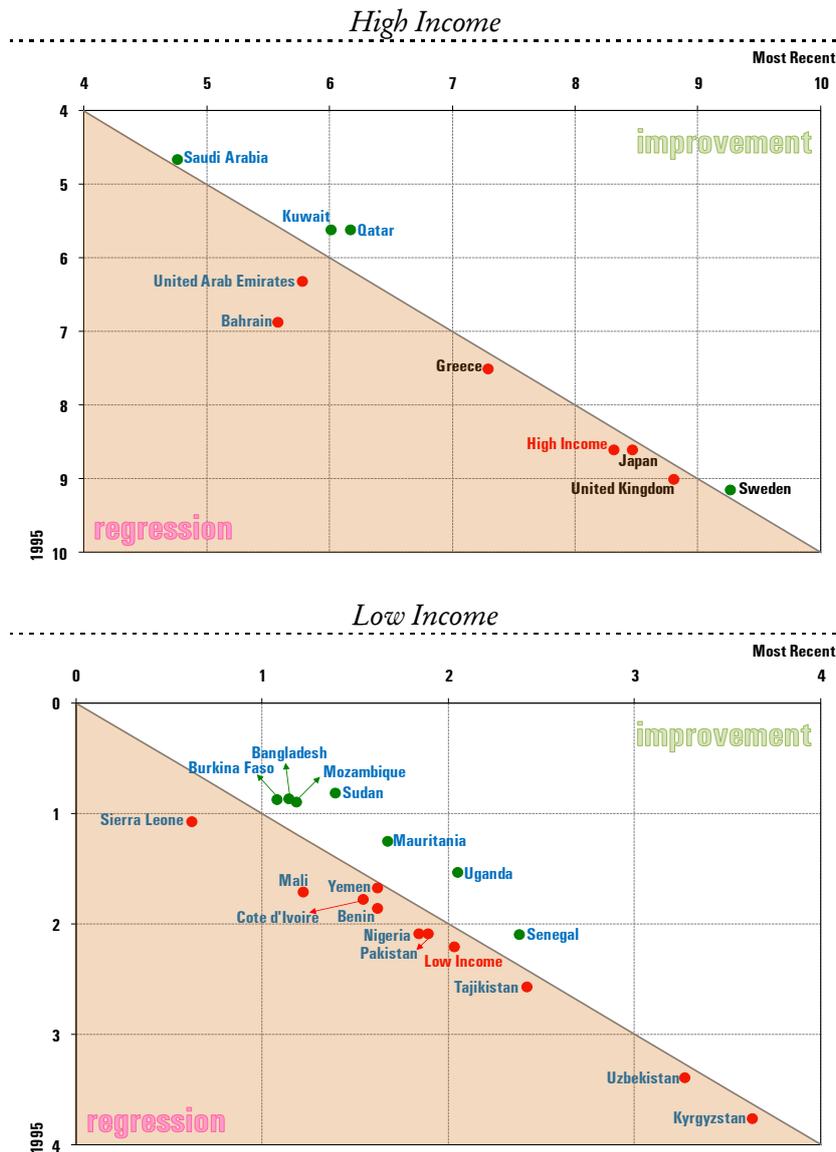


Figure 4.1-2: Income Group KEI Performance (1995 – Most Recent)

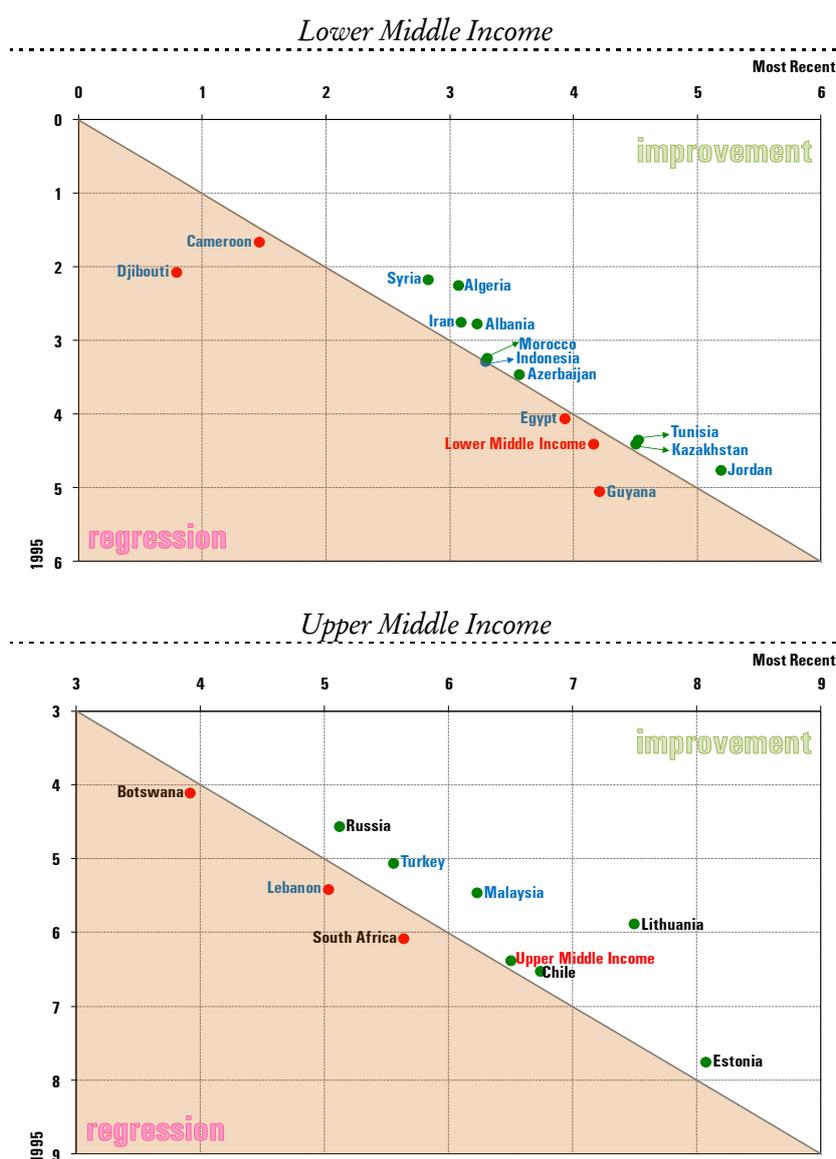


East Asia-Pacific, Latin America and South Asia are the regions where few OIC countries have been included in KAM (2007). In these regions, Malaysia and Bangladesh made progress, Guyana and Pakistan lost ground and Indonesia remained the same. The KE cases of Malaysia and Guyana were especially significant with their score changing by 0.77 and -0.84, respectively.

The averages of different income groups remained below the diagonal except for the upper middle income group, where a 0.12 increase was recorded since 1995. The performances of Malaysia, Oman and Turkey have shown improvements, while that of Lebanon deteriorated since 1995. The scores of these four OIC countries were still below the 2007 average of the upper middle income group, though Malaysia -with a score of 6.23- came very closer to the group average (see Figure 4.1-2).

According to KEI (2007), among the 14 lower middle income OIC countries, only Guyana, Kazakhstan, Tunisia and Jordan were above the lower middle income average of 4.16. However, it

Figure 4.1-2 (cont.): Income Group KEI Performance (1995 – Most Recent)



is a promising development that nine of these countries made progress and Indonesia remained at the 1995 level. On the other hand, the profile of low income countries has not been very encouraging, as only 7 out of 17 countries in the group were able to make some progress (see Figure 4.1-2). For the high income group, the situation of Qatar, Kuwait and Saudi Arabia changed positively. Meanwhile, United Arab Emirates and Bahrain regressed in terms of KEI scores since 1995. Bahrain moved back by the huge margin of 1.29 on a 10 point scale (see Figure 4.1-2).

## 4.2 Contributions to Higher Education Research

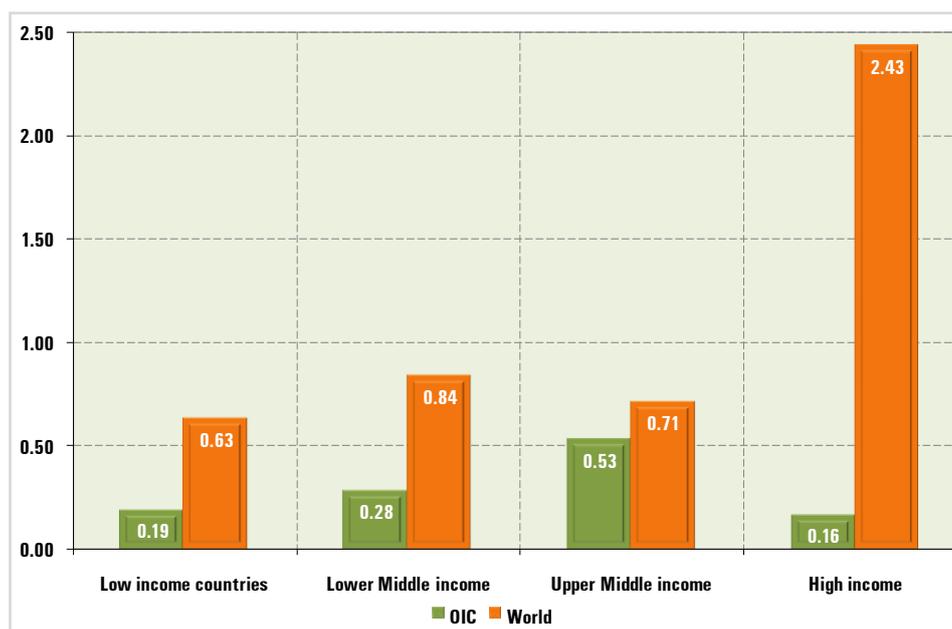
The higher education and research in OIC member countries are faced with a myriad of challenges such as lack of financing, underdevelopment, poor quality of teaching, and availability of limited provisions for the relevant research facilities. There have, however, been a few promising developments in recent years that attest to the efforts of some of the member countries to invest in the future (see Box 4.2). There are also indications of support in improving the key indicators of

science and technological innovations at the OIC level. The OIC has decided to implement strategic plans on science and technology in 2005 in this regard; for example, it has proposed the allocation by the member countries of 1% of their GDP on R&D by 2015 (*OIC Ten Year Plan of Action*).

The *R&D expenditures as percent of the GDP* is one of the indicators to measure the efforts at the national level to improve and develop facilities for research and innovation activities. Unfortunately, most of the member countries do not publish data on R&D expenditures. Only 19 out of 57 member countries report these figures. The comparison of the R&D expenditures as a percent of the GDP among the income groups is presented in Figure 4.2-1. In all the cases, the OIC expenditure ratios are lower than the world averages. However, the difference in the ratio for the high income group is very prominent. Uganda, a low income country, is the only OIC member spending around 1% of its GDP on R&D. Malaysia and Turkey in the Upper Middle Income group and Morocco and Iran in the Lower Middle Income group have been spending around 0.60%.

*Only 19 out of 57 member countries publish their statistics on R&D spending.*

Figure 4.2-1: Research and Development Expenditures (% of GDP)



Academic research and its productivity can be gauged by the number of scientific articles published in indexed and established journals. Indeed, these publications have been widely used in national science and technology statistics publications to measure scientific capacity and linkages to world science<sup>5</sup>, and particularly in national and international rankings of universities<sup>6</sup>. Moreover, the

<sup>5</sup> UNESCO Institute for Statistics, “What do bibliometric indicators tell us about world scientific output?” *UIS Bulletin on Science and Technology Statistics, Issue 2, September 2005*.

distribution of these articles across various scientific fields of research also reveals the fields of specialization of the institutions and countries in question.

The Institute for Scientific Information (ISI) Web of Science offers a comprehensive database on articles published in journals indexed in Science Citation Index (SCI), Social Sciences Citation Index (SSCI), and Arts & Humanities Citation Index (A&HCI). It is an online academic database which provides detailed search facilities for and access to articles from leading journals in Science, Technology, Social Sciences, Arts, and Humanities. The publications in the journals of ISI also contribute significantly to the world ranking of educational institutions because publishing articles in these journals is one of the main criteria used in these rankings.

**Table 4-1: Total Scientific Publications of Top 10 OIC Member Countries (2003–2007)**

	Publications of the Last 5 Years (2003 - 2007)	As Percentage of Total OIC	Cumulative Percentage
<b>Turkey</b>	69746	36.38	36.38
<b>Iran</b>	25399	13.25	49.62
<b>Egypt</b>	15105	7.88	57.50
<b>Malaysia</b>	8155	4.25	61.76
<b>Saudi Arabia</b>	7089	3.70	65.45
<b>Pakistan</b>	6313	3.29	68.75
<b>Tunisia</b>	6138	3.20	71.95
<b>Nigeria</b>	5229	2.73	74.67
<b>Morocco</b>	4914	2.56	77.24
<b>Jordan</b>	4383	2.29	79.52
<b>Total OIC</b>	191732	100.00	

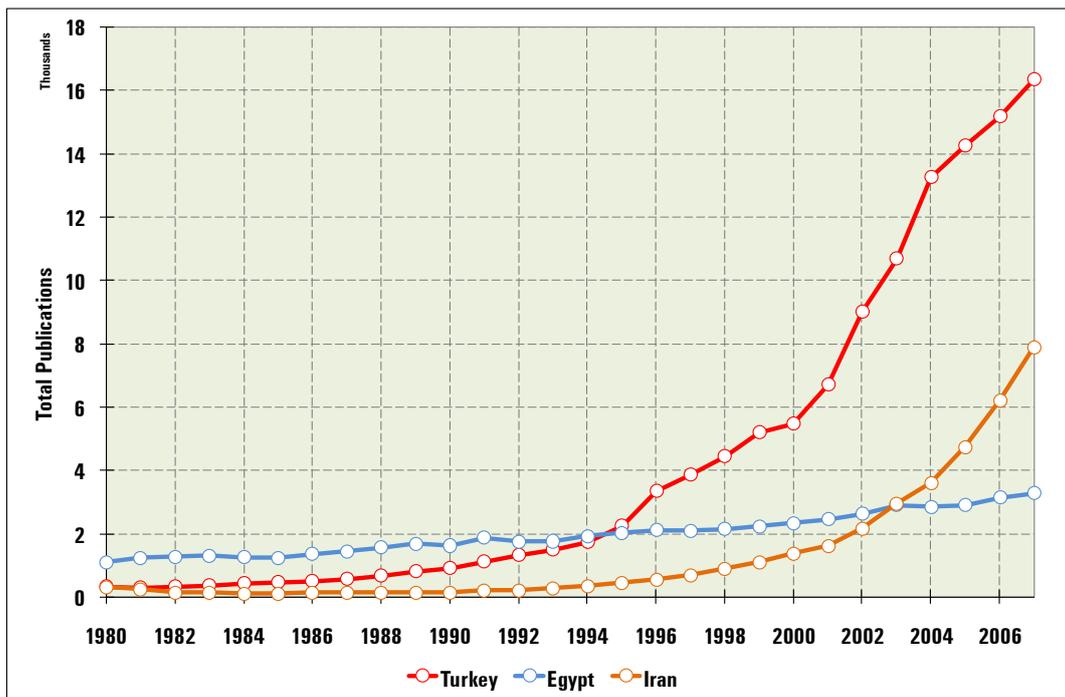
Table 4-1 highlights the top 10 OIC member countries, using one of the measures of scientific and technological contributions, namely, the total publications in the established journals (ISI) during the last five years. The top 10 member countries contributed around 80% of the total publications of the OIC. Indonesia and Bangladesh are absent from the top 10 list, although they contribute significantly to the total population of the member countries.

The number of articles published in the international journals during 1998-2002 and 2003-2007 for all the OIC member countries are being reported in Table 8-1 in Appendix. At the regional level, member countries in the MENA and Europe & Central Asia have contributed more than 80% in the total publications of OIC. Furthermore, in 2003-07 period the total number of publications in the international journals of all the member countries was 191,732 compared to 373,760 in Japan and 321,217 in England (see Appendix, Table 8-1).

<sup>6</sup> For example, Academic Ranking of World Universities by Shanghai Jiao Tong University (SJTU), World University Rankings by the Times Higher Education Supplement (THES), and also the OIC University Ranking make use of the research output as an important indicator in their ranking methodologies.

The number of articles per million people has also been calculated for the member countries and has been reported in Appendix (see Table 8-2). In the period of 2003 and 2007, Lebanon, Kuwait and Turkey are the leading member countries with more than 1000 articles per million people. At regional level, Europe & Central Asia has the highest number of articles per million people (528) while South Asia has the lowest contribution of 27.56 per million people (See Appendix, Table 8-2). This ratio, in 2003-07, for OIC was 134.88 compared to 7,869 for Finland and 114.71 for India.

Figure 4.2-2: ISI Publications of Leading OIC Member Countries

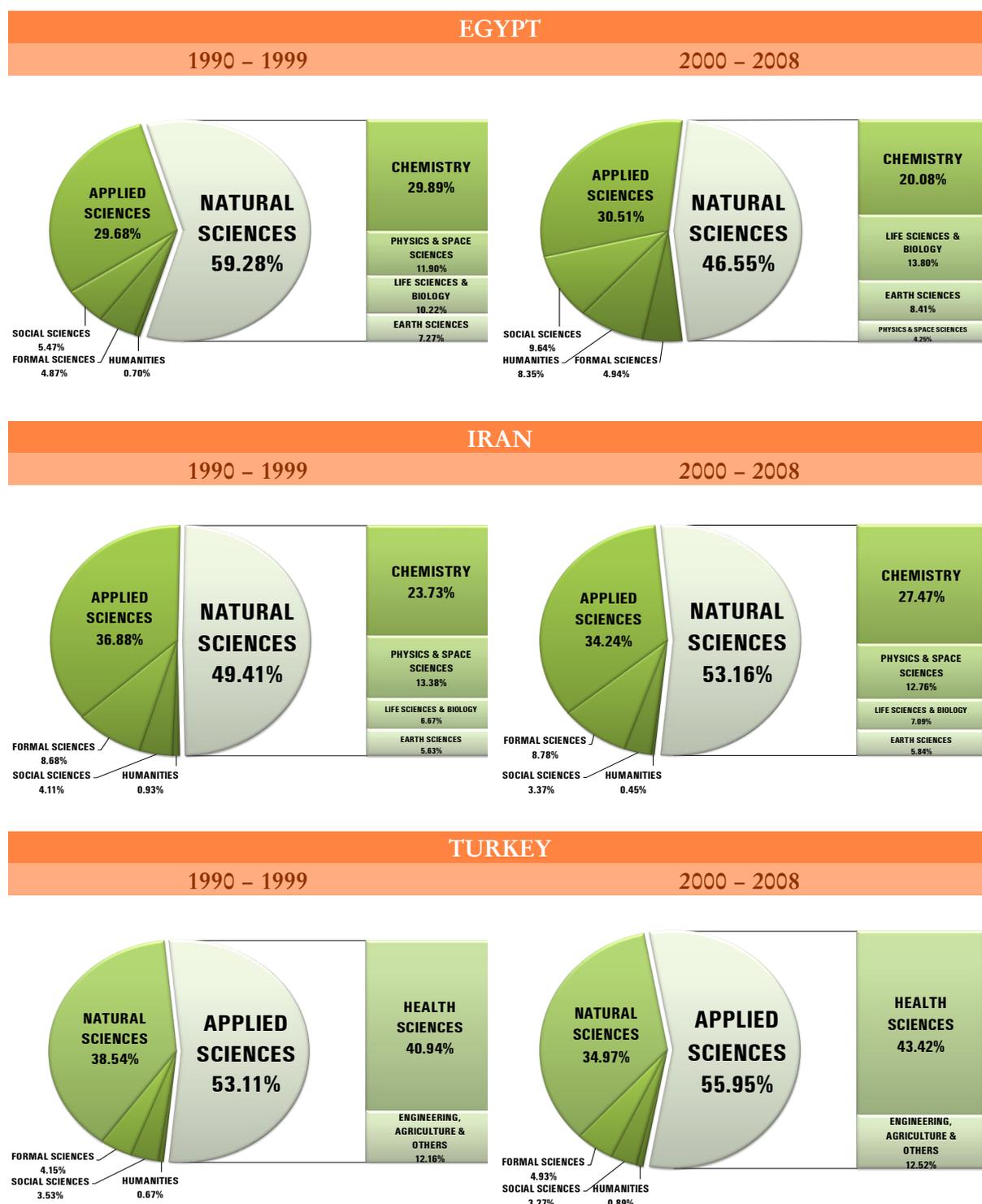


The ISI publications of Egypt, Iran and Turkey for the period 1980-2006 can also be seen in Figure 4.2-2. Turkey (see Box 4.2) takes clear lead with Iran and Egypt to follow. In 2007, Turkey published 16355 articles followed by Iran with 7895 articles and Egypt with 3287 articles. Overall, these three countries contributed 58.73% of the total publications of the OIC in 2007.

The distribution of the articles according to the scientific fields also reveals differences both across member countries and through time, indicating the variation in the fields of specializations of countries in their scholarly research contributions. Figure 4.2-3 highlights the distribution under five categories – applied sciences, formal sciences, humanities, natural sciences and social sciences– for the top three countries with the highest shares of articles in the OIC, namely Turkey, Iran, and Egypt. It also allows comparisons between two periods of time; i.e. 1990-1999 (hereafter denoted as the first period) and 2000-2008 (hereafter denoted as the second period). The articles in natural sciences and applied sciences together constitute more than 90% of the total articles, leaving less than 10% for social sciences, formal sciences, and humanities in all of the three countries.

*Turkey, Iran and Egypt contributed 58.7% of academic publications in the reputable journals in 2007.*

Figure 4.2-3: Distribution of ISI Publications by Fields of Science



The majority of articles of Egypt in the first period was in natural sciences (59.28%), most of which were in the field of chemistry (29.89%) and physics and space sciences (11.90%). Although the share of natural sciences was again highest in the second period<sup>7</sup>, it decreased to 46.55% and while chemistry constituted the highest part of it, the share of physics and space sciences declined

<sup>7</sup> Data for 2008 reflect only the first quarter.

to 4.25%, leaving its former position to life sciences and biology (13.8%). Applied sciences took the second position after natural sciences in both periods and almost with the same share of 30%.

On the contrary, the development in Iran was towards the expansion of the share of natural sciences, but without relative change in the sub-disciplines. The share of natural sciences increased to 53.16% in the second period from 49.41% in the first period. This increase is mostly due to the changes in the field of chemistry, yet the relative position of the sub-disciplines under natural sciences remained the same. Similar to Egypt, the second important field was applied sciences, though its share decreased by 2.64 percentage points in the second period reaching down to 34.24%. Turkey, on the other hand, presented a different structure from Egypt and Iran. Turkey specialized in applied sciences, and the shares of the scientific fields did not change significantly compared to the first period. The share of applied sciences increased by 2.84 percentage points in the second period, reaching up to 55.95% and almost all of this increase came from the expansion of articles in health sciences, as the share of other sub-disciplines remained almost at the same rate of 12%. Natural sciences took the second position in Turkey in both periods and its share decreased to 34.97% in the second period.

#### Box 4.1 Silver Lining in the Clouds

A number of buoyant initiatives have been launched recently by some of the member countries to narrow the innovation gap. Although these initiatives are at preliminary stages of implementation, they do provide some hope for a better future.

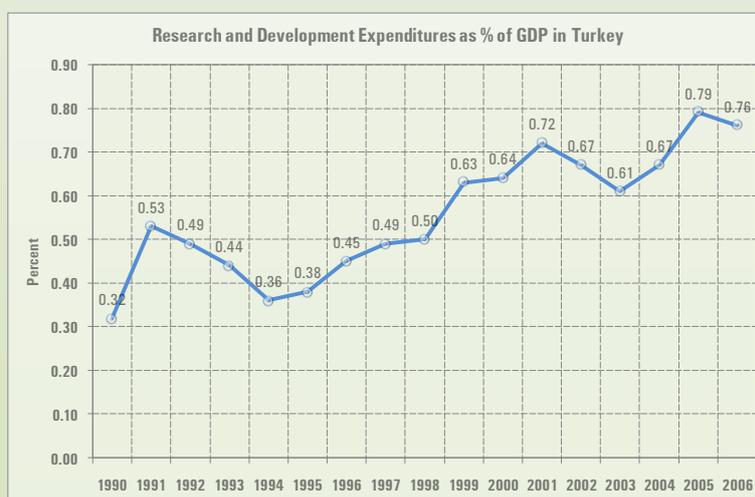
- ☞ The Higher Education Commission (HEC) in Pakistan has launched a belligerent scheme to develop the scientific and research manpower since 2002. The budgetary allocations to higher education have increased by several thousand percent. The HEC has sought cooperative agreements with foreign governments, aid agencies and foreign universities to provide assistance to students pursuing studies abroad. It aims at creating 5000 new PhDs in the next five years.
- ☞ Qatar has invested in building the Education City over 2500 acres of land near Doha. This is a multi-billion dollar project in collaboration with several renowned international universities around the world. The planners of the project hope that it would transform the Emirate into a regional educational hub of the 21<sup>st</sup> century.
- ☞ A \$5 billion endowment fund has been announced by the Nigerian government to set up a science fund for scientific development at the Nigerian Economic Empowerment and Development Strategy (NEEDS). The project will be partially funded by the oil revenues and with collaboration with industry and multi-lateral institutions.
- ☞ In May 2007, the Vice President of the United Arab Emirates has announced the establishment of 10 billion US dollar foundation to establish research institutions in the Arab universities and to support scientist through research grants.

### Box 4.2 Higher Education Policy in Turkey\*

The Supreme Council for Science and Technology (SCST) approved an important policy document in February 1993. It emphasized the importance of science and technology for the future growth of the country and laid down four specific goals for the next ten years. These included:

- ∞ to increase the number of researchers from 7 to over 15 per 10,000 population,
- ∞ to increase the R&D expenditures to over 1% of the GDP from its current level of 0.33%,
- ∞ to increase the private sector's share in the R&D expenditures from 18% to 30%, and
- ∞ to raise Turkey's rank in contributing to world scientific development from 40th to 30th, measured by the number of international scientific publications.

In order to support some of these objectives, the Scientific and Technical Research Council of Turkey (TUBITAK) launched the Program for Encouragement of International Scientific Publications (UBYT) in 1993. Support of US\$ 2.5 million was awarded to some 3,034 academicians for their international scientific publications. These figures increased in the following years totalling US\$ 7.5 million and 35,652 researchers in 1998. Furthermore, TUBITAK and other government institutions increased their spending on research and development as had been proposed by SCST in 1993. The trends in the R&D expenditures to the GDP show a systematic upward trend after 1994. It increased from 0.30 in 1994 to 0.72 in 2001. Although the ratio could not reach to the targeted 1% mark by 2004, it has been on the rise since 2003.



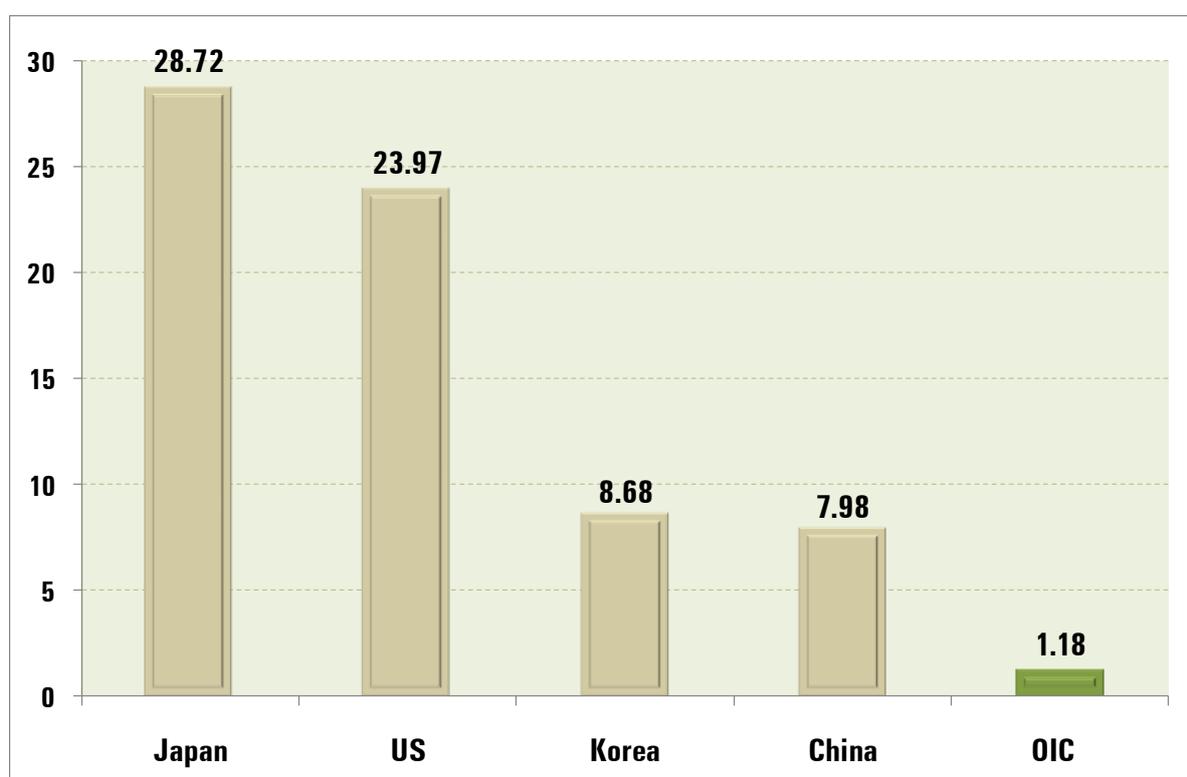
The establishment of 21 new public universities in the early 1990's and the drawing up of new academic policies to link promotions to international scientific publications have also been suggested to explain the rise in contributions of scientific articles in Turkey (Ak and Gulmez, 2006)\*\*.

\* TUBITAK (1993), *Turkish Science and Technology Policy: 1993-2003*, [<http://www.tubitak.gov.tr>].

\*\* Ak, M.Z. and A. Gulmez (2006), "Analysis of the International Publication Performance of Turkey", *Akademik Incelemeler*, Vol 1, No 1.

Finally, patent applications by countries present valuable information regarding the achievements of higher education system of the countries. In Appendix, patent applications by residents, non-residents, and total are given in Tables 8-3, 8-4 and 8-5, respectively. With an average 5527 applications, Malaysia is the leading country in terms of patent applications between 2000 and 2006 (Tables 8-3, 8-4 and 8-5 in Appendix). While Indonesia and Turkey followed Malaysia with an average of 3935 and 2937 applications, respectively; most of the OIC countries applied less than 1000 patents during these years. Moreover, 17304 (average of 2000-2006) applications from OIC countries constituted only 1.18 percent of World total patent applications which is lower than those of Japan, the US, Korea and China (see Figure 4.2-4).

Figure 4.2-4: Share in World Total Patent Applications (% , Average 2000-2006)



### 4.3 Malaysian Education Policies: A Case Study

Malaysia is considered as one of the dynamic countries in the Asian region. It has achieved remarkable economic growth and ranked high in terms of major world development indicators. On the education front also, Malaysia has recorded significant achievements. According to the World Bank's Knowledge Assessment Methodology (KAM), it is ranked 40<sup>th</sup> in 2007 compared to its 53<sup>rd</sup> position in 1995, and it ranked number one among all the OIC member countries. Two Malaysian universities were also placed among the world's top 200 universities in The Time's 2006 ranking.

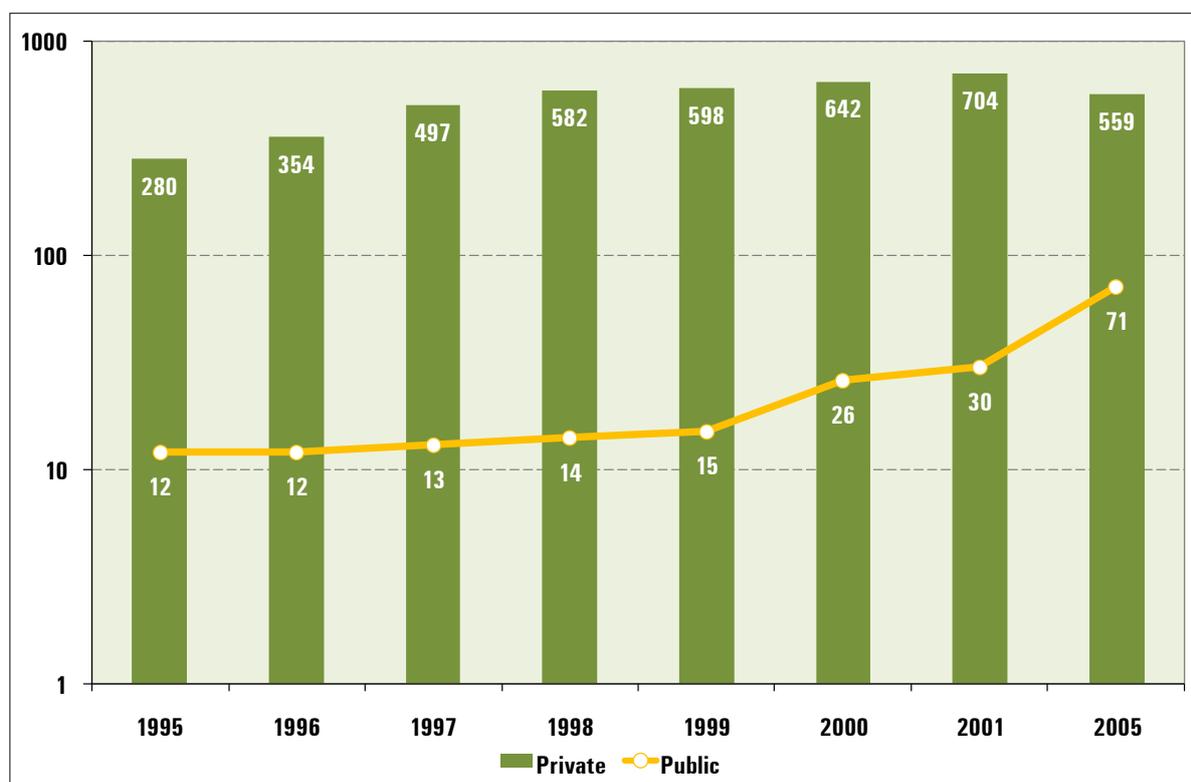
Until the mid 90's, Malaysia depended largely on capital investments to spearhead economic growth. However, it shifted from this policy to the building up of a knowledge-based economy

after mid 90's. It was envisaged to make Malaysia a fully developed country by the year 2020 (Vision 2020). It was also recognized that human capital will be the nucleus of such an economy.

In order to improve the quality of education, several reforms had been implemented, including those in the areas of curriculum revisions, improvements in teachers training programs and implementation of major legislative reforms related to the education sector. These reforms enabled Malaysia to achieve the targets of universal primary education, together with significant improvements in literacy rates and net enrolment ratios.

One of the remarkable achievements of the education policy was the involvement of the private sector in education, especially in the higher education. Following the amendment of the Education Act in 1995, and the introduction of the new Private Higher Education Act in 1996, the number of private colleges and universities has shown an exponential growth. There are now close to 600 private higher education institutions in Malaysia as compared to less than 100 earlier.

Figure 4.3-1: Public and Private Institutions of Higher Education in Malaysia, 1995-2005



The major incentives and attractiveness behind such overwhelming participation of private entities in the education sector are as follows:

- ☞ Prior to 1996, private higher educational institutions in Malaysia had no right to award degrees and diplomas. In 1996, the Malaysian Parliament passed the Private Higher Educational Institutions Act (PHEIA), along with enacting four other related pieces of legislation, to allow the private sector to enter the higher education market.

- ∞ The government encouraged the Private sector by relaxing the rules in issuing permits and reducing the cost of business by providing fiscal and financial incentives in the 1995/1996 Federal Budget. The tax incentives included tax exemption on import duties, sales taxes and excise duties on educational materials; a 100% Investment Tax Allowance for investments in technical and vocational institutions and tax deductions to corporations that make cash donations to government and semi-government institutions of higher learning.
- ∞ The large corporations involved in private education are technology-based companies. Their first motive in establishing and financing the private universities was to train their own engineers and technologists domestically. In the past they (e.g. PETRONAS - the National Oil Company, and Tenaga Nasional, the electricity corporation) have been sending students overseas on scholarships. When the necessary permission was granted, they decided to venture into the tertiary education business to train their own engineers and others, which was more cost-effective.
- ∞ The Malaysian government's plan to make Malaysia a centre of excellence in education in the Southeast Asian region is another factor that has encouraged the private sector to expand their education activities to attract foreign students.
- ∞ Due to the increases in the income levels and growth of multinational enterprises, more and more students were inclined to pursue a higher education. Furthermore, since the Malaysian government was emphasizing free primary and secondary education, the public higher education institutions were unable to meet the growing demand. Hence there was ample room for the private sector to fill this gap and make a profit out of it.

## 5 Conclusions and Recommendations

The report highlighted the prospects and challenges, faced by the member countries of the Organisation of the Islamic Conference (OIC), in attaining education goals related to primary, secondary and higher education. It also presented some of the achievements of member countries in making some headway in the development of knowledge-based economies.

In general most of the member countries have made significant progress in increasing Net Enrolment Ratios in the primary and secondary education. The member countries in Central Asia and Europe have been maintaining fairly high ratios, higher than the world averages. Similarly, some member countries such as Malaysia in East Asia and Maldives in South Asia, have accomplished excellent results in most of the main education-related indicators. However, most of the South Asian member countries could not increase their literacy rates above the 50% mark and have been struggling with low secondary enrolment ratios. The situation in the MENA region has been encouraging. Many member countries could increase their primary and secondary ratios above the world average. The conditions in Sub-Saharan Africa, on the other hand, indicate some improvements in the primary enrolment ratios, but the secondary enrolment ratios are well below the OIC and world average.

The initial focus was establishing the necessary environment for mass education, and the results reviewed above on primary and secondary education show that this aim has been achieved for most of the OIC member countries. However, education does not merely consist of providing schooling for children. Hence, to improve the quality of education has to be the next and inevitable focus for the OIC member countries. In this respect, the organization of the existing education systems should change. Among the different aspects of this organization, pedagogy, structure, finance and management can be listed. For the pedagogical aspect, student-centred and competency-based learning can be suggested. In terms of the structural aspect, lifelong learning can be important. When financing is considered, diversification of funding is possible. Although providing and improving education is mainly the responsibility of governments, supporting civil organisms is also a must for better quality education. In terms of management, a coordinated decentralization can help to a large extent.

Building a knowledge-based economy is one of the major challenges faced by most of the member countries in the 21<sup>st</sup> century. It warrants a strategic vision aiming at reformation and restructuring of policies to create a general awareness around which such a knowledge-economy can evolve. Giving importance to knowledge and its linkage to human development is fundamental in developing an economy open for such a vision. This would require developing a scientific culture that supports and encourages the contributions of the scientist and attaches importance to higher education. It would also require the implementation of policies to ensure good quality education for all at the primary and secondary level.

The report presents comparative analysis of scores of Knowledge Economy Index (KEI), for 40 member countries in six regions, based on World Bank's Knowledge Assessment Methodology. In general, the transition process of OIC member countries to Knowledge Economy has followed a slow but promisingly upward trend as the rank of 27 out of 40 OIC countries increased in 2008. Five member countries, UAE, Malaysia, Kuwait, Qatar and Bahrain, could accomplish placement among the top 50 countries in the world. The recent data of Turkey, Tunisia, Algeria and Mauritania also indicates that these countries could improve their KEI scores in the recent years.

The overall situation in the OIC countries, in implementing policies to build such a knowledge-based economy, appears to be discouraging. Most of the member countries in the high income group have been spending a mere 0.16% of their GDP on average on Research & Development (R&D) as compared to the 2.43% spent by the non-OIC countries in the same group. Nevertheless, some countries, such as Turkey, Iran, Egypt and Malaysia, have successfully implemented policies to encourage research at the university level. The publications statistics in the world-renowned journals indicate that Turkey, Iran and Egypt alone contribute more than 58% of the total OIC publications.

It is against such a background that the OIC Ten Year Programme of Action adopted in December 2005 has outlined an elaborate set of recommendations and policy prescriptions related to education and R&D in the member countries. The "New Vision" of OIC calls for a system-wide education reform in the member countries. It includes improving gender parity, increasing access to primary and secondary education and placing greater emphasis on science and Information and Communication Technology (ICT). It also calls for more investment in R&D and for devising of policies to reverse the brain drain from the member countries. The New Vision strongly recommends the adoption of a strategy whereby each country should contribute at least 1% of its Gross Domestic Product (GDP) to R&D activities. Some of the other initiatives of the member countries have been outlined in Box 4.1 of this report.

There are several joint programs and projects that have been implemented by the OIC and the UN entities to improve ICT standards and filling the gap between Developed and Developing Countries. These projects involve the exchange of ICT related data, establishment of documentation centres, facilitating vocational and technical education programs and encouraging the participation of women in ICT.

The specific education policy recommendations, under the OIC Ten Year Programme of Action, have been reiterated as follows:

- ⌘ Effectively improve and reform higher education institutions and curricula, link postgraduate studies to the comprehensive development plans of the Islamic world.
- ⌘ At the same time, priority should be given to science and technology and facilitating academic interaction and exchange of knowledge among the academic institutions of the Member Countries.

- ⌘ Urge the member countries to strive for quality education that promotes creativity, innovation, and R&D.
- ⌘ Assimilate highly-qualified Muslims within the Muslim world, develop a comprehensive strategy in order to utilize their competencies and prevent the brain migration phenomenon.
- ⌘ Call upon Islamic countries to encourage R&D programs, taking into account that the global percentage of this activity is 2% of the Gross Domestic Product (GDP), and request member countries to ensure that their individual contribution is not inferior to half of this percentage.
- ⌘ Study the feasibility of creating an OIC Award for Outstanding Scientific Achievements by Muslim scientists.
- ⌘ Encourage public and private national research institutions to invest on technology capacity-building.
- ⌘ Review the performance of the OIC-affiliated universities so as to improve their effectiveness and efficiency.

One final word is that higher investment in education should be associated with faster economic growth. Most OIC member countries have committed substantial resources to expand and improve their education systems, but these investments in education have not generated the maximal benefits for the individuals and the societies because of the lack of associated economic growth. Improvements in education without a corresponding increase in new job opportunities in the more dynamic sectors of the economy would mean a better educated, but still unemployed, labour force. So, the link between the improvements in the level and quality of education and economic growth should be strong.

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## 7 Country Profiles

The following Country Profiles have been prepared by SESRIC to give a general overview on education for each of the OIC Member Countries. These profiles include information on the countries' Measures of Progression and Completion, Education Expenditures, and Knowledge Economy Index as well as School Enrolment and Literacy Rates, along with selected KEI sub-indicators.

The Country Profiles are based on the latest available data from the World Bank. The Country Profiles are intended for general information and background briefing purposes only.

### 7.1 Structure

The profiles exhibit data in both tables and charts. The profiles host two tables in which the first one summarizes the Measures of Progression and Completion, and Education Expenditures, whereas the second one puts forth the country's Knowledge Economy Index (KEI) and the Pillars of KEI. However, it should be noted that due to lack of data, the profiles of 17 out of 57 OIC Member Countries do not contain the KEI table.

The first table presents data related to Measures of Progression and Completion, and Education Expenditures. The concerned country's data are then compared with the averages of the geographic region and income classification the country belongs to. While calculating the averages, all the countries belonging to that group are included. The averages are calculated from the annual data between years 2000 and 2005. The Measures of Progression and Completion part of Table 1 presents the Primary Completion Rate (%) and the Progression to Secondary School (%) on both gender and total basis. The Education Expenditures part of Table 1 presents the Public Spending on Education, Pupil-Teacher Ratio (%) and the Expenditure per Student (% of GDP per capita). Although most of the data are available for the majority of countries, the missing/unavailable data are denoted by two dots [..]

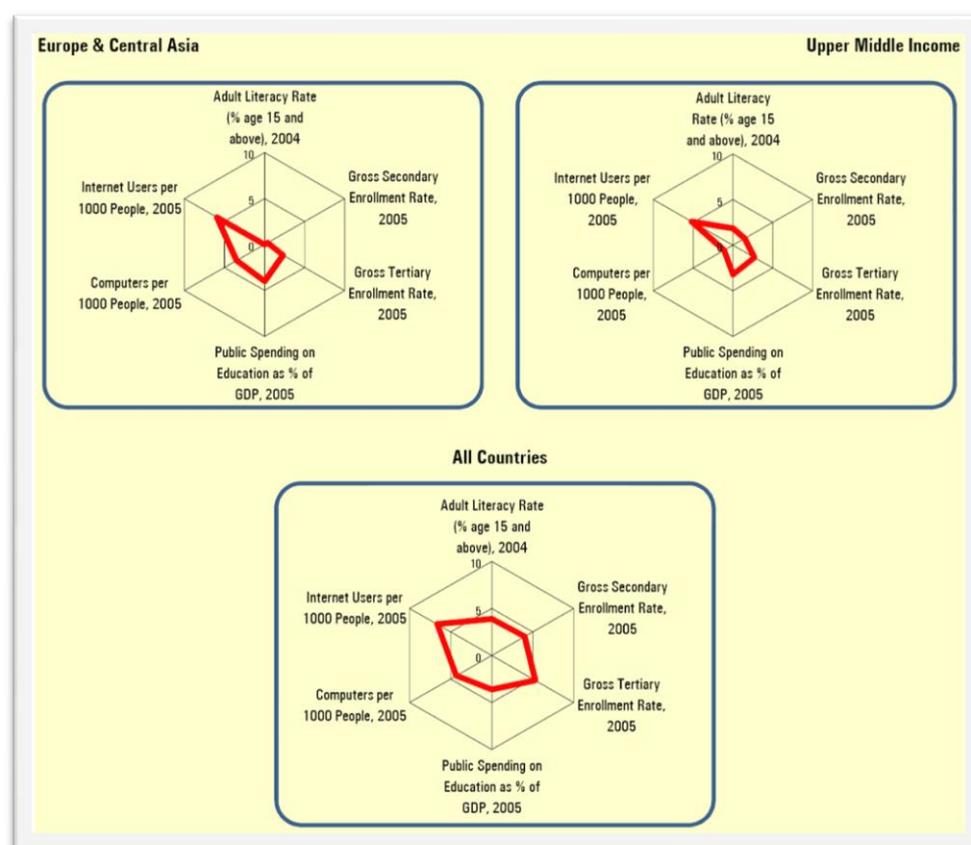
The second table, where data available, presents Knowledge Economy Index (KEI) and Pillars of the KEI data for the concerned country and again compares the country data with the averages of the geographic region and income classification the country belongs to. Also the progress of the country's KEI rank from 1995 to 2007 is provided in the second table.

Beside the tables, the profiles exhibit charts under the abovementioned tables. The three charts coming after the first table show the averages of the Primary and Secondary School Enrolment Ratios and Adult Literacy Rate for the concerned country's citizens who are 15 or more years old for the 1990s and 2000s. The averages of the concerned country in these three charts are compared to those of the OIC.

The section after the second table introduces three hexagonal diamond charts each with six indicators, where data is available for the concerned country. Those six indicators of the concerned

country are demonstrated on a scale from 0 to 10 showing the country's performance against all 137 countries, regional and income group the country belongs to, respectively. In respective diamonds, each 10% tier of all countries, regional and income group are given a normalized value; in this case, to have a normalized value of 10, the country has to be in the top 10% performers of the group it is found in. The country's relative position is reflected by the red line in the diamonds. For example, for the country presented in Figure 1, the country's "Computers per 1000 People" indicator shows the country is found to be below its regional and income group average (values below 5), whereas it has attained the average value when all countries are considered.

Figure 7.1-1: Country Indicator Comparison on a Global, Regional and Income Group Basis



The data for the below indicators of the hexagonal diamonds are not available for the following countries, so the red line passes through the 0 level:

- ∞ Adult Literacy Rate (% age 15 and above), 2004: Djibouti
- ∞ Gross Tertiary Enrolment Rate, 2005: Syria
- ∞ Public Spending on Education as % of GDP, 2005: Algeria, Bahrain, Egypt, Nigeria, Sudan, Syria, Uzbekistan
- ∞ Computers per 1000 People, 2005: Kazakhstan, Sierra Leone, Tajikistan, Uzbekistan

## 7.2 East Asia

Table 7-1: Education Indicators for East Asia

	NER Primary		NER Secondary		Primary Completion		Progression to Secondary		Adult Literacy Rate		Educational Spending as % of GDP		Educational Spending as % of Government Expenditure	
	1990s*	2000s**	1990s	2000s	1990s	2000s	1990s	2000s	1990s	2000s	1990s	2000s	1990s	2000s
<b>Brunei</b>	92.03	93.59	70.97	88.70	104.68	116.49	..	90.85	87.80	92.67	4.44	5.15	9.32	9.14
<b>Indonesia</b>	96.34	93.90	38.53	54.02	93.99	98.21	..	80.36	81.52	90.38	0.99	1.14	..	9.41
<b>Malaysia</b>	97.72	96.80	65.51	67.61	92.21	92.83	99.04	..	82.92	88.69	5.41	7.28	21.59	24.03
<b>East Asia</b>	96.48	94.13	..	62.38	100.85	99.71	..	..	80.11	90.77	2.25	2.87	15.35	15.19
<b>East Asia-OIC</b>	95.36	94.76	58.34	70.11	96.96	102.51	99.04	85.60	84.08	90.58	3.61	4.53	15.46	14.19

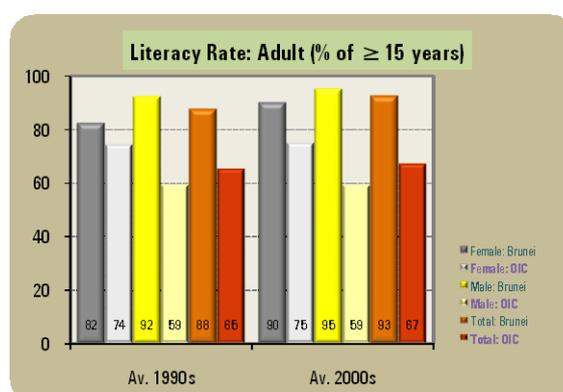
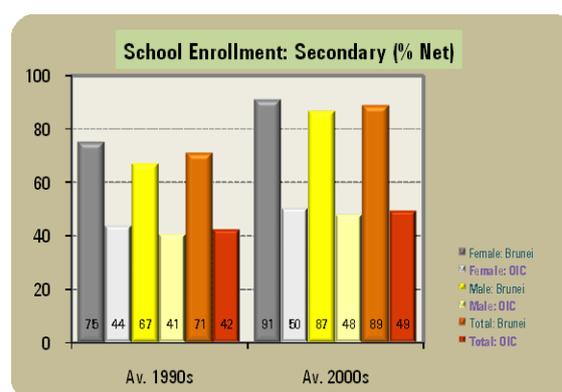
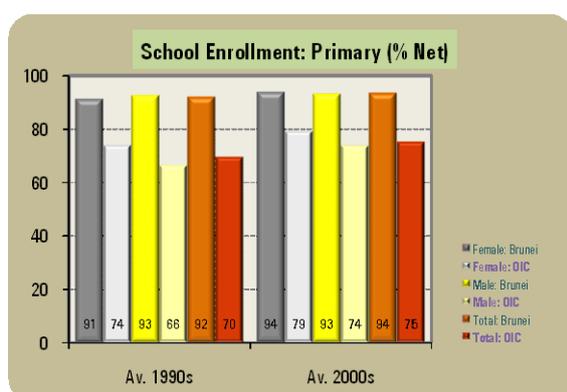
\* 1990s: Averages are calculated from the annual data between 1990 and 1999.

\*\* 2000s: Averages are calculated from the annual data between 2000 and 2005.

## 7.2.1 Brunei

	Brunei Average	East Asia & Pacific Average	High Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	115.97	100.28	97.97
Male	116.93	100.46	98.54
Total	116.49	99.71	98.26
<b>Progression to Secondary School %</b>			
Female	93.57	..	..
Male	88.48	..	..
Total	90.85	..	..
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	5.15	2.87	5.25
% of Government Expenditure	9.14	15.19	12.67
<b>Pupil - Teacher Ratio %</b>			
Primary	12.25	21.10	16.50
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	..	8.50	18.51
Secondary	..	7.05	24.12
Tertiary	..	32.19	29.96

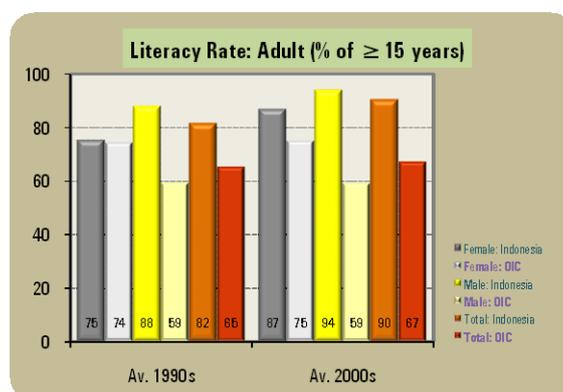
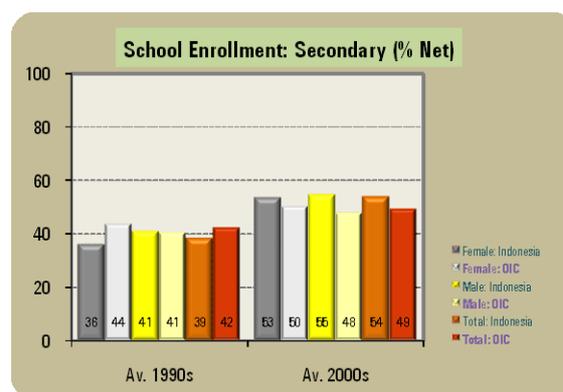
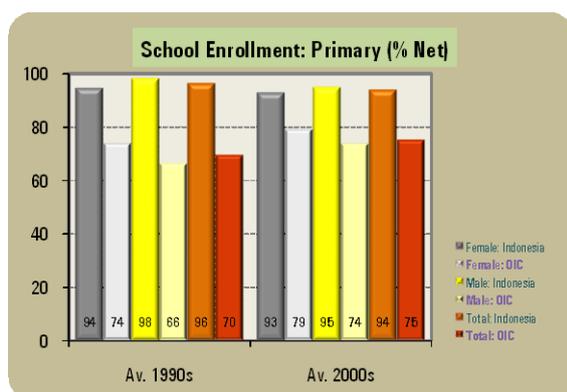
Averages are calculated from the annual data between years 2000 and 2005.



### 7.2.2 Indonesia

	Indonesia Average	East Asia & Pacific Average	Lower Middle Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	98.62	100.28	96.46
Male	97.80	100.46	97.29
Total	98.21	99.71	96.71
<b>Progression to Secondary School %</b>			
Female	80.88	..	..
Male	79.85	..	..
Total	80.36	..	..
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	1.14	2.87	4.40
% of Government Expenditure	9.41	15.19	16.22
<b>Pupil - Teacher Ratio %</b>			
Primary	21.07	21.10	21.31
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	3.13	8.50	11.00
Secondary	6.07	7.05	16.74
Tertiary	17.13	32.19	..

Averages are calculated from the annual data between years 2000 and 2005.

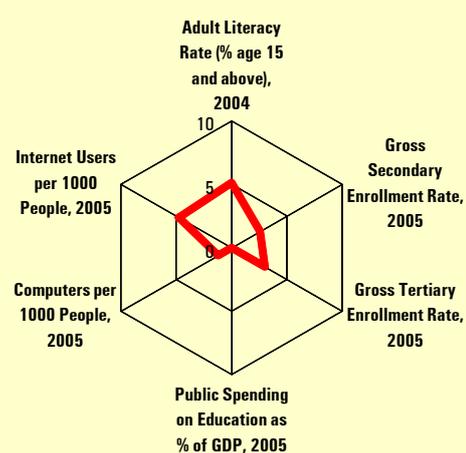
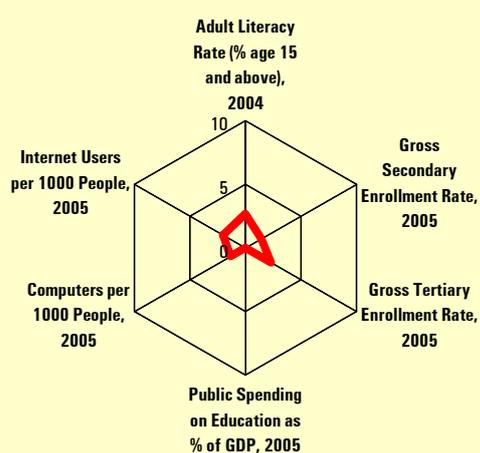


## 7.2.2 Indonesia (cont.)

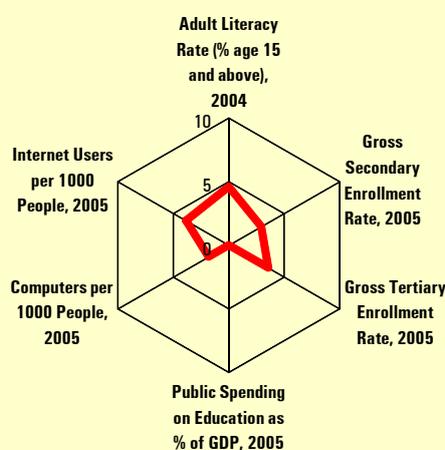
Rank in 2007: 91 out of 137 (based on KEI)	Indonesia	East Asia & Pacific	Lower Middle Income
Rank in 1995: 92 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	3.29	5.40	3.87
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	3.20	5.43	3.54
Innovation	3.38	5.18	3.81
Education	3.69	5.48	4.33
Information and Communication Technology	2.87	5.52	3.81

## East Asia &amp; Pacific

## Lower Middle Income



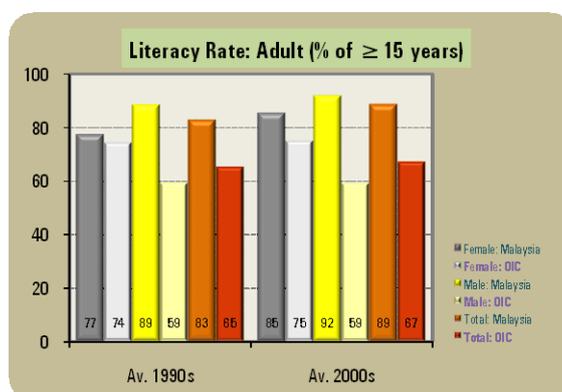
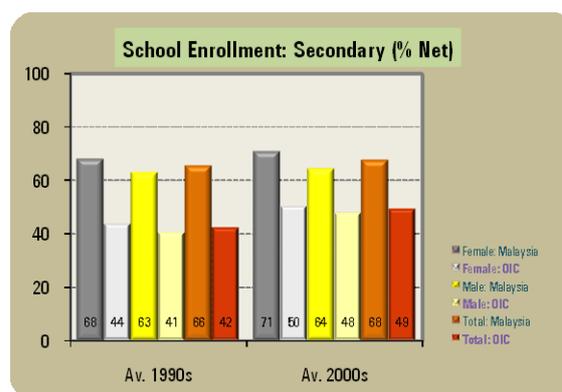
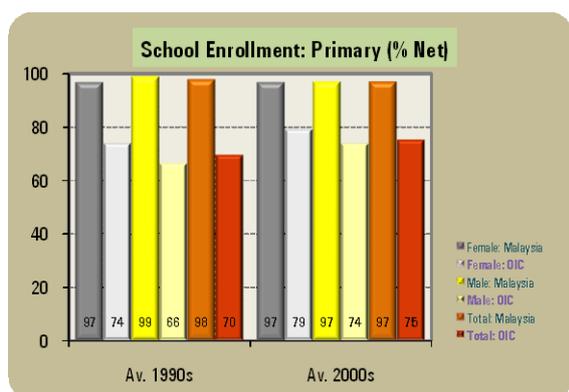
## All Countries



## 7.2.3 Malaysia

	Malaysia Average	East Asia & Pacific Average	Upper Middle Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	92.77	100.28	98.39
Male	92.88	100.46	98.69
Total	92.83	99.71	98.54
<b>Progression to Secondary School %</b>			
Female	..	..	..
Male	..	..	..
Total	..	..	90.86
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	7.28	2.87	4.17
% of Government Expenditure	24.03	15.19	13.97
<b>Pupil - Teacher Ratio %</b>			
Primary	18.63	21.10	21.50
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	16.62	8.50	13.66
Secondary	25.13	7.05	17.53
Tertiary	92.87	32.19	28.90

Averages are calculated from the annual data between years 2000 and 2005.

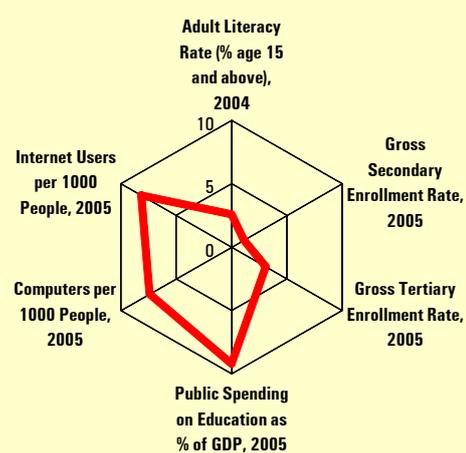
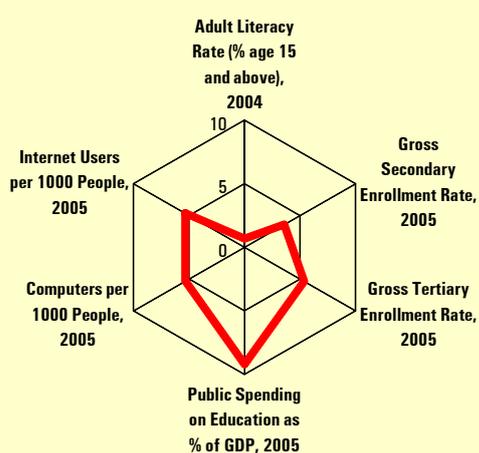


## 7.2.3 Malaysia (cont.)

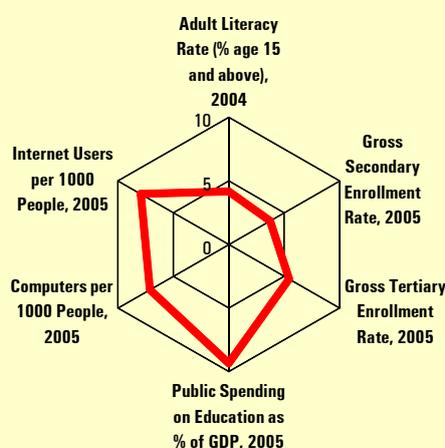
Rank in 2007: 40 out of 137 (based on KEI)	Malaysia	East Asia & Pacific	Upper Middle Income
Rank in 1995: 53 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	6.23	5.40	6.14
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	6.50	5.43	6.06
Innovation	6.74	5.18	6.05
Education	4.45	5.48	6.10
Information and Communication Technology	7.23	5.52	6.33

## East Asia &amp; Pacific

## Upper Middle Income



## All Countries



### 7.3 South Asia

Table 7-2: Education Indicators for South Asia

	NER Primary		NER Secondary		Primary Completion		Progression to Secondary		Adult Literacy Rate		Educational Spending as % of GDP		Educational Spending as % of Government Expenditure	
	1990s*	2000s**	1990s	2000s	1990s	2000s	1990s	2000s	1990s	2000s	1990s	2000s	1990s	2000s
<b>Afghanistan</b>	..	..	..	..	25.35	37.73	..	..	..	28.00	..	..	..	..
<b>Bangladesh</b>	83.10	86.05	40.69	43.40	63.52	72.04	81.90	89.53	35.32	47.49	1.95	2.37	12.83	15.17
<b>Maldives</b>	97.65	97.74	31.54	54.87	..	141.16	..	73.46	96.17	96.33	5.39	7.86	13.62	15.00
<b>Pakistan</b>	33.26	62.60	..	28.10	..	61.64	..	71.45	42.85	46.44	2.42	2.13	7.92	9.84
<b>South Asia</b>	..	79.50	..	..	64.95	73.58	87.46	85.82	46.81	58.42	2.80	2.60	10.61	14.03
<b>South Asia-OIC</b>	71.34	82.13	36.11	42.13	44.43	78.14	81.90	78.15	58.11	54.56	3.25	4.12	11.46	13.34

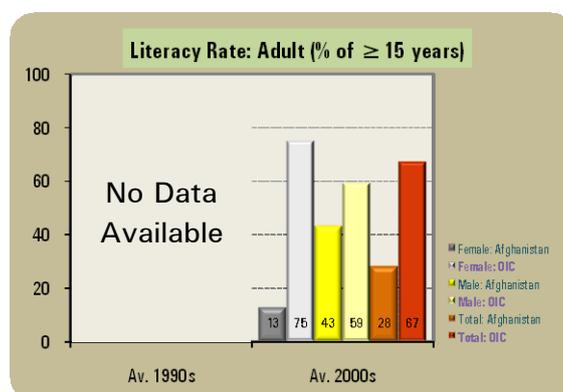
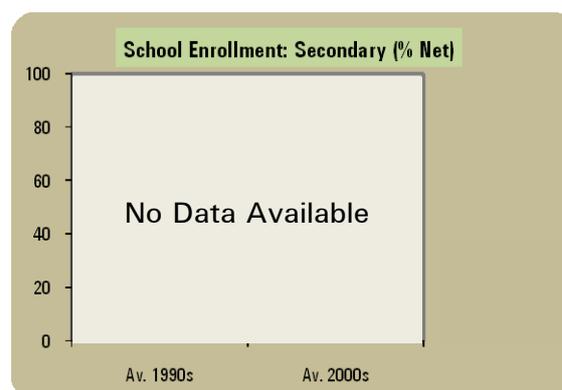
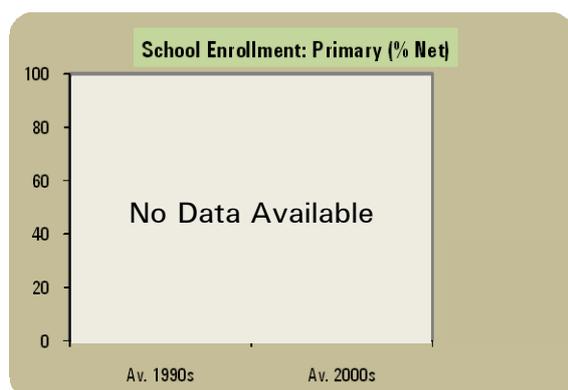
\* 1990s: Averages are calculated from the annual data between 1990 and 1999.

\*\* 2000s: Averages are calculated from the annual data between 2000 and 2005.

## 7.3.1 Afghanistan

	Afghanistan Average	South Asia Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	20.79	68.57	63.28
Male	53.53	78.20	73.41
Total	37.73	73.58	68.49
<b>Progression to Secondary School %</b>			
Female	..	85.28	79.30
Male	..	86.13	80.71
Total	..	85.82	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	..	2.60	3.13
% of Government Expenditure	..	14.03	..
<b>Pupil - Teacher Ratio %</b>			
Primary	69.04	41.49	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	..	10.69	..
Secondary	..	12.36	..
Tertiary	..	79.58	..

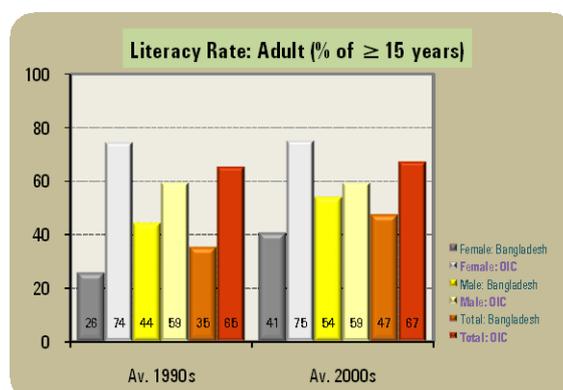
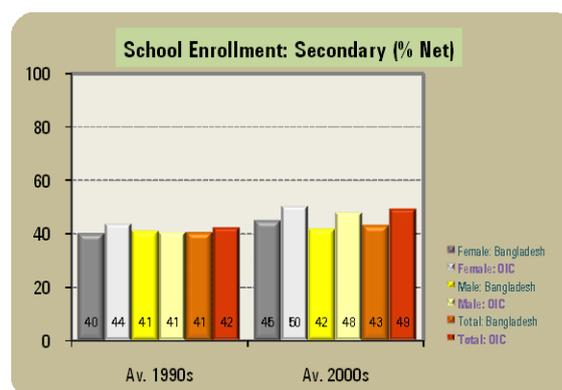
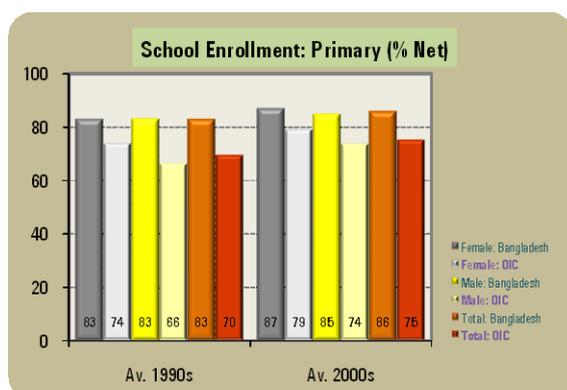
Averages are calculated from the annual data between years 2000 and 2005.



## 7.3.2 Bangladesh

	Bangladesh Average	South Asia Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	74.38	68.57	63.28
Male	69.81	78.20	73.41
Total	72.04	73.58	68.49
<b>Progression to Secondary School %</b>			
Female	93.95	85.28	79.30
Male	85.14	86.13	80.71
Total	89.53	85.82	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	2.37	2.60	3.13
% of Government Expenditure	15.17	14.03	..
<b>Pupil - Teacher Ratio %</b>			
Primary	54.47	41.49	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	7.73	10.69	..
Secondary	12.94	12.36	..
Tertiary	40.63	79.58	..

Averages are calculated from the annual data between years 2000 and 2005.

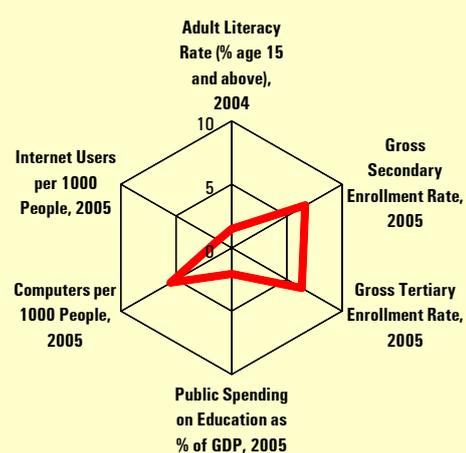
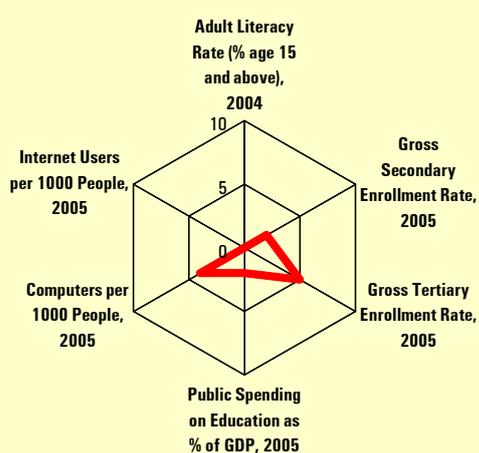


## 7.3.2 Bangladesh (cont.)

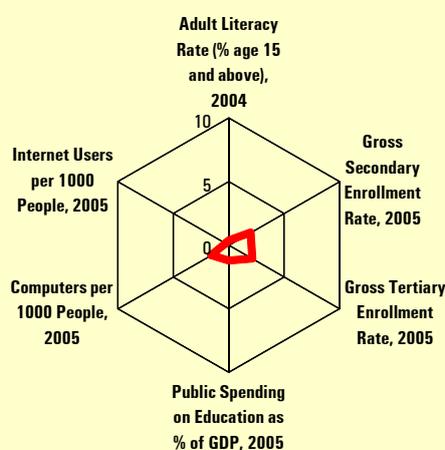
Rank in 2007: 130 out of 137 (based on KEI)	Bangladesh	South Asia	Low Income
Rank in 1995: 133 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	1.14	2.24	1.85
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	0.79	2.55	2.32
Innovation	1.27	2.63	1.64
Education	1.48	2.17	1.90
Information and Communication Technology	1.01	1.60	1.54

## South Asia

## Low Income



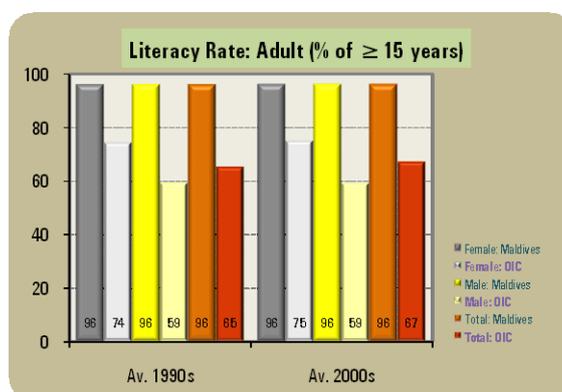
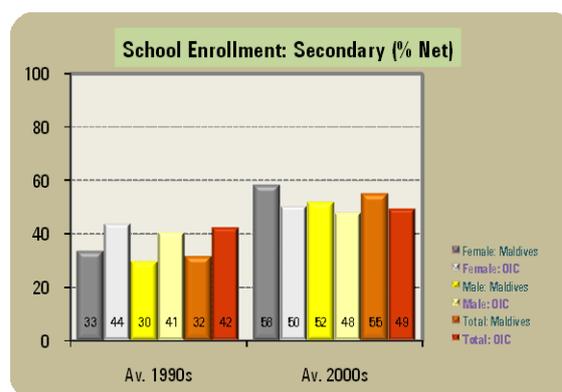
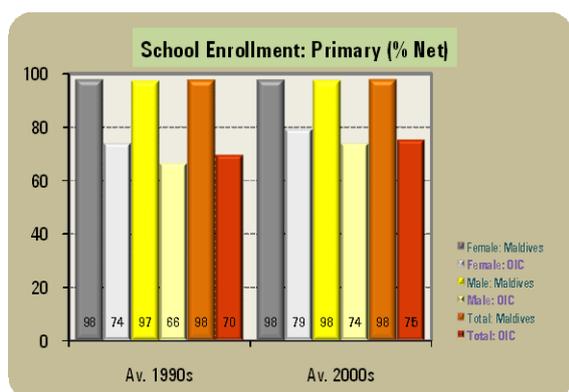
## All Countries



### 7.3.3 Maldives

	Maldives Average	South Asia Average	Lower Middle Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	141.66	68.57	96.46
Male	140.69	78.20	97.29
Total	141.16	73.58	96.71
<b>Progression to Secondary School %</b>			
Female	78.08	85.28	..
Male	69.18	86.13	..
Total	73.46	85.82	..
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	7.86	2.60	4.40
% of Government Expenditure	15.00	14.03	16.22
<b>Pupil - Teacher Ratio %</b>			
Primary	20.37	41.49	21.31
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	22.38	10.69	11.00
Secondary	34.36	12.36	16.74
Tertiary	..	79.58	..

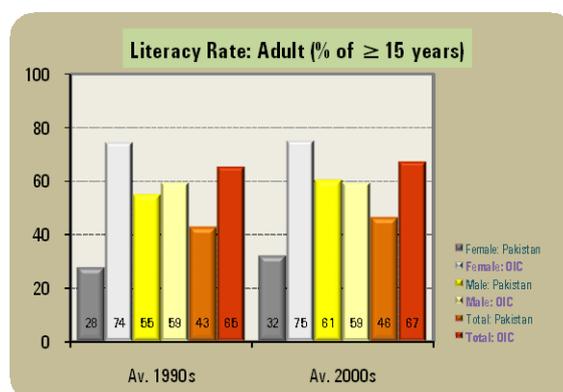
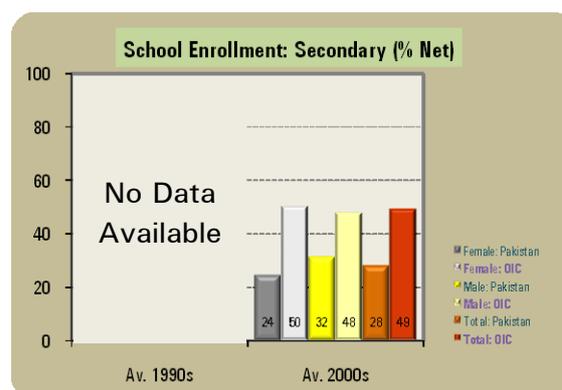
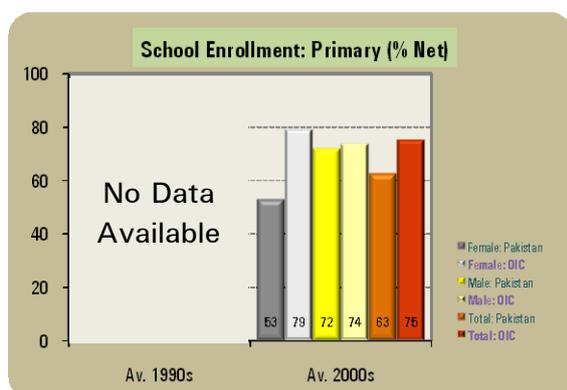
Averages are calculated from the annual data between years 2000 and 2005.



## 7.3.4 Pakistan

	Pakistan Average	South Asia Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	51.96	68.57	63.28
Male	70.81	78.20	73.41
Total	61.64	73.58	68.49
<b>Progression to Secondary School %</b>			
Female	73.62	85.28	79.30
Male	70.02	86.13	80.71
Total	71.45	85.82	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	2.13	2.60	3.13
% of Government Expenditure	9.84	14.03	..
<b>Pupil - Teacher Ratio %</b>			
Primary	36.06	41.49	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	..	10.69	..
Secondary	..	12.36	..
Tertiary	..	79.58	..

Averages are calculated from the annual data between years 2000 and 2005.

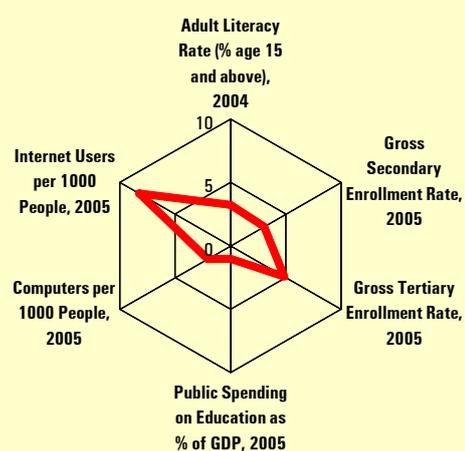
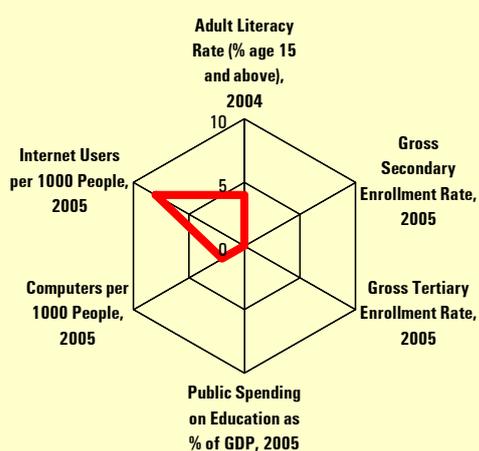


7.3.4 Pakistan (cont.)

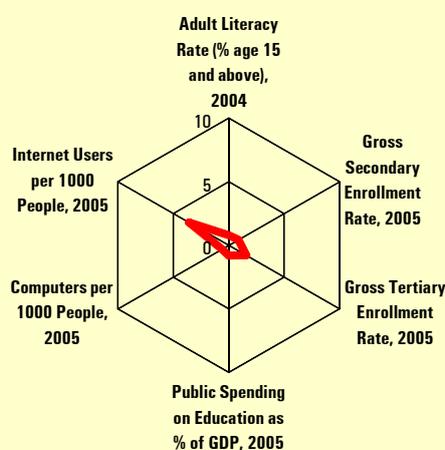
Rank in 2007: 114 out of 137 (based on KEI)	Pakistan	South Asia	Low Income
Rank in 1995: 110 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	1.89	2.24	1.85
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	1.75	2.55	2.32
Innovation	2.76	2.63	1.64
Education	1.09	2.17	1.90
Information and Communication Technology	1.94	1.60	1.54

South Asia

Low Income



All Countries



## 7.4 Middle East and North Africa

Table 7-3: Education Indicators for Middle East and North Africa

	NER Primary		NER Secondary		Primary Completion		Progression to Secondary		Adult Literacy Rate		Educational Spending as % of GDP		Educational Spending as % of Government Expenditure	
	1990s*	2000s**	1990s	2000s	1990s	2000s	1990s	2000s	1990s	2000s	1990s	2000s	1990s	2000s
Algeria	89.77	95.11	53.36	65.02	81.80	90.27	71.86	78.41	..	69.87	5.10	..	22.05	..
Bahrain	97.48	97.34	84.81	90.02	94.14	102.53	98.52	97.30	84.01	86.55	3.94	..	12.80	..
Djibouti	28.01	31.66	..	17.32	27.81	31.34	42.30	59.83	..	..	4.86	8.68	11.10	22.61
Egypt	89.98	94.24	..	80.88	100.08	95.46	83.68	83.53	55.59	71.41	3.89	..	..	..
Iran	87.20	87.49	..	77.87	94.42	93.45	..	92.30	69.30	79.72	4.38	4.75	20.52	19.62
Iraq	89.25	84.92	29.54	35.46	56.55	66.72	72.59	69.77	..	74.05	..	..	..	..
Jordan	92.51	92.69	80.15	81.62	95.94	96.95	97.15	97.06	..	90.51	6.45	..	19.83	..
Kuwait	67.76	83.97	88.55	81.05	99.12	91.02	96.73	97.40	78.40	93.27	4.83	5.62	3.37	13.49
Lebanon	76.39	84.68	..	73.02	94.87	86.33	85.41	87.07	..	..	2.03	2.59	10.40	11.25
Libya	93.17	..	..	..	..	..	..	..	74.67	84.16	2.67	..	..	..
Morocco	63.23	84.42	..	32.67	48.25	69.02	80.74	79.51	41.59	52.31	5.68	6.44	26.01	25.98
Oman	74.93	79.14	64.63	73.09	75.49	88.69	94.58	98.31	..	81.36	3.71	3.96	18.57	23.29
Palestine	96.75	87.87	77.05	84.54	101.12	99.64	96.53	97.66	86.06	92.39	..	..	..	..
Qatar	90.75	93.23	71.73	81.28	68.21	92.37	..	94.71	83.26	88.96	3.52	1.59	..	..
Saudi Arabia	72.82	92.73	35.06	66.30	60.47	92.91	..	95.03	70.82	81.10	7.09	7.06	21.90	26.08
Syria	91.54	94.01	39.38	50.01	93.58	100.23	68.53	87.30	..	81.87	3.86	..	14.20	..
Tunisia	93.17	96.04	..	66.97	81.78	92.39	68.05	85.35	..	74.30	6.47	7.04	14.26	18.79
UAE	89.12	82.47	64.28	72.46	90.60	87.40	96.00	97.76	79.47	88.67	1.97	1.77	14.98	24.32
Yemen	52.84	68.87	31.57	35.45	53.92	58.67	84.16	85.88	37.09	54.07	..	9.75	..	32.78
MENA	83.13	87.83	..	62.49	79.99	85.98	78.59	85.23	58.21	72.96	4.57	..	19.06	..
MENA-OIC	80.88	85.05	60.01	64.72	78.79	85.30	82.45	88.01	69.11	79.09	4.40	5.39	16.15	21.82

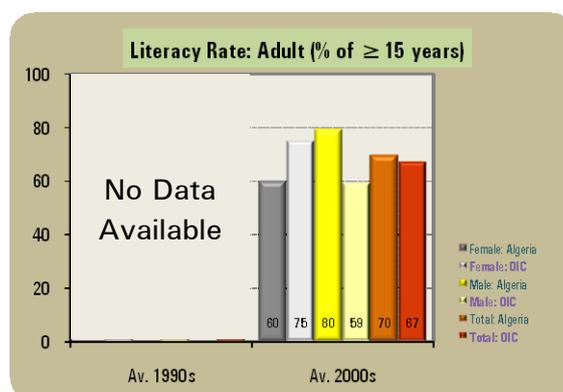
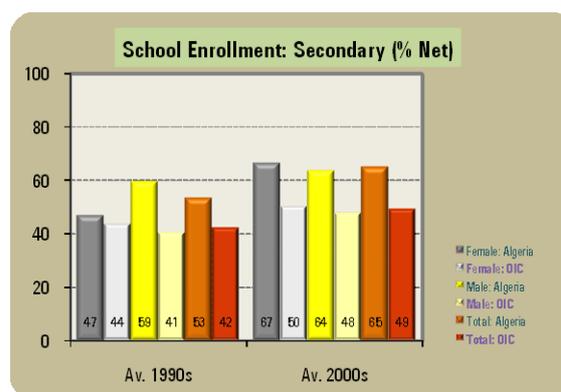
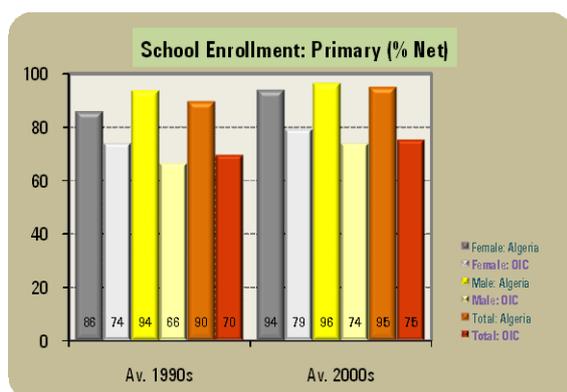
\* 1990s: Averages are calculated from the annual data between 1990 and 1999.

\*\* 2000s: Averages are calculated from the annual data between 2000 and 2005.

## 7.4.1 Algeria

	Algeria Average	Middle East & North Africa Average	Lower Middle Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	90.01	82.32	96.46
Male	90.51	89.48	97.29
Total	90.27	85.98	96.71
<b>Progression to Secondary School %</b>			
Female	82.06	86.52	..
Male	75.22	84.07	..
Total	78.41	85.23	..
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	..	..	4.40
% of Government Expenditure	..	..	16.22
<b>Pupil - Teacher Ratio %</b>			
Primary	26.83	23.80	21.31
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	10.46	14.37	11.00
Secondary	17.12	17.31	16.74
Tertiary	..	..	..

Averages are calculated from the annual data between years 2000 and 2005.

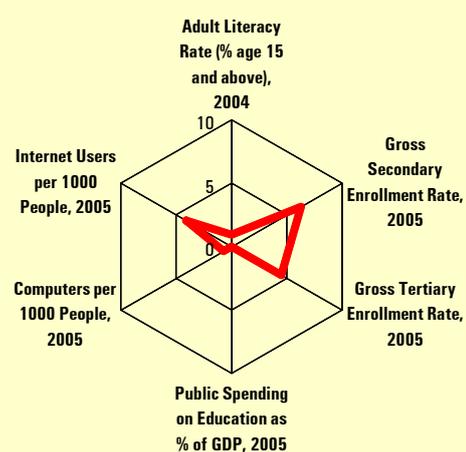
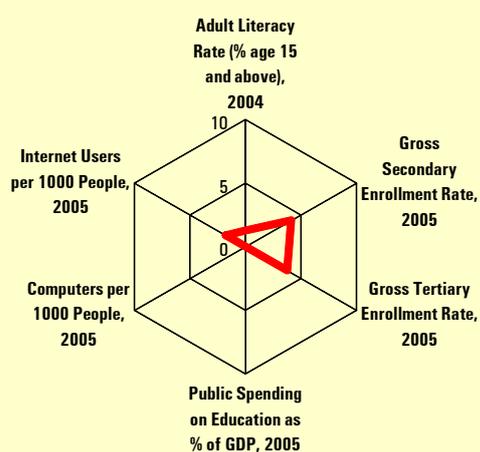


## 7.4.1 Algeria (cont.)

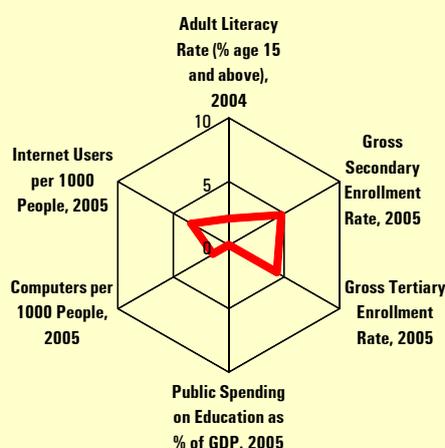
Rank in 2007: 99 out of 137 (based on KEI)	Algeria	Middle East & North Africa	Lower Middle Income
Rank in 1995: 107 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	3.07	4.41	3.87
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	2.14	4.34	3.54
Innovation	3.37	4.23	3.81
Education	3.72	4.08	4.33
Information and Communication Technology	3.08	4.99	3.81

## Middle East &amp; North Africa

## Lower Middle Income



## All Countries

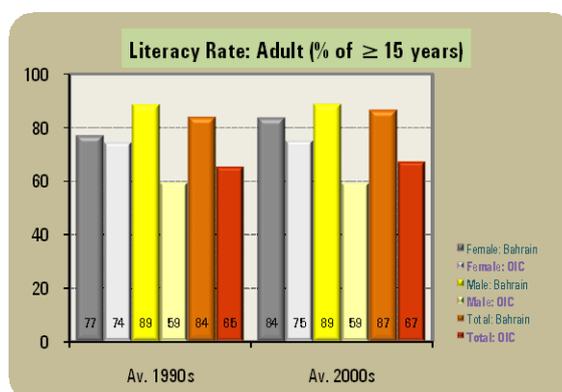
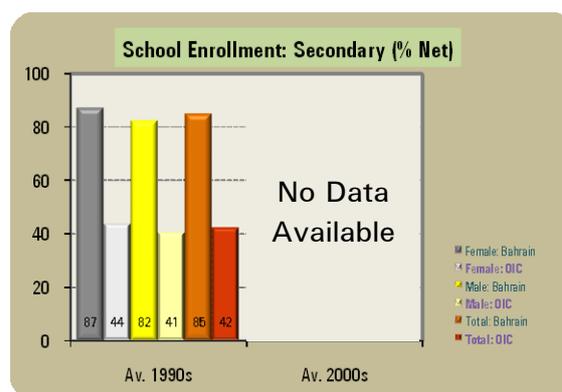
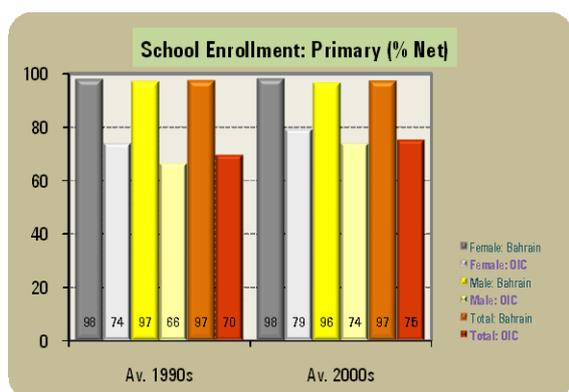


\* No data available for *Public Spending on Education as % of GDP, 2005*.

### 7.4.2 Bahrain

	Bahrain Average	Middle East & North Africa Average	High Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	104.02	82.32	97.97
Male	101.14	89.48	98.54
Total	102.53	85.98	98.26
<b>Progression to Secondary School %</b>			
Female	99.35	86.52	..
Male	95.39	84.07	..
Total	97.30	85.23	..
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	..	..	5.25
% of Government Expenditure	..	..	12.67
<b>Pupil - Teacher Ratio %</b>			
Primary	17.48	23.80	16.50
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	15.82	14.37	18.51
Secondary	17.70	17.31	24.12
Tertiary	..	..	29.96

Averages are calculated from the annual data between years 2000 and 2005.

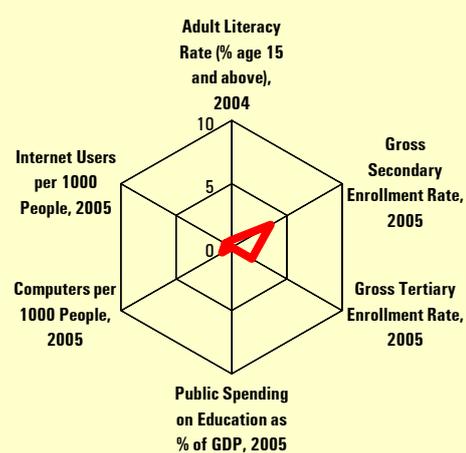
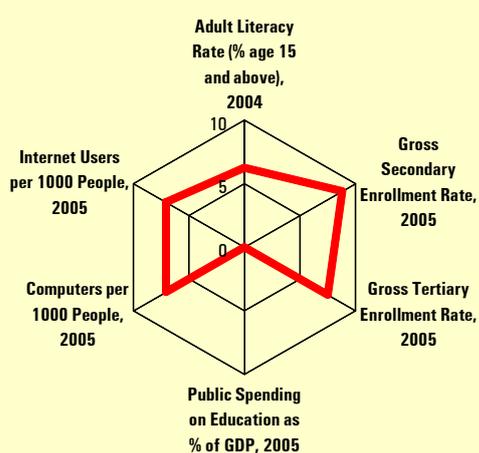


## 7.4.2 Bahrain (cont.)

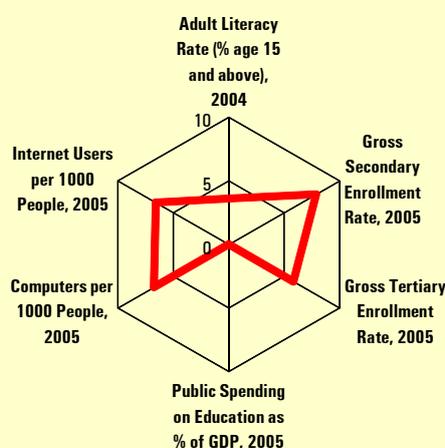
Rank in 2007: 52 out of 137 (based on KEI)	Bahrain	Middle East & North Africa	High Income
Rank in 1995: 34 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	5.58	4.41	8.07
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	6.59	4.34	8.06
Innovation	2.84	4.23	8.19
Education	5.77	4.08	7.63
Information and Communication Technology	7.10	4.99	8.40

## Middle East &amp; North Africa

## High Income



## All Countries

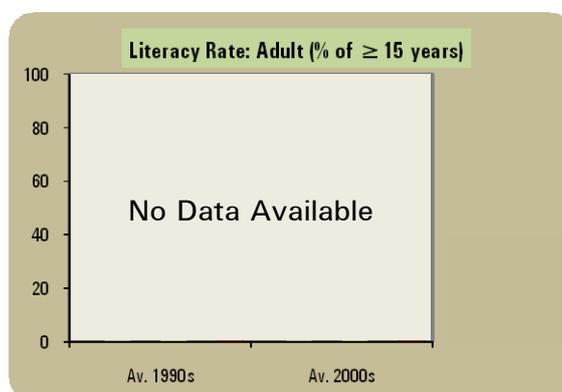
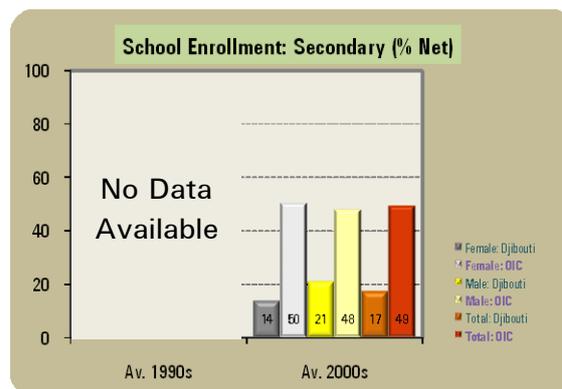
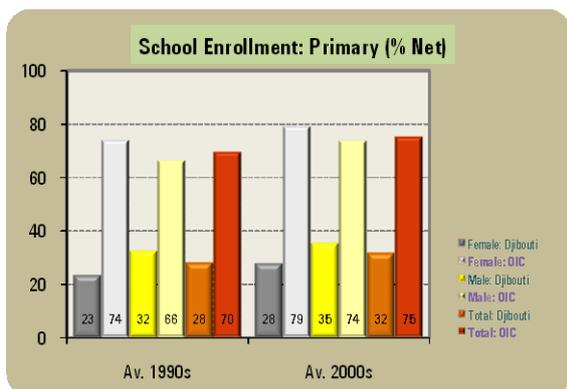


\* No data available for *Public Spending on Education as % of GDP, 2005*.

### 7.4.3 Djibouti

	Djibouti Average	Middle East & North Africa Average	Lower Middle Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	26.56	82.32	96.46
Male	36.04	89.48	97.29
Total	31.34	85.98	96.71
<b>Progression to Secondary School %</b>			
Female	57.21	86.52	..
Male	61.68	84.07	..
Total	59.83	85.23	..
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	8.68	..	4.40
% of Government Expenditure	22.61	..	16.22
<b>Pupil - Teacher Ratio %</b>			
Primary	34.15	23.80	21.31
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	22.15	14.37	11.00
Secondary	..	17.31	16.74
Tertiary	..	..	..

Averages are calculated from the annual data between years 2000 and 2005.

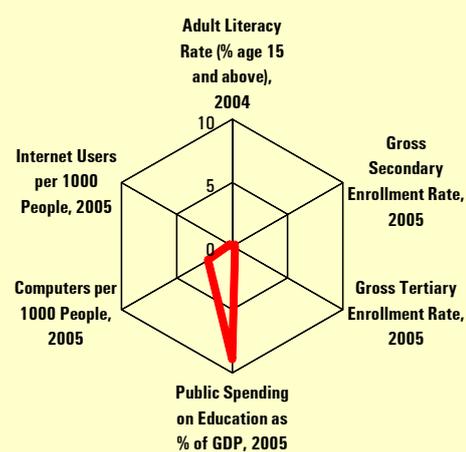
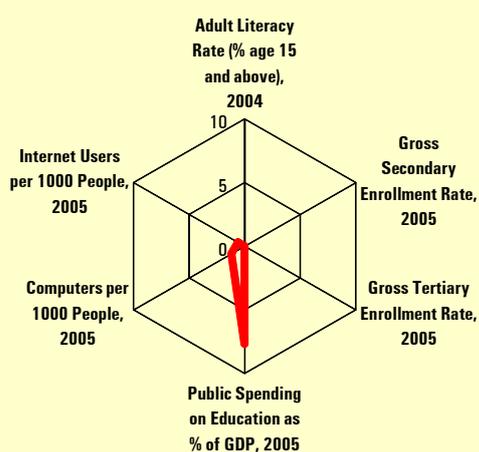


## 7.4.3 Djibouti (cont.)

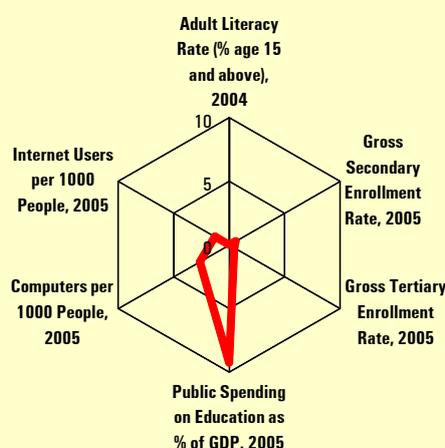
Rank in 2007: 135 out of 137 (based on KEI)	Djibouti	Middle East & North Africa	Lower Middle Income
Rank in 1995: 113 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	0.79	4.41	3.87
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	0.98	4.34	3.54
Innovation	0.00	4.23	3.81
Education	0.52	4.08	4.33
Information and Communication Technology	1.65	4.99	3.81

## Middle East &amp; North Africa

## Lower Middle Income



## All Countries

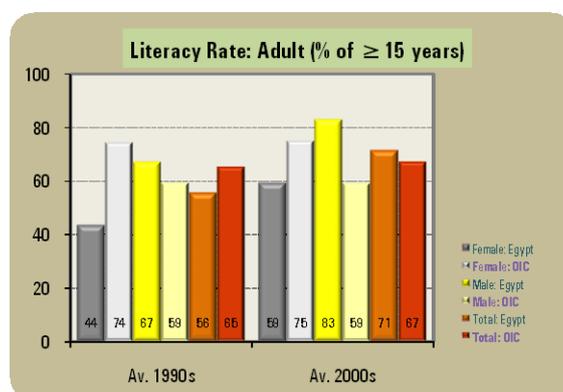
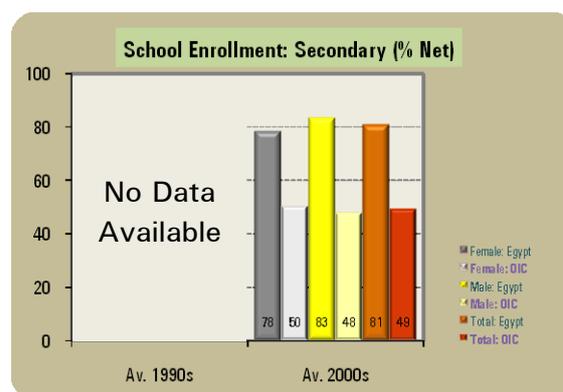
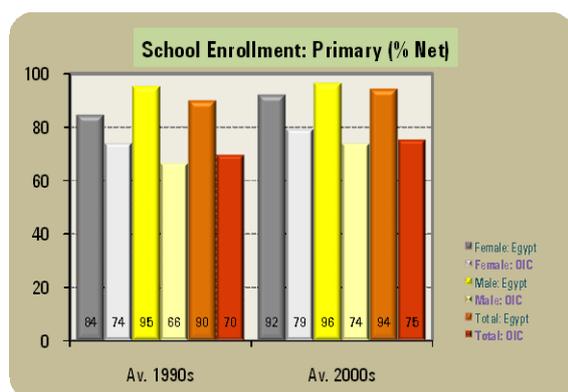


\* No data available for Adult Literacy Rate (% age 15 and above), 2004.

## 7.4.4 Egypt

	Egypt Average	Middle East & North Africa Average	Lower Middle Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	92.76	82.32	96.46
Male	98.05	89.48	97.29
Total	95.46	85.98	96.71
<b>Progression to Secondary School %</b>			
Female	87.18	86.52	..
Male	80.36	84.07	..
Total	83.53	85.23	..
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	..	..	4.40
% of Government Expenditure	..	..	16.22
<b>Pupil - Teacher Ratio %</b>			
Primary	22.90	23.80	21.31
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	..	14.37	11.00
Secondary	..	17.31	16.74
Tertiary	..	..	..

Averages are calculated from the annual data between years 2000 and 2005.

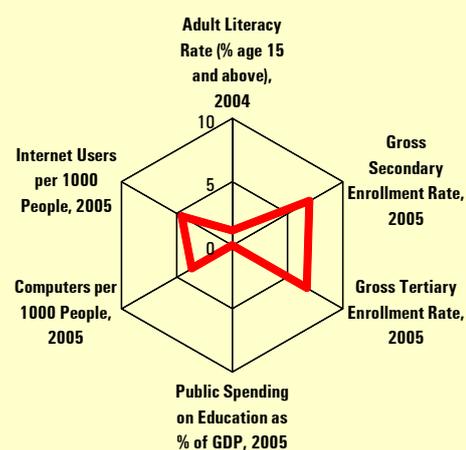
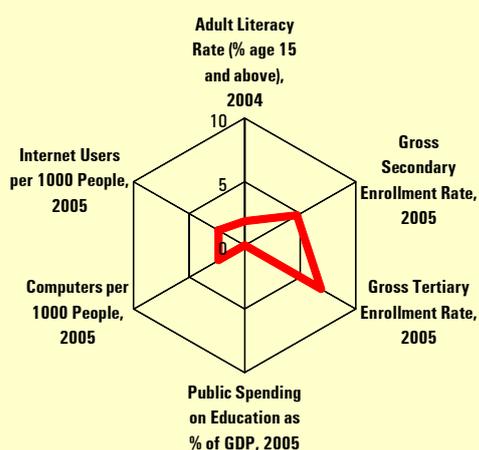


## 7.4.4 Egypt (cont.)

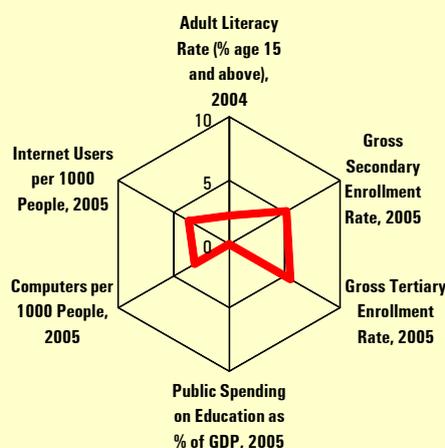
Rank in 2007: 83 out of 137 (based on KEI)	Egypt	Middle East & North Africa	Lower Middle Income
Rank in 1995: 81 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	3.93	4.41	3.87
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	3.27	4.34	3.54
Innovation	4.72	4.23	3.81
Education	4.31	4.08	4.33
Information and Communication Technology	3.42	4.99	3.81

## Middle East &amp; North Africa

## Lower Middle Income



## All Countries

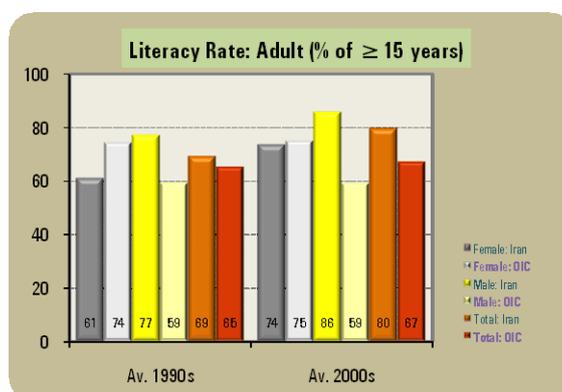
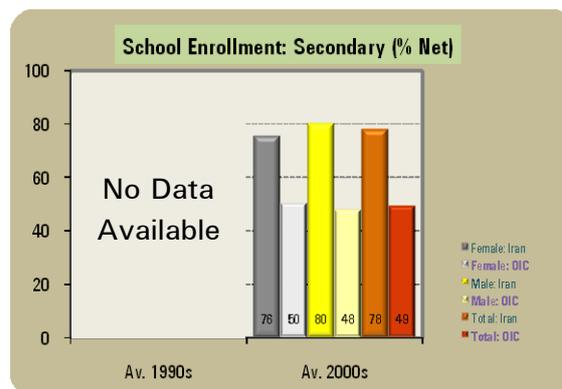
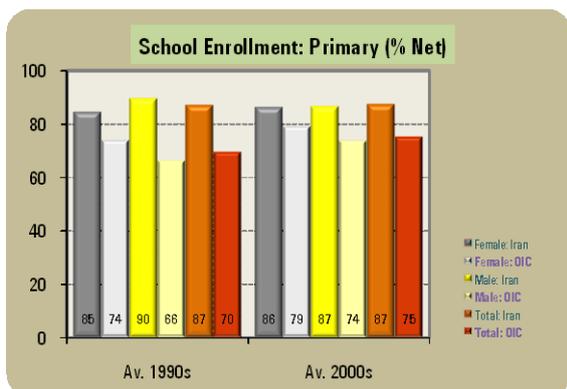


\* No data available for *Public Spending on Education as % of GDP, 2005*.

### 7.4.5 Iran

	Iran Average	Middle East & North Africa Average	Lower Middle Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	94.22	82.32	96.46
Male	92.71	89.48	97.29
Total	93.45	85.98	96.71
<b>Progression to Secondary School %</b>			
Female	90.89	86.52	..
Male	93.75	84.07	..
Total	92.30	85.23	..
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	4.75	..	4.40
% of Government Expenditure	19.62	..	16.22
<b>Pupil - Teacher Ratio %</b>			
Primary	22.59	23.80	21.31
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	10.77	14.37	11.00
Secondary	11.03	17.31	16.74
Tertiary	30.40	..	..

Averages are calculated from the annual data between years 2000 and 2005.

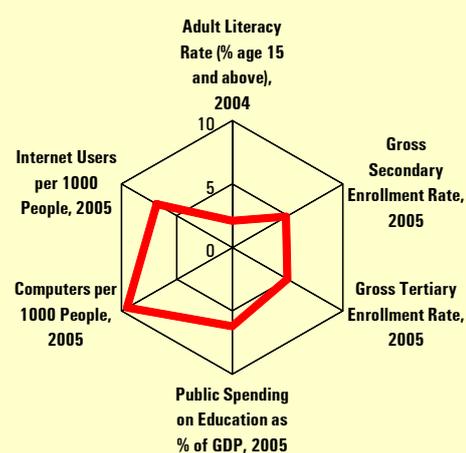
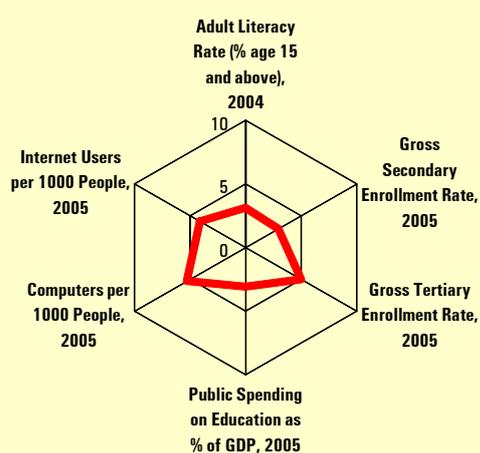


## 7.4.5 Iran (cont.)

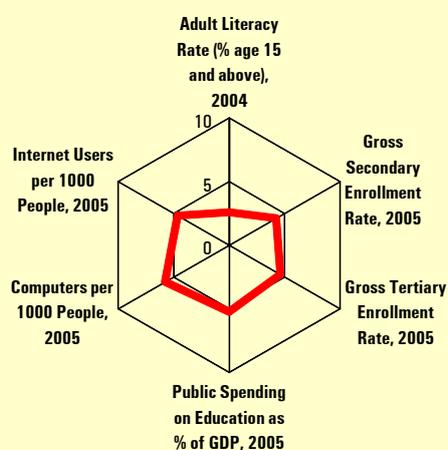
Rank in 2007: 98 out of 137 (based on KEI)	Iran	Middle East & North Africa	Lower Middle Income
Rank in 1995: 102 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	3.09	4.41	3.87
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	1.25	4.34	3.54
Innovation	2.58	4.23	3.81
Education	3.81	4.08	4.33
Information and Communication Technology	4.70	4.99	3.81

## Middle East &amp; North Africa

## Lower Middle Income



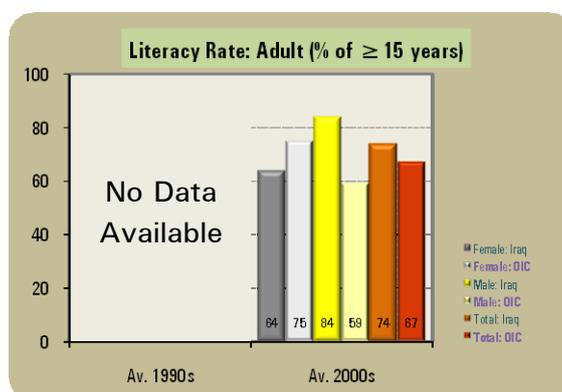
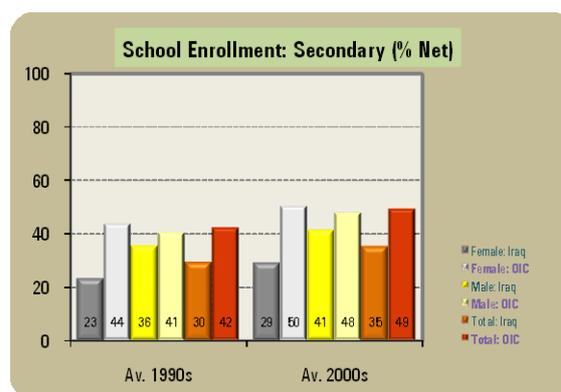
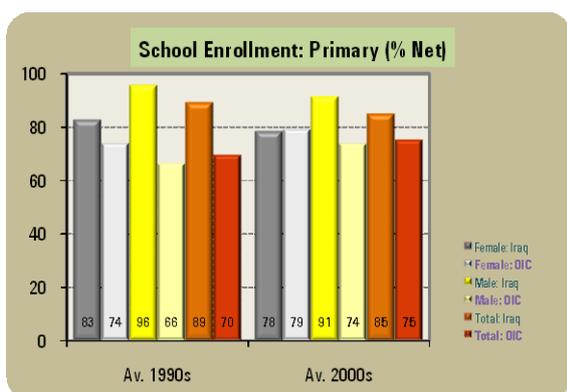
## All Countries



### 7.4.6 Iraq

	Iraq Average	Middle East & North Africa Average	Lower Middle Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	57.57	82.32	96.46
Male	75.51	89.48	97.29
Total	66.72	85.98	96.71
<b>Progression to Secondary School %</b>			
Female	65.85	86.52	..
Male	72.55	84.07	..
Total	69.77	85.23	..
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	..	..	4.40
% of Government Expenditure	..	..	16.22
<b>Pupil - Teacher Ratio %</b>			
Primary	20.13	23.80	21.31
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	..	14.37	11.00
Secondary	..	17.31	16.74
Tertiary	..	..	..

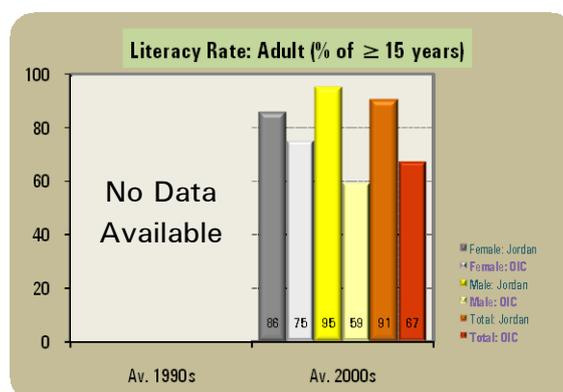
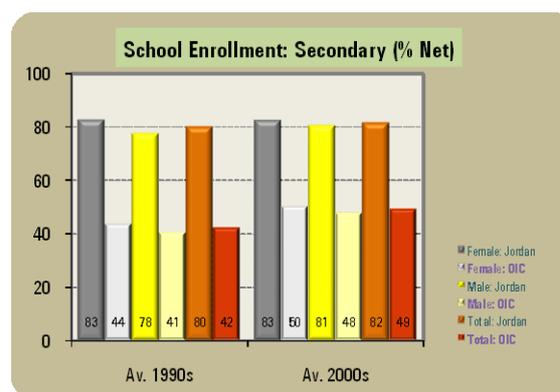
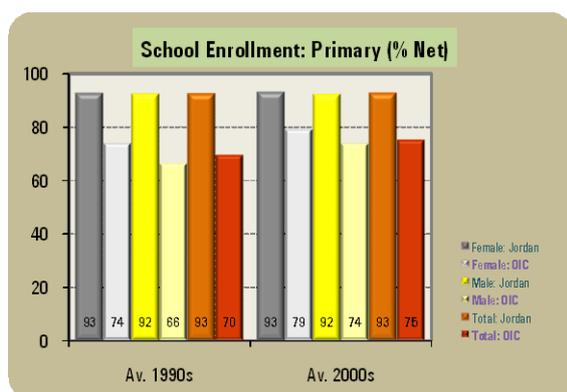
Averages are calculated from the annual data between years 2000 and 2005.



## 7.4.7 Jordan

	Jordan Average	Middle East & North Africa Average	Lower Middle Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	96.93	82.32	96.46
Male	96.96	89.48	97.29
Total	96.95	85.98	96.71
<b>Progression to Secondary School %</b>			
Female	97.39	86.52	..
Male	96.75	84.07	..
Total	97.06	85.23	..
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	..	..	4.40
% of Government Expenditure	..	..	16.22
<b>Pupil - Teacher Ratio %</b>			
Primary	20.08	23.80	21.31
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	14.90	14.37	11.00
Secondary	17.79	17.31	16.74
Tertiary	..	..	..

Averages are calculated from the annual data between years 2000 and 2005.

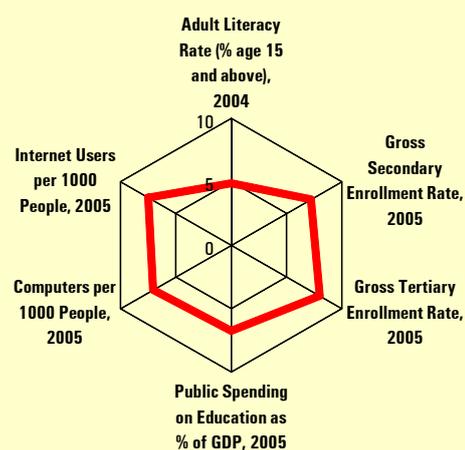
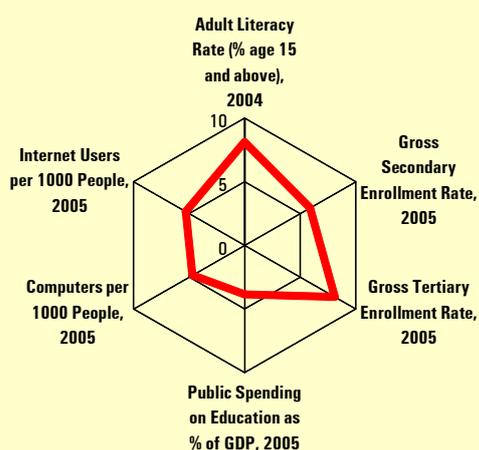


7.4.7 Jordan (cont.)

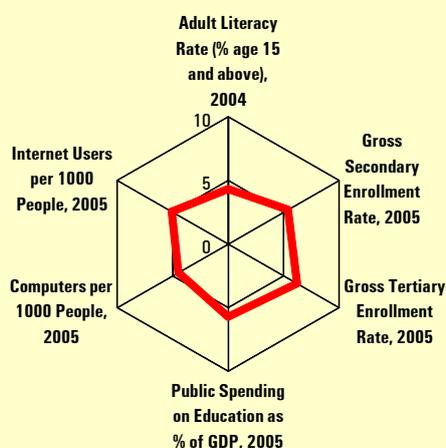
Rank in 2007: 62 out of 137 (based on KEI)	Jordan	Middle East & North Africa	Lower Middle Income
Rank in 1995: 67 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	5.19	4.41	3.87
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	5.31	4.34	3.54
Innovation	5.67	4.23	3.81
Education	5.31	4.08	4.33
Information and Communication Technology	4.47	4.99	3.81

Middle East & North Africa

Lower Middle Income



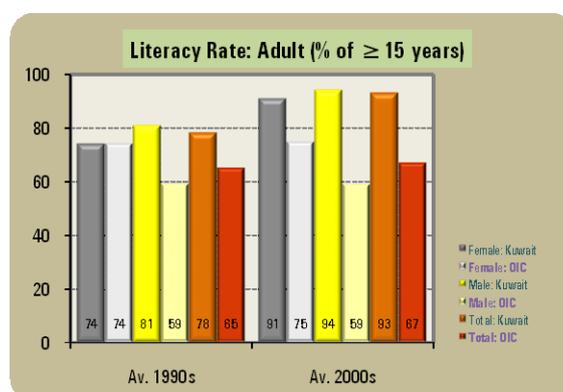
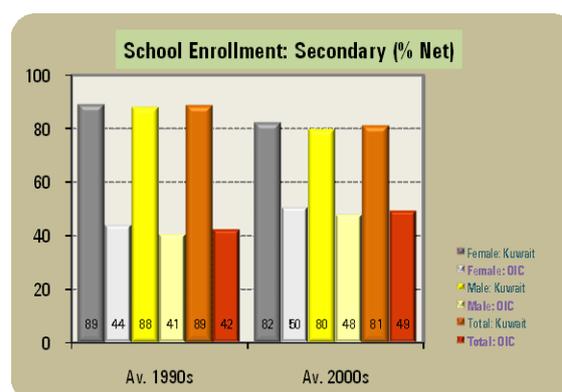
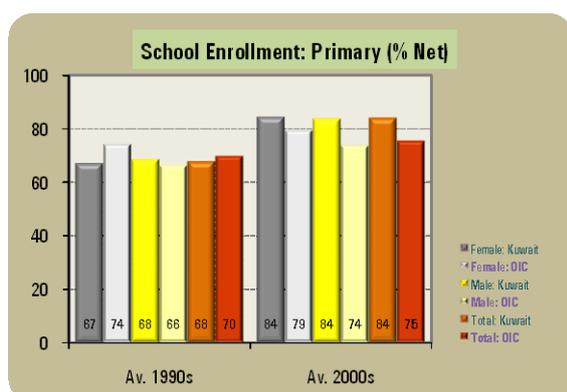
All Countries



## 7.4.8 Kuwait

	Kuwait Average	Middle East & North Africa Average	High Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	91.18	82.32	97.97
Male	90.87	89.48	98.54
Total	91.02	85.98	98.26
<b>Progression to Secondary School %</b>			
Female	98.36	86.52	..
Male	96.52	84.07	..
Total	97.40	85.23	..
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	5.62	..	5.25
% of Government Expenditure	13.49	..	12.67
<b>Pupil - Teacher Ratio %</b>			
Primary	12.74	23.80	16.50
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	15.54	14.37	18.51
Secondary	18.39	17.31	24.12
Tertiary	116.75	..	29.96

Averages are calculated from the annual data between years 2000 and 2005.

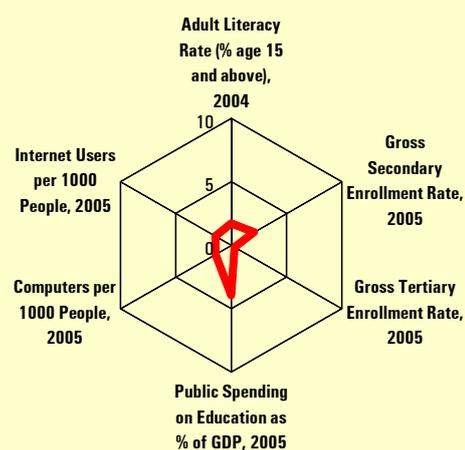
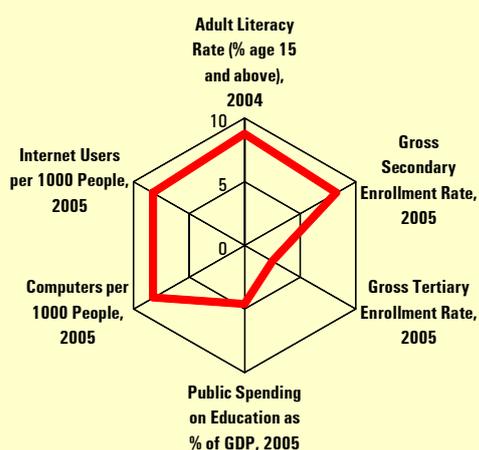


7.4.8 Kuwait (cont.)

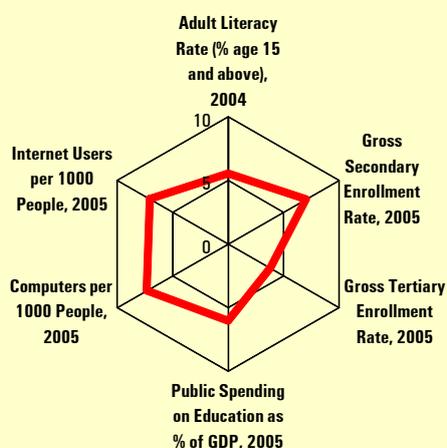
Rank in 2007: 46 out of 137 (based on KEI)	Kuwait	Middle East & North Africa	High Income
Rank in 1995: 51 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	6.01	4.41	8.07
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	6.55	4.34	8.06
Innovation	4.83	4.23	8.19
Education	5.44	4.08	7.63
Information and Communication Technology	7.24	4.99	8.40

Middle East & North Africa

High Income



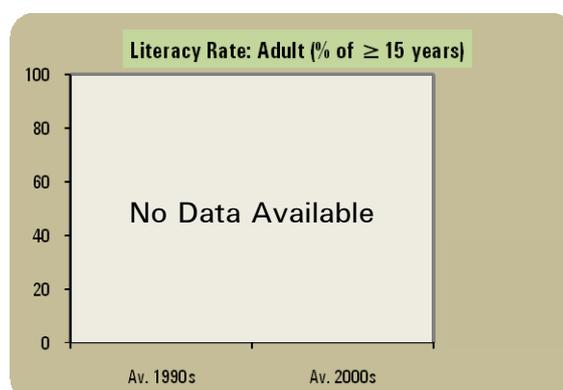
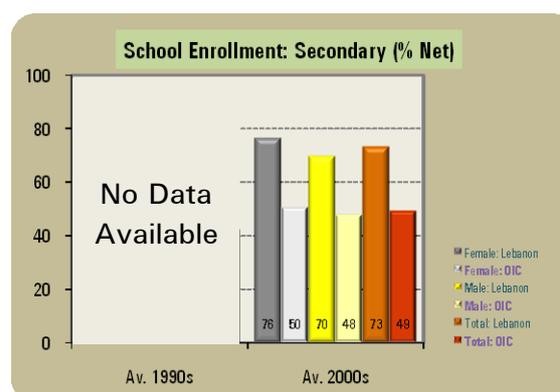
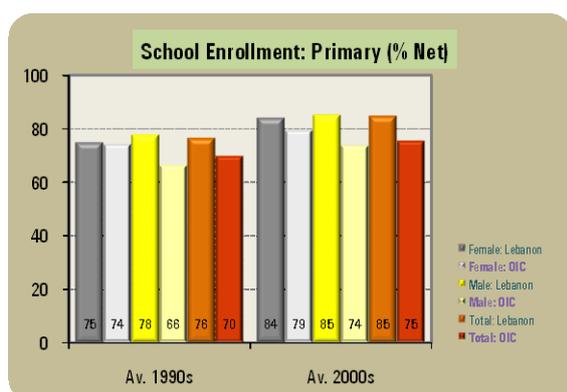
All Countries



## 7.4.9 Lebanon

	Lebanon Average	Middle East & North Africa Average	Upper Middle Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	88.03	82.32	98.39
Male	84.70	89.48	98.69
Total	86.33	85.98	98.54
<b>Progression to Secondary School %</b>			
Female	90.21	86.52	..
Male	84.02	84.07	..
Total	87.07	85.23	90.86
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	2.59	..	4.17
% of Government Expenditure	11.25	..	13.97
<b>Pupil - Teacher Ratio %</b>			
Primary	15.29	23.80	21.50
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	8.32	14.37	13.66
Secondary	8.78	17.31	17.53
Tertiary	16.95	..	28.90

Averages are calculated from the annual data between years 2000 and 2005.

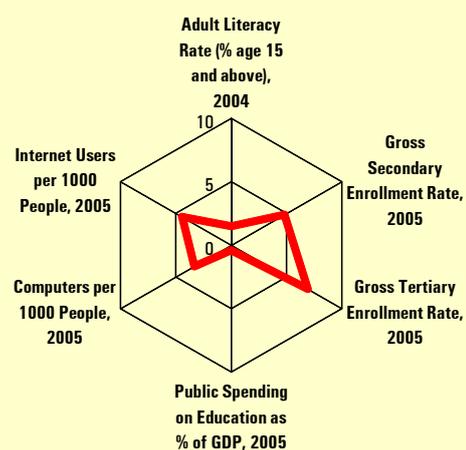
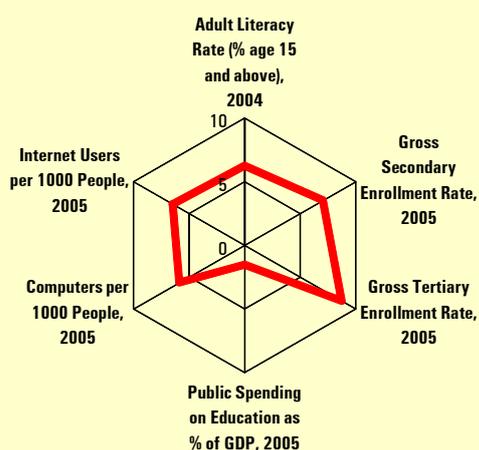


7.4.9 Lebanon (cont.)

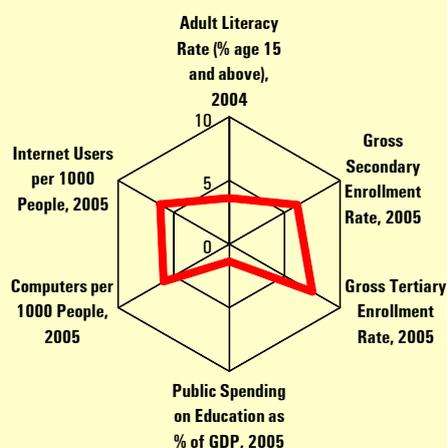
Rank in 2007: 66 out of 137 (based on KEI)	Lebanon	Middle East & North Africa	Upper Middle Income
Rank in 1995: 54 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	5.03	4.41	6.14
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	4.36	4.34	6.06
Innovation	4.40	4.23	6.05
Education	5.74	4.08	6.10
Information and Communication Technology	5.64	4.99	6.33

Middle East & North Africa

Upper Middle Income



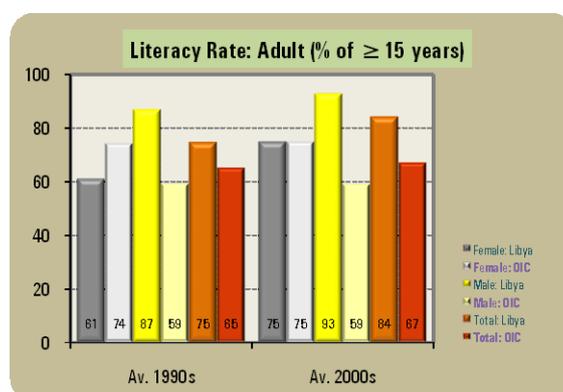
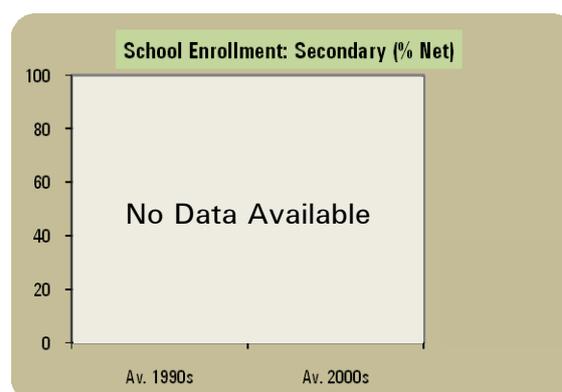
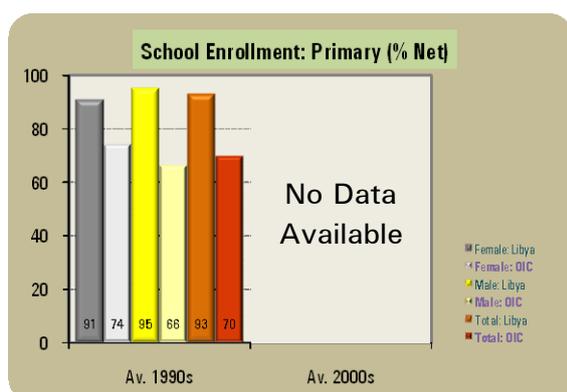
All Countries



## 7.4.10 Libya

	Libya Average	Middle East & North Africa Average	Upper Middle Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	..	82.32	98.39
Male	..	89.48	98.69
Total	..	85.98	98.54
<b>Progression to Secondary School %</b>			
Female	..	86.52	..
Male	..	84.07	..
Total	..	85.23	90.86
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	..	..	4.17
% of Government Expenditure	..	..	13.97
<b>Pupil - Teacher Ratio %</b>			
Primary	..	23.80	21.50
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	..	14.37	13.66
Secondary	..	17.31	17.53
Tertiary	..	..	28.90

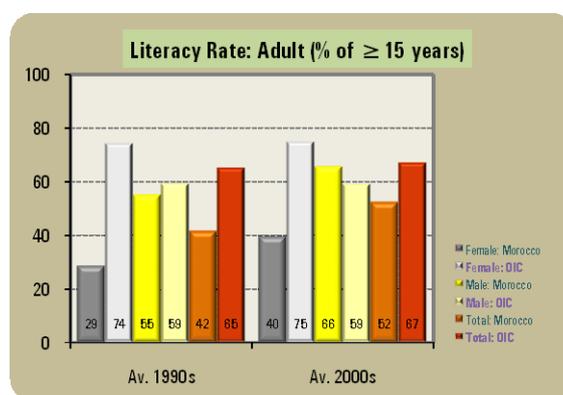
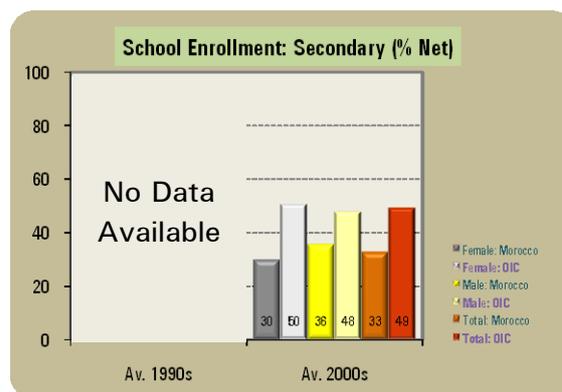
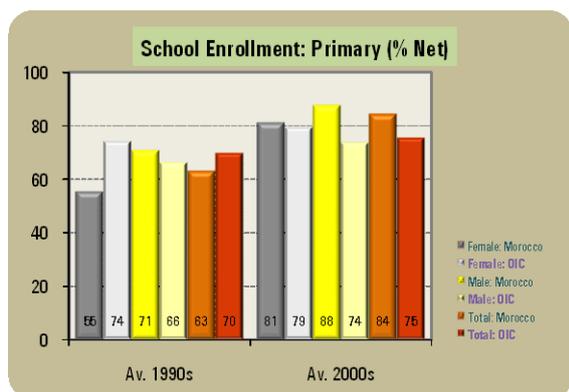
Averages are calculated from the annual data between years 2000 and 2005.



## 7.4.11 Morocco

	Morocco Average	Middle East & North Africa Average	Lower Middle Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	64.30	82.32	96.46
Male	73.59	89.48	97.29
Total	69.02	85.98	96.71
<b>Progression to Secondary School %</b>			
Female	80.13	86.52	..
Male	79.04	84.07	..
Total	79.51	85.23	..
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	6.44	..	4.40
% of Government Expenditure	25.98	..	16.22
<b>Pupil - Teacher Ratio %</b>			
Primary	27.86	23.80	21.31
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	19.46	14.37	11.00
Secondary	46.01	17.31	16.74
Tertiary	96.21	..	..

Averages are calculated from the annual data between years 2000 and 2005.

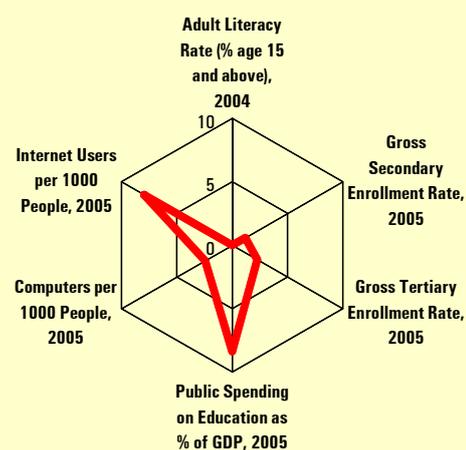
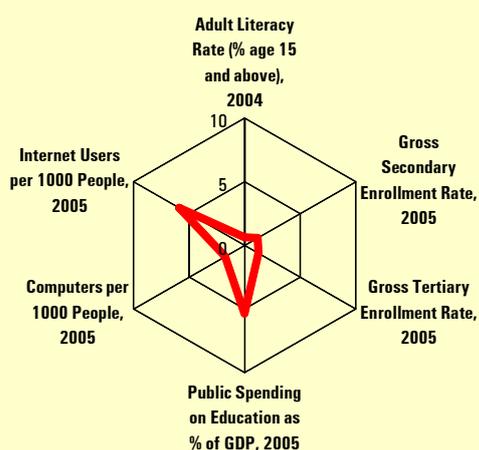


## 7.4.11 Morocco (cont.)

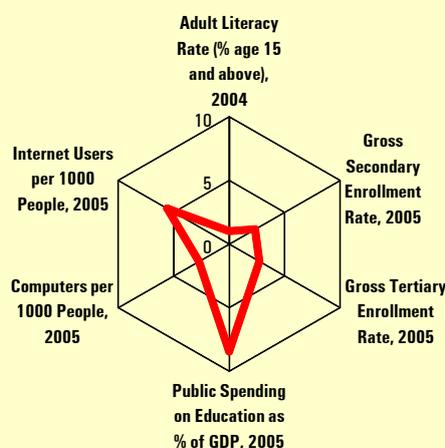
Rank in 2007: 90 out of 137 (based on KEI)	Morocco	Middle East & North Africa	Lower Middle Income
Rank in 1995: 94 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	3.30	4.41	3.87
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	3.22	4.34	3.54
Innovation	3.88	4.23	3.81
Education	2.02	4.08	4.33
Information and Communication Technology	4.08	4.99	3.81

## Middle East &amp; North Africa

## Lower Middle Income



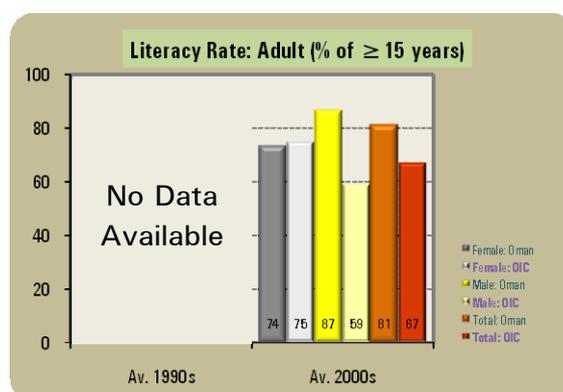
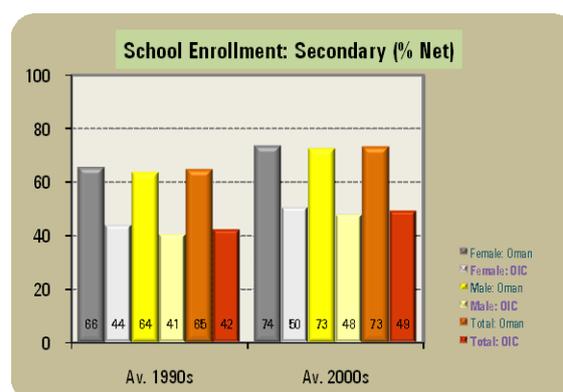
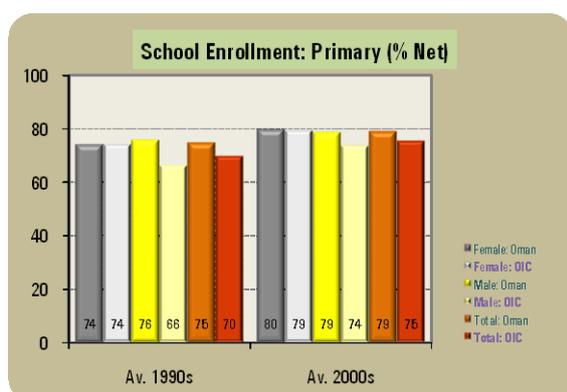
## All Countries



## 7.4.12 Oman

	Oman Average	Middle East & North Africa Average	Upper Middle Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	87.90	82.32	98.39
Male	89.44	89.48	98.69
Total	88.69	85.98	98.54
<b>Progression to Secondary School %</b>			
Female	98.59	86.52	..
Male	98.07	84.07	..
Total	98.31	85.23	90.86
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	3.96	..	4.17
% of Government Expenditure	23.29	..	13.97
<b>Pupil - Teacher Ratio %</b>			
Primary	19.85	23.80	21.50
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	14.77	14.37	13.66
Secondary	16.44	17.31	17.53
Tertiary	22.35	..	28.90

Averages are calculated from the annual data between years 2000 and 2005.

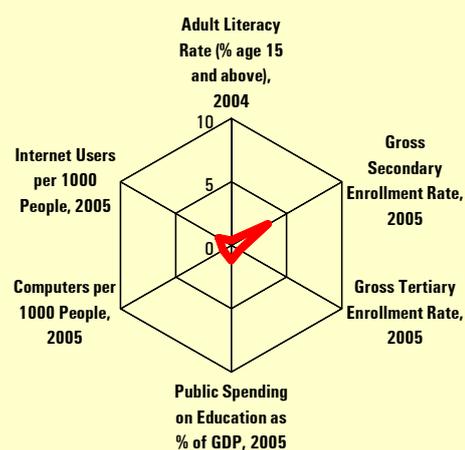
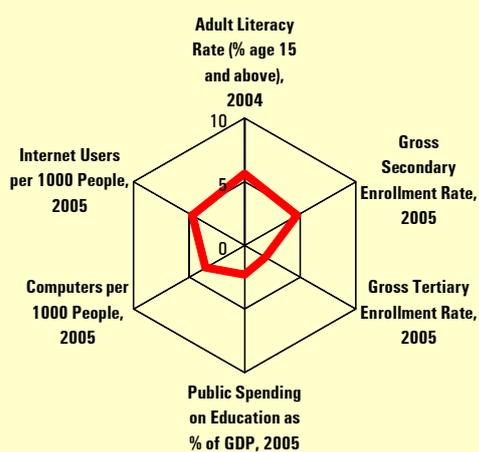


## 7.4.12 Oman (cont.)

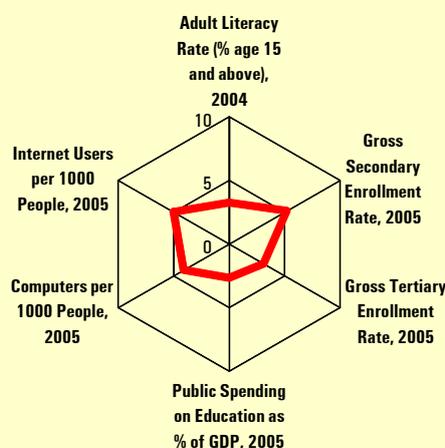
Rank in 2007: 63 out of 137 (based on KEI)	Oman	Middle East & North Africa	Upper Middle Income
Rank in 1995: 72 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	5.12	4.41	6.14
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	6.94	4.34	6.06
Innovation	4.91	4.23	6.05
Education	3.84	4.08	6.10
Information and Communication Technology	4.79	4.99	6.33

## Middle East &amp; North Africa

## Upper Middle Income



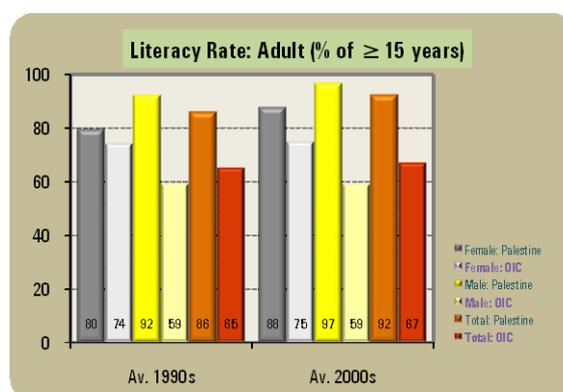
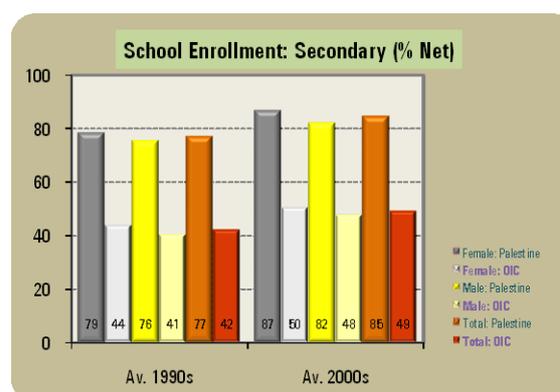
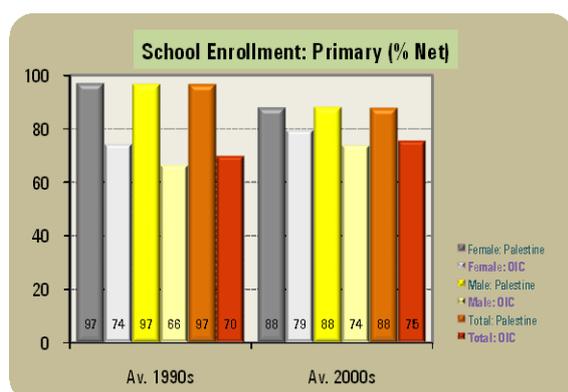
## All Countries



## 7.4.13 Palestine

	Palestine Average	Middle East & North Africa Average	Lower Middle Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	100.05	82.32	96.46
Male	99.26	89.48	97.29
Total	99.64	85.98	96.71
<b>Progression to Secondary School %</b>			
Female	97.80	86.52	..
Male	97.52	84.07	..
Total	97.66	85.23	..
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	..	..	4.40
% of Government Expenditure	..	..	16.22
<b>Pupil - Teacher Ratio %</b>			
Primary	31.74	23.80	21.31
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	..	14.37	11.00
Secondary	..	17.31	16.74
Tertiary	..	..	..

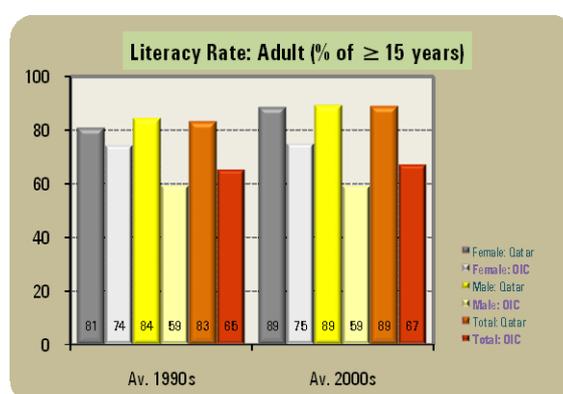
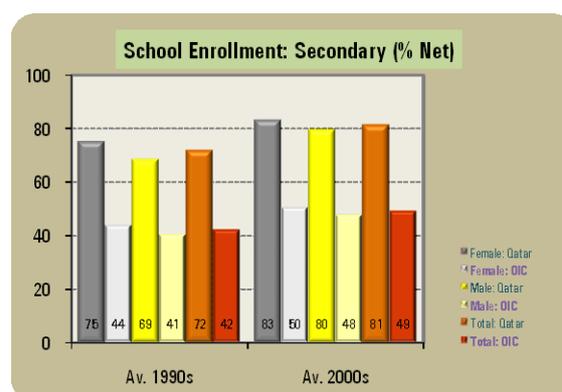
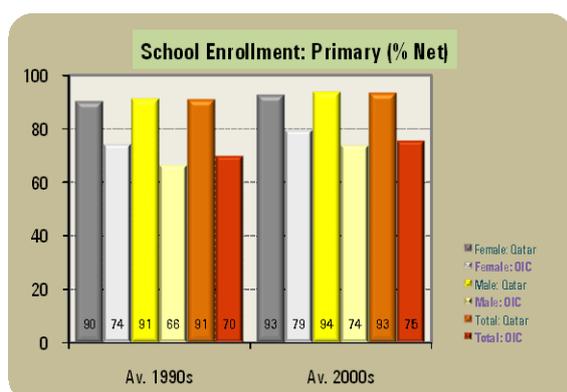
Averages are calculated from the annual data between years 2000 and 2005.



## 7.4.14 Qatar

	Qatar Average	Middle East & North Africa Average	High Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	91.76	82.32	97.97
Male	92.96	89.48	98.54
Total	92.37	85.98	98.26
<b>Progression to Secondary School %</b>			
Female	98.75	86.52	..
Male	91.00	84.07	..
Total	94.71	85.23	..
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	1.59	..	5.25
% of Government Expenditure	..	..	12.67
<b>Pupil - Teacher Ratio %</b>			
Primary	11.57	23.80	16.50
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	..	14.37	18.51
Secondary	..	17.31	24.12
Tertiary	..	..	29.96

Averages are calculated from the annual data between years 2000 and 2005.

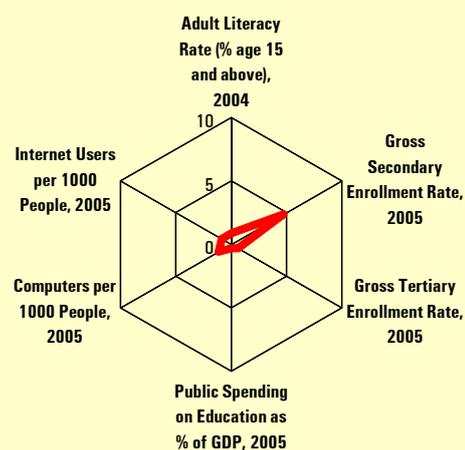
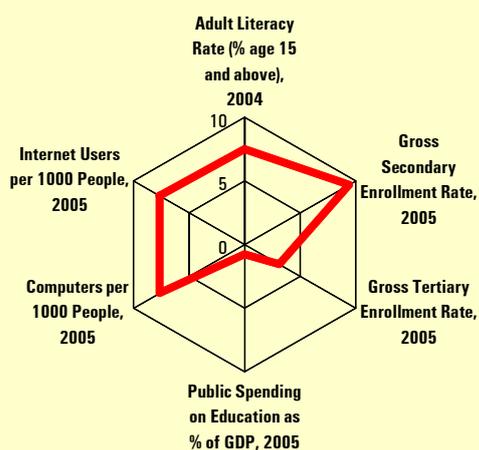


7.4.14 Qatar (cont.)

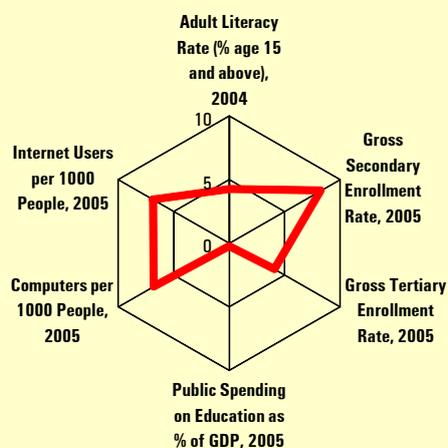
Rank in 2007: 42 out of 137 (based on KEI)	Qatar	Middle East & North Africa	High Income
Rank in 1995: 50 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	6.17	4.41	8.07
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	6.57	4.34	8.06
Innovation	5.63	4.23	8.19
Education	5.53	4.08	7.63
Information and Communication Technology	6.96	4.99	8.40

Middle East & North Africa

High Income



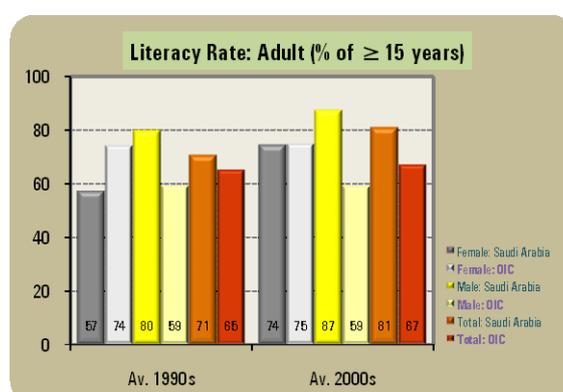
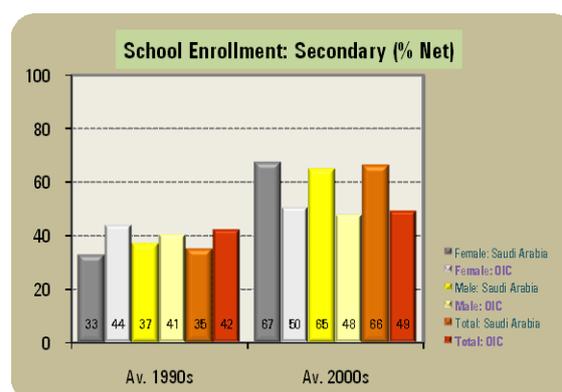
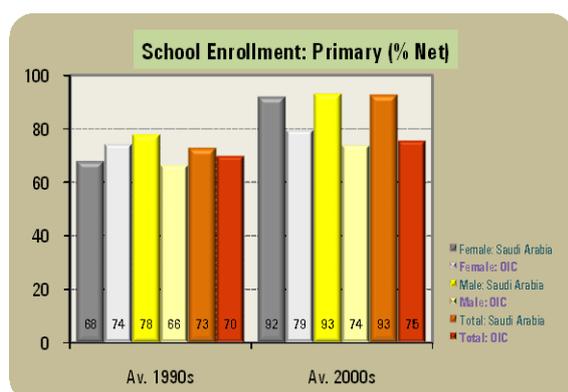
All Countries



## 7.4.15 Saudi Arabia

	Saudi Arabia Average	Middle East & North Africa Average	High Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	91.49	82.32	97.97
Male	94.33	89.48	98.54
Total	92.91	85.98	98.26
<b>Progression to Secondary School %</b>			
Female	97.12	86.52	..
Male	93.01	84.07	..
Total	95.03	85.23	..
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	7.06	..	5.25
% of Government Expenditure	26.08	..	12.67
<b>Pupil - Teacher Ratio %</b>			
Primary	..	23.80	16.50
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	..	14.37	18.51
Secondary	..	17.31	24.12
Tertiary	..	..	29.96

Averages are calculated from the annual data between years 2000 and 2005.

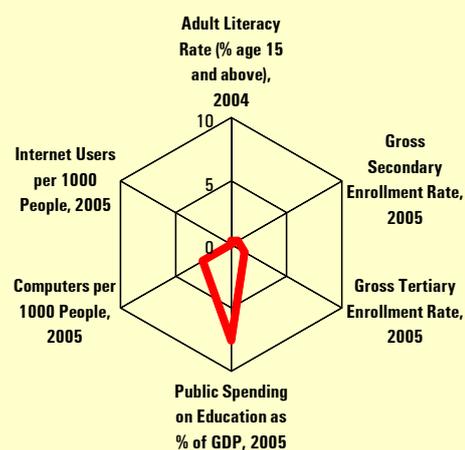
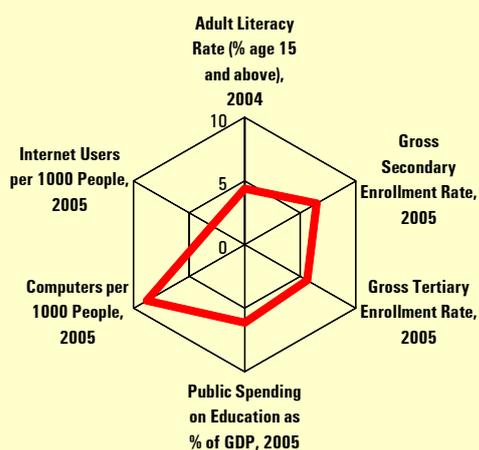


7.4.15 Saudi Arabia (cont.)

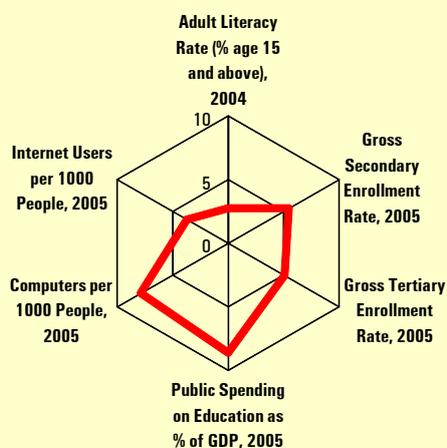
Rank in 2007: 69 out of 137 (based on KEI)	Saudi Arabia	Middle East & North Africa	High Income
Rank in 1995: 68 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	4.76	4.41	8.07
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	5.07	4.34	8.06
Innovation	3.75	4.23	8.19
Education	4.43	4.08	7.63
Information and Communication Technology	5.79	4.99	8.40

Middle East & North Africa

High Income



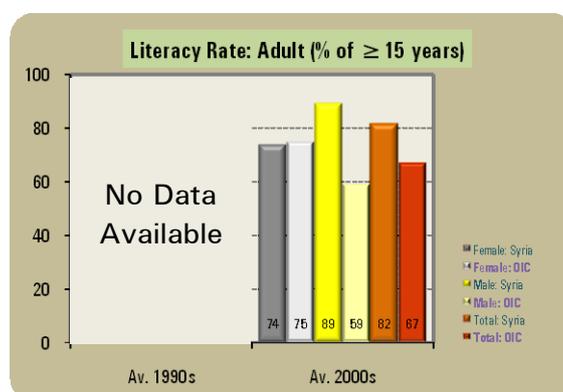
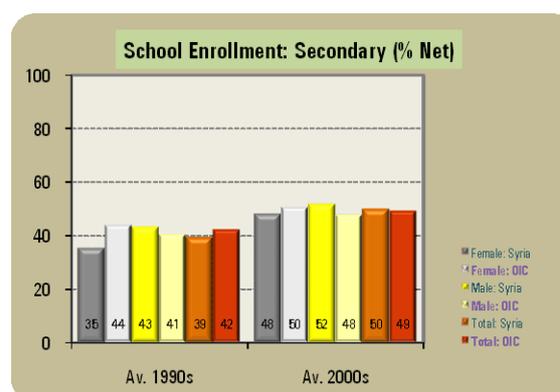
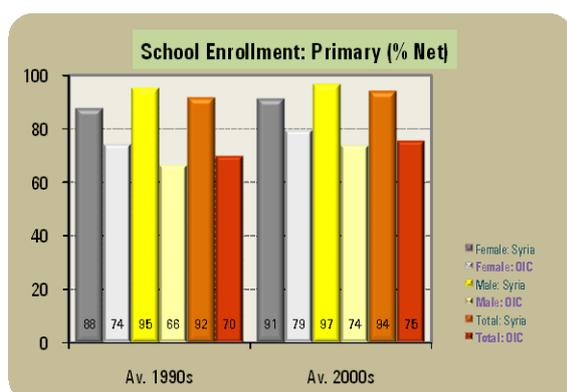
All Countries



## 7.4.16 Syria

	Syria Average	Middle East & North Africa Average	Lower Middle Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	97.72	82.32	96.46
Male	102.64	89.48	97.29
Total	100.23	85.98	96.71
<b>Progression to Secondary School %</b>			
Female	87.66	86.52	..
Male	86.98	84.07	..
Total	87.30	85.23	..
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	..	..	4.40
% of Government Expenditure	..	..	16.22
<b>Pupil - Teacher Ratio %</b>			
Primary	24.74	23.80	21.31
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	13.25	14.37	11.00
Secondary	24.58	17.31	16.74
Tertiary	..	..	..

Averages are calculated from the annual data between years 2000 and 2005.

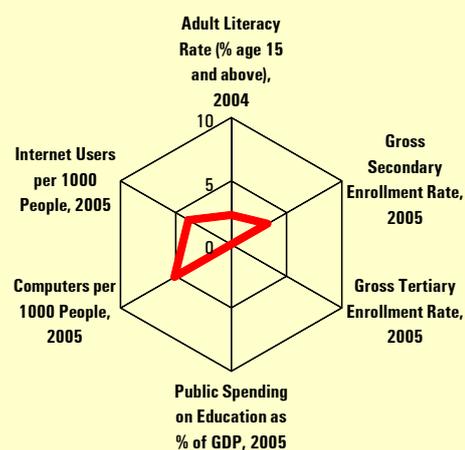
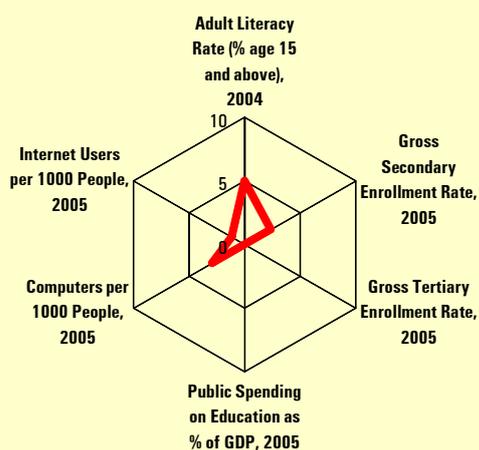


7.4.16 Syria (cont.)

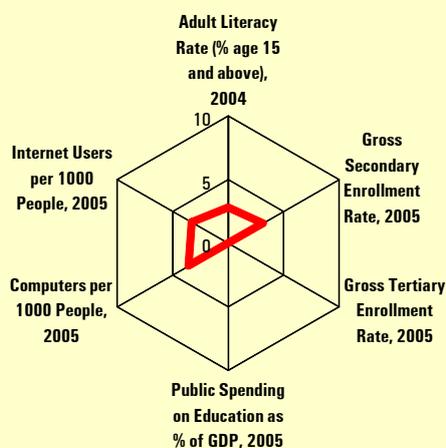
Rank in 2007: 104 out of 137 (based on KEI)	Syria	Middle East & North Africa	Lower Middle Income
Rank in 1995: 108 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	2.82	4.41	3.87
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	1.79	4.34	3.54
Innovation	3.11	4.23	3.81
Education	2.97	4.08	4.33
Information and Communication Technology	3.40	4.99	3.81

Middle East & North Africa

Lower Middle Income



All Countries



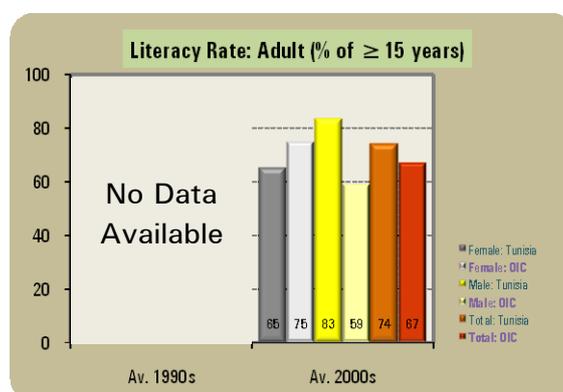
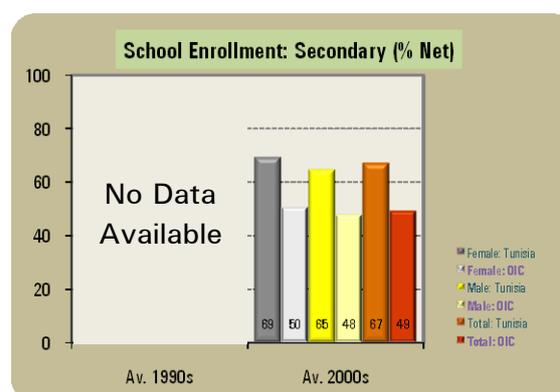
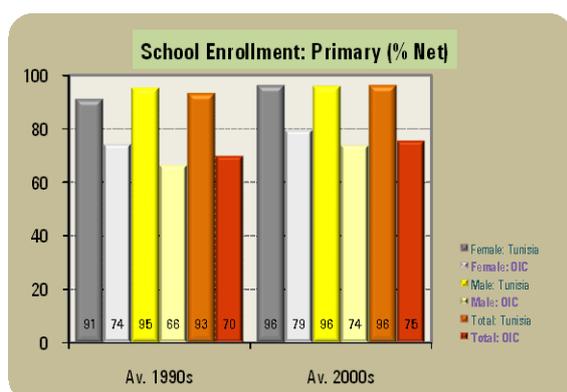
\* No data available for Gross Tertiary Enrolment Rate, 2005.

\* No data available for Public Spending on Education as % of GDP, 2005.

## 7.4.17 Tunisia

	Tunisia Average	Middle East & North Africa Average	Lower Middle Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	92.73	82.32	96.46
Male	92.07	89.48	97.29
Total	92.39	85.98	96.71
<b>Progression to Secondary School %</b>			
Female	87.39	86.52	..
Male	83.48	84.07	..
Total	85.35	85.23	..
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	7.04	..	4.40
% of Government Expenditure	18.79	..	16.22
<b>Pupil - Teacher Ratio %</b>			
Primary	21.65	23.80	21.31
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	18.09	14.37	11.00
Secondary	25.22	17.31	16.74
Tertiary	68.58	..	..

Averages are calculated from the annual data between years 2000 and 2005.

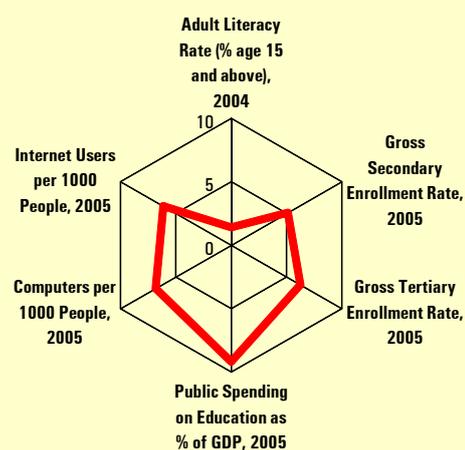
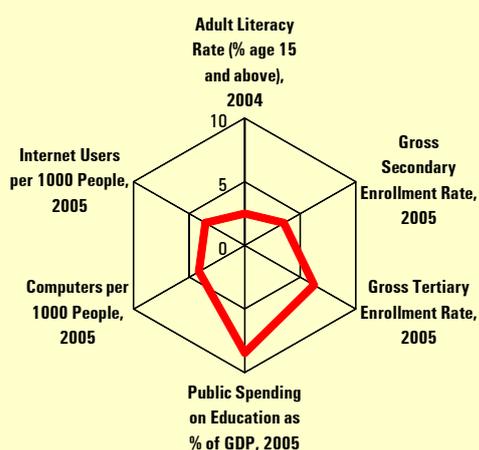


7.4.17 Tunisia (cont.)

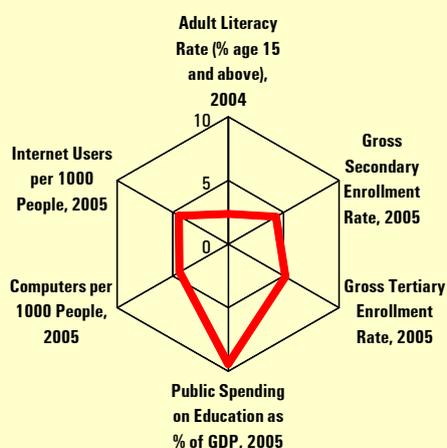
Rank in 2007: 71 out of 137 (based on KEI)	Tunisia	Middle East & North Africa	Lower Middle Income
Rank in 1995: 76 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	4.52	4.41	3.87
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	4.73	4.34	3.54
Innovation	4.58	4.23	3.81
Education	3.94	4.08	4.33
Information and Communication Technology	4.82	4.99	3.81

Middle East & North Africa

Lower Middle Income



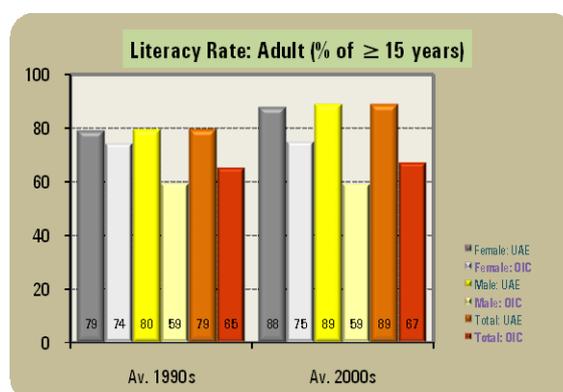
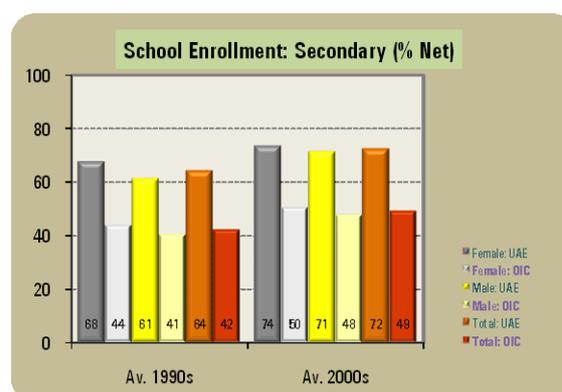
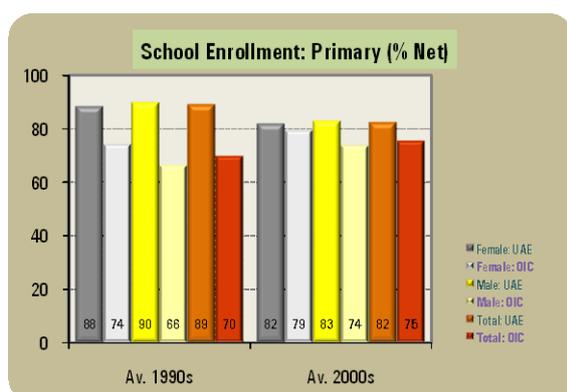
All Countries



## 7.4.18 United Arab Emirates

	United Arab Emirates Average	Middle East & North Africa Average	High Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	87.07	82.32	97.97
Male	87.71	89.48	98.54
Total	87.40	85.98	98.26
<b>Progression to Secondary School %</b>			
Female	98.75	86.52	..
Male	96.86	84.07	..
Total	97.76	85.23	..
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	1.77	..	5.25
% of Government Expenditure	24.32	..	12.67
<b>Pupil - Teacher Ratio %</b>			
Primary	15.47	23.80	16.50
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	7.66	14.37	18.51
Secondary	10.49	17.31	24.12
Tertiary	34.06	..	29.96

Averages are calculated from the annual data between years 2000 and 2005.

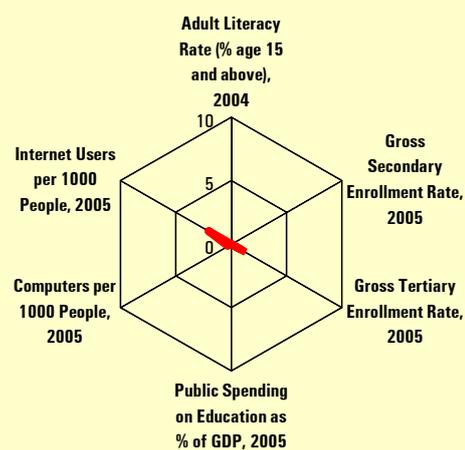
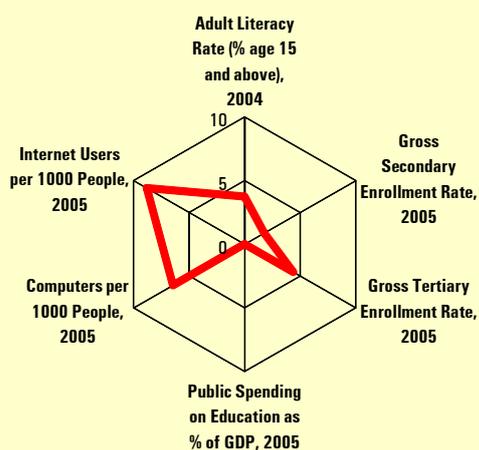


7.4.18 United Arab Emirates (cont.)

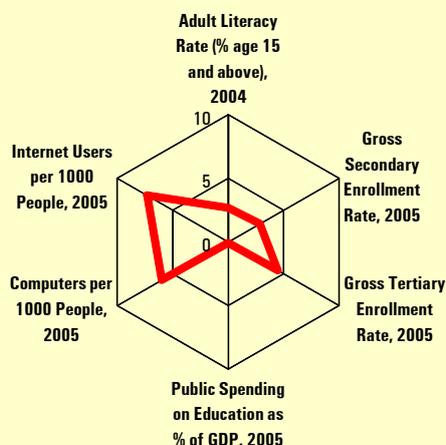
Rank in 2007: 49 out of 137 (based on KEI)	United Arab Emirates	Middle East & North Africa	High Income
Rank in 1995: 40 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	5.78	4.41	8.07
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	6.25	4.34	8.06
Innovation	6.56	4.23	8.19
Education	3.33	4.08	7.63
Information and Communication Technology	6.97	4.99	8.40

Middle East & North Africa

High Income



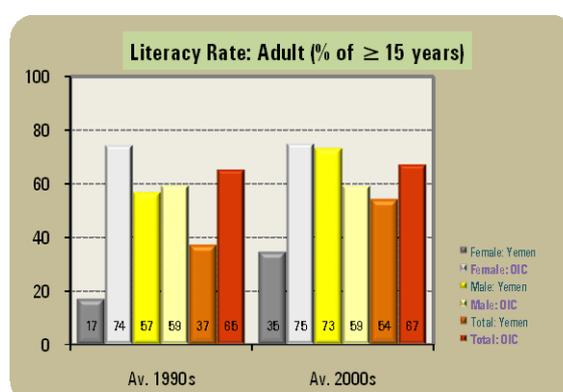
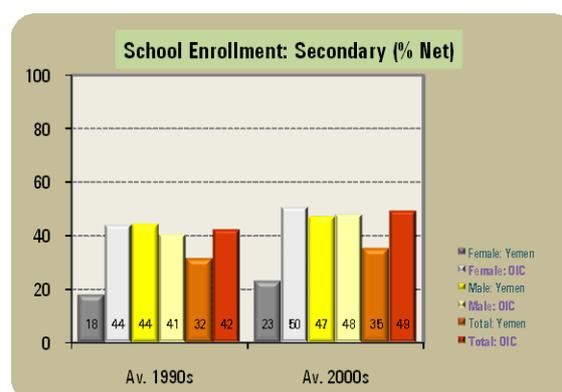
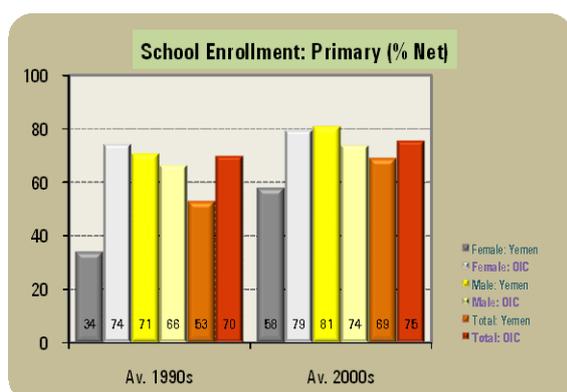
All Countries



## 7.4.19 Yemen

	Yemen Average	Middle East & North Africa Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	41.15	82.32	63.28
Male	75.43	89.48	73.41
Total	58.67	85.98	68.49
<b>Progression to Secondary School %</b>			
Female	83.82	86.52	79.30
Male	86.85	84.07	80.71
Total	85.88	85.23	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	9.75	..	3.13
% of Government Expenditure	32.78	..	..
<b>Pupil - Teacher Ratio %</b>			
Primary	22.37	23.80	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	..	14.37	..
Secondary	..	17.31	..
Tertiary	..	..	..

Averages are calculated from the annual data between years 2000 and 2005.

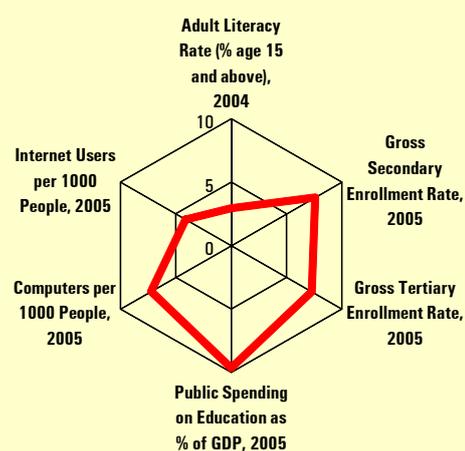
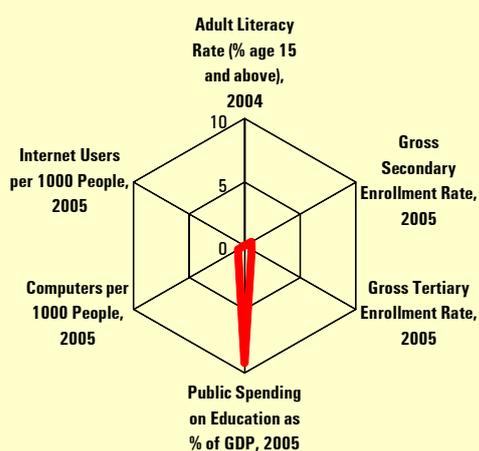


7.4.19 Yemen (cont.)

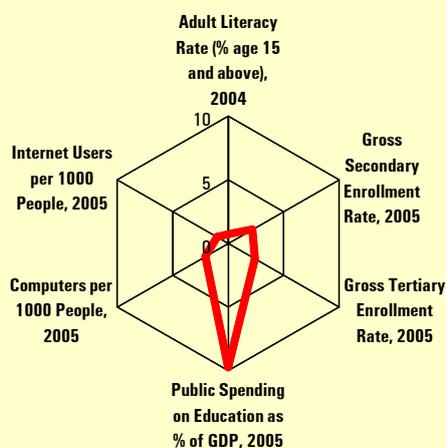
Rank in 2007: 119 out of 137 (based on KEI)	Yemen	Middle East & North Africa	Low Income
Rank in 1995: 120 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	1.62	4.41	1.85
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	1.26	4.34	2.32
Innovation	1.78	4.23	1.64
Education	1.78	4.08	1.90
Information and Communication Technology	1.66	4.99	1.54

Middle East & North Africa

Low Income



All Countries



## 7.5 Sub-Saharan Africa

Table 7-4: Education Indicators for Sub-Sahara Africa

	NER Primary		NER Secondary		Primary Completion		Progression to Secondary		Adult Literacy Rate		Educational Spending as % of GDP		Educational Spending as % of Government Expenditure	
	1990s*	2000s**	1990s	2000s	1990s	2000s	1990s	2000s	1990s	2000s	1990s	2000s	1990s	2000s
Benin	45.42	72.67	15.95	16.47	23.07	45.50	..	62.30	27.25	34.66	2.92	3.47	15.70	17.11
Burkina Faso	30.84	39.42	8.53	9.62	24.18	28.14	38.43	41.06	13.21	22.69	2.59	4.22	..	15.92
Cameroon	69.37	..	..	..	52.83	55.54	22.71	39.81	..	67.90	2.65	3.08	14.74	14.86
Chad	42.51	56.52	6.84	8.55	17.20	28.82	47.21	52.84	12.22	25.65	1.62	1.74	..	8.89
Comoros	53.12	55.06	..	..	33.20	48.91	..	62.69	..	..	3.78	3.78	23.46	24.12
Cote d'Ivoire	48.54	55.22	17.66	18.66	39.44	41.40	35.20	39.65	..	48.73	4.50	4.63	15.91	21.54
Gabon	93.88	87.99	..	..	62.19	75.33	..	..	72.23	84.02	3.25	3.83	9.61	..
Gambia	55.38	68.12	25.03	36.66	45.75	63.04	82.35	..	..	..	3.38	2.44	14.42	11.59
Guinea	35.99	61.54	12.43	20.63	21.64	45.79	51.51	61.26	..	29.48	1.93	1.83	25.77	25.62
Guinea-Bissau	41.55	45.16	..	8.68	26.90	26.94	63.37	63.22	..	..	5.25	..	11.86	..
Mali	35.52	56.25	6.02	..	13.96	40.60	52.74	54.41	19.04	24.00	2.98	4.09	..	15.70
Mauritania	50.31	72.43	..	15.14	34.03	47.39	35.27	43.93	..	51.21	3.55	3.15	15.24	9.22
Mozambique	47.23	65.10	2.59	4.36	20.18	28.36	42.18	47.93	38.71	..	2.44	4.36	12.31	19.47
Niger	25.15	36.83	5.94	7.19	16.34	24.03	29.61	46.58	..	28.67	3.26	2.77	18.58	14.11
Nigeria	56.76	61.65	18.43	25.53	..	73.09	..	..	55.45	69.12	0.89	..	..	..
Senegal	49.58	62.69	..	16.64	38.99	45.00	35.00	44.09	..	39.28	3.60	4.11	26.92	21.78
Sierra Leone	43.08	..	..	22.82	..	80.75	..	..	..	34.83	..	4.48	..	..
Somalia	8.91	19.00	..	..	..	..	..	..	..	..	..	..	..	..
Sudan	40.42	47.43	..	18.90	38.41	42.61	78.32	89.01	..	60.93	6.01	..	2.75	..
Togo	71.70	78.03	17.31	22.20	36.28	65.65	..	65.96	..	53.16	4.08	3.51	25.28	18.36
Uganda	..	..	7.86	14.72	..	57.17	42.04	39.40	56.11	66.81	1.47	3.85	11.53	18.29
Sub-Saharan Africa	52.68	62.48	18.76	22.98	50.46	55.29	..	..	54.16	59.26	3.34	3.93	..	..
Sub-Saharan Africa-OIC	47.26	57.84	12.05	16.67	32.04	48.20	46.85	53.39	36.78	46.32	3.17	3.49	16.27	17.11

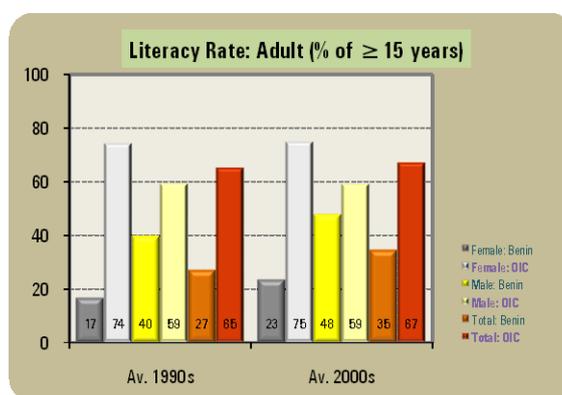
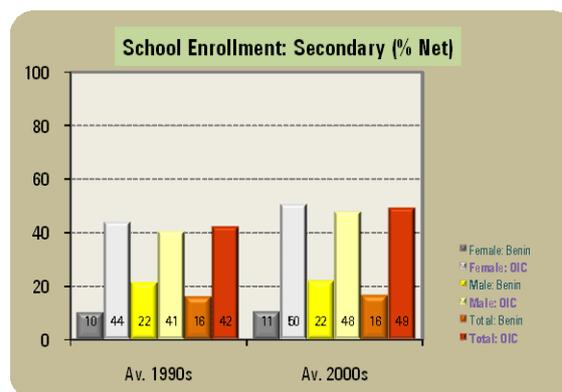
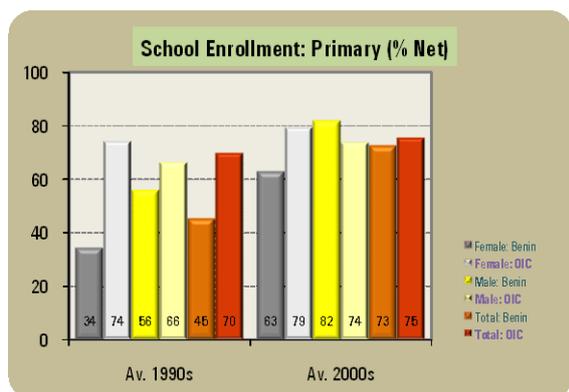
\* 1990s: Averages are calculated from the annual data between 1990 and 1999.

\*\* 2000s: Averages are calculated from the annual data between 2000 and 2005.

### 7.5.1 Benin

	Benin Average	Sub-Saharan Africa Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	33.81	50.07	63.28
Male	56.83	60.45	73.41
Total	45.50	55.29	68.49
<b>Progression to Secondary School %</b>			
Female	63.02	..	79.30
Male	61.94	..	80.71
Total	62.30	..	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	3.47	3.93	3.13
% of Government Expenditure	17.11	..	..
<b>Pupil - Teacher Ratio %</b>			
Primary	53.29	44.00	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	12.62	11.79	..
Secondary	23.80	..	..
Tertiary	201.90	..	..

Averages are calculated from the annual data between years 2000 and 2005.

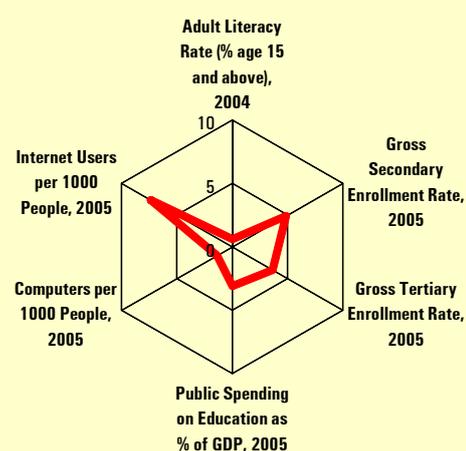
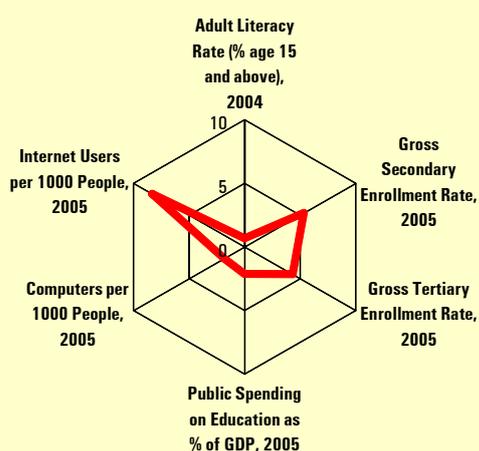


## 7.5.1 Benin (cont.)

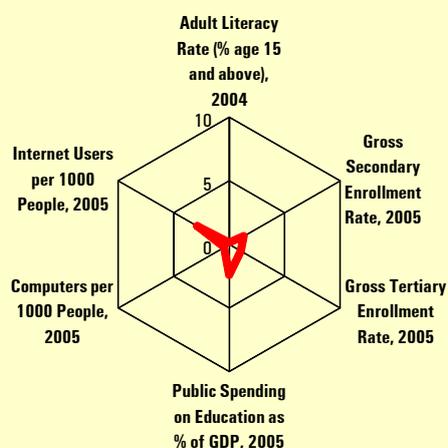
Rank in 2007: 118 out of 137 (based on KEI)	Benin	Sub-Saharan Africa	Low Income
Rank in 1995: 115 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	1.62	2.08	1.85
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	2.42	2.92	2.32
Innovation	1.58	1.97	1.64
Education	0.84	1.50	1.90
Information and Communication Technology	1.63	1.94	1.54

## Sub-Saharan Africa

## Low Income



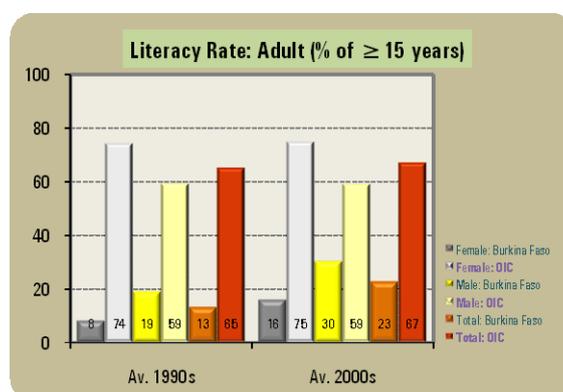
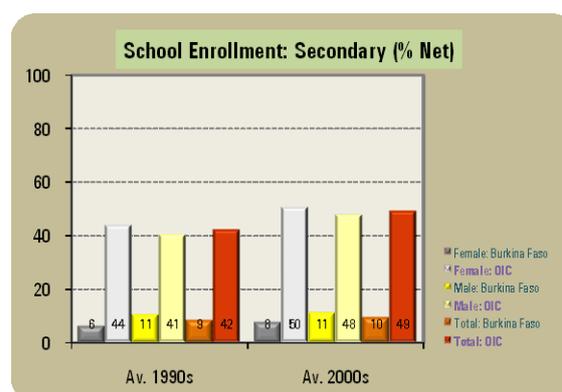
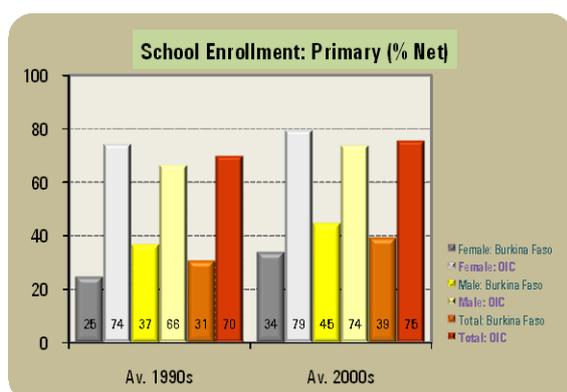
## All Countries



## 7.5.2 Burkina Faso

	Burkina Faso Average	Sub-Saharan Africa Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	23.85	50.07	63.28
Male	32.29	60.45	73.41
Total	28.14	55.29	68.49
<b>Progression to Secondary School %</b>			
Female	39.57	..	79.30
Male	42.15	..	80.71
Total	41.06	..	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	4.22	3.93	3.13
% of Government Expenditure	15.92	..	..
<b>Pupil - Teacher Ratio %</b>			
Primary	46.96	44.00	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	29.44	11.79	..
Secondary	20.09	..	..
Tertiary	200.39	..	..

Averages are calculated from the annual data between years 2000 and 2005.

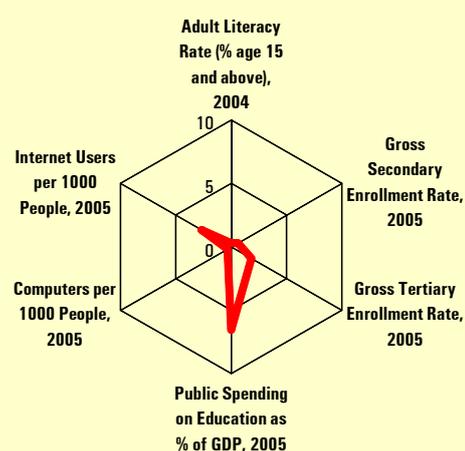
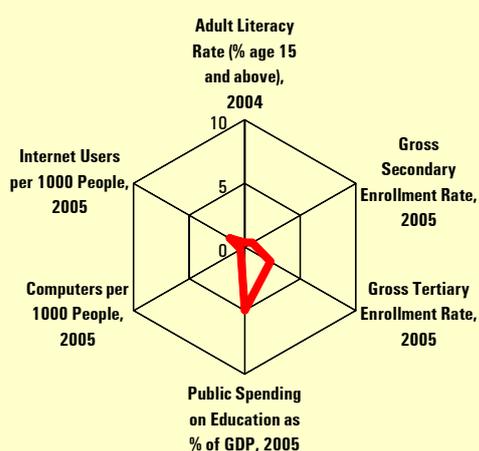


## 7.5.2 Burkina Faso (cont.)

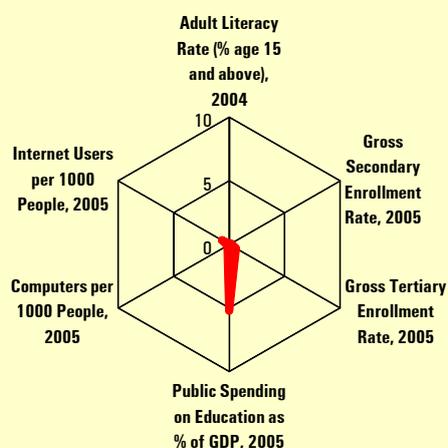
Rank in 2007: 132 out of 137 (based on KEI)	Burkina Faso	Sub-Saharan Africa	Low Income
Rank in 1995: 132 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	1.08	2.08	1.85
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	2.93	2.92	2.32
Innovation	0.62	1.97	1.64
Education	0.27	1.50	1.90
Information and Communication Technology	0.48	1.94	1.54

## Sub-Saharan Africa

## Low Income



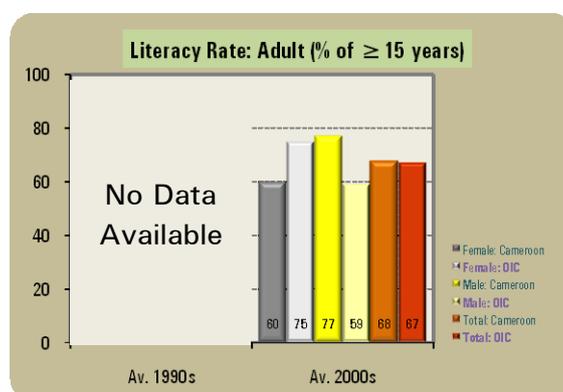
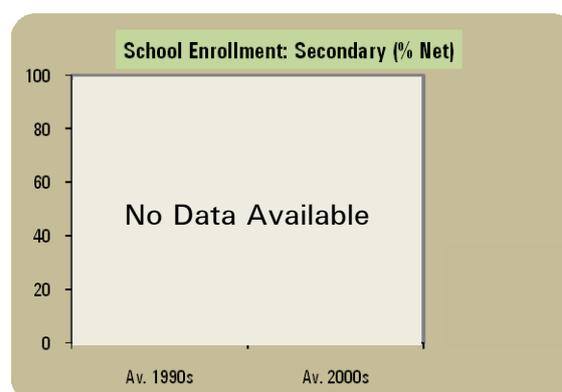
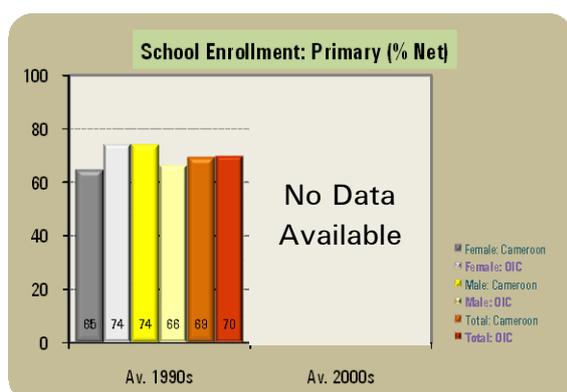
## All Countries



## 7.5.3 Cameroon

	Cameroon Average	Sub-Saharan Africa Average	Lower Middle Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	51.08	50.07	96.46
Male	59.95	60.45	97.29
Total	55.54	55.29	96.71
<b>Progression to Secondary School %</b>			
Female	40.69	..	..
Male	39.11	..	..
Total	39.81	..	..
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	3.08	3.93	4.40
% of Government Expenditure	14.86	..	16.22
<b>Pupil - Teacher Ratio %</b>			
Primary	54.09	44.00	21.31
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	8.19	11.79	11.00
Secondary	19.46	..	16.74
Tertiary	76.27	..	..

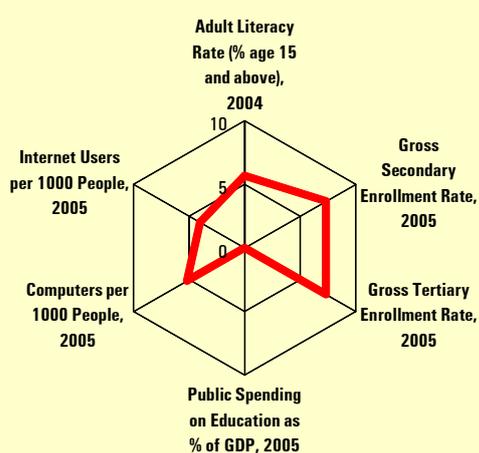
Averages are calculated from the annual data between years 2000 and 2005.



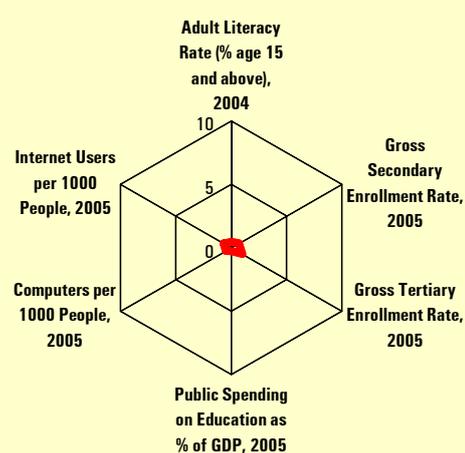
## 7.5.3 Cameroon (cont.)

Rank in 2007: 123 out of 137 (based on KEI)	Cameroon	Sub-Saharan Africa	Lower Middle Income
Rank in 1995: 121 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	1.46	2.08	3.87
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	1.05	2.92	3.54
Innovation	1.32	1.97	3.81
Education	1.82	1.50	4.33
Information and Communication Technology	1.65	1.94	3.81

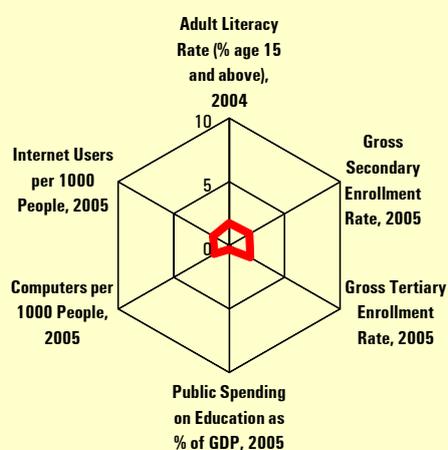
## Sub-Saharan Africa



## Lower Middle Income



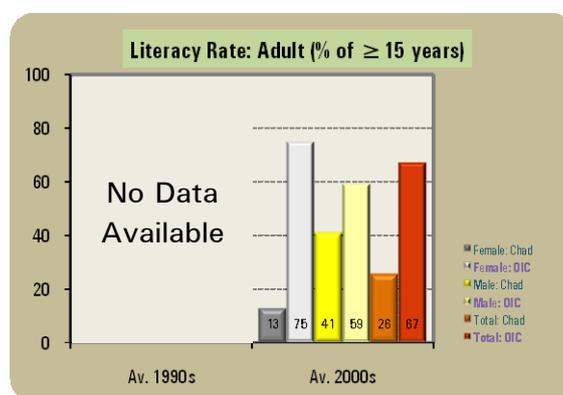
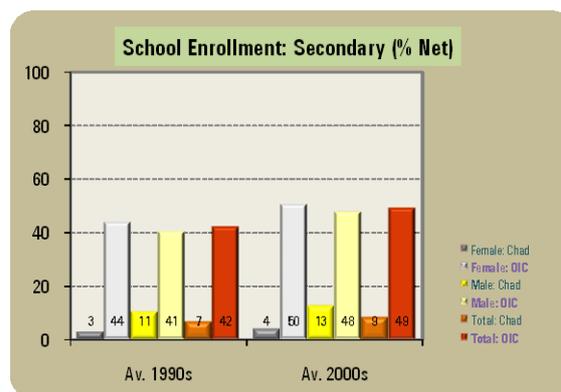
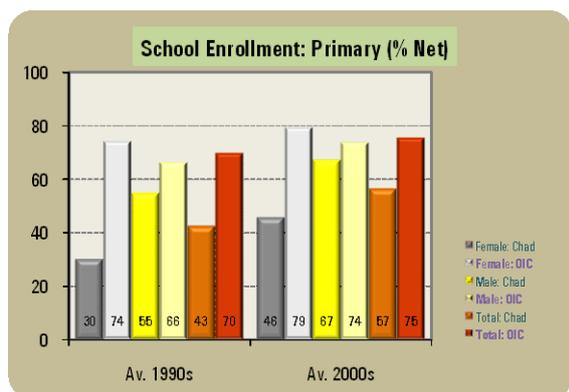
## All Countries



## 7.5.4 Chad

	Chad Average	Sub-Saharan Africa Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	18.16	50.07	63.28
Male	39.41	60.45	73.41
Total	28.82	55.29	68.49
<b>Progression to Secondary School %</b>			
Female	46.04	..	79.30
Male	55.88	..	80.71
Total	52.84	..	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	1.74	3.93	3.13
% of Government Expenditure	8.89	..	..
<b>Pupil - Teacher Ratio %</b>			
Primary	68.63	44.00	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	5.96	11.79	..
Secondary	26.92	..	..
Tertiary	327.87	..	..

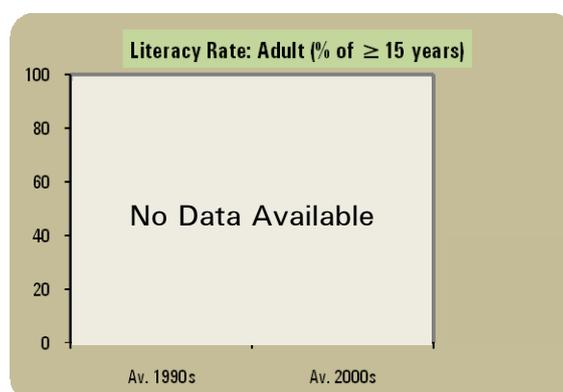
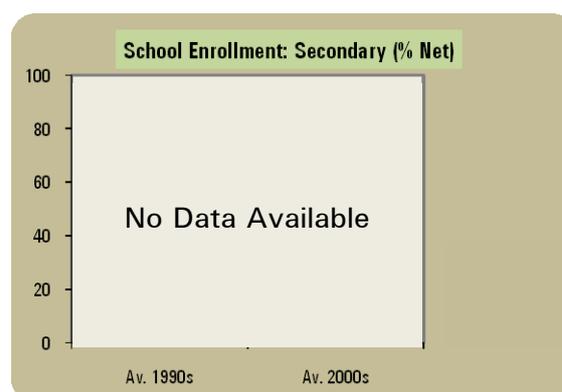
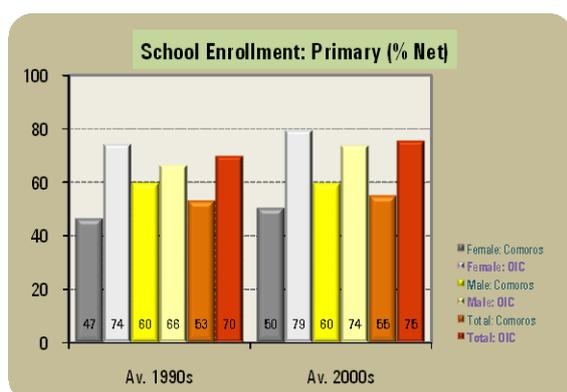
Averages are calculated from the annual data between years 2000 and 2005.



## 7.5.5 Comoros

	Comoros Average	Sub-Saharan Africa Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	46.69	50.07	63.28
Male	51.07	60.45	73.41
Total	48.91	55.29	68.49
<b>Progression to Secondary School %</b>			
Female	58.47	..	79.30
Male	66.32	..	80.71
Total	62.69	..	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	3.78	3.93	3.13
% of Government Expenditure	24.12	..	..
<b>Pupil - Teacher Ratio %</b>			
Primary	36.65	44.00	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	9.41	11.79	..
Secondary	25.45	..	..
Tertiary	..	..	..

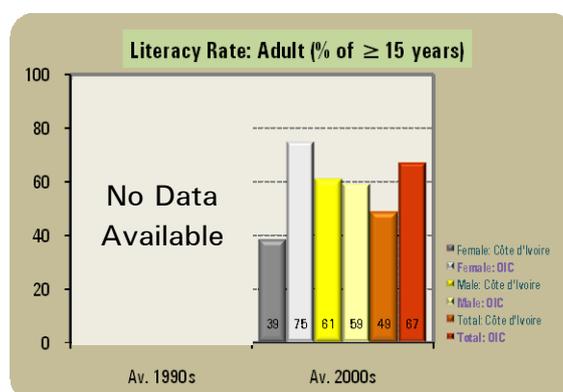
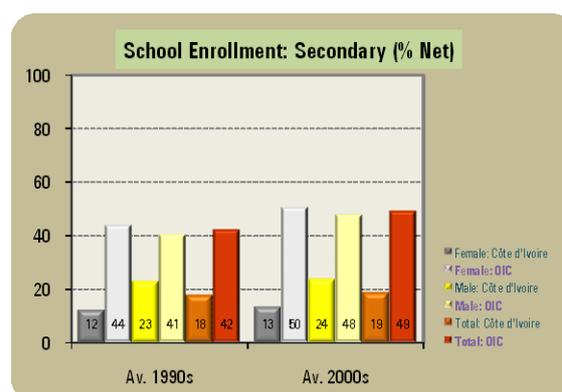
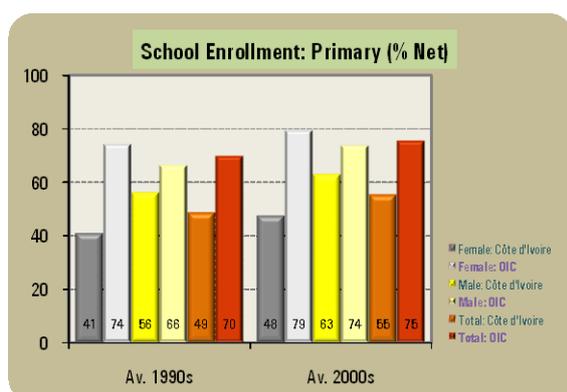
Averages are calculated from the annual data between years 2000 and 2005.



## 7.5.6 Côte d'Ivoire

	Côte d'Ivoire Average	Sub-Saharan Africa Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	31.96	50.07	63.28
Male	50.84	60.45	73.41
Total	41.40	55.29	68.49
<b>Progression to Secondary School %</b>			
Female	36.51	..	79.30
Male	41.65	..	80.71
Total	39.65	..	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	4.63	3.93	3.13
% of Government Expenditure	21.54	..	..
<b>Pupil - Teacher Ratio %</b>			
Primary	44.68	44.00	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	16.60	11.79	..
Secondary	40.63	..	..
Tertiary	..	..	..

Averages are calculated from the annual data between years 2000 and 2005.

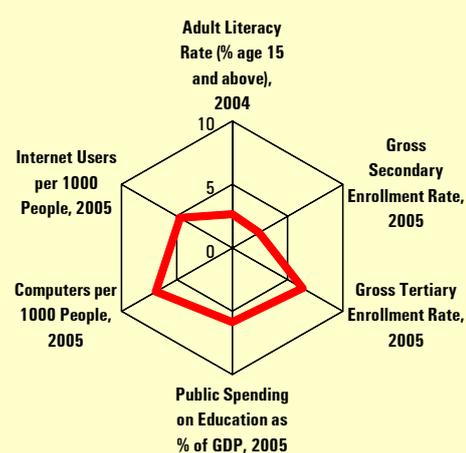
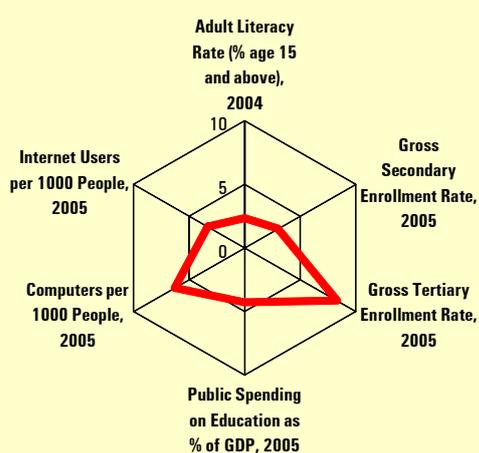


## 7.5.6 Côte d'Ivoire (cont.)

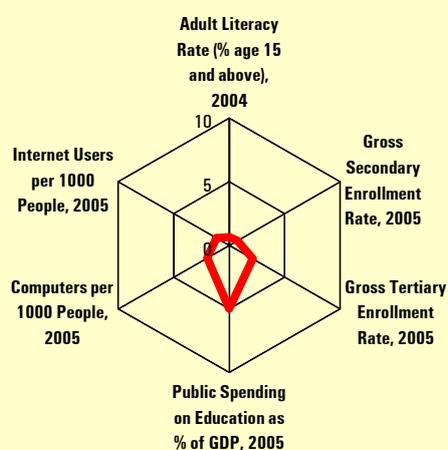
Rank in 2007: 120 out of 137 (based on KEI)	Côte d'Ivoire	Sub-Saharan Africa	Low Income
Rank in 1995: 117 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	1.54	2.08	1.85
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	0.68	2.92	2.32
Innovation	2.65	1.97	1.64
Education	1.17	1.50	1.90
Information and Communication Technology	1.66	1.94	1.54

## Sub-Saharan Africa

## Low Income



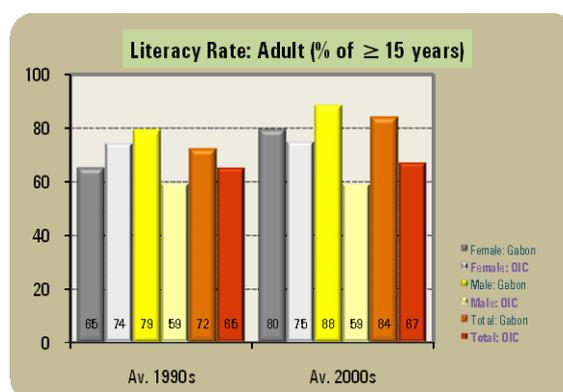
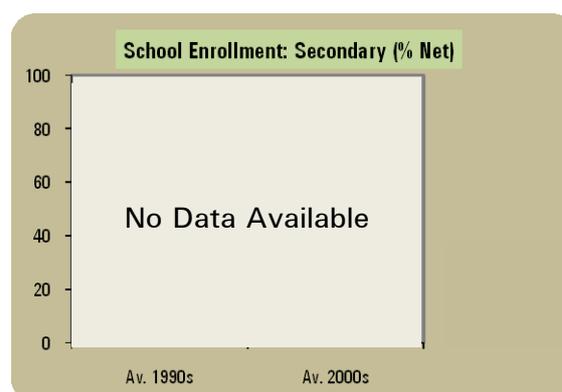
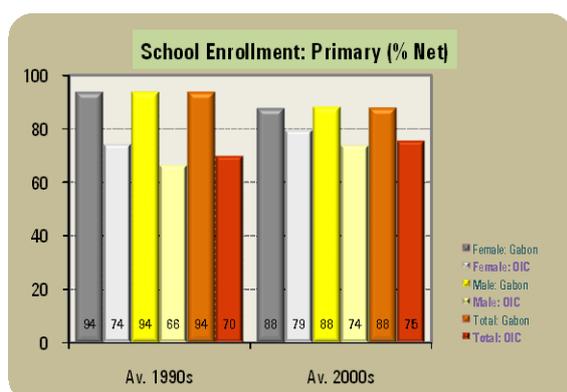
## All Countries



## 7.5.7 Gabon

	Gabon Average	Sub-Saharan Africa Average	Upper Middle Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	76.87	50.07	98.39
Male	73.82	60.45	98.69
Total	75.33	55.29	98.54
<b>Progression to Secondary School %</b>			
Female	..	..	..
Male	..	..	..
Total	..	..	90.86
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	3.83	3.93	4.17
% of Government Expenditure	..	..	13.97
<b>Pupil - Teacher Ratio %</b>			
Primary	42.11	44.00	21.50
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	..	11.79	13.66
Secondary	..	..	17.53
Tertiary	..	..	28.90

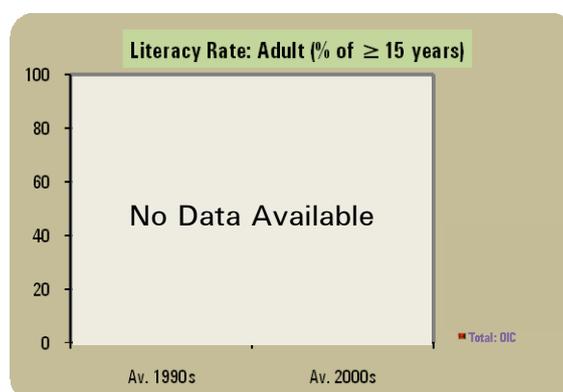
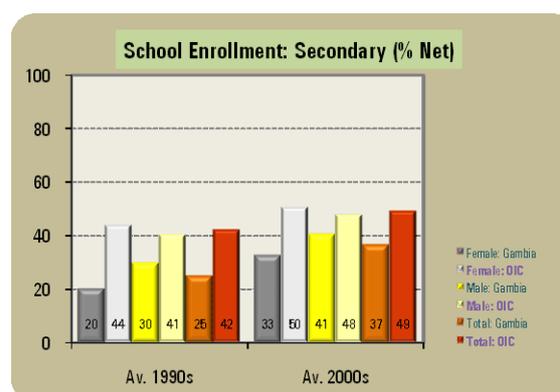
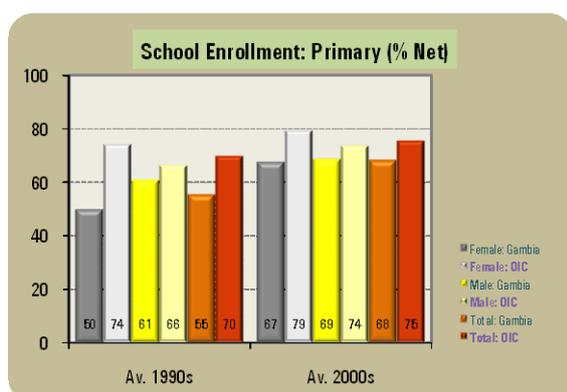
Averages are calculated from the annual data between years 2000 and 2005.



## 7.5.8 Gambia

	Gambia Average	Sub-Saharan Africa Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	63.64	50.07	63.28
Male	62.45	60.45	73.41
Total	63.04	55.29	68.49
<b>Progression to Secondary School %</b>			
Female	..	..	79.30
Male	..	..	80.71
Total	..	..	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	2.44	3.93	3.13
% of Government Expenditure	11.59	..	..
<b>Pupil - Teacher Ratio %</b>			
Primary	36.63	44.00	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	9.59	11.79	..
Secondary	10.08	..	..
Tertiary	238.01	..	..

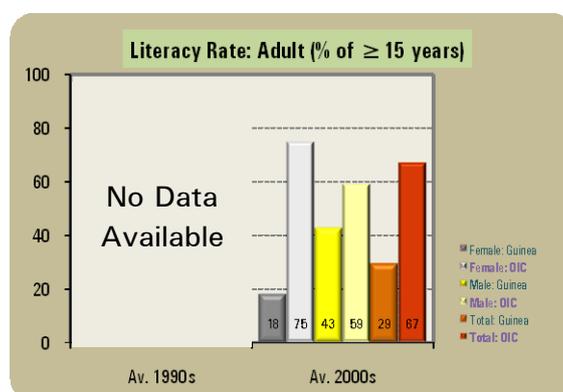
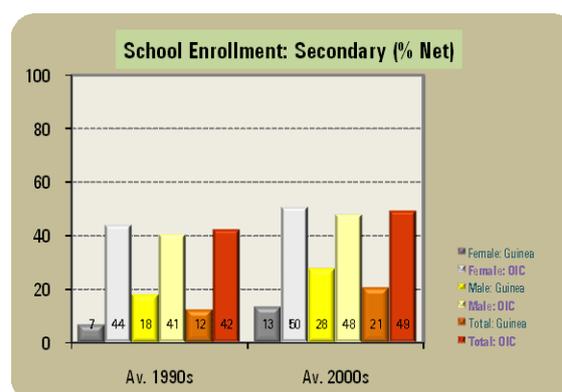
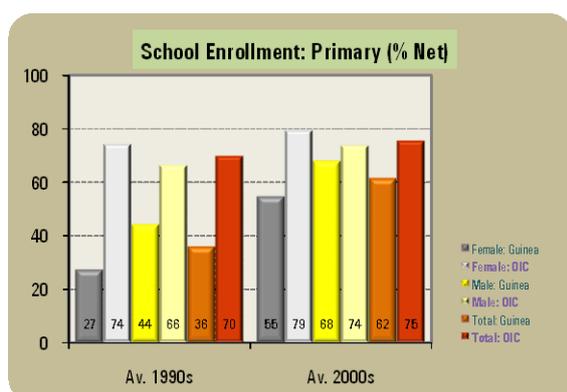
Averages are calculated from the annual data between years 2000 and 2005.



## 7.5.9 Guinea

	Guinea Average	Sub-Saharan Africa Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	34.70	50.07	63.28
Male	56.49	60.45	73.41
Total	45.79	55.29	68.49
<b>Progression to Secondary School %</b>			
Female	56.67	..	79.30
Male	64.06	..	80.71
Total	61.26	..	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	1.83	3.93	3.13
% of Government Expenditure	25.62	..	..
<b>Pupil - Teacher Ratio %</b>			
Primary	45.25	44.00	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	10.01	11.79	..
Secondary	..	..	..
Tertiary	226.78	..	..

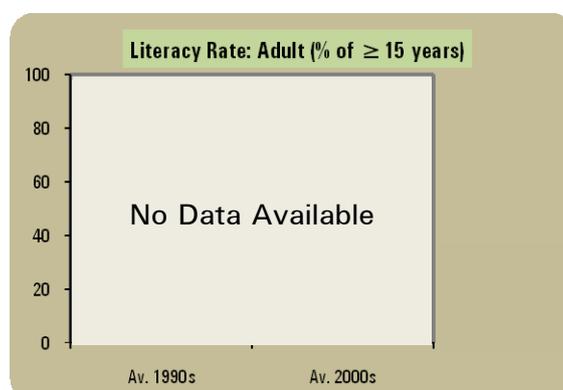
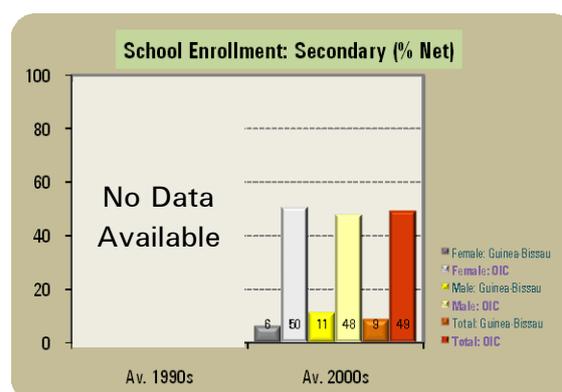
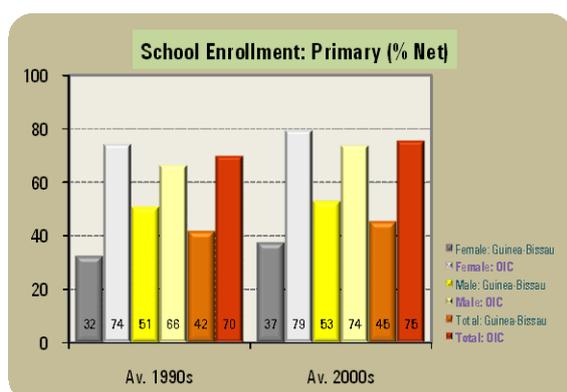
Averages are calculated from the annual data between years 2000 and 2005.



## 7.5.10 Guinea-Bissau

	Guinea-Bissau Average	Sub-Saharan Africa Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	19.34	50.07	63.28
Male	34.59	60.45	73.41
Total	26.94	55.29	68.49
<b>Progression to Secondary School %</b>			
Female	58.46	..	79.30
Male	66.01	..	80.71
Total	63.22	..	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	..	3.93	3.13
% of Government Expenditure	..	..	..
<b>Pupil - Teacher Ratio %</b>			
Primary	44.07	44.00	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	..	11.79	..
Secondary	..	..	..
Tertiary	..	..	..

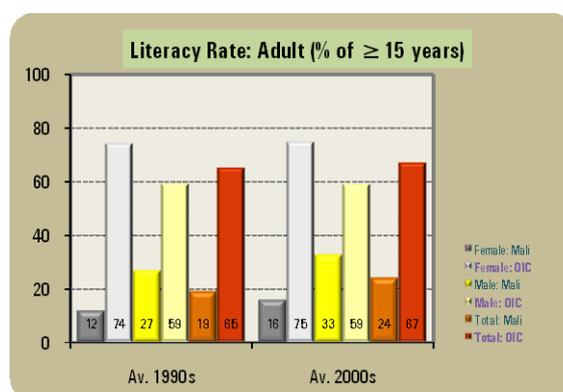
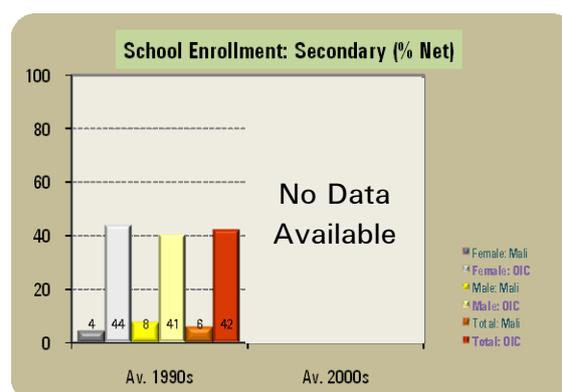
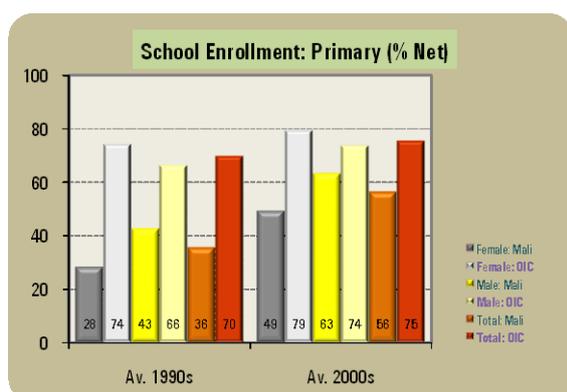
Averages are calculated from the annual data between years 2000 and 2005.



## 7.5.11 Mali

	Mali Average	Sub-Saharan Africa Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	31.60	50.07	63.28
Male	49.59	60.45	73.41
Total	40.60	55.29	68.49
<b>Progression to Secondary School %</b>			
Female	50.21	..	79.30
Male	57.13	..	80.71
Total	54.41	..	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	4.09	3.93	3.13
% of Government Expenditure	15.70	..	..
<b>Pupil - Teacher Ratio %</b>			
Primary	57.81	44.00	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	24.46	11.79	..
Secondary	36.39	..	..
Tertiary	..	..	..

Averages are calculated from the annual data between years 2000 and 2005.

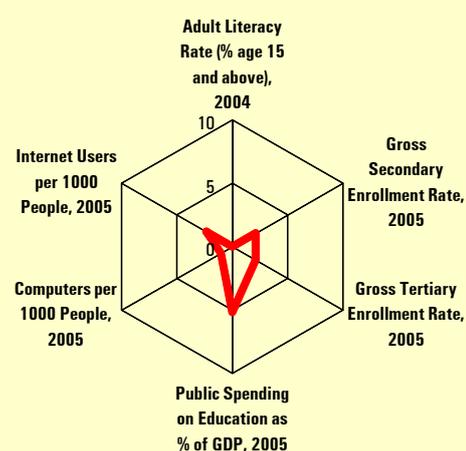
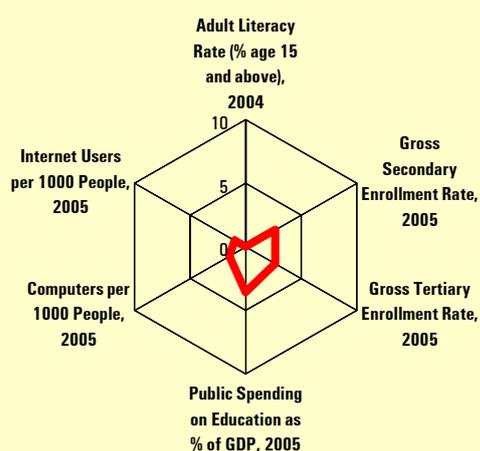


## 7.5.11 Mali (cont.)

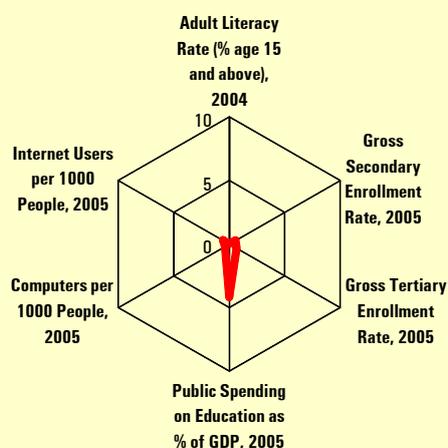
Rank in 2007: 127 out of 137 (based on KEI)	Mali	Sub-Saharan Africa	Low Income
Rank in 1995: 118 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	1.22	2.08	1.85
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	3.38	2.92	2.32
Innovation	0.41	1.97	1.64
Education	0.42	1.50	1.90
Information and Communication Technology	0.67	1.94	1.54

## Sub-Saharan Africa

## Low Income



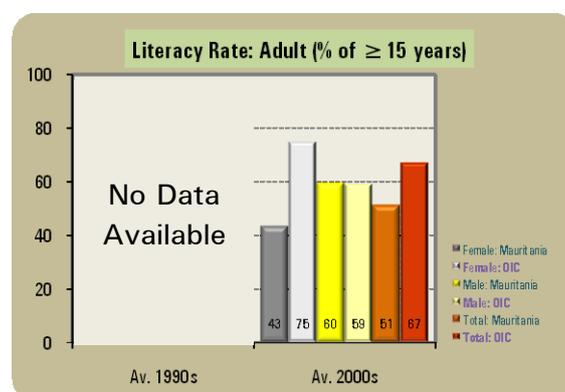
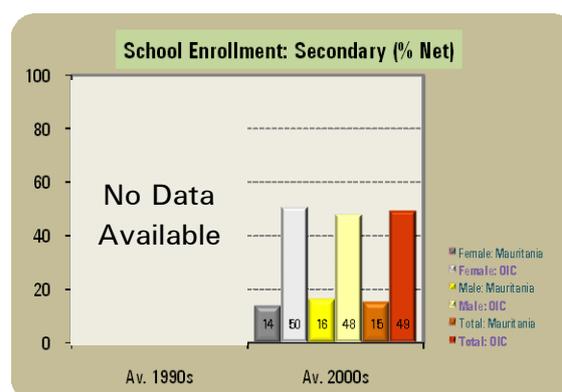
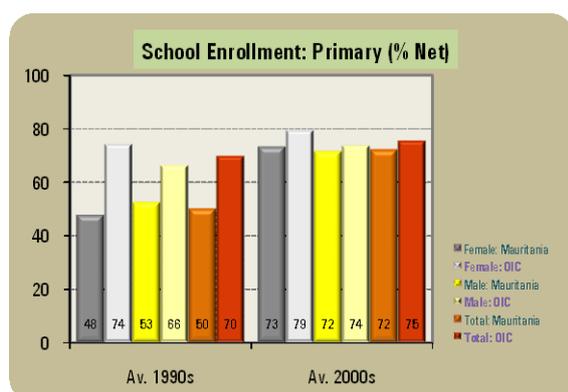
## All Countries



## 7.5.12 Mauritania

	Mauritania Average	Sub-Saharan Africa Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	45.47	50.07	63.28
Male	47.53	60.45	73.41
Total	47.39	55.29	68.49
<b>Progression to Secondary School %</b>			
Female	41.32	..	79.30
Male	46.34	..	80.71
Total	43.93	..	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	3.15	3.93	3.13
% of Government Expenditure	9.22	..	..
<b>Pupil - Teacher Ratio %</b>			
Primary	41.35	44.00	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	9.99	11.79	..
Secondary	25.06	..	..
Tertiary	40.58	..	..

Averages are calculated from the annual data between years 2000 and 2005.

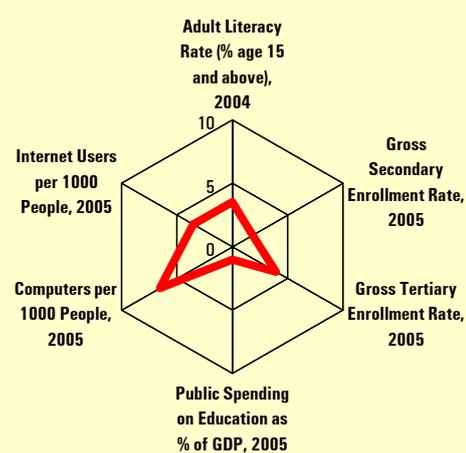
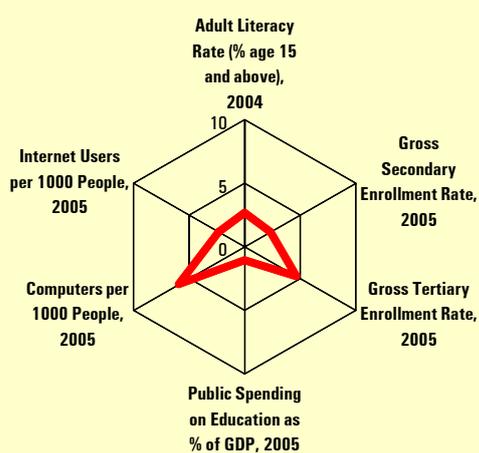


## 7.5.12 Mauritania (cont.)

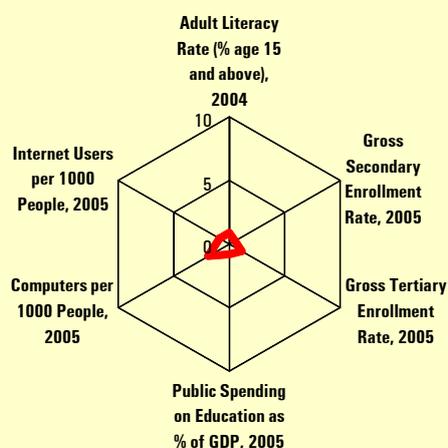
Rank in 2007: 117 out of 137 (based on KEI)	Mauritania	Sub-Saharan Africa	Low Income
Rank in 1995: 126 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	1.67	2.08	1.85
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	3.72	2.92	2.32
Innovation	0.29	1.97	1.64
Education	0.84	1.50	1.90
Information and Communication Technology	1.85	1.94	1.54

## Sub-Saharan Africa

## Low Income



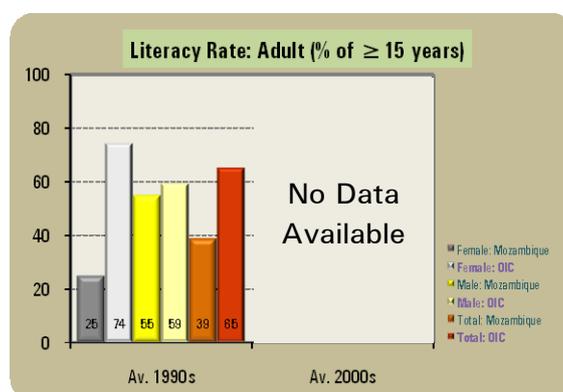
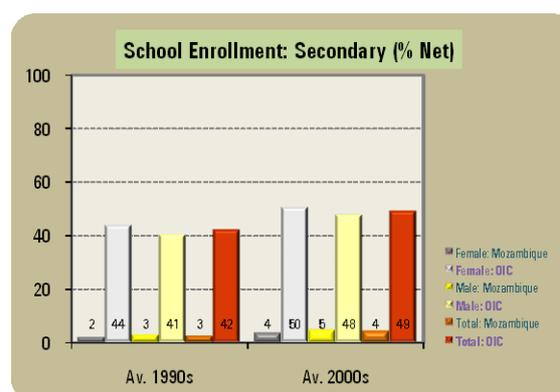
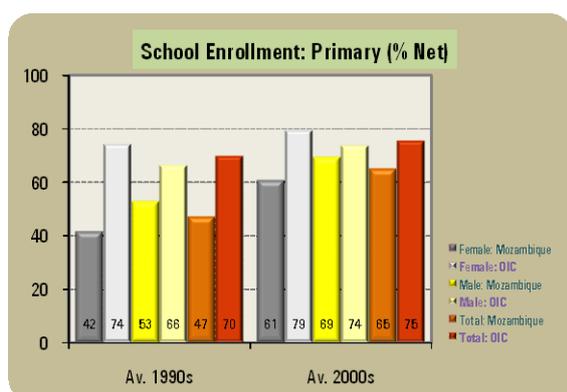
## All Countries



## 7.5.13 Mozambique

	Mozambique Average	Sub-Saharan Africa Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	22.78	50.07	63.28
Male	33.95	60.45	73.41
Total	28.36	55.29	68.49
<b>Progression to Secondary School %</b>			
Female	49.63	..	79.30
Male	46.76	..	80.71
Total	47.93	..	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	4.36	3.93	3.13
% of Government Expenditure	19.47	..	..
<b>Pupil - Teacher Ratio %</b>			
Primary	66.02	44.00	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	14.54	11.79	..
Secondary	71.64	..	..
Tertiary	398.55	..	..

Averages are calculated from the annual data between years 2000 and 2005.

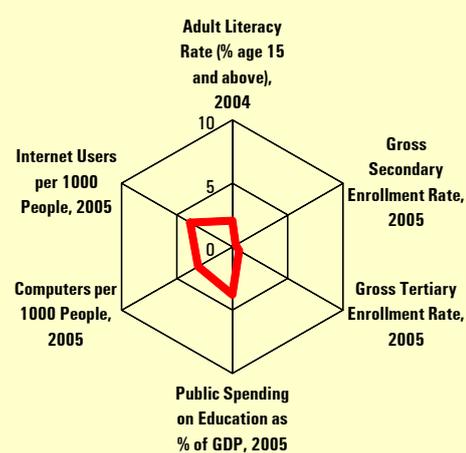
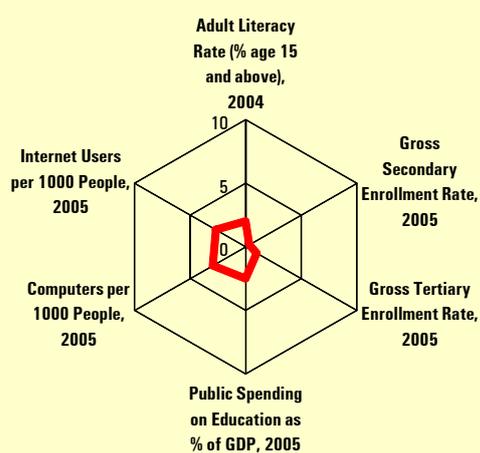


## 7.5.13 Mozambique (cont.)

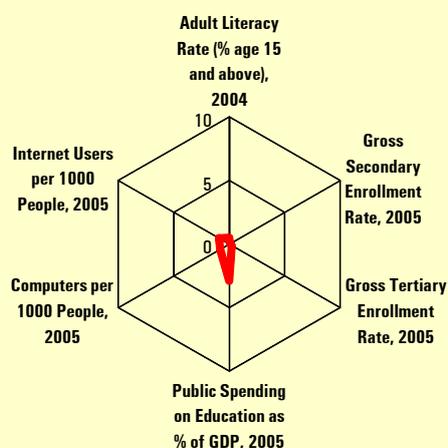
Rank in 2007: 128 out of 137 (based on KEI)	Mozambique	Sub-Saharan Africa	Low Income
Rank in 1995: 131 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	1.18	2.08	1.85
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	2.48	2.92	2.32
Innovation	1.09	1.97	1.64
Education	0.27	1.50	1.90
Information and Communication Technology	0.87	1.94	1.54

## Sub-Saharan Africa

## Low Income



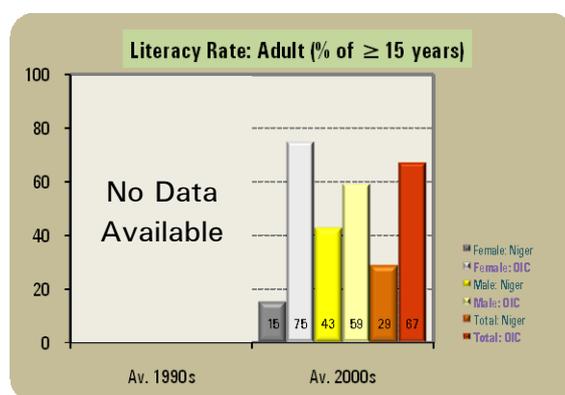
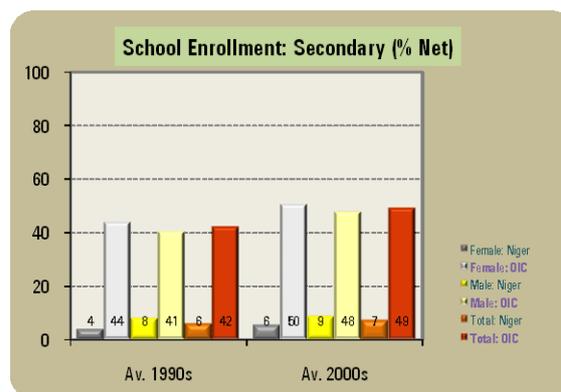
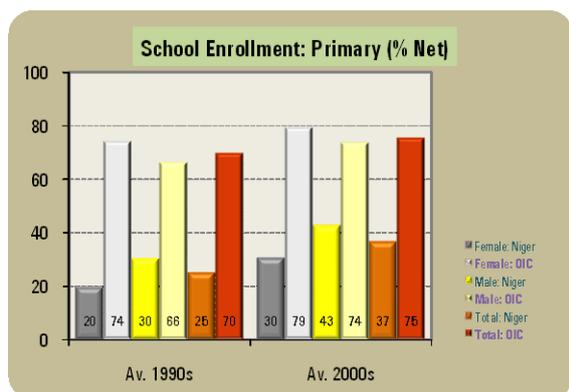
## All Countries



7.5.14 Niger

	Niger Average	Sub-Saharan Africa Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	19.25	50.07	63.28
Male	28.53	60.45	73.41
Total	24.03	55.29	68.49
<b>Progression to Secondary School %</b>			
Female	44.44	..	79.30
Male	47.97	..	80.71
Total	46.58	..	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	2.77	3.93	3.13
% of Government Expenditure	14.11	..	..
<b>Pupil - Teacher Ratio %</b>			
Primary	41.85	44.00	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	28.91	11.79	..
Secondary	56.76	..	..
Tertiary	384.86	..	..

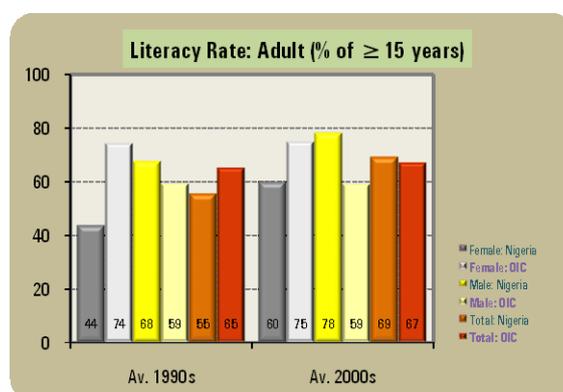
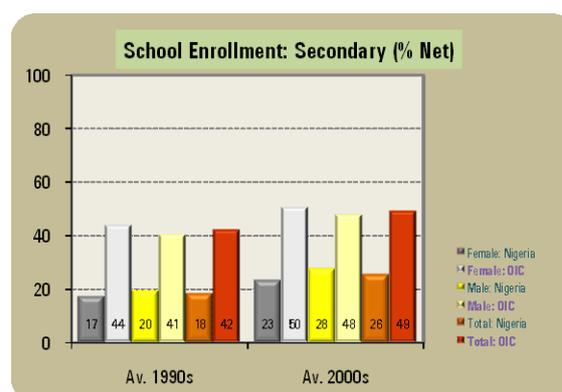
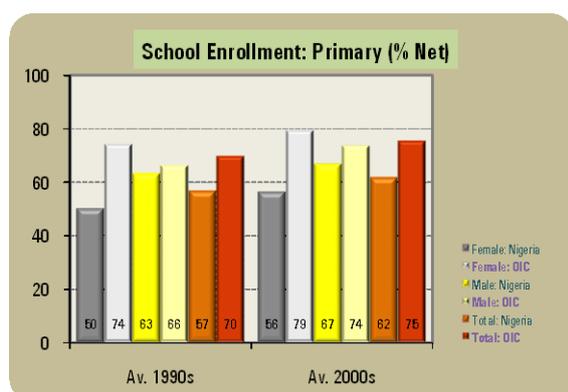
Averages are calculated from the annual data between years 2000 and 2005.



## 7.5.15 Nigeria

	Nigeria Average	Sub-Saharan Africa Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	65.19	50.07	63.28
Male	80.82	60.45	73.41
Total	73.09	55.29	68.49
<b>Progression to Secondary School %</b>			
Female	..	..	79.30
Male	..	..	80.71
Total	..	..	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	..	3.93	3.13
% of Government Expenditure	..	..	..
<b>Pupil - Teacher Ratio %</b>			
Primary	37.76	44.00	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	..	11.79	..
Secondary	..	..	..
Tertiary	..	..	..

Averages are calculated from the annual data between years 2000 and 2005.

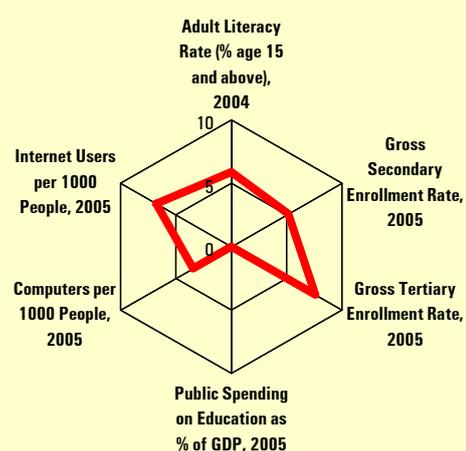
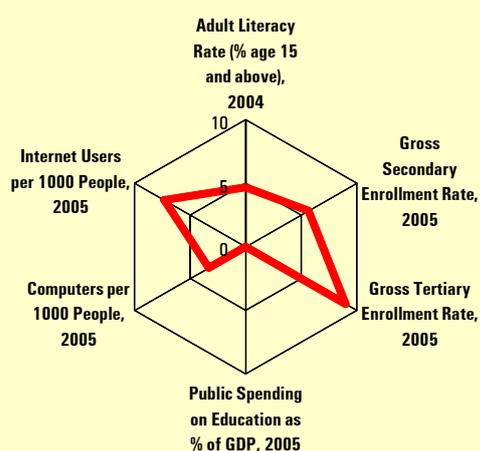


7.5.15 Nigeria (cont.)

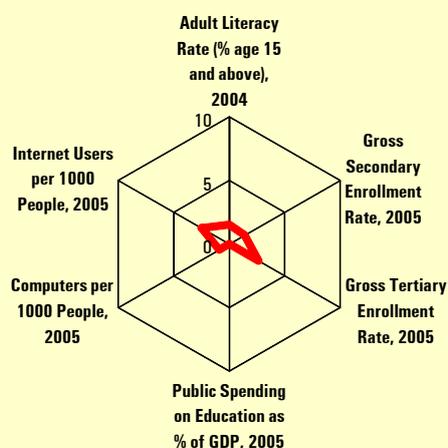
Rank in 2007: 115 out of 137 (based on KEI)	Nigeria	Sub-Saharan Africa	Low Income
Rank in 1995: 112 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	1.84	2.08	1.85
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	1.02	2.92	2.32
Innovation	2.61	1.97	1.64
Education	1.85	1.50	1.90
Information and Communication Technology	1.87	1.94	1.54

Sub-Saharan Africa

Low Income



All Countries

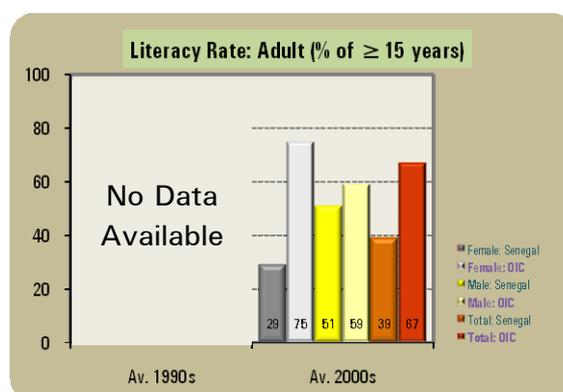
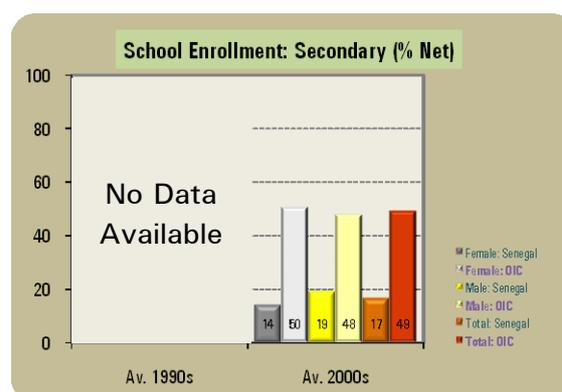
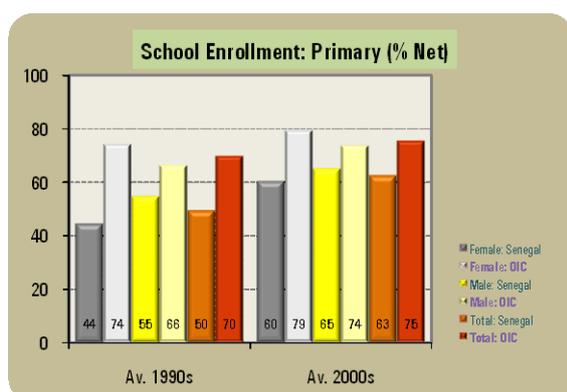


\* No data available for *Public Spending on Education as % of GDP, 2005*.

## 7.5.16 Senegal

	Senegal Average	Sub-Saharan Africa Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	40.53	50.07	63.28
Male	49.41	60.45	73.41
Total	45.00	55.29	68.49
<b>Progression to Secondary School %</b>			
Female	41.88	..	79.30
Male	45.88	..	80.71
Total	44.09	..	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	4.11	3.93	3.13
% of Government Expenditure	21.78	..	..
<b>Pupil - Teacher Ratio %</b>			
Primary	45.80	44.00	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	18.33	11.79	..
Secondary	34.96	..	..
Tertiary	235.27	..	..

Averages are calculated from the annual data between years 2000 and 2005.

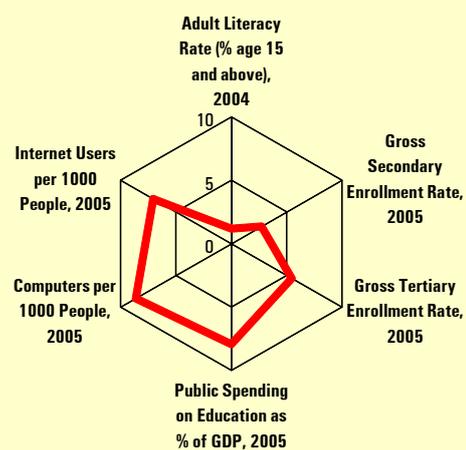
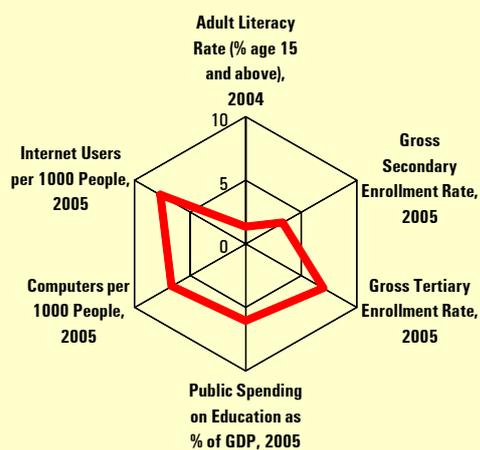


7.5.16 Senegal (cont.)

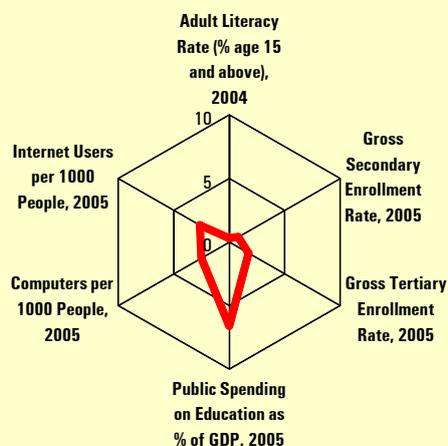
Rank in 2007: 109 out of 137 (based on KEI)	Senegal	Sub-Saharan Africa	Low Income
Rank in 1995: 111 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	2.38	2.08	1.85
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	3.92	2.92	2.32
Innovation	2.14	1.97	1.64
Education	0.94	1.50	1.90
Information and Communication Technology	2.52	1.94	1.54

Sub-Saharan Africa

Low Income



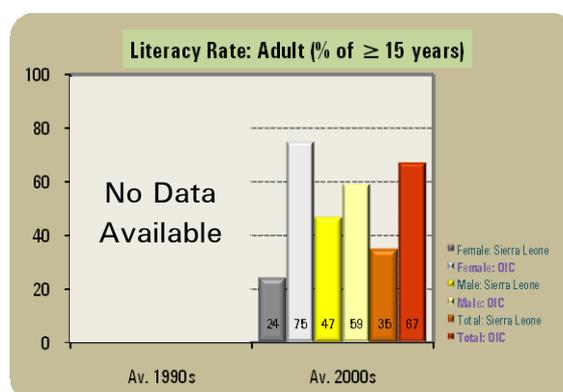
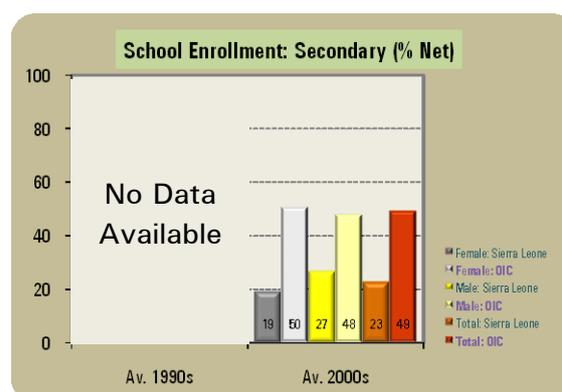
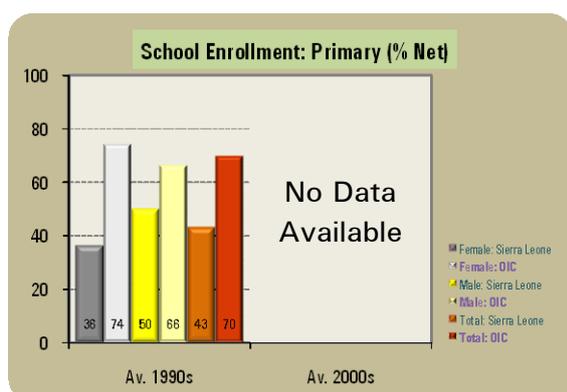
All Countries



## 7.5.17 Sierra Leone

	Sierra Leone Average	Sub-Saharan Africa Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	69.84	50.07	63.28
Male	91.76	60.45	73.41
Total	80.75	55.29	68.49
<b>Progression to Secondary School %</b>			
Female	..	..	79.30
Male	..	..	80.71
Total	..	..	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	4.48	3.93	3.13
% of Government Expenditure	..	..	..
<b>Pupil - Teacher Ratio %</b>			
Primary	40.74	44.00	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	..	11.79	..
Secondary	..	..	..
Tertiary	..	..	..

Averages are calculated from the annual data between years 2000 and 2005.

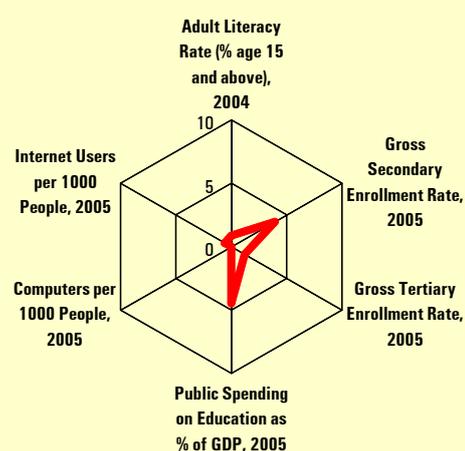
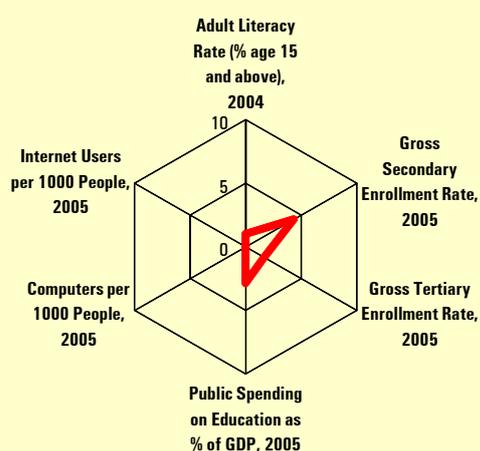


7.5.17 Sierra Leone (cont.)

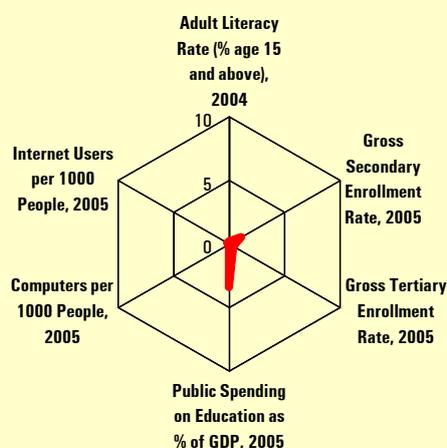
Rank in 2007: 137 out of 137 (based on KEI)	Sierra Leone	Sub-Saharan Africa	Low Income
Rank in 1995: 128 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	0.62	2.08	1.85
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	0.84	2.92	2.32
Innovation	0.87	1.97	1.64
Education	0.56	1.50	1.90
Information and Communication Technology	0.21	1.94	1.54

Sub-Saharan Africa

Low Income



All Countries

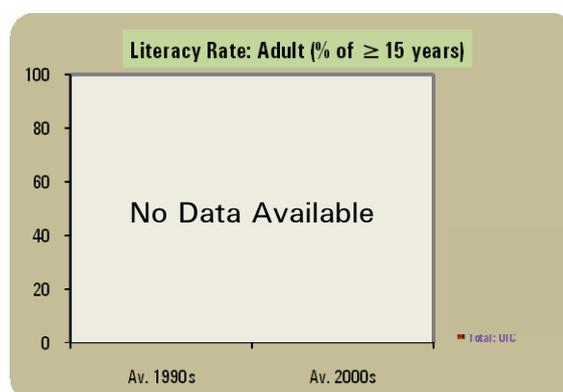
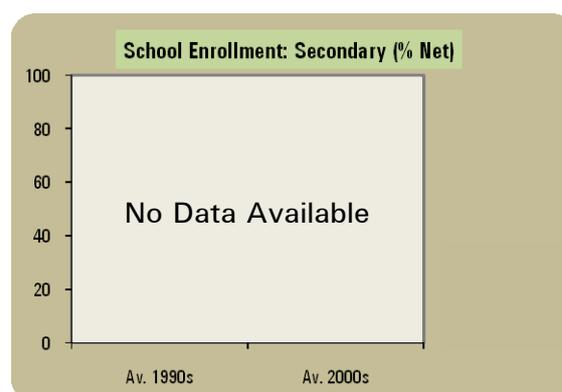
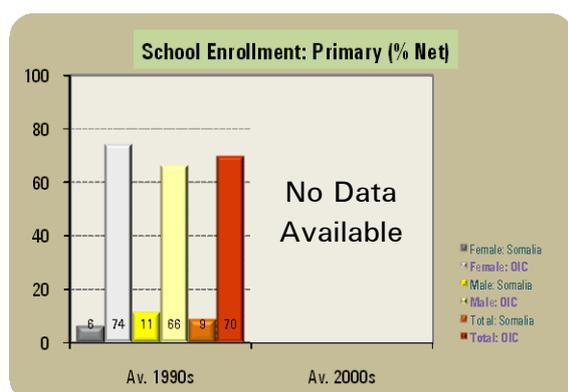


\* No data available for Computers per 1000 people, 2005.

## 7.5.18 Somalia

	Somalia Average	Sub-Saharan Africa Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	..	50.07	63.28
Male	..	60.45	73.41
Total	..	55.29	68.49
<b>Progression to Secondary School %</b>			
Female	..	..	79.30
Male	..	..	80.71
Total	..	..	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	..	3.93	3.13
% of Government Expenditure	..	..	..
<b>Pupil - Teacher Ratio %</b>			
Primary	..	44.00	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	..	11.79	..
Secondary	..	..	..
Tertiary	..	..	..

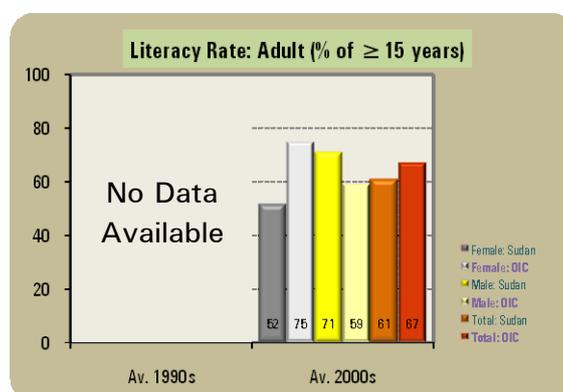
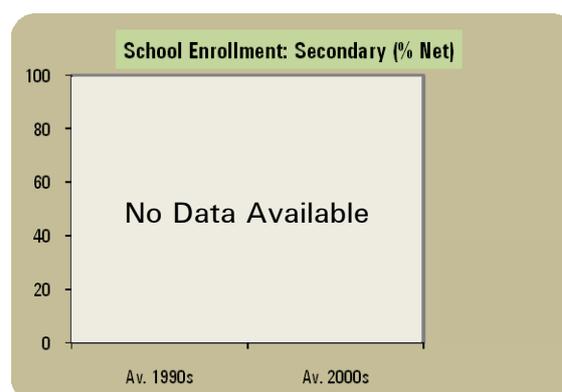
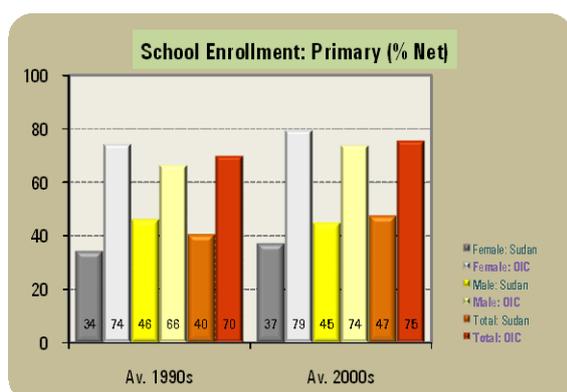
Averages are calculated from the annual data between years 2000 and 2005.



## 7.5.19 Sudan

	Sudan Average	Sub-Saharan Africa Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	39.54	50.07	63.28
Male	45.59	60.45	73.41
Total	42.61	55.29	68.49
<b>Progression to Secondary School %</b>			
Female	91.22	..	79.30
Male	88.87	..	80.71
Total	89.01	..	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	..	3.93	3.13
% of Government Expenditure	..	..	..
<b>Pupil - Teacher Ratio %</b>			
Primary	28.95	44.00	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	..	11.79	..
Secondary	..	..	..
Tertiary	..	..	..

Averages are calculated from the annual data between years 2000 and 2005.

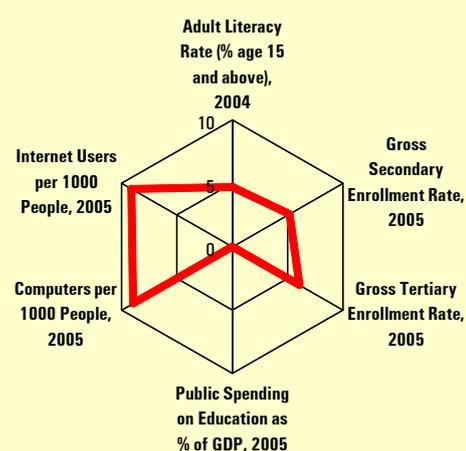
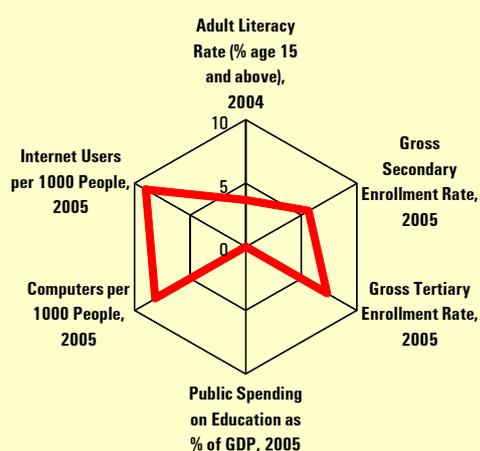


## 7.5.19 Sudan (cont.)

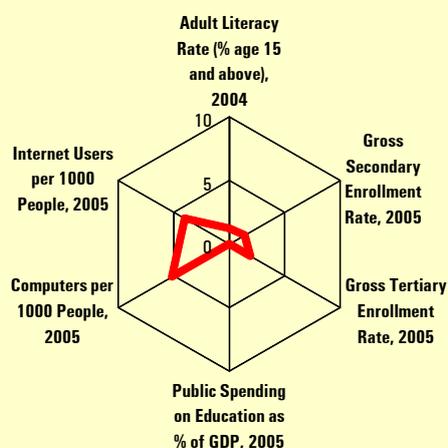
Rank in 2007: 124 out of 137 (based on KEI)	Sudan	Sub-Saharan Africa	Low Income
Rank in 1995: 135 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	1.39	2.08	1.85
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	0.29	2.92	2.32
Innovation	0.43	1.97	1.64
Education	1.50	1.50	1.90
Information and Communication Technology	3.36	1.94	1.54

## Sub-Saharan Africa

## Low Income



## All Countries

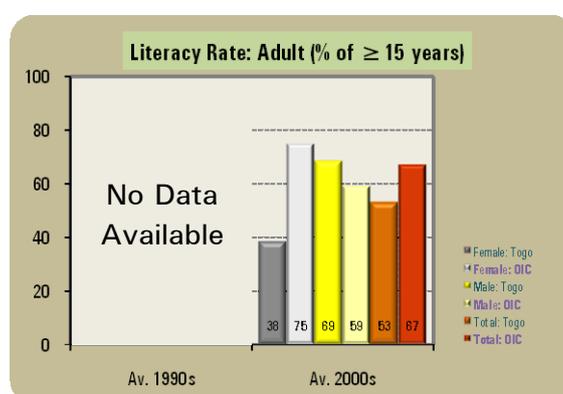
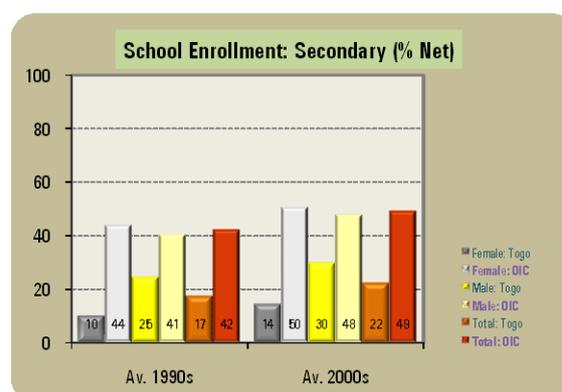
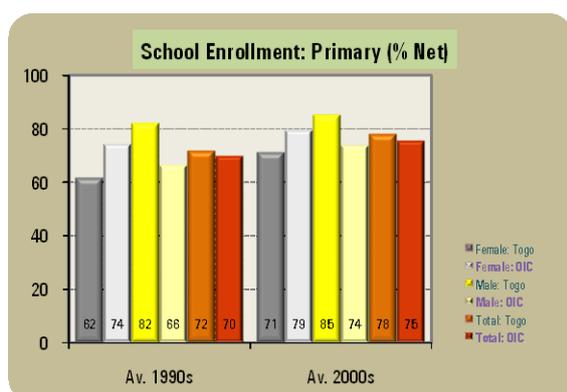


\* No data available for *Public Spending on Education as % of GDP, 2005*.

## 7.5.20 Togo

	Togo Average	Sub-Saharan Africa Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	53.12	50.07	63.28
Male	78.23	60.45	73.41
Total	65.65	55.29	68.49
<b>Progression to Secondary School %</b>			
Female	62.11	..	79.30
Male	68.57	..	80.71
Total	65.96	..	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	3.51	3.93	3.13
% of Government Expenditure	18.36	..	..
<b>Pupil - Teacher Ratio %</b>			
Primary	37.55	44.00	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	9.46	11.79	..
Secondary	26.46	..	..
Tertiary	269.90	..	..

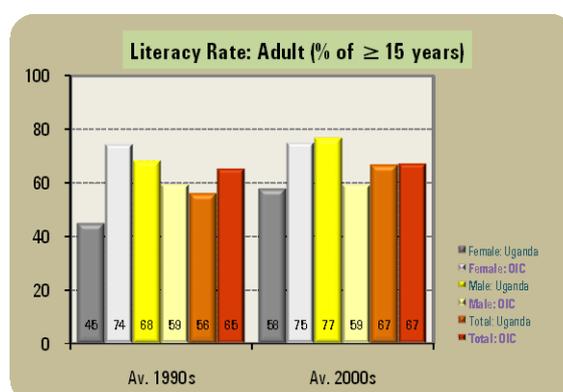
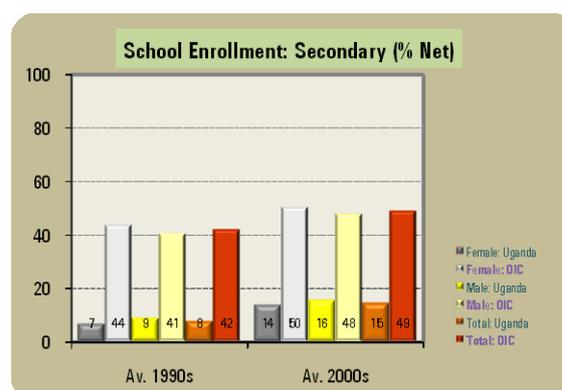
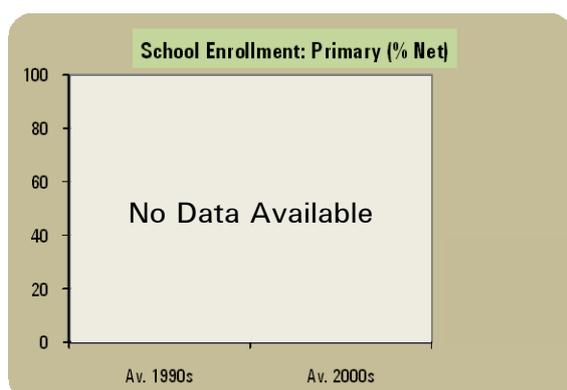
Averages are calculated from the annual data between years 2000 and 2005.



## 7.5.21 Uganda

	Uganda Average	Sub-Saharan Africa Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	52.90	50.07	63.28
Male	61.39	60.45	73.41
Total	57.17	55.29	68.49
<b>Progression to Secondary School %</b>			
Female	40.53	..	79.30
Male	38.52	..	80.71
Total	39.40	..	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	3.85	3.93	3.13
% of Government Expenditure	18.29	..	..
<b>Pupil - Teacher Ratio %</b>			
Primary	52.59	44.00	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	11.28	11.79	..
Secondary	33.98	..	..
Tertiary	188.91	..	..

Averages are calculated from the annual data between years 2000 and 2005.

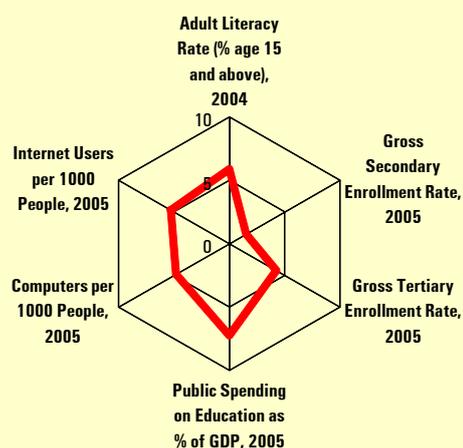
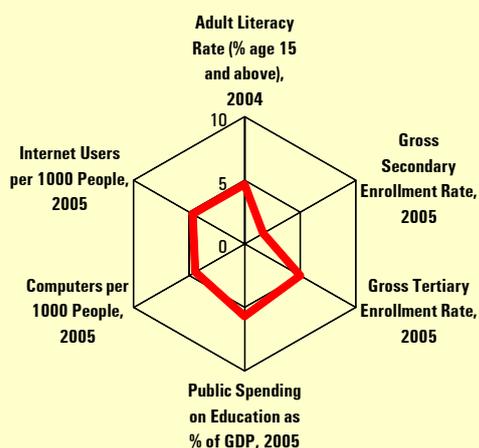


7.5.21 Uganda (cont.)

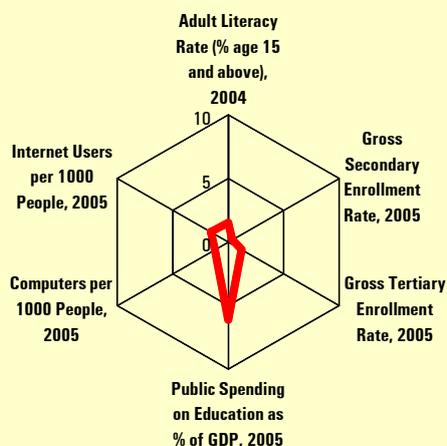
Rank in 2007: 112 out of 137 (based on KEI)	Uganda	Sub-Saharan Africa	Low Income
Rank in 1995: 124 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	2.05	2.08	1.85
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	3.33	2.92	2.32
Innovation	2.69	1.97	1.64
Education	1.03	1.50	1.90
Information and Communication Technology	1.17	1.94	1.54

Sub-Saharan Africa

Low Income



All Countries



## 7.6 Europe and Central Asia

Table 7-5: Education Indicators for Europe and Central Asia

	NER Primary		NER Secondary		Primary Completion		Progression to Secondary		Adult Literacy Rate		Educational Spending as % of GDP		Educational Spending as % of Government Expenditure	
	1990s*	2000s**	1990s	2000s	1990s	2000s	1990s	2000s	1990s	2000s	1990s	2000s	1990s	2000s
Albania	94.77	92.80	67.30	69.56	95.82	95.19	90.97	96.41	..	98.71	..	2.87	..	8.43
Azerbaijan	87.15	83.52	73.19	75.95	89.77	92.35	97.50	98.43	98.79	..	5.11	3.08	23.70	20.62
Kazakhstan	87.97	90.44	..	88.26	..	99.90	..	99.54	99.51	..	3.88	2.87	16.76	14.45
Kyrgyzstan	90.15	86.46	..	81.01	97.15	94.25	98.51	99.11	98.70	..	4.79	3.96	22.74	18.65
Tajikistan	76.70	96.48	62.78	77.04	89.85	97.76	97.08	97.82	..	99.45	4.56	2.80	18.09	17.62
Turkey	89.22	90.24	41.99	66.03	89.70	86.64	..	91.36	79.23	87.37	3.11	3.69	..	..
Turkmenistan	..	..	..	..	..	..	..	..	98.78	..	3.94	..	19.65	..
Uzbekistan	78.21	..	..	..	..	98.60	..	99.63	..	..	9.37	..	17.81	..
ECA	90.26	90.51	..	82.61	94.63	94.72	..	94.75	96.18	97.44	4.45	3.94	..	13.79
ECA-OIC	86.31	89.99	61.31	76.31	92.46	94.96	96.02	97.47	95.00	95.18	4.97	3.21	19.79	15.95

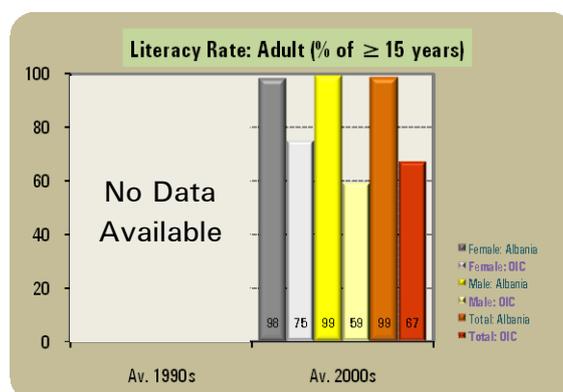
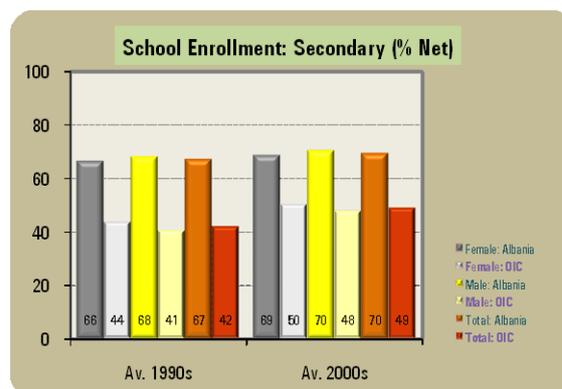
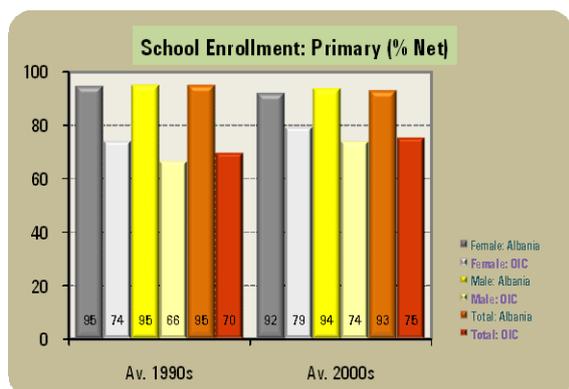
\* 1990s: Averages are calculated from the annual data between 1990 and 1999.

\*\* 2000s: Averages are calculated from the annual data between 2000 and 2005.

### 7.6.1 Albania

	Albania Average	Europe & Central Asia Average	Lower Middle Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	95.12	93.25	96.46
Male	95.26	96.13	97.29
Total	95.19	94.72	96.71
<b>Progression to Secondary School %</b>			
Female	96.94	..	..
Male	95.92	..	..
Total	96.41	94.75	..
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	2.87	3.94	4.40
% of Government Expenditure	8.43	13.79	16.22
<b>Pupil - Teacher Ratio %</b>			
Primary	21.76	16.81	21.31
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	7.78	12.44	11.00
Secondary	11.97	17.34	16.74
Tertiary	36.60	23.42	..

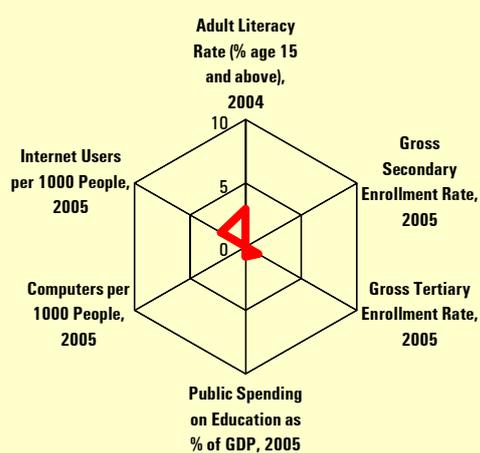
Averages are calculated from the annual data between years 2000 and 2005.



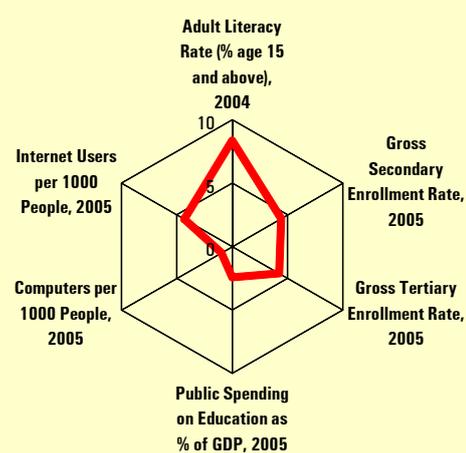
## 7.6.1 Albania (cont.)

Rank in 2007: 94 out of 137 (based on KEI)	Albania	Europe & Central Asia	Lower Middle Income
Rank in 1995: 100 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	3.22	5.68	3.87
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	3.09	4.99	3.54
Innovation	2.29	5.60	3.81
Education	5.10	6.76	4.33
Information and Communication Technology	2.41	5.38	3.81

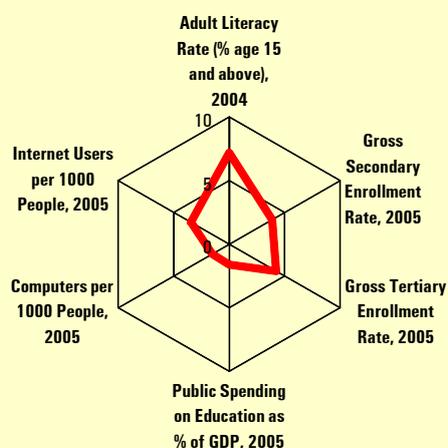
## Europe &amp; Central Asia



## Lower Middle Income



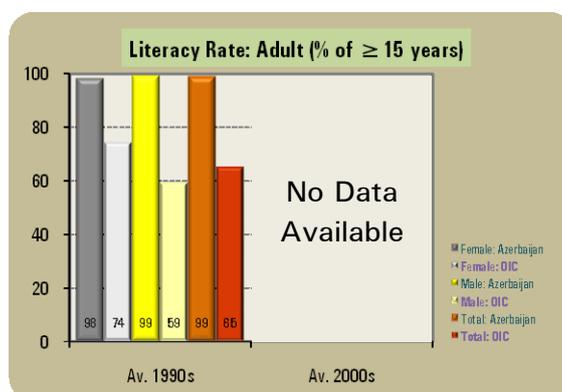
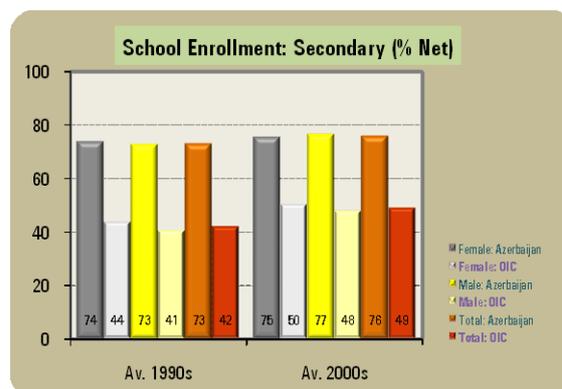
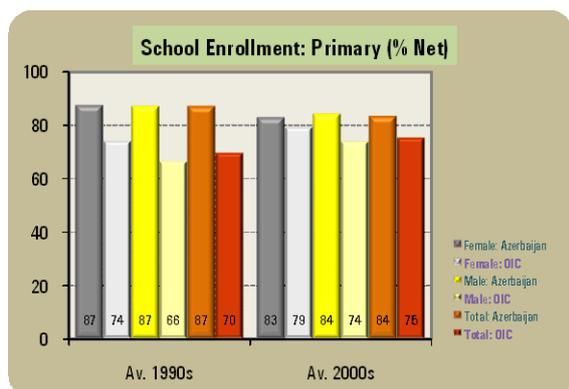
## All Countries



## 7.6.2 Azerbaijan

	Azerbaijan Average	Europe & Central Asia Average	Lower Middle Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	91.67	93.25	96.46
Male	93.00	96.13	97.29
Total	92.35	94.72	96.71
<b>Progression to Secondary School %</b>			
Female	97.78	..	..
Male	99.04	..	..
Total	98.43	94.75	..
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	3.08	3.94	4.40
% of Government Expenditure	20.62	13.79	16.22
<b>Pupil - Teacher Ratio %</b>			
Primary	15.35	16.81	21.31
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	6.81	12.44	11.00
Secondary	12.98	17.34	16.74
Tertiary	12.35	23.42	..

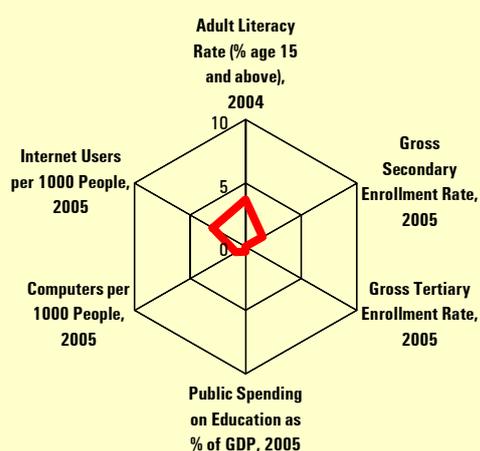
Averages are calculated from the annual data between years 2000 and 2005.



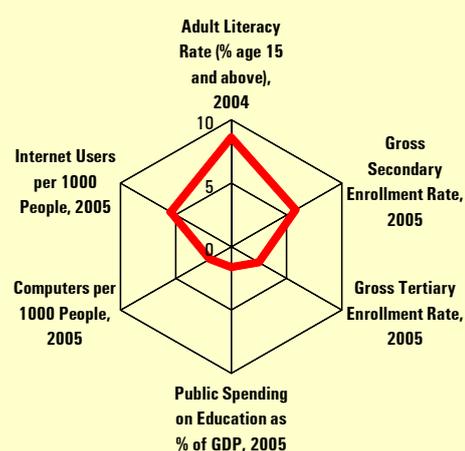
## 7.6.2 Azerbaijan (cont.)

Rank in 2007: 89 out of 137 (based on KEI)	Azerbaijan	Europe & Central Asia	Lower Middle Income
Rank in 1995: 88 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	3.56	5.68	3.87
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	3.03	4.99	3.54
Innovation	2.65	5.60	3.81
Education	5.04	6.76	4.33
Information and Communication Technology	3.53	5.38	3.81

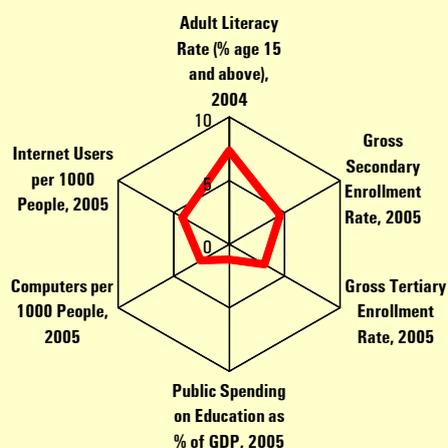
## Europe &amp; Central Asia



## Lower Middle Income



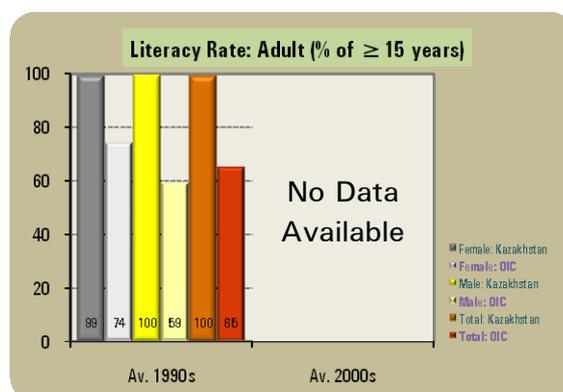
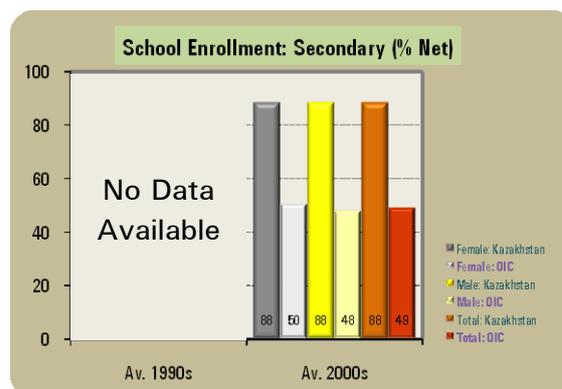
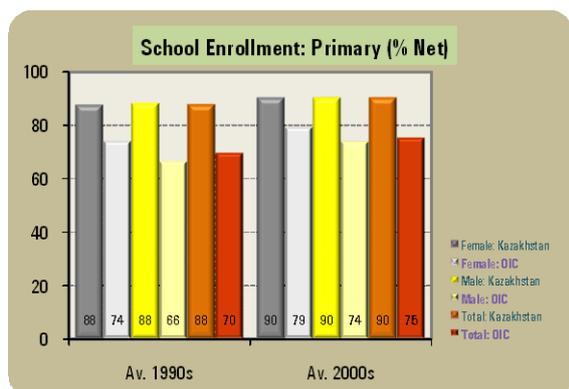
## All Countries



## 7.6.3 Kazakhstan

	Kazakhstan Average	Europe & Central Asia Average	Upper Middle Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	100.01	93.25	98.39
Male	99.79	96.13	98.69
Total	99.90	94.72	98.54
<b>Progression to Secondary School %</b>			
Female	99.44	..	..
Male	99.65	..	..
Total	99.54	94.75	90.86
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	2.87	3.94	4.17
% of Government Expenditure	14.45	13.79	13.97
<b>Pupil - Teacher Ratio %</b>			
Primary	17.92	16.81	21.50
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	10.48	12.44	13.66
Secondary	8.39	17.34	17.53
Tertiary	7.64	23.42	28.90

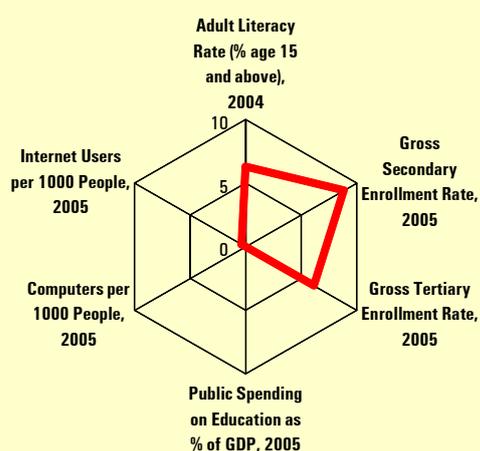
Averages are calculated from the annual data between years 2000 and 2005.



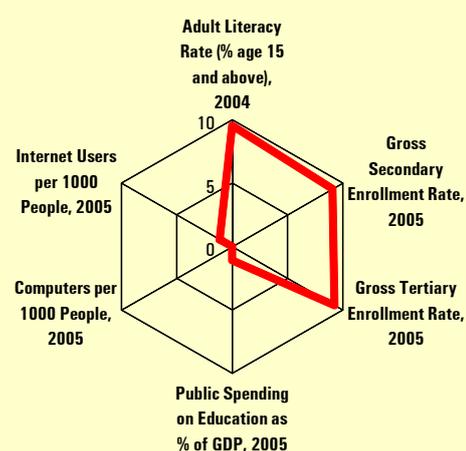
## 7.6.3 Kazakhstan (cont.)

Rank in 2007: 72 out of 137 (based on KEI)	Kazakhstan	Europe & Central Asia	Upper Middle Income
Rank in 1995: 75 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	4.50	5.68	6.14
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	3.02	4.99	6.06
Innovation	4.12	5.60	6.05
Education	7.77	6.76	6.10
Information and Communication Technology	3.11	5.38	6.33

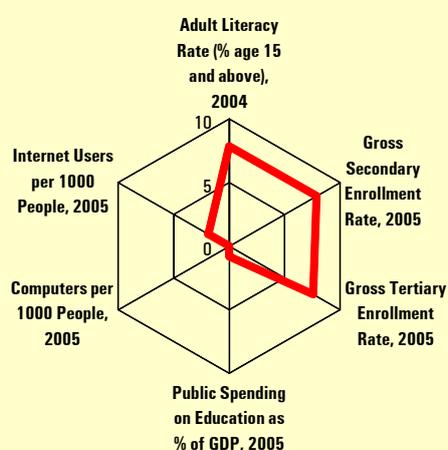
## Europe &amp; Central Asia



## Upper Middle Income



## All Countries

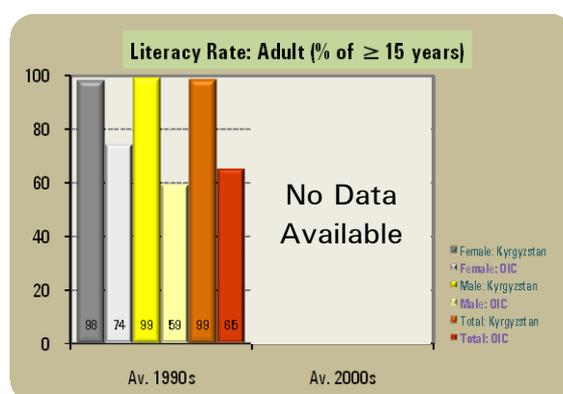
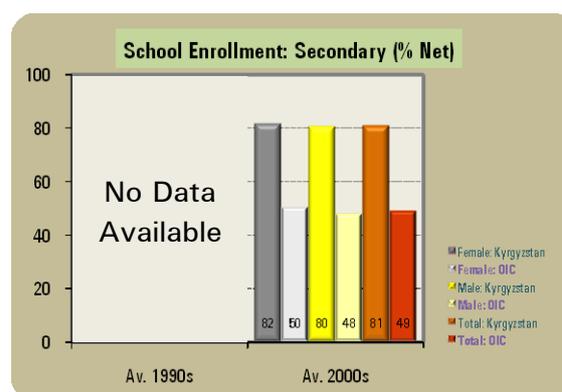
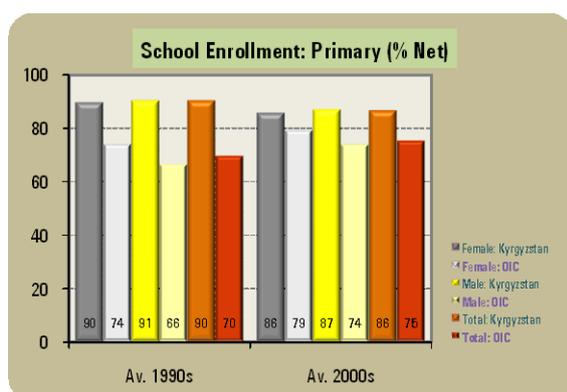


\* No data available for Computers per 1000 people, 2005.

## 7.6.4 Kyrgyzstan

	Kyrgyzstan Average	Europe & Central Asia Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	93.94	93.25	63.28
Male	94.56	96.13	73.41
Total	94.25	94.72	68.49
<b>Progression to Secondary School %</b>			
Female	99.43	..	79.30
Male	98.81	..	80.71
Total	99.11	94.75	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	3.96	3.94	3.13
% of Government Expenditure	18.65	13.79	..
<b>Pupil - Teacher Ratio %</b>			
Primary	24.23	16.81	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	6.24	12.44	..
Secondary	11.64	17.34	..
Tertiary	18.44	23.42	..

Averages are calculated from the annual data between years 2000 and 2005.

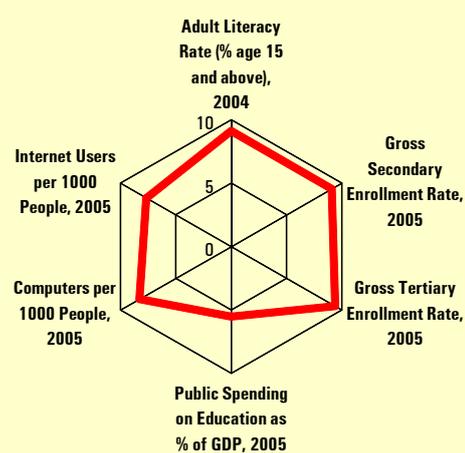
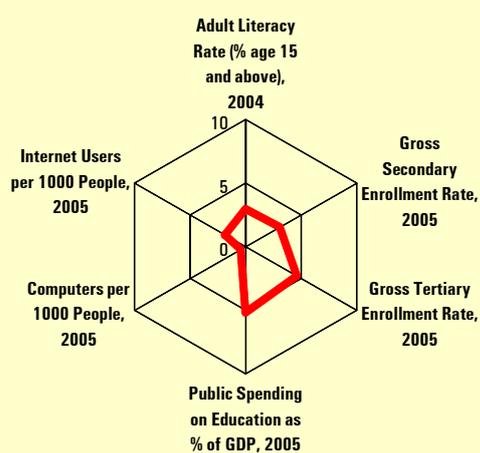


## 7.6.4 Kyrgyzstan (cont.)

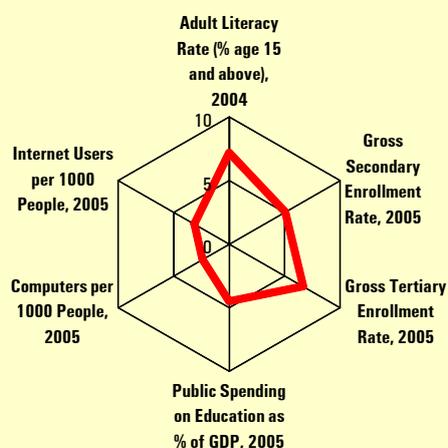
Rank in 2007: 87 out of 137 (based on KEI)	Kyrgyzstan	Europe & Central Asia	Low Income
Rank in 1995: 86 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	3.63	5.68	1.85
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	2.76	4.99	2.32
Innovation	2.78	5.60	1.64
Education	6.30	6.76	1.90
Information and Communication Technology	2.69	5.38	1.54

## Europe &amp; Central Asia

## Low Income



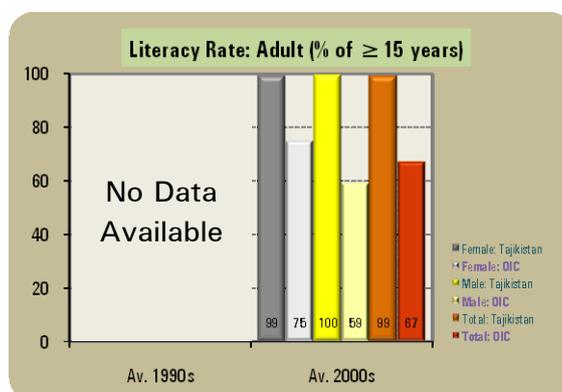
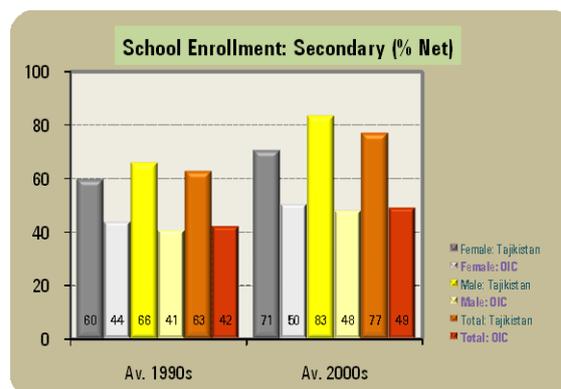
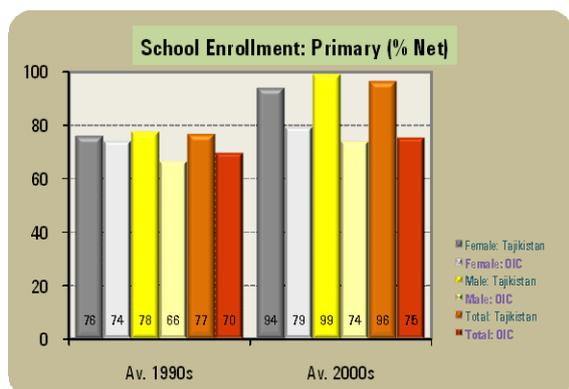
## All Countries



## 7.6.5 Tajikistan

	Tajikistan Average	Europe & Central Asia Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	94.67	93.25	63.28
Male	100.76	96.13	73.41
Total	97.76	94.72	68.49
<b>Progression to Secondary School %</b>			
Female	97.08	..	79.30
Male	98.40	..	80.71
Total	97.82	94.75	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	2.80	3.94	3.13
% of Government Expenditure	17.62	13.79	..
<b>Pupil - Teacher Ratio %</b>			
Primary	21.83	16.81	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	7.33	12.44	..
Secondary	9.48	17.34	..
Tertiary	14.28	23.42	..

Averages are calculated from the annual data between years 2000 and 2005.

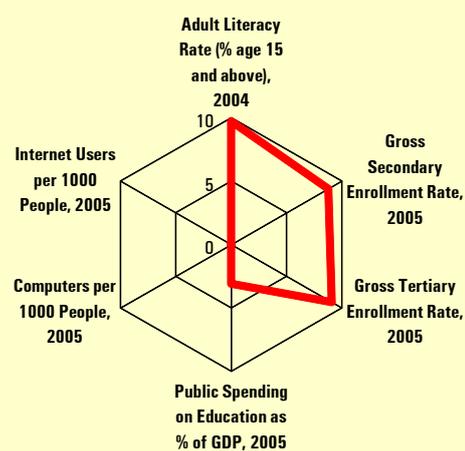
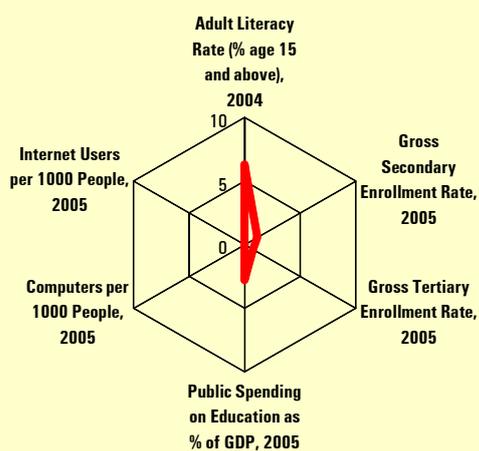


## 7.6.5 Tajikistan (cont.)

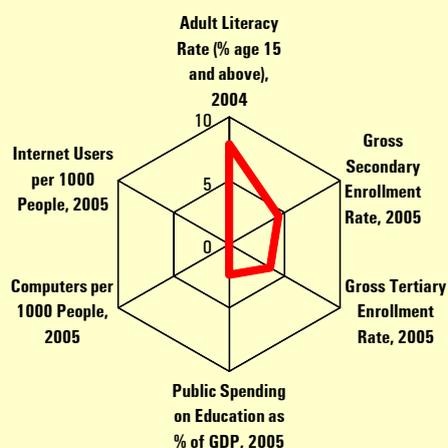
Rank in 2007: 108 out of 137 (based on KEI)	Tajikistan	Europe & Central Asia	Low Income
Rank in 1995: 105 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	2.42	5.68	1.85
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	2.12	4.99	2.32
Innovation	1.54	5.60	1.64
Education	5.34	6.76	1.90
Information and Communication Technology	0.68	5.38	1.54

## Europe &amp; Central Asia

## Low Income



## All Countries

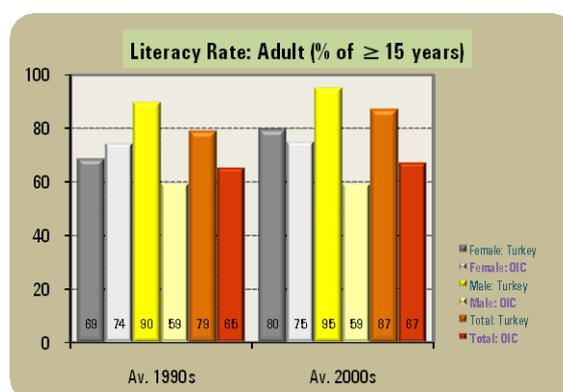
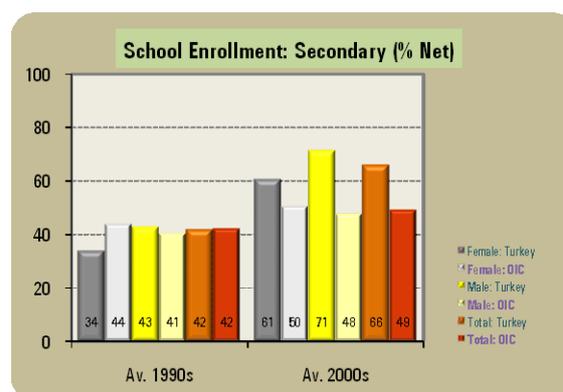
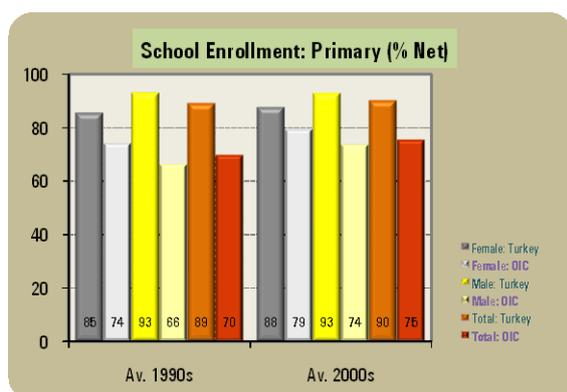


\* No data available for Computers per 1000 people, 2005.

## 7.6.6 Turkey

	Turkey Average	Europe & Central Asia Average	Upper Middle Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	81.85	93.25	98.39
Male	91.26	96.13	98.69
Total	86.64	94.72	98.54
<b>Progression to Secondary School %</b>			
Female	89.41	..	..
Male	93.07	..	..
Total	91.36	94.75	90.86
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	3.69	3.94	4.17
% of Government Expenditure	..	13.79	13.97
<b>Pupil - Teacher Ratio %</b>			
Primary	..	16.81	21.50
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	12.23	12.44	13.66
Secondary	15.64	17.34	17.53
Tertiary	46.17	23.42	28.90

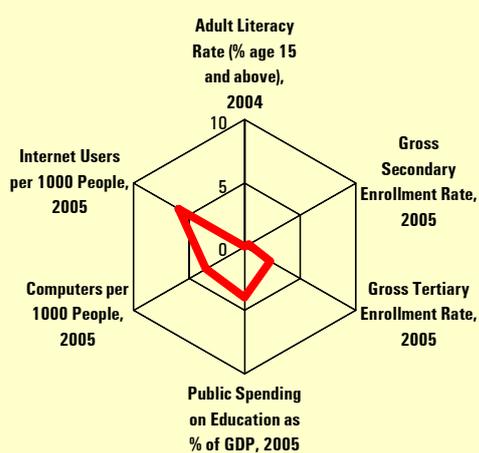
Averages are calculated from the annual data between years 2000 and 2005.



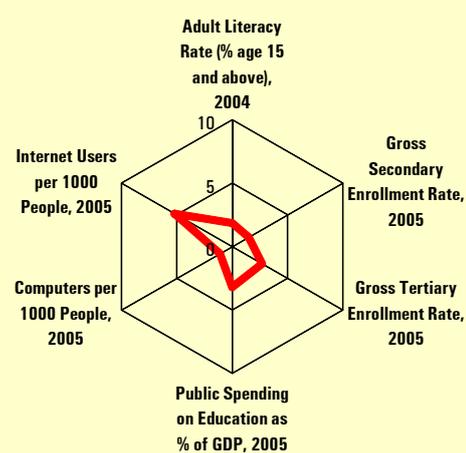
## 7.6.6 Turkey (cont.)

Rank in 2007: 53 out of 137 (based on KEI)	Turkey	Europe & Central Asia	Upper Middle Income
Rank in 1995: 60 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	5.56	5.68	6.14
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	6.37	4.99	6.06
Innovation	5.71	5.60	6.05
Education	4.40	6.76	6.10
Information and Communication Technology	5.77	5.38	6.33

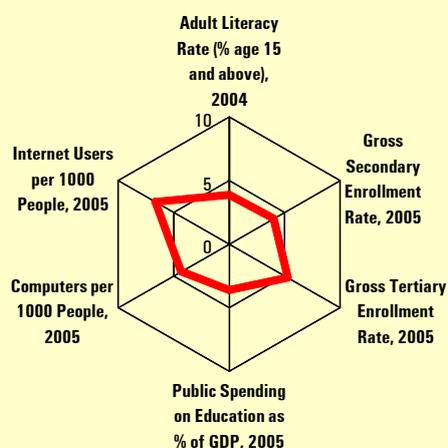
## Europe &amp; Central Asia



## Upper Middle Income



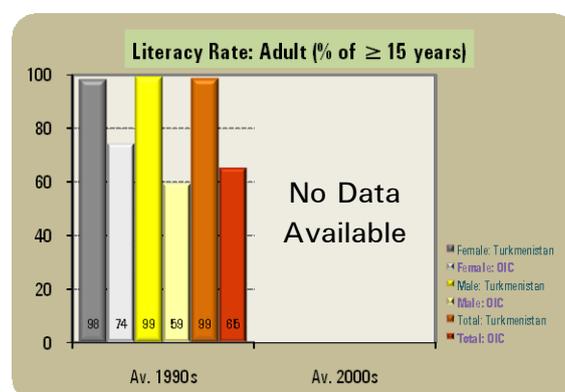
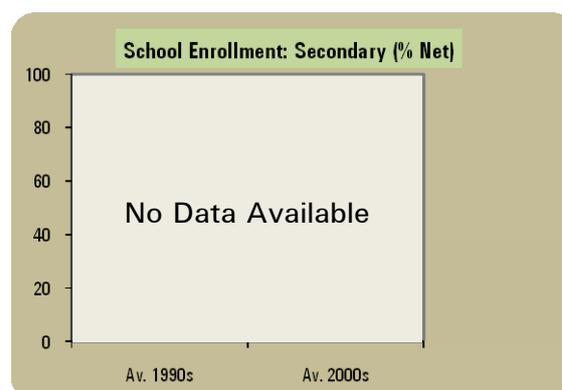
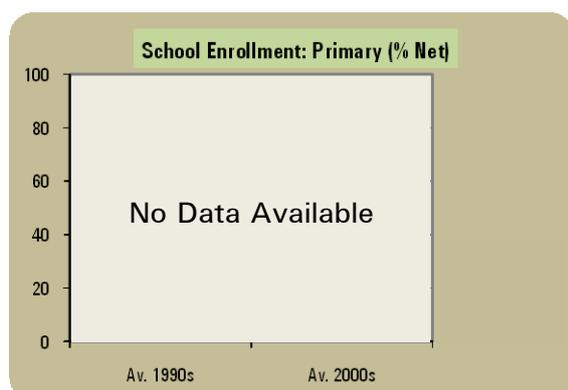
## All Countries



## 7.6.7 Turkmenistan

	Turkmenistan Average	Europe & Central Asia Average	Lower Middle Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	..	93.25	96.46
Male	..	96.13	97.29
Total	..	94.72	96.71
<b>Progression to Secondary School %</b>			
Female	..	..	..
Male	..	..	..
Total	..	94.75	..
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	..	3.94	4.40
% of Government Expenditure	..	13.79	16.22
<b>Pupil - Teacher Ratio %</b>			
Primary	..	16.81	21.31
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	..	12.44	11.00
Secondary	..	17.34	16.74
Tertiary	..	23.42	..

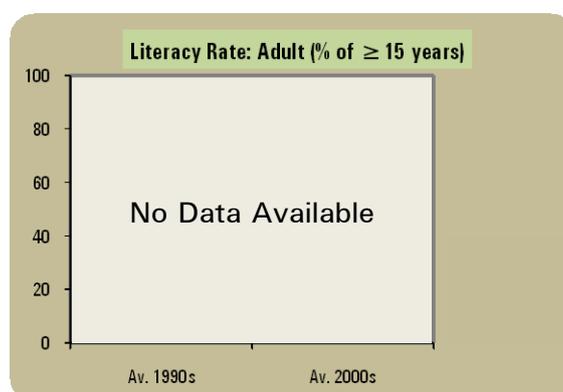
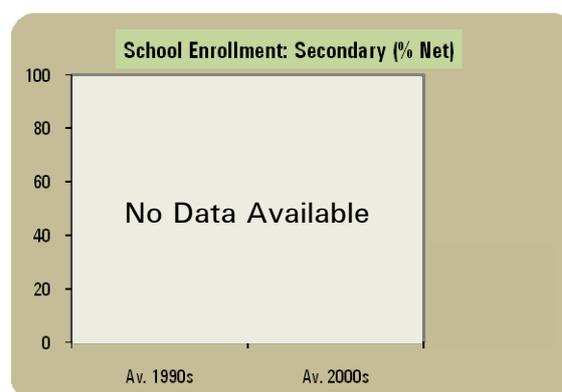
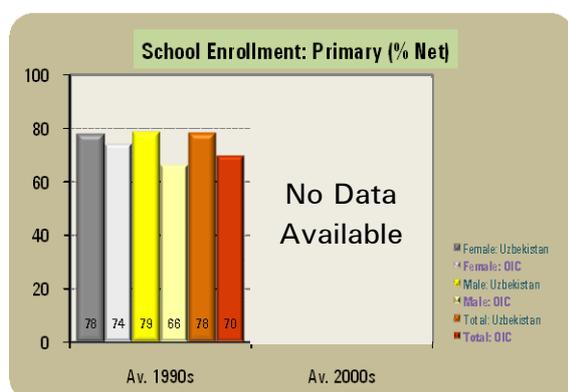
Averages are calculated from the annual data between years 2000 and 2005.



## 7.6.8 Uzbekistan

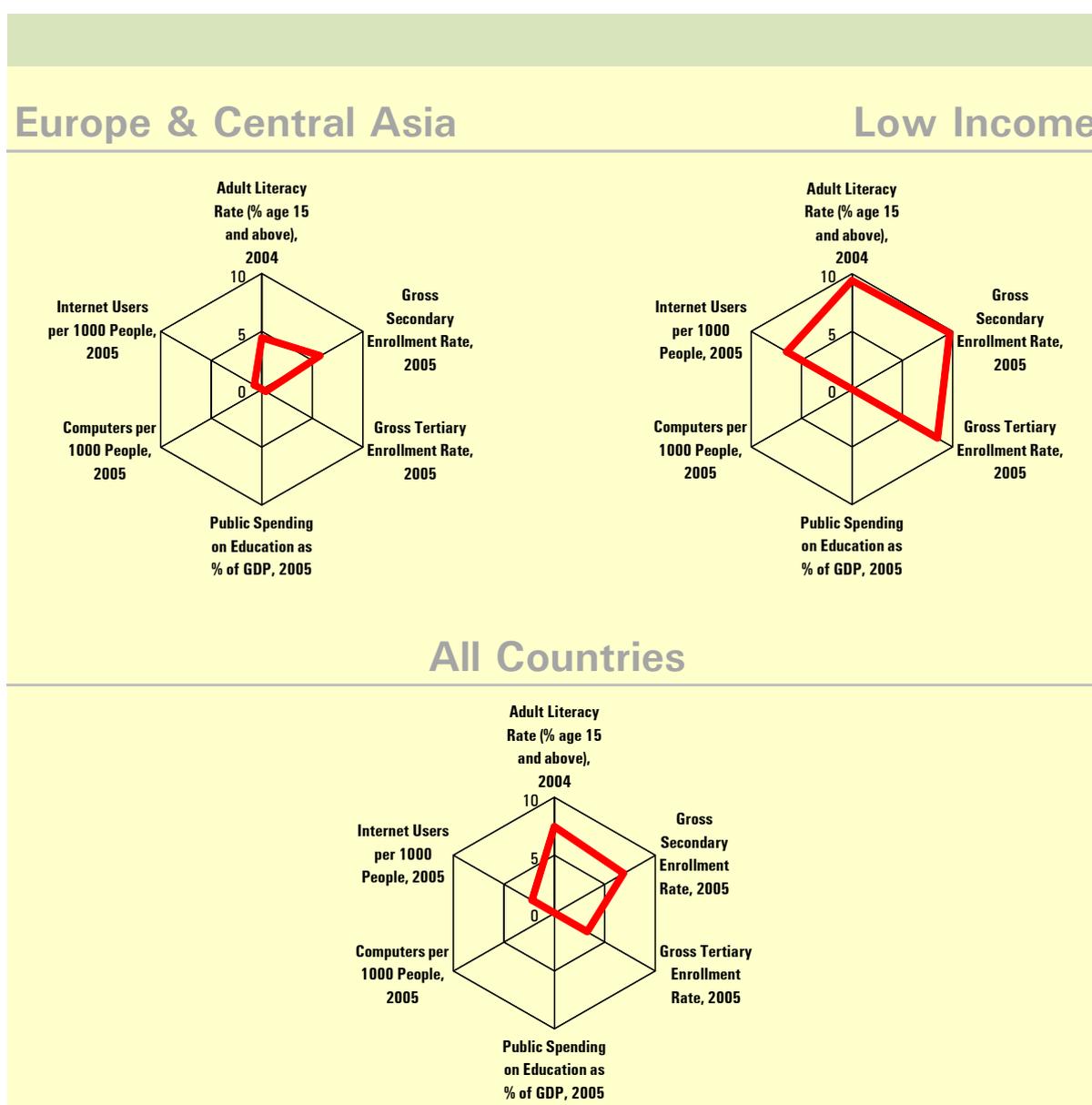
	Uzbekistan Average	Europe & Central Asia Average	Low Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	98.37	93.25	63.28
Male	98.82	96.13	73.41
Total	98.60	94.72	68.49
<b>Progression to Secondary School %</b>			
Female	99.24	..	79.30
Male	100.00	..	80.71
Total	99.63	94.75	80.12
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	..	3.94	3.13
% of Government Expenditure	..	13.79	..
<b>Pupil - Teacher Ratio %</b>			
Primary	18.81	16.81	41.15
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	..	12.44	..
Secondary	..	17.34	..
Tertiary	..	23.42	..

Averages are calculated from the annual data between years 2000 and 2005.



7.6.8 Uzbekistan (cont.)

Rank in 2007: 92 out of 137 (based on KEI)	Uzbekistan	Europe & Central Asia	Low Income
Rank in 1995: 90 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	3.27	5.68	1.85
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	1.79	4.99	2.32
Innovation	3.55	5.60	1.64
Education	5.87	6.76	1.90
Information and Communication Technology	1.86	5.38	1.54



\* No data available for *Public Spending on Education as % of GDP, 2005*.

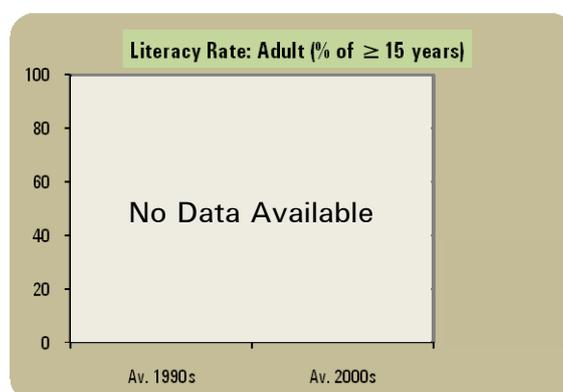
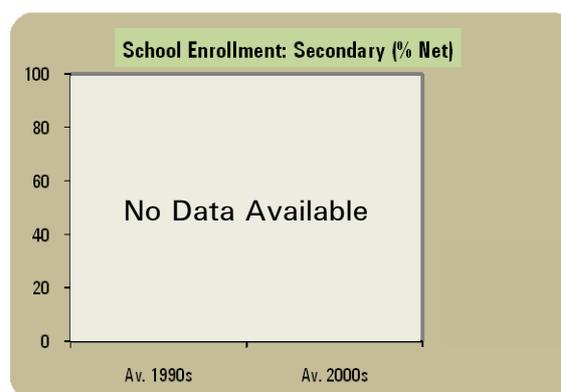
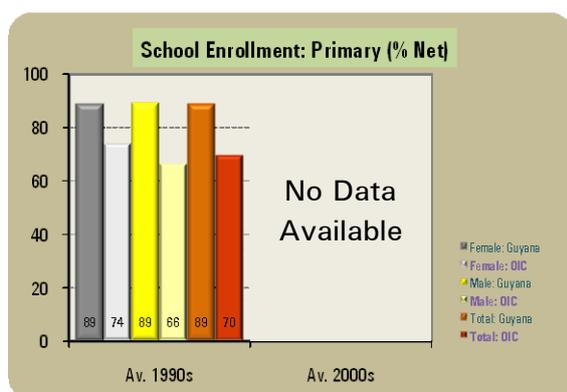
\* No data available for *Computers per 1000 people, 2005*.

## 7.7 South America

### 7.7.1 Guyana

	Guyana Average	Latin America & Caribbean Average	Lower Middle Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	103.08	98.67	96.46
Male	109.54	97.37	97.29
Total	106.33	98.01	96.71
<b>Progression to Secondary School %</b>			
Female	..	..	..
Male	..	..	..
Total	..	89.33	..
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	7.82	4.29	4.40
% of Government Expenditure	16.17	14.14	16.22
<b>Pupil - Teacher Ratio %</b>			
Primary	26.83	24.61	21.31
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	17.34	12.22	11.00
Secondary	20.46	14.96	16.74
Tertiary	39.45	36.57	..

Averages are calculated from the annual data between years 2000 and 2005.

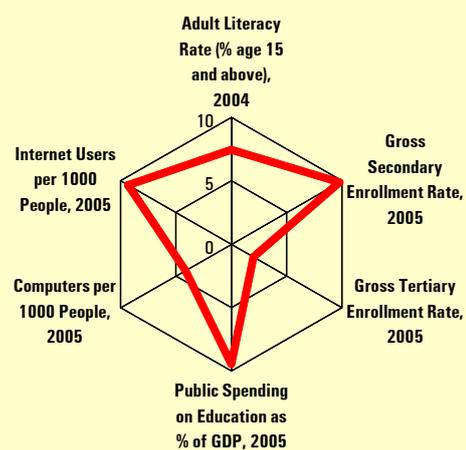
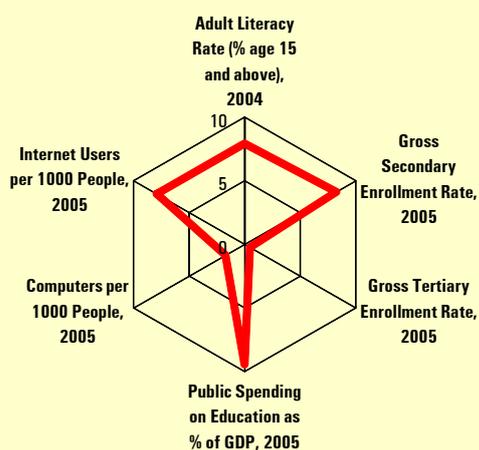


7.7.1 Guyana (cont.)

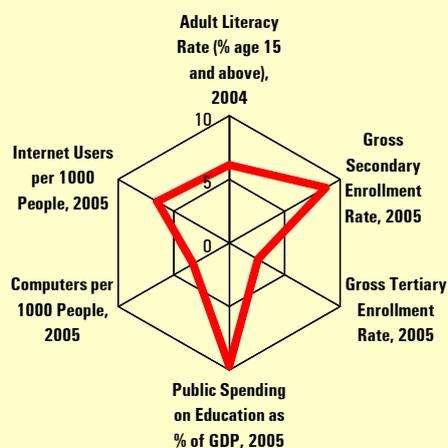
Rank in 2007: 80 out of 137 (based on KEI)	Guyana	Latin America & Caribbean	Lower Middle Income
Rank in 1995: 61 out of 137 (based on KEI)			
<b>Knowledge Economy Index (KEI)</b>			
Score	4.21	4.68	3.87
<b>Pillars of the Knowledge Economy Index</b>			
Economic Incentive and Institutional Regime	2.52	4.34	3.54
Innovation	3.77	4.51	3.81
Education	5.79	4.98	4.33
Information and Communication Technology	4.78	4.91	3.81

Latin America & Caribbean

Lower Middle Income



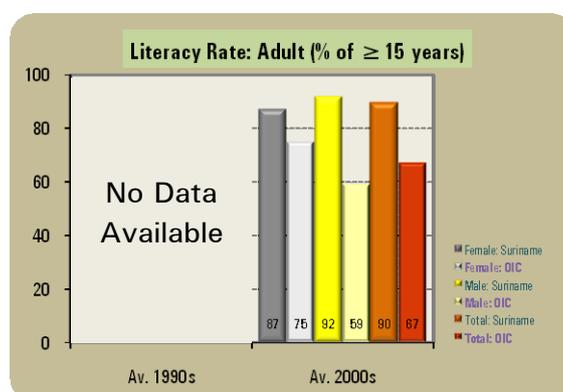
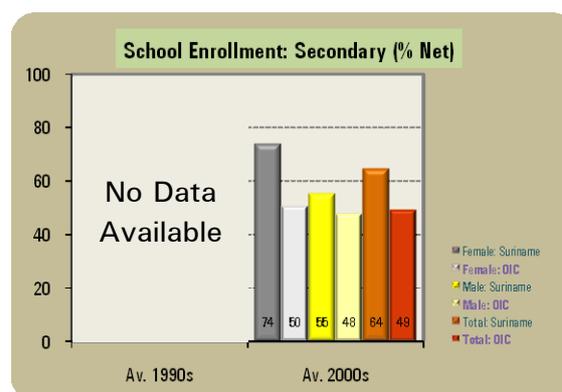
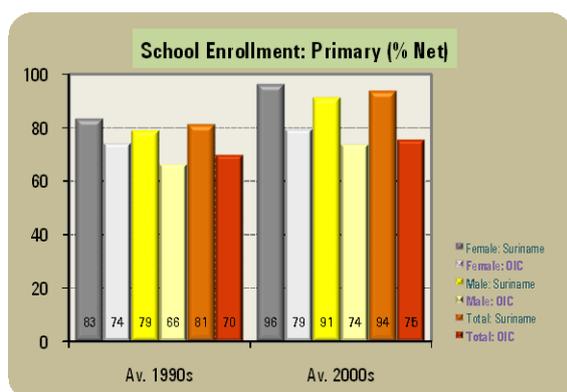
All Countries



## 7.7.2 Suriname

	Suriname Average	Latin America & Caribbean Average	Lower Middle Income Average
<b>Measures of Progression and Completion</b>			
<b>Primary Completion Rate %</b>			
Female	103.05	98.67	96.46
Male	86.18	97.37	97.29
Total	94.29	98.01	96.71
<b>Progression to Secondary School %</b>			
Female	..	..	..
Male	..	..	..
Total	..	89.33	..
<b>Education Expenditures</b>			
<b>Public Spending on Education</b>			
% of GDP	..	4.29	4.40
% of Government Expenditure	..	14.14	16.22
<b>Pupil - Teacher Ratio %</b>			
Primary	18.69	24.61	21.31
<b>Expenditure per Student (% of GDP per capita)</b>			
Primary	..	12.22	11.00
Secondary	..	14.96	16.74
Tertiary	..	36.57	..

Averages are calculated from the annual data between years 2000 and 2005.



## 8 Appendix

Table 8-1: Articles Published in International Journals\*

Country	Number of Articles		Share in Total		Country	Number of Articles		Share in Total	
	1998-02	2003-07	1998-02	2003-07		1998-02	2003-07	1998-02	2003-07
Turkey	30,850	69,746	28.61	36.38	Niger	269	343	0.25	0.18
Iran	7,117	25,399	6.60	13.25	Mozambique	181	296	0.17	0.15
Egypt	11,830	15,105	10.97	7.88	Palestine	141	269	0.13	0.14
Malaysia	4,529	8,155	4.20	4.25	Yemen	177	218	0.16	0.11
Saudi Arabia	7,116	7,089	6.60	3.70	Togo	206	211	0.19	0.11
Pakistan	3,130	6,313	2.90	3.29	Kyrgyz Republic	204	203	0.19	0.11
Tunisia	2,995	6,138	2.78	3.20	Albania	165	182	0.15	0.09
Nigeria	3,970	5,229	3.68	2.73	Brunei	178	178	0.17	0.09
Morocco	5,145	4,914	4.77	2.56	Tajikistan	182	166	0.17	0.09
Lebanon	3,183	4,852	2.95	2.53	Guinea-Bissau	77	106	0.07	0.06
Jordan	3,038	4,383	2.82	2.29	Mauritania	65	97	0.06	0.05
Algeria	2,105	4,062	1.95	2.12	Chad	45	85	0.04	0.04
Indonesia	2,248	2,938	2.09	1.53	Guinea	63	84	0.06	0.04
Bangladesh	2,046	2,807	1.90	1.46	Guyana	64	80	0.06	0.04
United Arab Emirates	1,627	2,796	1.51	1.46	Afghanistan	5	48	0.00	0.03
Kuwait	2,706	2,790	2.51	1.46	Sierra Leone	40	29	0.04	0.02
Cameroon	1,153	1,831	1.07	0.95	Turkmenistan	49	28	0.05	0.01
Uganda	823	1,535	0.76	0.80	Suriname	20	20	0.02	0.01
Uzbekistan	1,587	1,505	1.47	0.78	Comoros	6	17	0.01	0.01
Oman	1,061	1,417	0.98	0.74	Maldives	13	17	0.01	0.01
Azerbaijan	806	1,139	0.75	0.59	Djibouti	7	12	0.01	0.01
Kazakhstan	970	1,138	0.90	0.59	Somalia	6	11	0.01	0.01
Senegal	895	1,024	0.83	0.53	<b>OIC</b>	<b>107,815</b>	<b>191,732</b>	<b>100.00</b>	<b>100.00</b>
Benin	602	880	0.56	0.46					
Syria	578	790	0.54	0.41	East Asia & Pacific	6,955	11,271	6.45	5.88
Burkina Faso	427	702	0.40	0.37	Europe & Central Asia	34,813	74,107	32.29	38.65
Cote d'Ivoire	701	674	0.65	0.35	Latin America & Caribbean	20	20	0.02	0.01
Qatar	254	593	0.24	0.31	Middle East & North Africa	49,953	82,249	46.33	42.90
Sudan	477	576	0.44	0.30	South Asia	5,194	9,185	4.82	4.79
Iraq	307	525	0.28	0.27	Sub-Saharan Africa	10,880	14,900	10.09	7.77
Bahrain	318	509	0.29	0.27					
Libya	248	388	0.23	0.20	Japan	356,928	373,760		
Mali	230	384	0.21	0.20	England	294,882	321,217		
Gambia	296	363	0.27	0.19	India	86,444	125,450		
Gabon	284	343	0.26	0.18	Finland	36,506	41,099		

\* Total number of articles published in journals covered by Science Citation Index Expanded (SCI-EXPANDED), Social Science Citation Index (SSCI), and Arts & Humanities Citation Index (A&HCI).

Table 8-2: Articles per Million People

Country	Number of Articles		Country	Number of Articles	
	1998-02	2003-07		1998-02	2003-07
Lebanon	888.9	1267.2	Pakistan	21.7	39.8
Kuwait	1371.1	1192.3	Kyrgyz Republic	42.1	39.4
Turkey	469.9	1001.4	Togo	43.7	39.0
Jordan	607.9	761.2	Cote d'Ivoire	45.0	39.0
Bahrain	501.7	739.7	Mali	22.9	33.7
Qatar	341.4	687.5	Mauritania	24.3	31.4
United Arab Emirates	504.7	684.1	Niger	25.6	28.2
Tunisia	313.1	609.0	Comoros	10.4	25.3
Brunei	547.2	493.1	Djibouti	16.2	25.2
Oman	418.2	471.5	Tajikistan	29.2	24.3
Iran	112.5	392.6	Iraq	13.5	20.1
Malaysia	207.7	340.2	Bangladesh	15.7	19.4
Saudi Arabia	307.2	268.5	Sudan	13.9	15.2
Gabon	230.6	245.9	Mozambique	10.0	14.7
Gambia	216.3	227.5	Indonesia	10.5	12.8
Egypt	167.8	194.8	Yemen	10.1	10.5
Morocco	170.5	149.9	Chad	5.7	9.1
Azerbaijan	103.2	142.0	Guinea	7.4	8.9
Algeria	69.2	124.8	Turkmenistan	10.8	5.7
Benin	90.8	115.0	Sierra Leone	8.1	4.9
Cameroon	75.1	106.0	Afghanistan	0.2	1.6
Guyana	84.8	104.5	Somalia	0.8	1.3
Senegal	86.5	86.3	<b>OIC</b>	<b>83.60</b>	<b>134.88</b>
Kazakhstan	64.2	74.9			
Guinea-Bissau	60.2	74.9	East Asia & Pacific	29.48	44.51
Palestine	44.7	71.5	Europe & Central Asia	262.98	528.63
Libya	48.5	67.3	Latin America & Caribbean	46.26	43.44
Uzbekistan	64.1	56.0	Middle East & North Africa	161.14	241.94
Uganda	34.3	54.3	South Asia	17.39	27.56
Albania	47.5	51.1	Sub-Saharan Africa	34.85	42.04
Burkina Faso	36.6	50.4			
Maldives	43.1	48.7	Finland	7,061.94	7,869.70
Suriname	46.3	43.4	England	6,001.00	6,369.35
Syria	35.4	42.8	Japan	2,816.54	2,932.26
Nigeria	34.7	40.6	India	86.08	114.71

\* 5-year total number of articles published in journals covered by Science Citation Index Expanded (SCI-EXPANDED), Social Science Citation Index (SSCI), and Arts & Humanities Citation Index (A&HCI) divided by 5-year average population.

Table 8-3: Patent Applications by Residents

Country	2000	2001	2002	2003	2004	2005	2006	Average (2000-2006)
Kazakhstan	1,399	1,607	..	1,696	..	1,523	1,433	1,532
Turkey	277	337	414	490	685	935	1,090	604
Uzbekistan	755	803	715	931	273	264	323	581
Egypt	534	464	627	493	382	428	..	488
Malaysia	206	271	322	376	522	522	531	393
Indonesia	157	212	234	201	227	235	288	222
Syria	247	189	183	213	205	105	124	181
Morocco	..	..	..	..	104	140	178	141
Kyrgyz Republic	80	84	123	179	..	..	..	117
Saudi Arabia	76	46	61	..	..	..	..	61
Pakistan	46	58	..	..	..	..	..	52
Tunisia	47	22	45	35	46	56	73	46
Algeria	30	52	42	30	58	..	57	45
Bangladesh	..	..	..	58	48	50	22	45
Tajikistan	46	..	40	..	32	..	26	36
<b>OIC</b>	<b>3,900</b>	<b>4,145</b>	<b>2,806</b>	<b>4,702</b>	<b>2,582</b>	<b>4,258</b>	<b>4,145</b>	<b>3,791</b>
World	880,477	889,207	889,393	927,010	953,234	1,001,129	906,230	920,954
High Income	755,075	751,297	743,399	752,754	775,954	800,298	794,628	767,629
Middle Income	70,171	78,742	87,013	109,409	108,393	136,752	45,499	90,854
Low Income	5,313	5,298	5,420	6,441	7,691	414	478	4,436
Regional Patent Offices	49,918	53,870	53,561	58,406	61,196	63,665	65,625	58,034
East Asia & Pacific	496,100	500,592	495,852	519,798	555,740	599,773	488,495	522,336
Europe & Central Asia	154,006	142,035	140,990	144,051	133,529	118,627	119,609	136,121
Latin America & Caribbean	4,003	4,191	4,172	4,526	4,924	4,919	4,480	4,459
Middle East & North Africa	3,070	2,738	2,193	2,100	1,066	1,045	689	1,843
South Asia	4,385	4,299	4,417	5,256	7,227	50	22	3,665
Sub-Saharan Africa	13	6	4	3	16	0	4	7
North America	168,982	181,476	188,204	192,870	189,536	213,050	227,306	194,489
Japan	384,201	382,815	365,204	358,184	368,416	367,960	347,060	367,691
United States	164,795	177,513	184,245	188,941	189,536	207,867	221,784	190,669
Korea, Rep.	72,831	73,714	76,570	90,313	105,250	122,188	125,476	95,192
China	25,431	30,038	39,806	56,769	65,786	93,485	122,318	61,948

Table 8-4: Patent Applications by Non-Residents

Country	2000	2001	2002	2003	2004	2005	2006	Average (2000-2006)
Malaysia	6,021	5,663	4,615	4,686	4,920	5,764	4,269	5,134
Indonesia	3,733	3,714	3,609	3,099	3,441	4,069	4,324	3,713
Turkey	3,156	2,877	1,460	662	1,577	2,526	4,075	2,333
Pakistan	..	..	..	..	1081	..	..	1,081
Egypt	1,081	923	788	626	312	1,008	..	790
Saudi Arabia	797	683	552	..	..	..	..	677
Morocco	..	..	..	..	457	520	732	570
Bangladesh	..	..	..	260	268	294	288	278
Algeria	127	86	38	16	334	455	608	238
Uzbekistan	213	443	203	171	205	180	186	229
Tunisia	210	156	58	120	223	282	383	205
Kazakhstan	116	99	..	102	..	103	124	109
Syria	48	39	47	36	40	34	133	54
Tajikistan	15	..	..	..	2	..	..	9
Kyrgyz Republic	4	14	5	1	..	..	..	6
<b>OIC</b>	<b>15,521</b>	<b>14,697</b>	<b>11,375</b>	<b>9,779</b>	<b>12,860</b>	<b>15,235</b>	<b>15,122</b>	<b>13,513</b>
World	500,559	545,055	542,375	549,271	552,182	607,830	560,099	551,053
High Income	315,855	360,103	360,029	359,847	337,243	396,855	425,259	365,027
Middle Income	126,591	116,226	116,534	116,944	133,632	137,872	62,317	115,731
Low Income	5,723	11,227	11,836	12,941	17,172	6,115	624	9,377
Regional Patent Offices	52,390	57,499	53,976	59,539	64,135	66,988	71,899	60,918
East Asia & Pacific	165,973	184,258	187,017	196,763	218,338	245,670	162,066	194,298
Europe & Central Asia	64,108	62,929	62,199	57,952	47,004	43,571	37,866	53,661
Latin America & Caribbean	39,713	34,343	30,266	25,700	32,178	21,075	37,342	31,517
Middle East & North Africa	7,559	10,621	11,412	9,647	6,241	7,107	9,900	8,927
South Asia	4,164	6,351	7,049	7,959	11,636	294	288	5,392
Sub-Saharan Africa	117	4,343	4,474	4,913	5,243	5,554	40	3,526
North America	166,535	184,711	185,982	186,798	167,407	217,571	240,698	192,815
United States	131,100	148,958	150,200	153,500	167,407	182,866	204,182	162,602
China	42,117	33,412	40,426	48,548	64,598	79,842	88,172	56,731
Japan	35,342	57,433	56,601	54,909	54,665	59,118	61,614	54,240
Korea, Rep.	29,179	30,898	29,566	28,338	34,865	38,733	40,713	33,185

Table 8-5: Patent Applications (Total)

Country	2000	2001	2002	2003	2004	2005	2006	Average (2000-2006)
Malaysia	6,227	5,934	4,937	5,062	5,442	6,286	4,800	5,527
Indonesia	3,890	3,926	3,843	3,300	3,668	4,304	4,612	3,935
Turkey	3,433	3,214	1,874	1,152	2,262	3,461	5,165	2,937
Kazakhstan	1,515	1,706	..	1,798	..	1,626	1,557	1,640
Egypt	1,615	1,387	1,415	1,119	694	1,436	..	1,278
Uzbekistan	968	1,246	918	1,102	478	444	509	809
Saudi Arabia	873	729	613	..	..	..	..	738
Morocco	..	..	..	..	561	660	910	710
Pakistan	46	58	..	..	1,081	..	..	395
Bangladesh	..	..	..	318	316	344	310	322
Algeria	157	138	80	46	392	455	665	276
Tunisia	257	178	103	155	269	338	456	251
Syria	295	228	230	249	245	139	257	235
Kyrgyz Republic	84	98	128	180	..	..	..	123
Tajikistan	61	..	40	..	34	..	26	40
<b>OIC</b>	<b>19,421</b>	<b>18,842</b>	<b>14,181</b>	<b>14,481</b>	<b>15,442</b>	<b>19,493</b>	<b>19,267</b>	<b>17,304</b>
World	1,381,036	1,434,262	1,431,768	1,476,281	1,505,416	1,608,959	1,466,329	1,472,007
High Income	1,070,930	1,111,400	1,103,428	1,112,601	1,113,197	1,197,153	1,219,887	1,132,657
Middle Income	196,762	194,968	203,547	226,353	242,025	274,624	107,816	206,585
Low Income	11,036	16,525	17,256	19,382	24,863	6,529	1,102	13,813
Regional Patent Offices	102,308	111,369	107,537	117,945	125,331	130,653	137,524	118,952
East Asia & Pacific	662,073	684,850	682,869	716,561	774,078	845,443	650,561	716,634
Europe & Central Asia	218,114	204,964	203,189	202,003	180,533	162,198	157,475	189,782
Latin America & Caribbean	43,716	38,534	34,438	30,226	37,102	25,994	41,822	35,976
Middle East & North Africa	10,629	13,359	13,605	11,747	7,307	8,152	10,589	10,770
South Asia	8,549	10,650	11,466	13,215	18,863	344	310	9,057
Sub-Saharan Africa	130	4,349	4,478	4,916	5,259	5,554	44	3,533
North America	335,517	366,187	374,186	379,668	356,943	430,621	468,004	387,304
United States	295,895	326,471	334,445	342,441	356,943	390,733	425,966	353,271
Japan	419,543	440,248	421,805	413,093	423,081	427,078	408,674	421,932
China	67,548	63,450	80,232	105,317	130,384	173,327	210,490	118,678
Korea, Rep.	102,010	104,612	106,136	118,651	140,115	160,921	166,189	128,376