

ARAB HIGHER EDUCATION AND DEVELOPMENT, AN OVERVIEW

Nader Fergany

Director, Almishkat Centre for Research, Cairo (www.almishkat.org)

February 2000

Higher, especially university level, education has a distinctly important role in the education system and in the knowledge acquisition system in general. However, the deteriorating state of higher education in Arab countries, particularly in quality, has become one of the hallmarks of underdevelopment by contemporary criteria.

If such deterioration were to continue, it is feared that higher education would become a mechanism for perpetuating the backwardness of Arab countries in the 21st century.

HIGHER EDUCATION AND DEVELOPMENT

The Evolving Role of Higher Education

The organisation of higher education institutions in industrialised countries has recently witnessed considerable developments among the most important of which is the focus on flexible enrolment in higher education, lifelong availability especially in open higher education institutions, emphasis on interdisciplinarity or transdisciplinarity in research and study. This necessitated new organisational forms that differ from traditional academic departments like interdisciplinary research institutes and centres as well as a stronger link with the business sector (the market) through projects, joint research foundations, grants and consultancies.

These developments herald a new phase in the societal role of higher education in mature capitalist countries, engendered by the growing role of “the market” in social organisation in the context of globalization. This phase raises concerns about market control (profit motive) in the organisation and role of “university”, hence as loss of autonomy or even distinguishing character as a social institution. Some consider this trend as the “end” of university as the West knew it ever since the end of the 19th century.

In this context, questions are now raised in industrialised countries about the very identity of the university and even about the justification for calling such relatively nascent institution a “university”. The market’s entry in the field of knowledge acquisition in this form can be considered a basic shift in the culture of science: from the liberalising role of science-knowledge to the supremacy of market values and trade in the domain of knowledge, now considered a commodity. This shift has profound effects, not only on universities but on mankind at large, indeed on the very process of knowledge building and the ability to access attained knowledge.

Some consider higher education in advanced countries to be the ideal model which underdeveloped countries must catch up with in order to upgrade their own higher education in their quest for progress. This argument can be countered by two simple reservations.

One, higher education in Arab countries is far removed from its counterpart in advanced countries in both substance and social role. Although it strives to resemble the latter we have strong doubts that it can catch up on a level playing field.

The second reservation can be summed up as follows: higher, especially university education has achieved in wide coverage in advanced countries and has sought excellence in an integrated cultural context (social, economic and political) within a structure that was only completed with active participation from higher education. Such cultural structure is far from complete in Arab countries where higher education did not contribute to the building the structure¹.

The challenge confronting the higher education system in Arab countries is complex one: achievement of wide coverage while steadily upgrading quality and adjusting to capitalist restructuring and globalization in this age of intensified knowledge.

¹ Perhaps the most salient feature of modern higher education institutions in the Arab countries is their relative recent origins. While the number of Arab universities stood at 175 in 1996 that number was only 10 in 1950. The establishment of universities in Arab countries grew rapidly during the last five decades at the rate of 9, 14, 33, 51 in each decade successively until the eighties then nearly ten new universities were established each year in the nineties. Almost four fifths of Arab universities were established in the quarter century (1970-1996) and, by the mid-nineties, the life span of most (62%) did not exceed 15 years. This observation is significant for higher education institutions, and universities in particular, need a long time to consolidate their institutional structure, to excel in knowledge acquisition especially in research and to be able to graduate sufficient numbers of highly qualified cadres.

Developmental Return on Higher Education

There is a strong relationship between the level of economic development on the one hand and spread of higher education on the other in the contemporary world. This relationship can be approximated by associating data on *per capita* GDP (purchasing power parity units) as a general indicator of economic productivity and material prosperity and number of students in the third level of education per 100,000 inhabitants, in 1995².

Values of the two indicators in 111 countries are shown in Figure (1) illustrates the relationship between the two variables³.

The relationship evolves with the expansion of higher education. In the first phases, the spread of higher education is associated with a rapid rise in per capita output⁴. The rate of increase in per capita output then slows down in response to further expansion of higher education.

² The second indicator has two flaws. One, enrolment in higher education at a given point in time does not reflect the accumulation of human capital formation on the level of higher education in society. Since higher education is a relative late comer to underdeveloped countries, the use of this indicator underestimates differences between advanced and underdeveloped countries in the degree to which they possess (sophisticated) human capital formed by higher education institutions.

The second flaw is that advanced countries differ from underdeveloped countries in the population age distribution such that the percentage of population of schooling age is greater in underdeveloped countries. This means that using the indicator of ratio of students enrolled in the third level of schooling to population tends to reduce the gap in the spread of higher education between the two groups of countries.

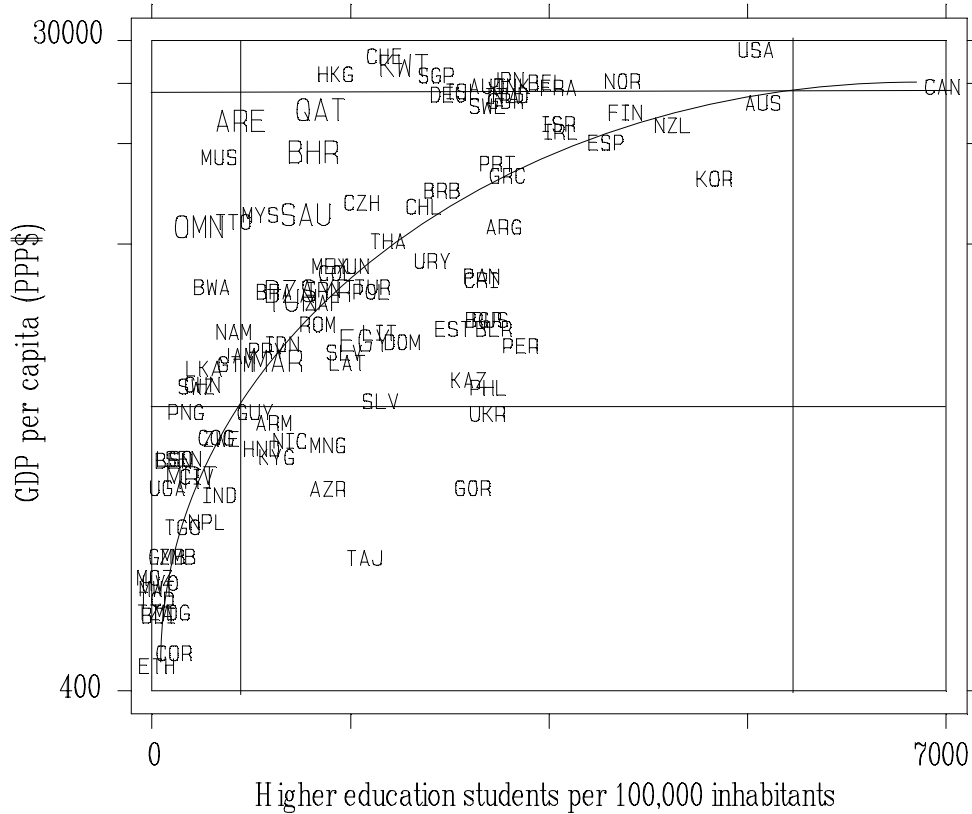
It is also important to note that this indicator compares the quantity of higher education not its quality. Two countries may be equal in quantitative balance of higher education but one outshines the other in quality. This leads to a big difference in the return on higher education extension. Unfortunately, reliable comparative data on the quality of higher education is not available.

³ Each country is represented by a three-letter abbreviation of its English name with symbols of Arab countries enlarged to distinguish them.

⁴ It is to be noted that the position of two groups of countries diverges from the general pattern of the relationship which in turn reduces the strength of the relationship. Some countries are distinguished by higher output rates than is consistent with the extent of higher education therein. Arab oil producing countries are a majority in this group with the larger part of their output representing some sort of rent for a positional advantage rather than production in the conventional sense. This does break the relation between *per capita* output and other commonly associated factors in such 'rentier' economies.

Another group of countries is characterised by the combination of relatively high level of higher education coverage and relatively low *per capita* output. Contemplating the symbols of this group will demonstrate that they are basically composed of countries which belonged to the former Soviet Union and which has been suffering an acute economic crises.

Figure (1)
GDP per capita (PPP\$) and number of higher education students
per 100,000 inhabitants, 1995



Source: UNESCO (1998a, 1998b)

From the macroeconomic perspective therefore, the extension of higher education tends to be accompanied by a rise in economic productivity and material well being, especially in the early phases.

The role of higher education in development, however, extends to societal returns that far exceed what is reflected in macroeconomic indicators. Higher education plays a paramount role in shaping the more sophisticated forms of human capital. Higher education institutions are the ones that generate the societal wealth of knowledge and advanced capabilities, that forms the superior strata of human capital. In addition, higher education institutions play a prominent role in knowledge acquisition through R&D activities.

Higher education as well makes significant contributions to societal capital formation. Higher education institutions, especially universities, carry the main function of energising thought, that is they develop intellectual capital, preserve and rejuvenate a nation's culture. These institutions build up a nation's cultural capital through research and intellectual activity.

It is worth mentioning that economic calculation of the return on education, on the individual level ignores not only these societal returns but also the macro economic return since its sole focus is the financial return for individuals and households⁵.

⁵ International comparisons of return on Education in terms of earnings (income from work) arrive at the conclusion that the financial return on basic education to individuals and households is higher than the return on higher education. This conclusion was sometimes utilised to justify the transfer of resources from higher education to basic education according to the argument that higher education was too expensive and benefited only the few and also generated low individual return if compared to basic education.

However, data on which these comparisons are based are inadequate. In fact, there are no data on the subject in many Arab countries. Calculations of individual return in different schooling phases in Egypt, for example, do not support this traditional 'wisdom'. Indeed, the Egyptian labour market sends, in terms of earnings, a clear signal to households and individuals underscoring the importance of completing higher education (Bartsch, 1995). We suspect that these results are not far removed from the situation in many Arab economies. Therefore, the claim that higher education only yields a poor return in Arab countries is unfounded even when the analysis is confined to individual financial return.

Finally, limiting the analysis to financial return does not permit a comprehensive treatment of the question of individual return on education especially in societies like Arab societies. Social status brought about by schooling for example is an important element in the values system in Arab countries. Obviously, social status reaches its peak with the completion of higher education.

EXTENT OF ENROLMENT IN HIGHER EDUCATION IN ARAB COUNTRIES

The degree of expansion of higher education is one of the important issues related to the contribution of this stage of education to the development process. Moreover, expansion of higher education has become a controversial issue in developing countries, Arab countries included, in a framework of capitalist restructuring, attempts to curtail the role of the state and (unfounded) claims of low return on higher education in developing countries.

Available indicators fall short of characterising the contribution of higher education to human capital formation particularly in developing countries, especially those which have only recent experience in higher education institutions- see footnotes (2) and (3). The more widely used indicators, especially in international comparisons, measure the extent of enrolment at a given point in time (number enrolled to population) while a more sensitive indicator would be the cumulative stock of higher education graduates (which in principle is provided by censuses and household surveys although such information is not readily available particularly on the international level).

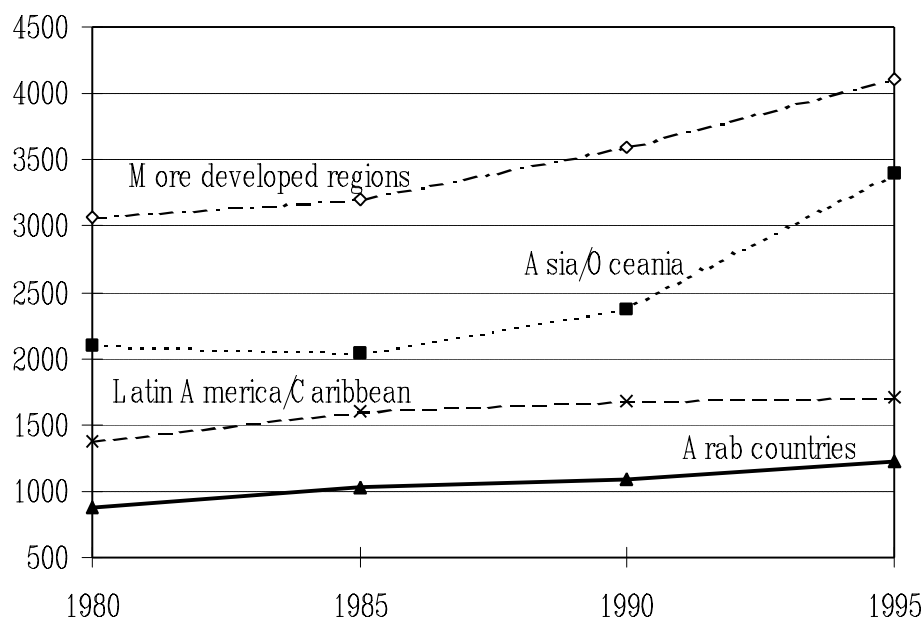
This part of the paper aims at determining the extent of enrolment in higher education in all Arab countries put together as well as individually, compared to other regions or countries of the world.

The Arab Region in the World Context

UNESCO puts the number of students enrolled in higher education in the Arab countries in 1995 at approximately 3.1 million. This figure is double the number of students in higher education in the region in 1980. This, no doubt, is a considerable increase. Yet the rate of increase is not that exceptional for the number of higher education students in developing countries combined rose at an even higher rate during the same period.

Assessing the ratio of enrolled students to population shows that the level of enrolment in higher education was lower than the Latin America in the period (1980-1995) Figure (2).

Figure (2)
Number of higher education students per 100,000 inhabitants,
selected world regions, 1980-1995



Source: Table (1), Statistical Annex

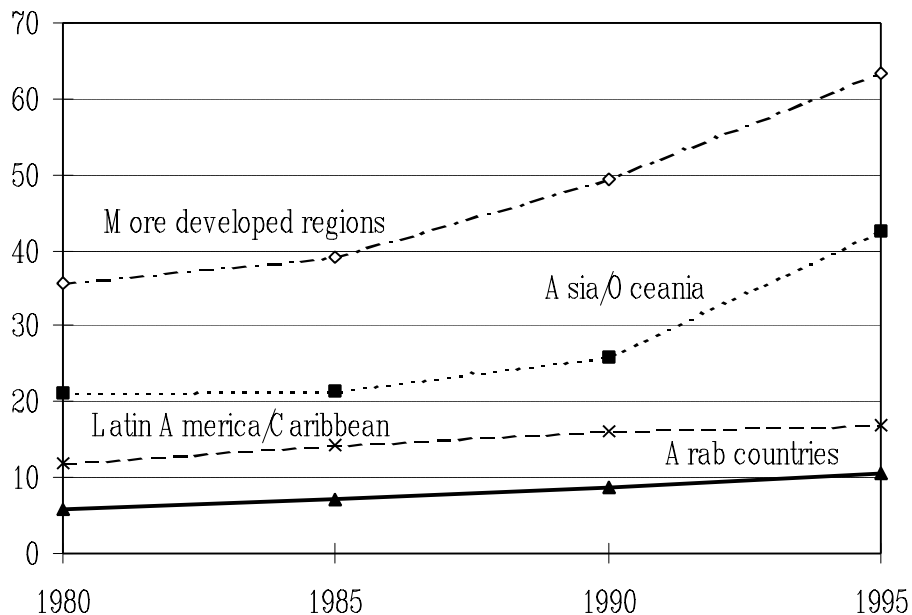
If compared to advanced countries, the level of enrolment in higher education in Arab countries in the beginning of the period and towards its end was less than 30%. The difference between the two groups grew over time. The gap between Arab countries and the Asia/Oceania region widened even faster especially since 1985, that is at the height of popularity of the recommendation to reduce the expansion in higher education⁶.

These conclusion means that Arab countries are up against a tremendous challenge to expand higher education and that the recommendation to reduce the expansion of higher education implies depriving these societies of a main foundation for advanced sciences and technology.

Arab countries have also manifestly lagged behind the three comparative regions in degree of enrolment of females in higher education despite a modest increase during the period under examination, Figure (3).

⁶ It is worth mentioning also that the share of higher education in total number of enrolment in education in Arab countries (approximately 5% in the nineties) is far lower than the equivalent figure for advanced countries (almost 18% and rapidly growing).

Figure (3)
Females' gross enrolment ratio in higher education (%),
selected world regions, 1980-1995



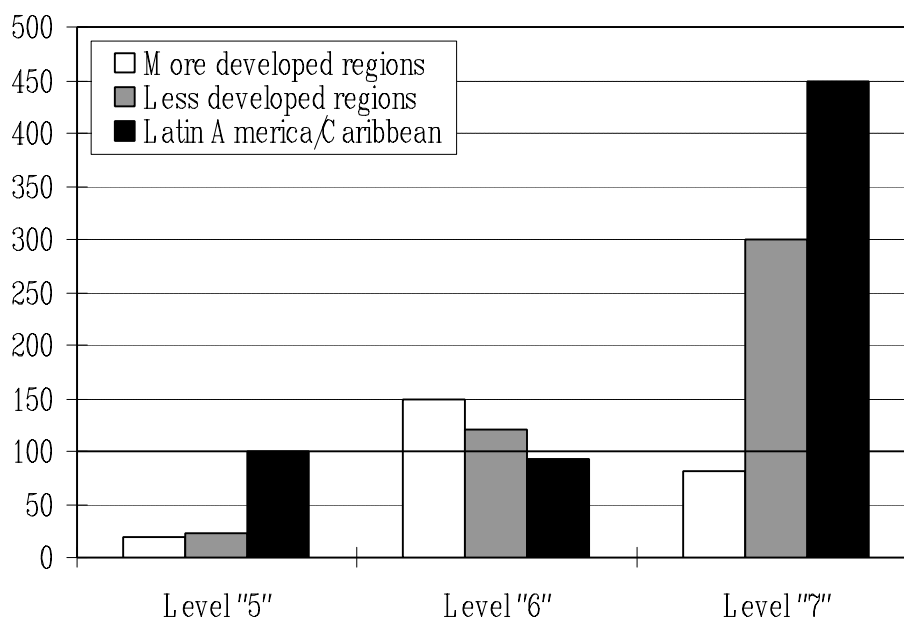
Source: Table (2), Statistical Annex

In addition, the difference in the ratio of female students in higher education between Arab countries and the two more advanced regions is steadily growing once more, especially since 1985.

It is indisputable that increasing denial of access to higher education to women is a definite hallmark of backwardness and it behoves Arab countries to seriously strive to shun it.

There is yet another flaw in the structure of enrolment in higher education in Arab countries. Compared to advanced countries and even to developing countries combined, enrolment in the first university degree (level 6 in the figure) in Arab countries is much higher at the expense of shorter period higher education, normally in the shape of “technical institutes” (level 5 in the figure). Also, the percentage of enrolment in graduate studies (level 7) in Arab countries is clearly greater than the developing countries, particularly Latin America, Figure (4).

Figure (4)
Higher education students by ISCED level,
percentage of Arab countries to selected world region, 1995



Source: Table (3), Statistical Annex.

Higher education in Arab countries is thus university education in essence. Since higher education below the first university grade is associated with the training of intermediate technical workers- much in demand in the world of production especially when efficient but scarce in Arab countries, the exaggerated emphasis on university-type higher education (where social and human sciences predominate as will be shown later) becomes evident.

Examination of the enrolment structure in the three levels of higher education by gender reveals a lower share of women in graduate studies than in advanced countries or even Latin America. This means that denying women access to higher education in Arab countries is more severe at upper levels of higher education.

Country Disparities

There is a dearth of good, recent and comparable data, especially over time, for a large number of Arab countries. It is nevertheless clear that there exists great disparity between them in extent of enrolment in higher education.

Data on enrolment in higher education in 1995 are available for 15 Arab countries. There is huge variation in the higher education enrolment (to population): from an almost negligible figure in Djibouti to more than 27 per thousand in Lebanon, Figure (5).

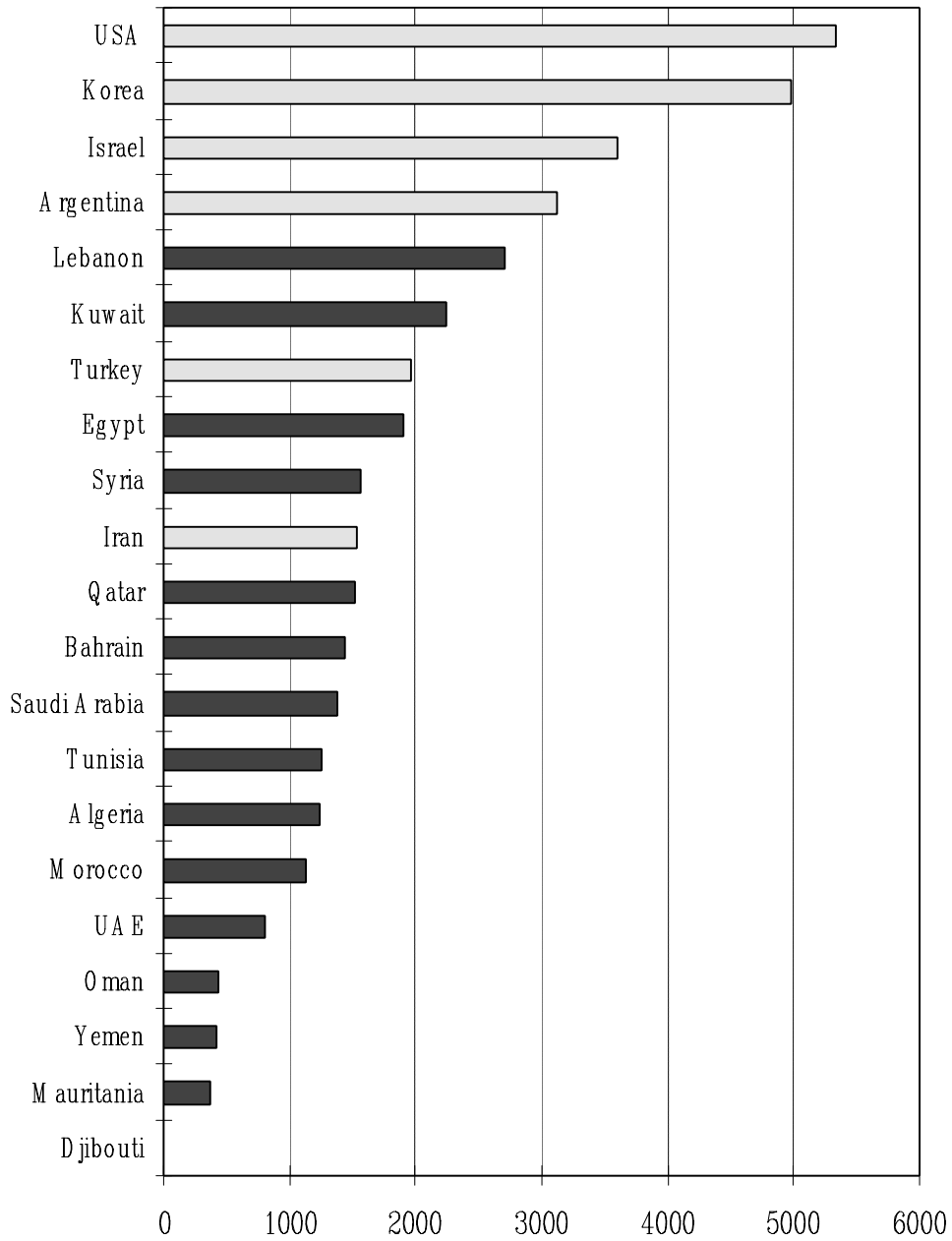
It is to be noted that, with the exception of Oman and the Emirates, Arab Gulf countries, especially Kuwait, occupy a relatively advanced position on this indicator than other Arab countries who were historically ahead in the field of higher education. If we take into account the fact that aliens constitute the majority in small Gulf countries and that only few of these non-nationals are the ones that enrol in higher education institutions, the relative advantage of the indicated Gulf countries would be accentuated.

The comparison on the level of individual countries also highlights the low level of enrolment in higher education in many Arab countries demonstrated when we compared regions. Not one Arab country has reached the level of South Korea, Israel or Argentina. The level of enrolment in the majority of Arab countries for which data is available is below that of Turkey and Iran.

We have previously mentioned the doubling of students in higher education in total Arab countries since 1980 (which, accounting for fast population growth rates, means that the ratio of enrolled students to population had increased by a much lower rate).

Nevertheless, the pattern of change varies from one Arab country to another, especially in the nineties. We note a slight decline in the ratio of students in higher education to population in the nineties in Egypt and Syria for example, whereas the indicator remains relatively stable in Jordan, the Emirates, Algeria and Morocco. By comparison, this ratio jumped nearly threefold in South Korea over the same period.

Figure (5)
Number of higher education students per 100,000 inhabitants,
Arab & selected non-Arab countries, around 1995



Source: Table (4), Statistical Annex

Despite the low rate of female enrolment in higher education in the Arab countries at large, the disparities here are enormous and provocative.

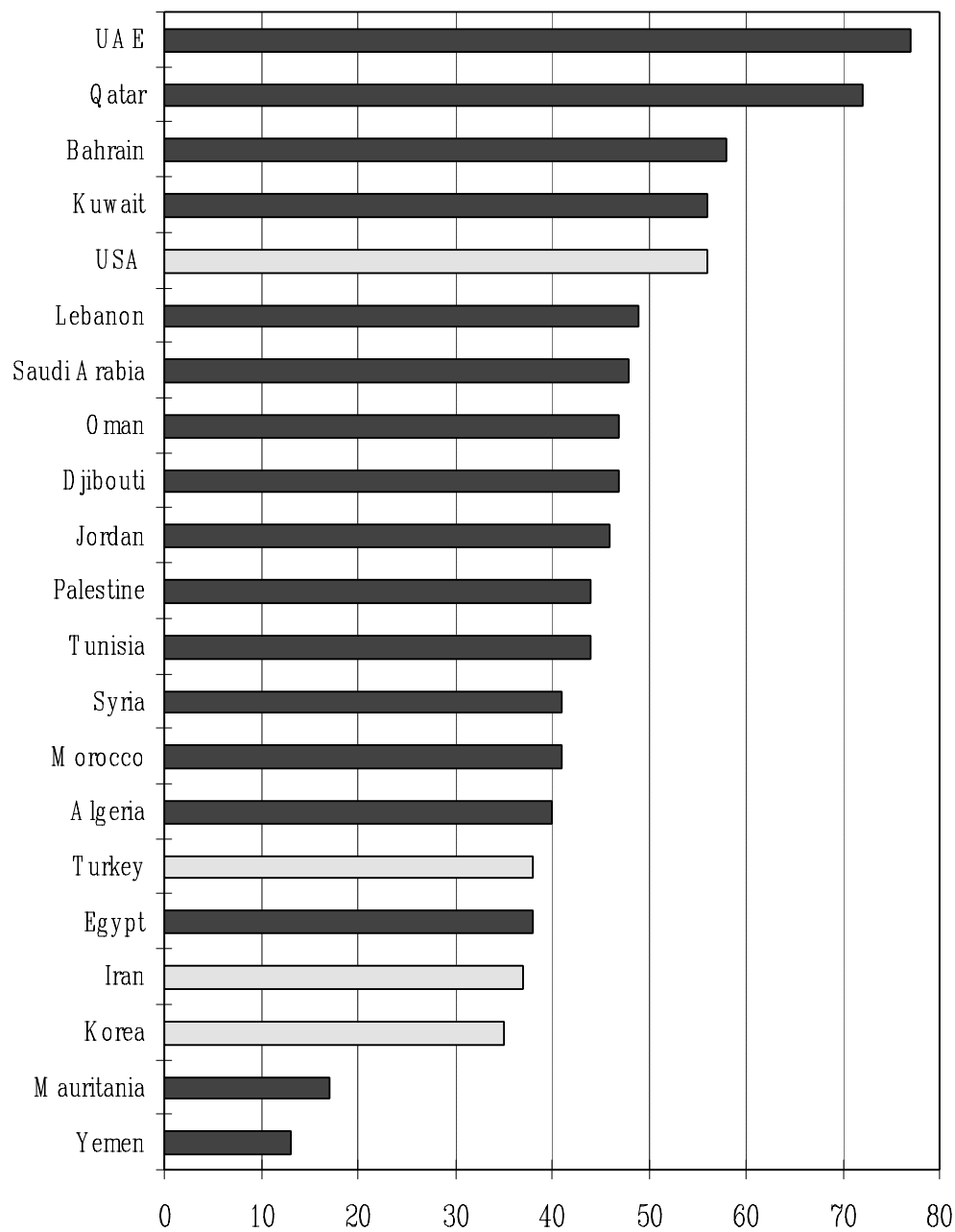
As illustrated by Figure (6), the percentage of female students in higher education around the mid-nineties ranged from 13% in Yemen to over 70% in Qatar and the UAE. The UAE is indeed singular in registering the highest ratio of females in higher education in the entire world (77%).

It is to be noted that female enrolment in higher education in the majority of Arab countries included in Figure (6) is higher than in Turkey, Iran and South Korea (only Yemen and Mauritania fall behind South Korea in this regard). Indeed four of the small Gulf emirates (UAE, Qatar, Bahrain and Kuwait) surpass even the United States in the ratio of female students in higher education.

This result does not contradict low female enrolment in the Arab world as established previously when comparing different regions of the world because of the small population base of those Arab Gulf countries with a high rate of female enrolment⁷.

⁷ It is to be noted as well that relatively high female enrolment rates in small Gulf countries also reflects reluctance of males to go through the rigours of higher education in view of many opportunities for lucrative earnings and high social prestige- essentially through government service and trade- without 'suffering the hardship' of higher education, opportunities that are generally unavailable to females. Indeed it is observed that the more difficult the educational track, the higher the ratio of females in the student body (in medical schools, for example).

Figure (6)
Percentage of female students in higher education,
Arab & selected non-Arab countries, around 1995



Source: Table (5), Statistical Annex.

Social Selectivity in Higher Education

Higher education in Arab countries, especially in the higher levels, is selective in favour of males. This comes as no surprise in the general Arab societal context and in view of the fact that women are among the weakest social groups in such societies. It is therefore logical that relatively higher deprivation afflicts the weaker social categories in Arab countries, categories which do not cease to grow in size.

Despite the lack of direct information, it is undeniable that enrolment in higher education in Arab countries has a selective bias for richer social groups. The chances of children of the poor reaching higher education are constricted by the high cost of pre-university schooling phase to begin with and the need to obtain high grades in general examinations in order to qualify for higher education, especially the prestigious tracks such as medicine and engineering.

Even in countries which claim to provide free higher education, families shoulder a variety of expenses such as fees, cost of books and equipment (particularly in applied and technical science branches) and sometimes private tuition. This tends to eliminate *a priori* the poor, especially females from pre university schooling.

Exacerbation of poverty adds to the onerous burden of such expenses with the passage of time and contributes to raising the opportunity cost of education. Hence the persistence and spread of poverty steadily increases the selectivity of higher education for the affluent social strata. In this way, higher education is gradually being transformed into a mechanism to perpetuate social inequality in Arab countries.

This means, *inter alia*, that one of the main future tasks of higher education reform in Arab countries as they strive to develop is to restore momentum to the dissemination of higher education among all of the people, that is if social disparity is not to mount beyond the already unacceptable limit observed in many Arab countries.

QUALITY OF HIGHER EDUCATION

Higher education in Arab countries is a recent phenomenon on the one hand and has- as is the case of all developing countries- expanded rapidly on the other. It is often alleged that rapid expansion in education, especially the higher variety, inevitably entails some trade off between quality quantity, meaning that rapid expansion in higher education can only come at the expense of quality. Here two questions arise: to what extent did the drop in quality of higher education in Arab countries reach? And with the quantitative expansion that occurred was it necessary for it to fall to that level?

Deplorably, the constraint of scant data and information on higher education is sharpest in the area of quality. There are no rigorous and comparable studies on quality of higher education in Arab countries, especially in comparison with advanced countries. This shortcoming is not solely due to the complexity of the required studies but also to the fact that higher education is treated with understandable, though unhelpful, veneration in backward countries.

As a result, widespread criticism about of the quality of higher education is aired in Arab countries but the evidence does not go beyond impressions or anecdotes, both no substitute serious investigation and research.

Rigorous and sustained research on the quality of higher education, and its determinants, has become a pressing need in order to enhance the contribution of higher education to human development.

Higher education institutions, critical importance of which aside, are characterised by sensitivity but also by rigidity, hence the difficulty of inducing radical reform in a short time. however, the coming of the age of intensity of knowledge which no sooner produced becomes obsolete calls for assessment, and persistent development, of higher education institutions continuously.

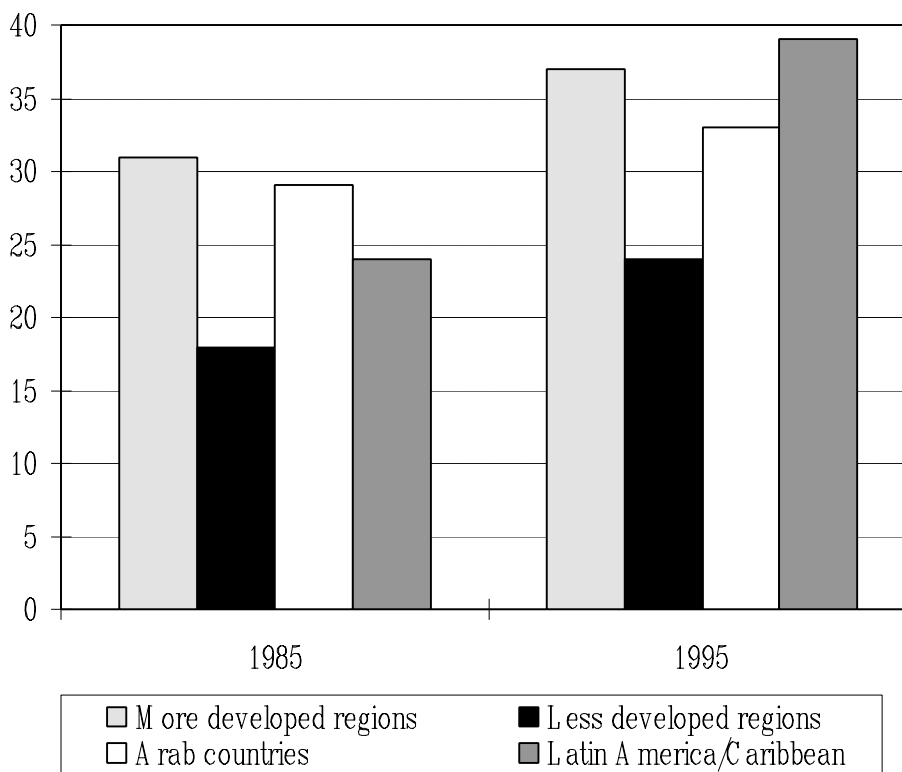
In the absence of such research, however, we shall take up a number of indications of poor quality of higher education in Arab countries and then submit a few observations.

We commence with the fields of study in higher education. It is now established that societies which aspire to actively contribute to the age of intensified knowledge must give priority to the branches of science (natural, exact and applied) in higher education programmes.

Available data though for 1995 show that the proportion of science students in higher education in the Arab countries combined is inferior to that in both advanced and developing countries (approximately in the ratio of 7:10).

Some comfort can be derived, however, from the ratio of females among science students in higher education in Arab countries which is above the average for developing countries and rising, Figure (7).

Figure (7)
Percentage of female science students in higher education,
selected world regions, 1985 and 1995

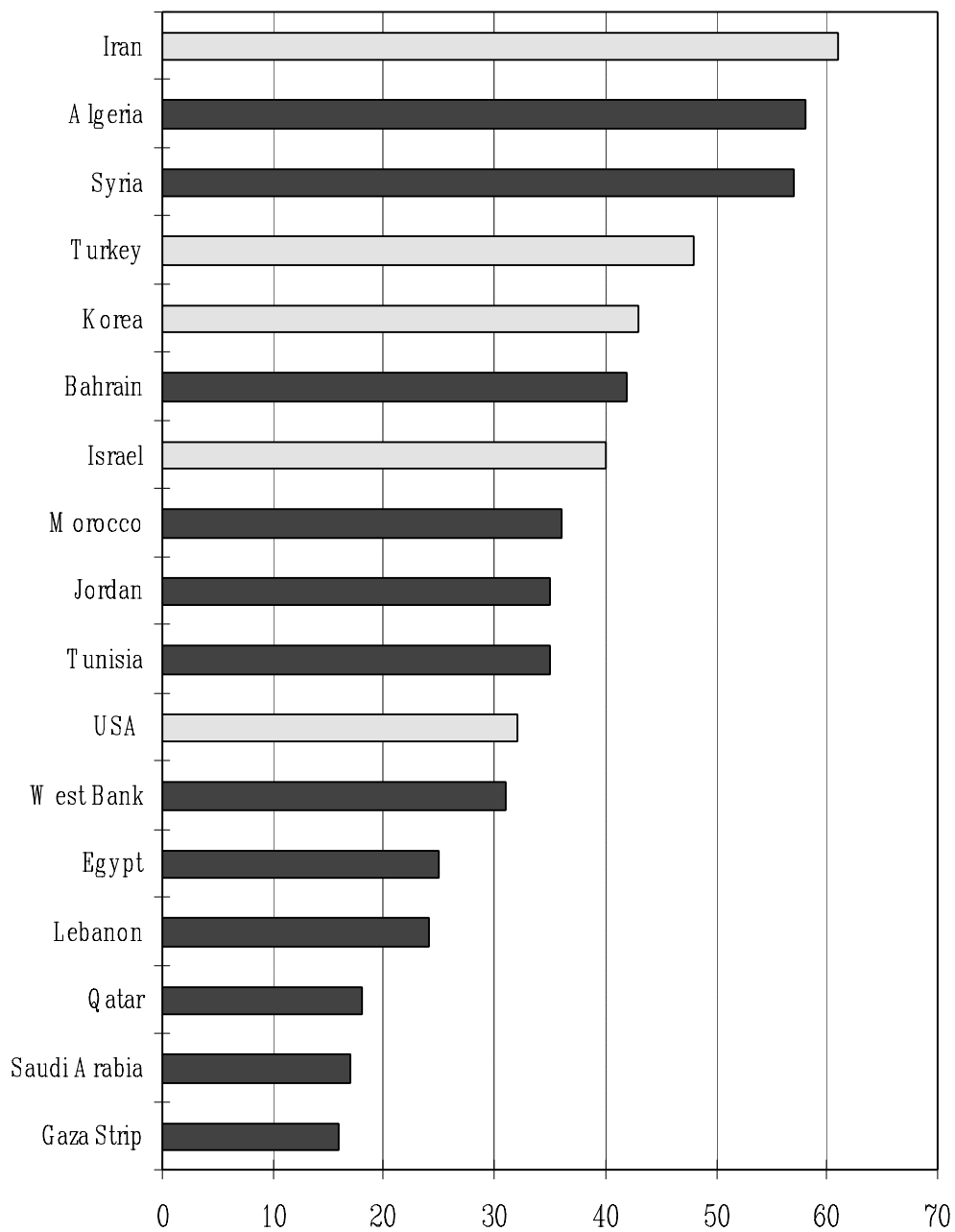


Source: Table (6), Statistical Annex.

The ratio of girls in science branches is still, however, below that observed in advanced countries. On the other hand, the location of Arab countries *vis-à-vis* the selected comparative developing region has reversed during the period (1985-1995). After surpassing Latin America in 1985 the ratio of girls in science in Arab countries fell behind Latin America only ten years later. This observation patently reflects diversity in the status of women, and the rate of improvement in it, in the two regions.

When reviewing data for individual countries, the number of Arab countries for which data is available in our main source (UNESCO, 1998b) becomes 12 only. Figure (8) illustrates the ratio of science branches among higher education graduates in these countries compared to other countries around 1995.

Figure (8)
Percentage of science graduates in higher education,
Arab & selected non-Arab countries, around 1995



Source: Table (7), Statistical Annex.

The ratio of science graduates in non-Arab developing countries included in the comparison greatly surpasses the rate in the United States. This is perhaps explained by the fact that higher education, especially science branches, is relatively new in developing countries. Hence it is incumbent upon developing countries which aspire to progress to focus on science branches in order to narrow the lead of advanced countries in the cumulative stock of graduates in these disciplines.

Among Arab countries, only Syria and Algeria are distinguished by high ratios science graduates, outpacing Korea and Israel, and followed by Bahrain.

As for the rest of Arab countries for which data is present, their ratios of science graduates lag behind Israel although the latter is superior in scientific capacity. The picture is not expected to change significantly with the inclusion of Arab countries for which data is absent. Most of these countries are least developed countries and- historically- new comers to higher education. These ratios of science graduates naturally reflect high shares of the social sciences and humanities among graduates of higher education in Arab countries. Let us recall that the cost of instruction in social science and the humanities is far lower than science branches.

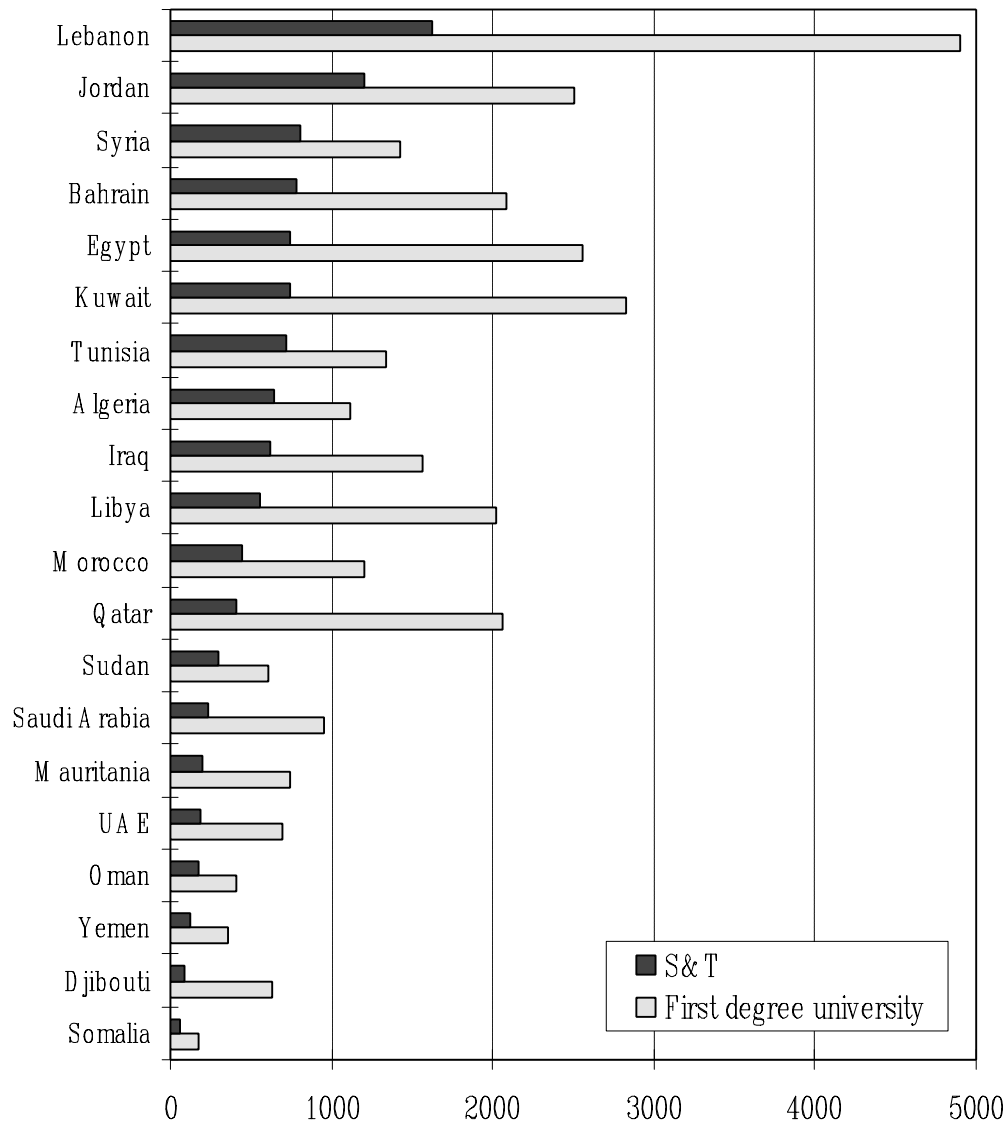
We now present a more accurate description of the diversity in the *stock* of graduates of higher education, and science graduated among them, over the period (1980-1995) as ratios to population size, from a UNESCO study, Cairo Office (Qasem, 1998a). These two criteria represents the best we can offer on the relative availability of high calibre human capital in Arab countries, Figure (9).

The diversity between Arab countries on this criteria- as appears in the Figure- is tremendous. Corresponding to 13- fold in the stock of science graduates and 28- fold in the stock of higher education graduates at large (between Lebanon and Somalia in both cases).

Lebanon scores highest in ratio of science graduates (and in higher education at large) followed by Jordan and then the rest of the Arab countries. Among Arab Gulf countries, Bahrain leads the pack, followed by Kuwait, in the ratio of science graduates (and higher education in general). Saudi Arabia does not differ from Mauritania whose ratio of graduates in turn exceeds that of UAE and Oman (!).

If we consider the distribution of the stock of higher education graduates in Arab countries among the scientific, social and humanities branches, Algeria, Syria and Tunisia record the highest ratio of science graduates. The ratio of science branches among higher education graduates in all Arab countries combined was 37% while the rate in the case of these three countries was 58%, 56% and 54% respectively. Jordan and Sudan then follow these three countries with ratios of less than half.

Figure (9)
First-degree university graduates and S&T graduates, per
100,000 inhabitants, Arab countries, during the period 1980-1995



Source: Table (8), Statistical Annex.

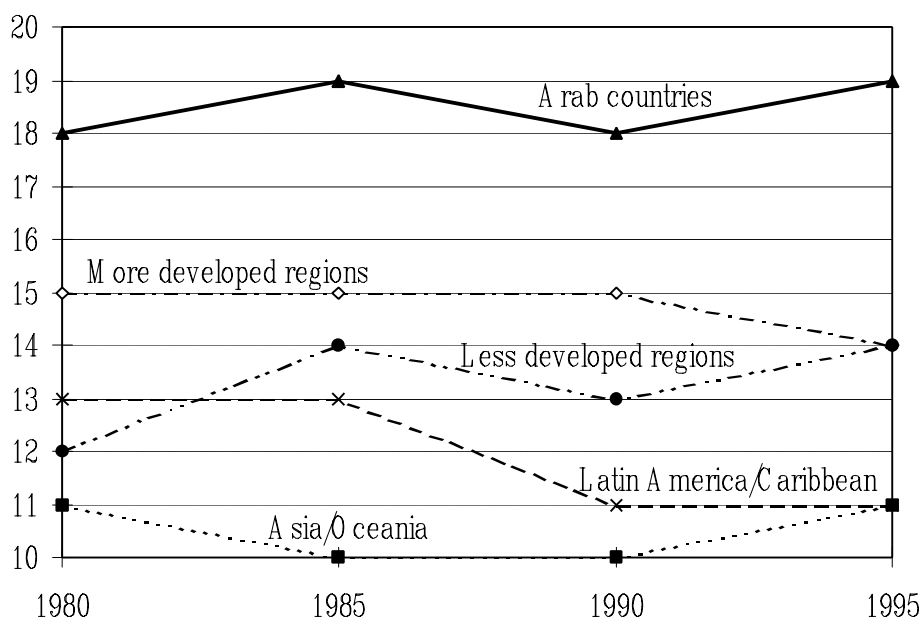
Of the Arab countries whose share of science graduates fell below the Arab average, we find Egypt and Saudi Arabia, the two largest countries in the region in terms of total human and financial resources respectively so that one would be justified in assuming that they carry a special importance in knowledge acquisition on the Arab level.

The indicators of accumulated stock of higher education graduates discussed above, especially those on science graduates, should serve as the criteria for human wealth in this age and time. Instead, we find them drawing a different picture from that reflected by financial indicators. But these indicators of human capital accumulation do influence, in our judgement, many facets of

human welfare in Arab countries perhaps even more so than the indicators of financial affluence.

We now proceed to one indicator of the educational process in higher education institutions which can be taken as a proxy for quality. This is the ratio of students to faculty. A cursory glance at Figure (10) suffices to grasp the glaring gap between Arab countries and the other regions of the world selected for comparison.

Figure (10)
Students/staff ratio in higher education,
selected world regions, 1980-1995



Source: Table (9), Statistical Annex.

The number of students per faculty member in higher education in Arab countries ranged between 18 and 19 in the period (1980-1995), a level higher than that of the more advanced and also the less advanced regions of the world. The differential between Arab countries on the one hand and the advanced countries and Latin America on the other grew over the period as a consequence of improvement registered in the last two, especially in Latin America.

The imbalance between faculty members and students in Arab countries is one drawback of accelerated expansion of higher education in the absence of the necessary means that ensure high quality. This is an important point. Blame for the drop in quality is apportioned to the “explosion” in higher education enrolment without matching resources. It is indisputable that lack of resources is an important factor. We shall visit this financial aspect in some detail in the next section.

Yet the explosion in enrolment in tandem with lack of resources alone is not enough, in our opinion, to explain the quality deficit in the Arab world. Many factors intervene, political in the main, to cause the degradation of higher education institutions. The end result has been a catastrophe for higher education which undermined its contribution to the development of Arab societies.

Perhaps the two most striking characteristics of higher education graduates in Arab countries is a low level of knowledge attainment, weak analytical and innovative abilities and steady deterioration of both.

These two characteristics have dangerous repercussions. Firstly repercussions on higher education institutions themselves since they draw their faculty from their alumni. Secondly on the system of education as a whole, for higher education institutions produce the teachers who educate the pupils of pre-higher education phases. Thirdly on the R&D system which culls its cadres from amongst higher education graduates, in particular from universities. Fourthly on the dynamics of knowledge acquisition and utilisation in the fields of production and in society as a whole. In sum, deterioration of higher education signifies the consecration of backwardness.

In reality, this appraisal of the decline in higher education extends to cover the circles responsible for this sorry state in Arab countries, although it is rare to find courageous and public expression of such views.

Newspapers are packed with shocking examples of what we have reached. Take for example, the flagrant mistakes in Arabic discovered in the *examination papers* of the final year of the Arabic language department at one teacher training faculty (how on earth can Arabic language teachers produced by such a tragedies teach Arabic to at schools and what level of competency to expect!) Affirmation of the deterioration in the conditions of the Arabic language in higher education are reflected in recommendations of a seminar recently held to discuss “upgrading language performance of university students in the face of the ascendancy of colloquial over classical Arabic, confronting the plethora of language, grammar and style errors pervasive among university students especially those not specialising in Arabic and striving to avoid oral mistakes in the spoken language as well as writing errors and emphasising the need for adequate teaching of dictation rules” (Al Ahram, Cairo, 28 May 1999).

It is pertinent to say that the above mentioned features of higher education institutions throw up a problem different from that which Arab countries lamented in the past: the non-existence of higher education institutions. The problem now is the existence of higher education institutions, sometimes giant in size but poor in efficiency, knowledge productivity and societal return. This is more intractable a problem than the absence of institutions. International experience shows that reforming established higher education institutions is much more complicated than building new and better ones. A spate of creative destruction is probably called for!

EXPENDITURE ON HIGHER EDUCATION

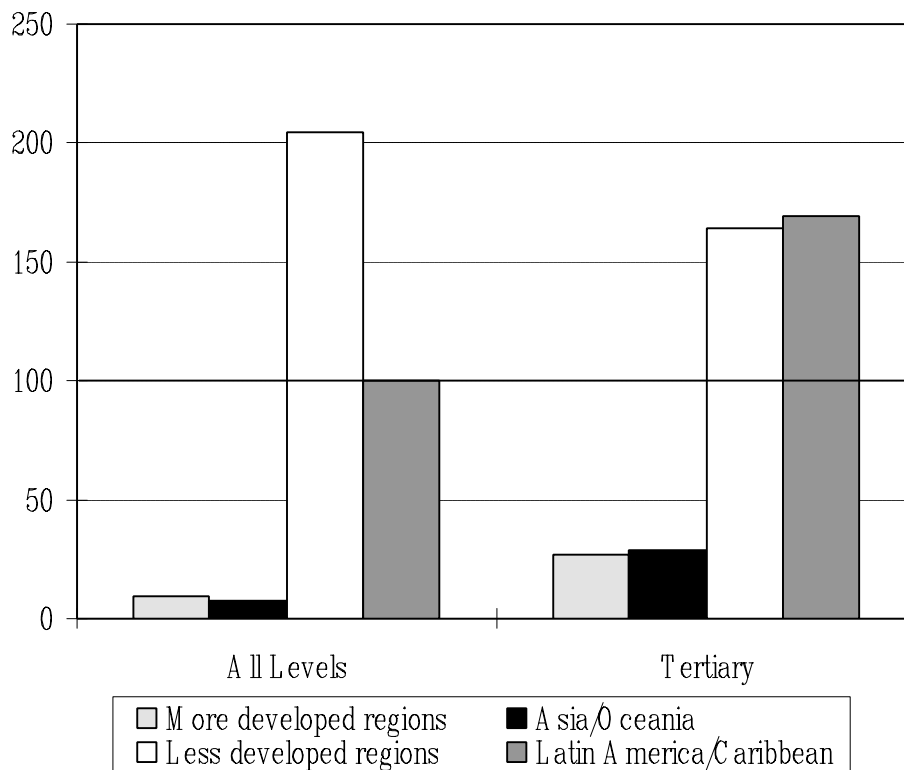
It is important to examine the means allocated to higher education because these institutions have voracious appetites for resources, especially when called on to produce high calibre graduates or contribute effectively in R&D.

Unfortunately, once again, good comparable data on expenditure on higher education in Arab countries is in short supply. What is available is so meagre that making comparisons among countries or over time is almost impossible.

In the mid-1990s, Arab countries spent on all stages of education, per student, much higher than the mean for developing countries, almost reaching the level of Latin America, although the gap was huge between Arab countries and the advanced countries in general (also comprising the “Asia/Oceania”).

Arab countries also spent on the higher education student, more than the mean for developing countries and Latin America, Figure (11).

Figure (11)
Public expenditure per student by level of education,
percentage of Arab countries to selected world regions, 1995



Source: Table (10), Statistical Annex.

Let us hasten to sound a note of caution lest these comparisons invite a round of self-congratulation in Arab countries, for more than one reason.

First, expenditure per student is not a dependable measure of education's contribution to development in international comparisons because the degree of exclusion from education varies from one region to another. For example, enrolment in the first level of schooling in Arab countries is lower than in developing countries in general and intake of higher education in Arab countries combined is lower than in Latin America.

A better measure of expenditure to gauge education's contribution to development is its ratio to total population or to population in the corresponding age group of the pertinent educational stage.

Second, it is preferable to compare to the advanced countries on account of the standards of education they have reached, standards which Arab countries must try to emulate in this age of knowledge intensity.

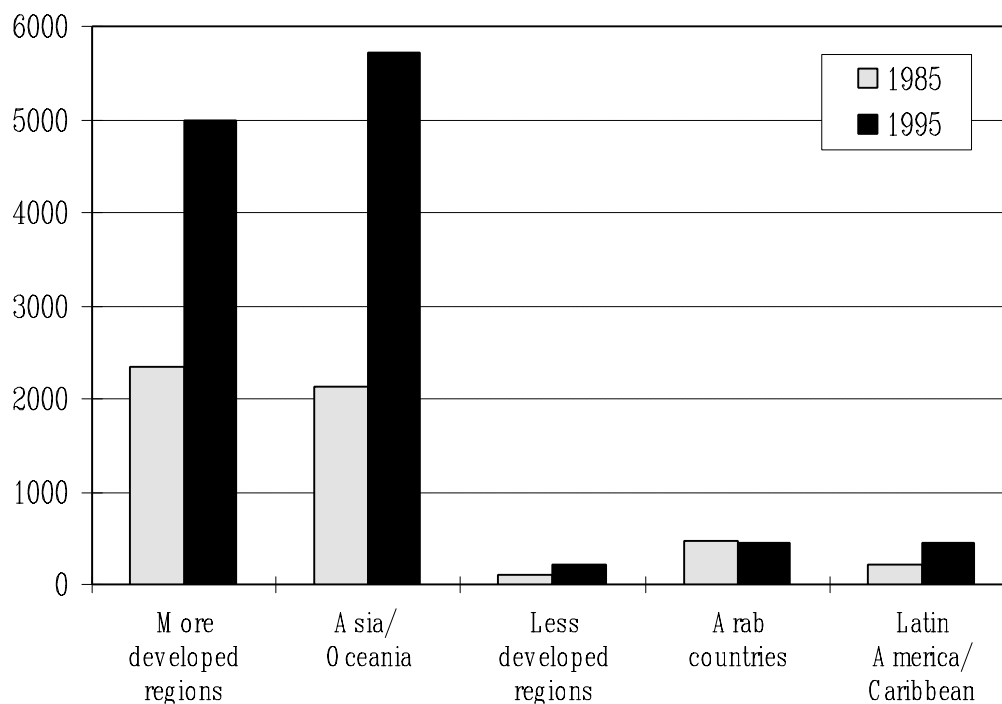
More serious is the fact that Arab countries spent less, per student, in higher education in 1995 than ten years earlier, Figure (12). While expenditure per student rose in both developing and advanced countries regions and selected sub-regions therein (the increase was greater in the advanced countries) expenditure in Arab countries fell slightly in the period (1985-1995).

The patterns of disparity in expenditure are more pronounced in the case of higher education such that the relative advantage of Arab countries over developing countries shrank while the gap with advanced countries grew. If we take into consideration inflation rates- which were quite high in some Arab countries during the period under study- we realise that the cutback in expenditure on higher education in Arab countries was quite drastic.

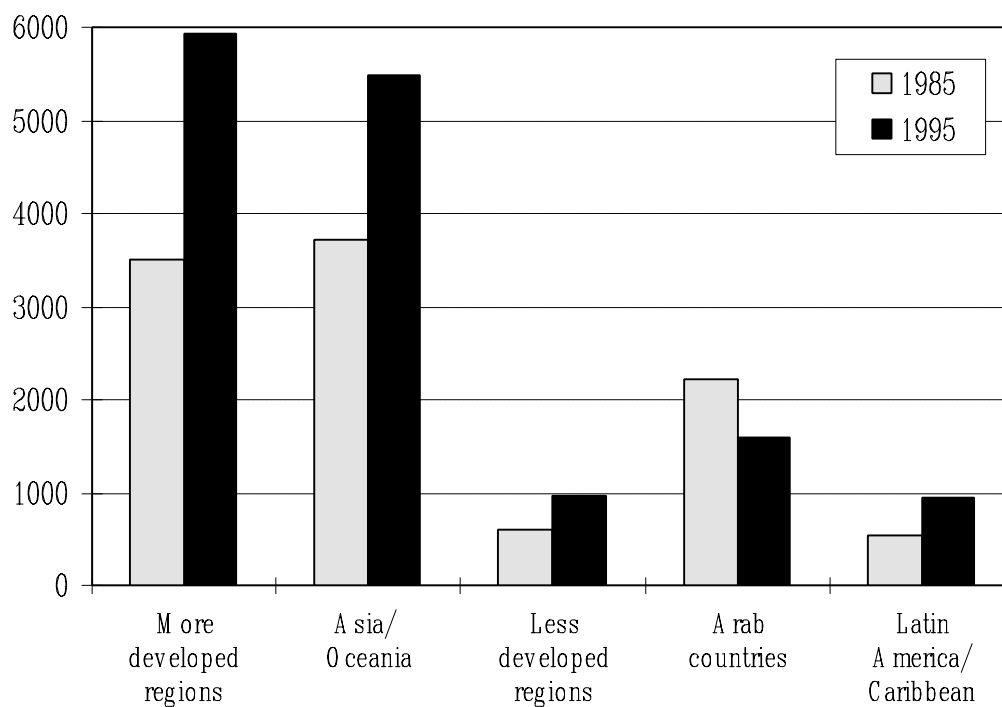
If we were to add the meagre intake in higher education in Arab countries it will become clear that the level of expenditure on higher education in Arab countries is far too low to rise up to its pivotal role in development.

Figure (12)
Public expenditure per student (in US dollars) by level of education,
Arab countries and selected world regions, 1985 and 1995

A- All levels



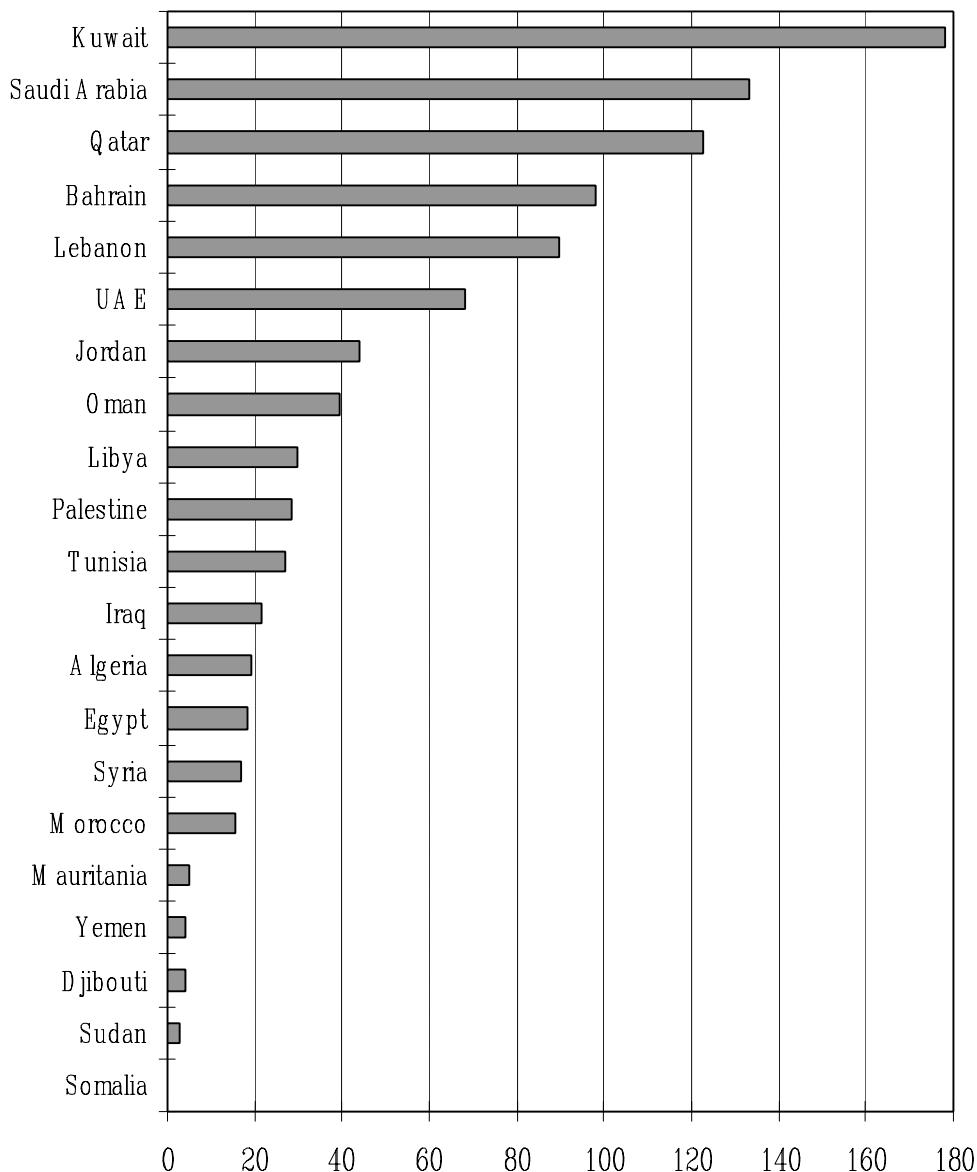
B- Tertiary education



Source: Table (11), Statistical Annex.

We now try to examine disparities between Arab countries individually, in higher education expenditure. Here we will use a superior criterion, expenditure per inhabitant, based on data gleaned from a UNESCO study, Cairo Office (Qasem, 1998b), Figure (13).

Figure (13)
Total expenditure on higher education per capita,
in US dollars, Arab countries, 1996



Source Table (12), Statistical Annex.

The Figure highlights the enormous disparity in higher education expenditure between Arab countries. In 1996, Kuwait outspent Somalia 500 fold and Sudan 60 fold. Kuwait stood out with its high expenditure level by far outdistancing all the other Arab countries, followed by the rest of the Gulf Co-operation Council countries with the exception of Oman, followed by Lebanon. Egypt spent less than one seventh the amount spent by Saudi Arabia.

The important question is: does such expenditure variation reflect similar difference in quality of education in Arab countries? An answer to this important question must await the in-depth study on the quality of education which we called for in the previous section.

Due to the significance of the conclusion we arrived at in the comparison of regional levels, the decline in higher education expenditure in the Arab countries combined, we will attempt to examine expenditure trends in individual Arab countries. Sadly, the constraint of data scarcity is even more severe in this endeavour.

We have tried to pull together whatever scattered evidence there exists on current public expenditure on higher education in some Arab countries and in two comparative countries, Hong Kong and South Korea, during the years 1980, 1990 and the most recent available year d.

We chose to compare the amount of current expenditure on higher education per inhabitant. We also converted expenditure into US dollars according to the prevailing exchange rate (IMF statements). Admittedly, the data series is weak, its comparability limited, yet it helps us to draw some important conclusions.

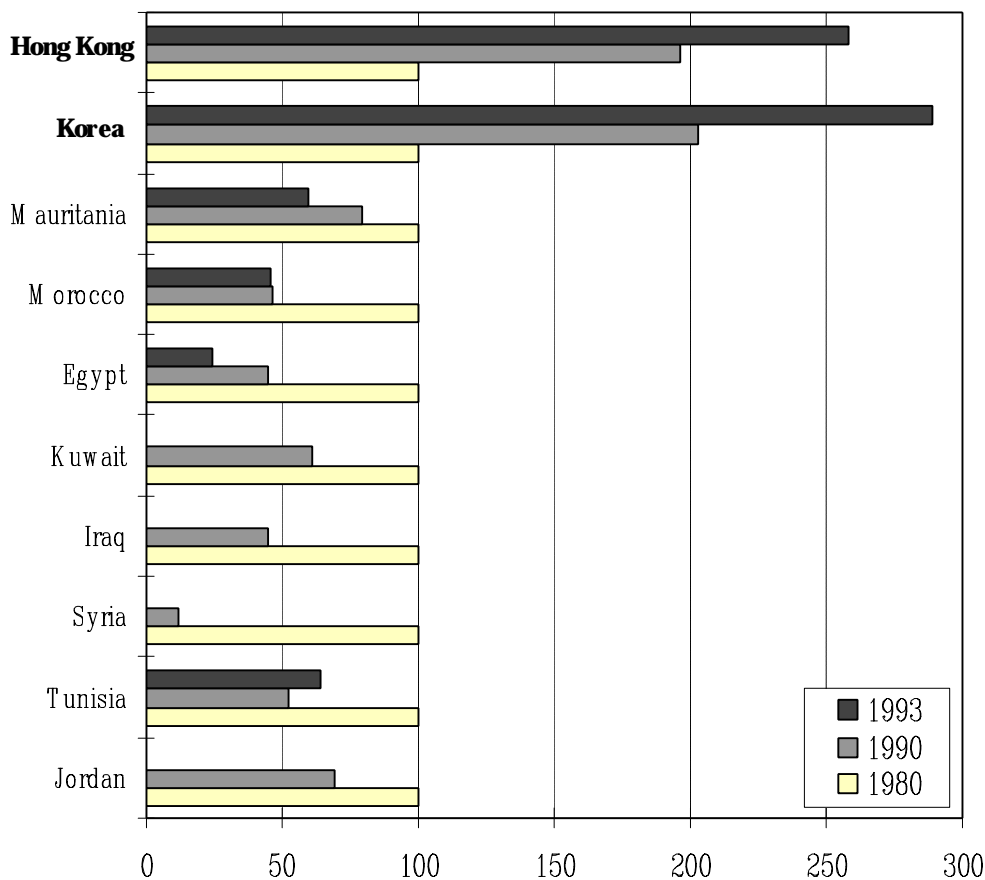
The comparison of higher education expenditure per inhabitant (in US \$) demonstrates the relative and sharp deterioration of Arab countries involved, over the period for which data was found since 1980, with two comparative countries (between which exists a large difference in expenditure rate in favour of Hong Kong because of its small population and intensive funding of higher education).

In 1980, out of 10 Arab countries for which data was available, not one spent less than the two comparison countries (Mauritania- the lowest spender among the Arabs at the time tied with Korea). Kuwait spent four times as much as Hong Kong.

But around 1990, of nine Arab countries for which data was available, the expenditure of two countries (Morocco and Mauritania) fell below the two Asian countries. Oman stood level with Korea and the expenditure of five countries was less than Hong Kong's. Kuwait's expenditure declined and came nearer to Hong Kong's but hovered slightly above (even though Kuwait's expenditure included capital expenditure).

Around 1993, data was only available for six Arab countries, expenditure in four of which was lower than both comparison countries. Only Tunisia surpassed Korea. Even Saudi Arabia's expenditure fell behind Hong Kong. Allowing for inflation, the picture becomes truly distressing, Figure (14).

Figure (14)
Index numbers of current public expenditure on higher education (in US dollars) per capita (constant prices 1980=100)



Source: Table (13), Statistical Annex.

This Figure illustrates the steep upward rise in (real) expenditure on higher education in Hong Kong and South Korea to the tune of 250% in contrast to the big drop in Arab countries for which data was available since 1980: down to almost a quarter in the case of Egypt and to less than half in Morocco, in no more that ten years approximately.

In view of these deplorable developments in funding higher education institutions in Arab countries, poor, and perhaps deteriorating quality, should not come as a surprise. Clearly, under these conditions it is difficult for such institutions to effectively play the desired role in the knowledge acquisition system or to participate effectively in human development of Arab societies.

A PACKAGE OF POLICIES TO REFORM HIGHER EDUCATION IN ARAB COUNTRIES

The above discussion leads to the conclusion that Higher education in Arab countries, both on quantitative expansion and especially quality, fails short of the requirements of a vigorous process of human development,. It is incapable of advancing knowledge or utilising it effectively in the service of development. More menacing is the persistence of current trends which augur slowing expansion, heightened elitism, and steady decline in quality and erosion of contribution to human development in the region.

Four synergistic strategic directions need to be urgently adopted in a serious program to radically reform higher education in Arab countries, an endeavour which brooks no delay.

1- Liberating higher education institutions from the domination of both and the profit motive

The precondition for radical reform in our opinion is liberation of all higher education institutions from government control. Independent boards of directors must be set up on the basis of quadripartite representation (government, business sector, civil society and academicians).

This demand is complemented by eliminating the profit motive from the domain of higher education and to encouraging the development of non-profit seeking institutions of higher education.

However, this strategic direction does not mean that the state (and not just the government) should shirk its responsibility for disseminating and developing higher education. State responsibility specifically means effectively discharging two basic functions.

First, to increase government, and societal, funding for higher education. Since the spread of poverty goes hand in hand with spiralling wealth of the few in Arab countries, it is necessary to *target the affluent* to induce them to increase their share in funding higher education.

Second, to raise efficiency of the utilisation of the resources of higher education institutions and maximise their knowledge and societal return. This can be accomplished through codifying true accountability of such institutions especially in respect of public funds.

2- Implement a powerful shake-up of institutions of higher education in a bid to upgrade quality

There is a pressing need to undertake three main tasks in the context of an integrated plan.

First, reduce the intake of existing higher education institutions, particularly in humanities and social science branches and others where graduates suffer high unemployment and at the same time improve teaching and research capacities and equipment.

Second, purge faculties and reinstate competition as an essential factor for filling posts on the faculty and formulate effective programmes for lifelong promotion of faculty capabilities.

Three, establish a standard of quality as an objective to be attained by *new* higher education institutions and enforce compliance with said standard rigorously so that no new institution is added except if it can help raise the general level of quality tangibly, especially through competition between new and old institutions. Establish strict systems for accreditation of higher education programmes and ensure strict implementation thereof in order to guarantee quality in all higher education institutions.

3- Building a diversified and flexible higher education system

The higher education system must aim at preparing individuals who are capable of learning and of effectively participating in human development rather than just receiving education.

In order to achieve this objective, higher education must acquire two fundamental properties: diversity and flexibility especially in order to respond to the demands of accelerated local and global changes.

Diversity of higher education institutions aims at averting the reproduction by institutions of carbon copies of old programmes which cannot be renewed. Attention should be given to sub-university higher education institutions and to enriching their societal value.

Diversity also means setting up and backstopping higher education institutions to cater for life-long learning without commitment to the present rigid university model, emphasising the importance of recurrent lifelong education in collaboration with the state, business sector and civil society. Also in the framework of diversity, R&D centres need to be built on the basis of interdisciplinarity and with active involvement of the three sectors of society.

Finally, institutional diversity requires enhancing the productive function of higher education institutions both as a source of funding and a base for deepening the teaching-learning function and maximising the contribution of higher education institutions to development.

On the level of individuals, *flexibility* of higher education institutions means freedom to exit and re-enter institutions of different kinds and at different stages in life.

As for the institutional level, flexibility means that an institution's structure, programmes and programme contents must submit to continuing review by its board of directors to ensure quick response to global and local requirements. This is but one of the virtues of quadripartite representation on the boards of higher education institutions.

4- Strengthen Arab co-operation

Higher education is perhaps the most important field for Arab co-operation in the area of knowledge and human development in general. The return on Arab co-operation in higher education can be extraordinary. Among the fields rightly designated as priority areas for Arab co-operation are: graduate studies, research and publishing. There is no doubt that the tremendous advance in communication and information technologies can be harnessed to consolidate such co-operation.

REFERENCES

Bartsch, Ulrich (1995)

Rates of Return to Investment in Education and Migration in Egypt, *Almishkat*, Research Notes 09, Cairo, September.

Qasem, S. (1998a)

The Higher Education Systems in the Arab States: Development of Science and Technology Indicators; UNESCO and ESCWA, Cairo, January.

----- (1998b)

R&D Systems in the Arab States: Development of S&T Indicators; UNESCO, Cairo.

UNESCO (1998a)

1998 World Education Report.

----- (1998b)

World Statistical Outlook on Higher Education: 1980-1995; *World Conference on Higher Education: Higher Education in the Twenty-First Century: Vision and Action*, Paris, 5-9 October.

STATISTICAL ANNEX

Table (1)
Number of higher education students per 100,000 inhabitants,
selected world regions, 1980-1995

| Region | 1980 | 1985 | 1990 | 1995 |
|--------------------------------|-------------|-------------|-------------|-------------|
| More developed regions | 3071 | 3206 | 3600 | 4110 |
| Asia/Oceania | 2103 | 2035 | 2366 | 3396 |
| Arab countries | 884 | 1032 | 1086 | 1227 |
| Latin America/Caribbean | 1375 | 1601 | 1683 | 1714 |

Source:

UNESCO (1998), World Statistical Outlook on Higher Education: ? 1980-1995;
? World Conference on Higher Education: Higher Education in the Twenty-First ?
Century: Vision and Action, Paris, 5-9 October.

Table (2)
Females' gross enrolment ratio in higher education (%),
selected world regions, 1980-1995

| Region | 1980 | 1985 | 1990 | 1995 |
|--------------------------------|-------------|-------------|-------------|-------------|
| More developed regions | 35.6 | 39.2 | 49.3 | 63.3 |
| Asia/Oceania | 21.1 | 21.4 | 25.9 | 42.6 |
| Arab countries | 5.8 | 7.2 | 8.6 | 10.5 |
| Latin America/Caribbean | 12.0 | 14.2 | 16.2 | 17.0 |

Source:

UNESCO (1998), World Statistical Outlook on Higher Education: ? 1980-1995;
World Conference on Higher Education: Higher Education in the Twenty-First ?
Century: Vision and Action, Paris, 5-9 October.

Table (3)
Higher education students by ISCED level,
percentage of Arab countries to selected world regions, 1995

| Region | Level "5" | Level "6" | Level "7" |
|--------------------------------|------------------|------------------|------------------|
| More developed regions | 19 | 149 | 82 |
| Less developed regions | 23 | 121 | 300 |
| Arab countries | 100 | 100 | 100 |
| Latin America/Caribbean | 100 | 92 | 450 |

Source:

UNESCO (1998), World Statistical Outlook on Higher Education: ? 1980-1995;
? World Conference on Higher Education: Higher Education in the Twenty-First ?
Century: Vision and Action, Paris, 5-9 October.

Table (4)
Number of higher education students per 100,000 inhabitants,
Arab and selected non-Arab countries, around 1995

| Country | Higher education students per 100,000 inhabitants |
|----------------------|---|
| Djibouti | 22 |
| Mauritania | 374 |
| Yemen | 419 |
| Oman | 438 |
| United Arab Emirates | 801 |
| Morocco | 1132 |
| Algeria | 1236 |
| Tunisia | 1253 |
| Saudi Arabia | 1380 |
| Bahrain | 1445 |
| Qatar | 1509 |
| Iran | 1533 |
| Syria | 1559 |
| Egypt | 1900 |
| Turkey | 1960 |
| Kuwait | 2247 |
| Lebanon | 2712 |
| Argentina | 3117 |
| Israel | 3598 |
| Korea | 4974 |
| USA | 5339 |
| Palestine | ... |
| Jordan | ... |

Source:

UNESCO (1998), World Statistical Outlook on Higher Education: ? 1980-1995;

? World Conference on Higher Education: Higher Education in the Twenty-First ?
Century: Vision and Action, Paris, 5-9 October.

Table (5)
Percentage of female students in higher education,
Arab and selected non-Arab countries, around 1995

| Country | Percentage of female students in higher education (%) |
|----------------------|---|
| Yemen | 13 |
| Mauritania | 17 |
| Korea | 35 |
| Iran | 37 |
| Egypt | 38 |
| Turkey | 38 |
| Algeria | 40 |
| Morocco | 41 |
| Syria | 41 |
| Tunisia | 44 |
| Palestine | 44 |
| Jordan | 46 |
| Djibouti | 47 |
| Oman | 47 |
| Saudi Arabia | 48 |
| Lebanon | 49 |
| USA | 56 |
| Kuwait | 56 |
| Bahrain | 58 |
| Qatar | 72 |
| United Arab Emirates | 77 |

Source:

UNESCO (1998), World Statistical Outlook on Higher Education: ? 1980-1995;
? World Conference on Higher Education: Higher Education in the Twenty-First

Century: Vision and Action, Paris, 5-9 October.

Table (6)
percentage of female science students in higher education,
selected world regions, 1985 and 1995

| Region | 1985 | 1995 |
|--------------------------------|-------------|-------------|
| More developed regions | 31 | 37 |
| Less developed regions | 18 | 24 |
| Arab countries | 29 | 33 |
| Latin America/Caribbean | 24 | 39 |

Source:

UNESCO (1998), World Statistical Outlook on Higher Education: ? 1980-1995;
 ? World Conference on Higher Education: Higher Education in the Twenty-First ?
 Century: Vision and Action, Paris, 5-9 October.

Table (7)
Percentage of science graduates in higher education,
Arab and selected non-Arab countries, around 1995

| Country | Science graduates (%) |
|---------------------|------------------------------|
| Gaza Strip | 16 |
| Saudi Arabia | 17 |
| Qatar | 18 |
| Lebanon | 24 |
| Egypt | 25 |
| West Bank | 31 |
| USA | 32 |
| Tunisia | 35 |
| Jordan | 35 |
| Morocco | 36 |
| Israel | 40 |
| Bahrain | 42 |
| Korea | 43 |
| Turkey | 48 |
| Syria | 57 |
| Algeria | 58 |
| Iran | 61 |

Source:

UNESCO (1998), World Statistical Outlook on Higher Education: ? 1980-1995;
 ? World Conference on Higher Education: Higher Education in the Twenty-First ?
 Century: Vision and Action, Paris, 5-9 October.

Table (8)
First degree university graduates and S&T graduates,
per 100,000 inhabitants, Arab countries, during the period 1980-1995

| Country | First degree university | S&T |
|-----------------------------|--------------------------------|----------------|
| Somalia | 174 | 56 |
| Djibouti | 633 | 83 |
| Yemen | 355 | 122 |
| Oman | 414 | 169 |
| United Arab Emirates | 699 | 185 |
| Mauritania | 743 | 197 |
| Saudi Arabia | 954 | 236 |
| Sudan | 605 | 292 |
| Qatar | 2058 | 408 |
| Morocco | 1203 | 445 |
| Libya | 2027 | 564 |
| Iraq | 1569 | 624 |
| Algeria | 1121 | 651 |
| Tunisia | 1335 | 721 |
| Kuwait | 2833 | 745 |
| Egypt | 2550 | 747 |
| Bahrain | 2090 | 780 |
| Syria | 1430 | 804 |
| Jordan | 2501 | 1203 |
| Lebanon | 4896 | 1627 |

Source:

UNESCO (1998), World Statistical Outlook on Higher Education: ? 1980-1995; World Conference on Higher Education: Higher Education in the Twenty-First ? Century: Vision and Action, Paris, 5-9 October.

Table (9)
Students/staff ratio in higher education,
selected world regions, 1980-1995

| Region | 1980 | 1985 | 1990 | 1995 |
|--------------------------------|-------------|-------------|-------------|-------------|
| More developed regions | 15 | 15 | 15 | 14 |
| Asia/Oceania | 11 | 10 | 10 | 11 |
| Less developed regions | 12 | 14 | 13 | 14 |
| Arab countries | 18 | 19 | 18 | 19 |
| Latin America/Caribbean | 13 | 13 | 11 | 11 |

Source:

UNESCO (1998), World Statistical Outlook on Higher Education: ? 1980-1995;
World Conference on Higher Education: Higher Education in the Twenty-First ?
Century: Vision and Action, Paris, 5-9 October.

Table (10)
Public expenditure per student by level of education,
percentage of Arab countries to selected world regions, 1995

| Region | All Levels | Tertiary |
|--------------------------------|-------------------|-----------------|
| More developed regions | 9 | 27 |
| Asia/Oceania | 8 | 29 |
| Less developed regions | 205 | 164 |
| Arab countries | 100 | 100 |
| Latin America/Caribbean | 100 | 169 |

Source:

UNESCO (1998), World Statistical Outlook on Higher Education: ? 1980-1995;
 ? World Conference on Higher Education: Higher Education in the Twenty-First ?
 Century: Vision and Action, Paris, 5-9 October.

Table (11)
Public expenditure per student (in US dollars) by level of education, Arab countries and selected world regions, 1985 and 1995

A- All levels

| Region | 1985 | 1995 |
|--------------------------------|-------------|-------------|
| More developed regions | 2344 | 4979 |
| Asia/Oceania | 2131 | 5727 |
| Less developed regions | 101 | 217 |
| Arab countries | 476 | 444 |
| Latin America/Caribbean | 211 | 444 |

B- Tertiary education

| Region | 1985 | 1995 |
|--------------------------------|-------------|-------------|
| More developed regions | 3498 | 5936 |
| Asia/Oceania | 3720 | 5488 |
| Less developed regions | 602 | 967 |
| Arab countries | 2211 | 1588 |
| Latin America/Caribbean | 548 | 937 |

Source:

UNESCO (1998), World Statistical Outlook on Higher Education: ? 1980-1995; World Conference on Higher Education: Higher Education in the Twenty-First ? Century: Vision and Action, Paris, 5-9 October.

Table (12)
Total expenditure on higher education per capita,
(in US dollars), Arab countries, 1996

| Country | Expenditure on higher education per capita |
|-----------------------------|---|
| Somalia | 0.31 |
| Sudan | 2.69 |
| Djibouti | 4.17 |
| Yemen | 4.18 |
| Mauritania | 4.91 |
| Morocco | 15.47 |
| Syria | 16.85 |
| Egypt | 18.29 |
| Algeria | 19.05 |
| Iraq | 21.42 |
| Tunisia | 26.83 |
| Palestine | 28.20 |
| Libya | 29.78 |
| Oman | 39.41 |
| Jordan | 44.15 |
| United Arab Emirates | 68.27 |
| Lebanon | 89.67 |
| Bahrain | 97.83 |
| Qatar | 122.60 |
| Saudi Arabia | 133.05 |
| Kuwait | 178.06 |

Source:

UNESCO (1998), World Statistical Outlook on Higher Education: ? 1980-1995;
? World Conference on Higher Education: Higher Education in the Twenty-First ?
Century: Vision and Action, Paris, 5-9 October.

Table (13)
**Index numbers of current public expenditure on higher
education per capita (in US dollars, constant prices 1980=100)**

| Country | 1980 | 1990 | 1993 |
|-------------------|-------------|-------------|-------------|
| Jordan | 100 | 69.07 | .. |
| Tunisia | 100 | 52.20 | 64.03 |
| Syria | 100 | 11.42 | .. |
| Iraq | 100 | 44.55 | .. |
| Kuwait | 100 | 61.30 | .. |
| Egypt | 100 | 44.80 | 24.05 |
| Morocco | 100 | 46.66 | 45.63 |
| Mauritania | 100 | 79.43 | 59.48 |
| Korea | 100 | 202.96 | 288.94 |
| Hong Kong | 100 | 196.09 | 258.30 |

Source:

UNESCO, Statistical Yearbook, 1996.