Financing and Political Economy of Higher Education in Lebanon

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I - Introduction

Higher education is, in the same time and inseparably, a process of acquisition of skills and knowledge and a process of acquisition and consolidation of social status. Development economics and the theories of human capital see the acquisition of skills and knowledge as a major factor for economic development and for the eradication of poverty, across all countries and at all stages of development. On the other hand, the necessities of state building and the dynamics of social promotion induced in each society specific markers of social differentiation and preferential channels for integration among groups, with specific role given to higher education in the definition of these structures of differentiation and integration.

For this mix of reasons, developing countries focused, after decolonization, on enlarging access to higher education. In the Arab countries, a lot has been achieved in this field. But the general model that emerged in the fifties and the sixties and relied on massive state intervention is being challenged for three main reasons:

- the extension of general education to a very large proportion of the population has coincided with a demographic bulge, hence inducing a dramatic increase in the demand for higher education;
- the decreasing role and means of the state in most countries have eroded the traditional scheme of large-scale public hiring of higher education graduates and restricted its ability and willingness to finance higher education;
- the pressures on the skilled labour market, the increased economic and cultural openness of the globalized world and, more deeply, the re-emerging need for social differentiation in the ranks of the new elite have all pushed towards a greater place for private provision of higher education.

In this perspective, it is understandable that the "financing of higher education in the MENA region is becoming increasingly difficult under the current set of policies and increasing scarcity of government resources, let alone the misallocation of such resources. This problem is likely to intensify in the future, as many countries attempt to meet the expected increase in the demand for better quality higher education because of demographic pressures and the emphasis on knowledge as a key factor in development.[2]"

The common approach to higher education in the MENA countries therefore appears to be based on three assessments: 1) higher education provision is dominated by the public sector; 2) there is a major financing problem and 3) there is an increasing demand

On each of these points, the Lebanese case is different: 1) the private sector historically dominates the education sector: out of 41 higher education institutions, only one is public, the Lebanese University (LU), and the majority of the student body is enrolled in private universities; 2) financing of education in general and higher education in particular is exceptionally abundant and 3) no demographic increase is foreseeable: in 2025, the youth population is expected to decrease by -5 %[3].

But the peculiarities of its history and present situation can be valuable in a comparative approach covering several Arab Countries since they shed light on specific factors, trends and options that might still be latent in other cases.

Lebanon is nevertheless facing severe challenges in the field of human capital formation and mobilization that go far beyond problems of financing:

[2] As mentioned in the "Terms of Reference for the Country Case Studies", August 2008, prepared by the ERF.
[3] United Nations, World paper prospectus: the 2004 Revision

- In spite of the relative abundance of human and financial resources, growth outcomes are very poor;
- Investment in human capital is probably excessive and is directly related in a circular causality to migration: the severe outflow of skilled migrants that prevents the domestic accumulation of human capital; and while skilled labour is attracted by emigration, unskilled Lebanese labour faces the competition of large numbers of temporary foreign workers;
- The Lebanese Government is unable to delineate a strategic vision for education in general and higher education in particular, resulting in the explosion of private higher education and diminishing means, quality and presence for the only public institution.

In this paper, we assess the adequacy, efficiency and equity of higher education financing in Lebanon in both the public and private sector, respecting the common outline set for the six country cases[4], while highlighting the challenges which are specific to the Lebanese case and reinterpreting some of the proposed headlines in the light of that case so as to broaden the general scope of the approach.

The conclusion of the paper, discusses different approaches and strategies to remedy the challenges of higher education financing in Lebanon, acknowledging that higher education is far more a response to external stimuli than an exogenous lever or even an autonomous field of action.

[4] Egypt, Syria, Jordan, Tunisia, Morocco along with Lebanon.

II - History and Political Economy of Higher Education in Lebanon

II- 1 The early stages

The modern education base of Lebanon was structured by missionaries who came to the country centuries back for the purpose of reinforcing the Catholic Christian communities through spreading education. In 1584, the pope Gregory XIII, established the Maronite College in Rome with the aim of training clergy men to open schools in rural areas in Mount Lebanon. In 1736, the Maronite Synodus generalized the opening of schools in most of the Maronite and mixed villages in Mount Lebanon. This led to two major results that are still effective today: one being an early alphabetization of the population and second, a prominent position of the confessional structure in education since the Maronite example was progressively followed by all the other communities and then sanctioned in the Lebanese constitution.

In 1882, schools in Beirut already gathered 13,000 students as compared to 7,000 in Damascus, which counted twice as many inhabitants; girls already represented more than 40% of students in Beirut whereas their proportion did not exceed 25% in Damascus and Aleppo.

The establishment of formal higher education in Lebanon began with the founding of the Syrian Evangelical College by the American Evangelical Mission in 1866, which in 1920 came to be known as the American University of Beirut (AUB). In 1883, the Society of Jesus founded St. Joseph University (USJ) to counter the Protestant influence, this university was a branch of the University of Lyon in France, and it gained its independence in 1975. In addition to these two institutions, a third institution was founded by the American Protestant Mission in 1885, it was named Beirut University College, it was primarily established as a women's college. It is presently known as the Lebanese American University (LAU).

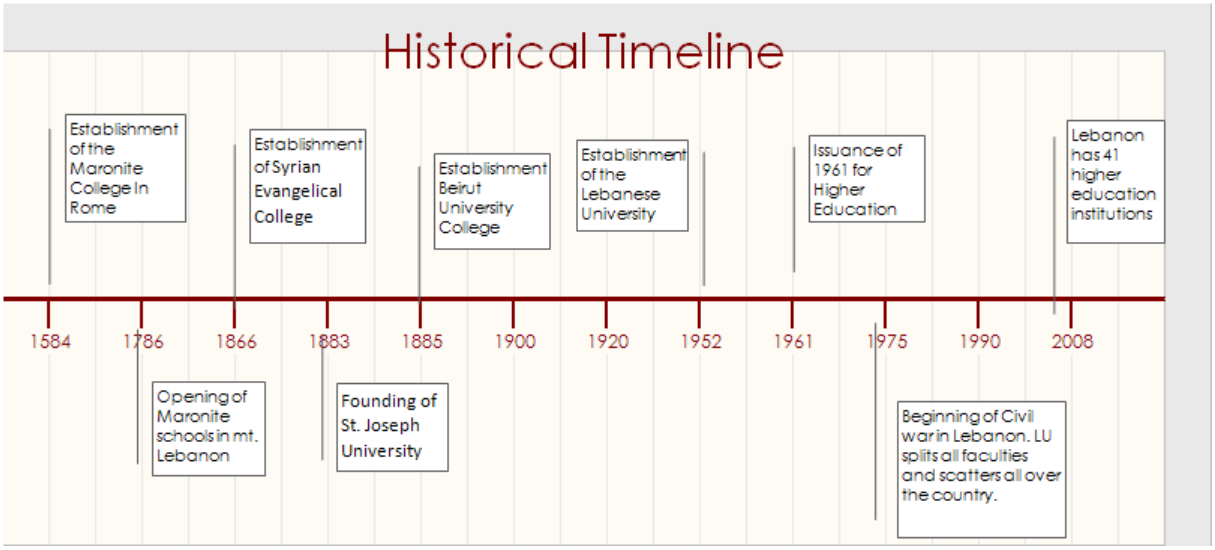


Figure 1: Historical timeline of education in Lebanon

For several decades, Higher education in Lebanon was monopolized by these three institutions until 1937 when a private Lebanese Association established the Lebanese Academy of Fine Arts, the first not linked to any foreign institution. The Lebanese Government inherited from the Ottomans a small nucleus of schools (Ma'arif) that was progressively expanded, increasing the need for teachers. In 1952, the Lebanese University was established with the main function of providing adequate training and learning for instructors and teachers (Faculty of Pedagogy); it was the first public Lebanese

institution for higher education. The Faculty of Social Sciences was established in 1959; later on, the Faculty of Fine Arts was established in 1965, and then came the Faculty of Science. The development of the Lebanese University became a major theme of mobilisation during the late sixties and the early seventies, a period during which rural –urban migration accelerated.

In 1959, in the wave of a large attempt to modernize the state and expand its social responsibilities, led by President General Fouad Chehab in the aftermath of a "small" civil war, a decree created a faculty of law in the Lebanese University and gave it the exclusivity for granting degrees in Lebanese law but stated that it would comprise two branches, the first being run by the LU and the second by the USJ according to its own rules.

Soon after, in the early 1960s, with the spread of Arab Nationalism and Nasserism in the region and at the peak of the confrontation between France and the Arab Nationalist movement because of the war in Algeria, but also with the beginning of tensions between Egypt and Saudi Arabia (the two regional powers that used to support the Sunni political leaders in Lebanon), the Beirut Arab University was formally founded in 1960 by "Al-Birr wal Ihsan" society, a pro-Nasser Sunni Moslem charitable association, but it was actually and academically affiliated to the Alexandria University in Egypt. Its creation provoked a tense political debate that focused on two points: the opening of a law school that pretended to enjoy the same rights as those granted to the USJ and the recognition of the Egyptian baccalaureate as equivalent to the Lebanese baccalaureate. The sectarian dimension of the debate was obvious: the Sunni petite bourgeoisie was directly contesting the statu quo in which the Christian segment of the elite was still dominant at the time. In their eyes, the Lebanese University was considered as part of the system and disregarded as an option. Reproducing the ambiguity of the 1959 decree, the objective was to establish a "University for the Sunnis", with the aid of Egypt in the same way the Christians had "their University", sponsored by the French[5].

The powerful lawyers association, dominated by the Christians, violently opposed these two points and imposed complex regulations to the practice of law including a long period of apprenticeship in the existing law firms and exams organized by the lawyers' association itself. This conflict led to the reinforcement of corporatist defences beyond the university. It also indirectly led to the adoption, in December 1961, of the Lebanese Higher education law, the first text that provided some form of structure and organization to higher education in Lebanon. This general law ratified the de facto situation that had emerged in the meantime; it forbade the equivalence with non-Lebanese baccalaureates and devoted several articles to the specific case of the law studies[6].

II- 2 The lasting effects of the war

At a time when the neighbouring Arab countries were still bearing the marks of the wave of nationalization of the sixties and the consequent migration of parts of their elite and before the Gulf countries had established any higher education institutions, Beirut represented a significant intellectual pole and attracted large numbers of students from the whole region.

At the beginning of the Lebanese Civil war, Lebanon had 5 universities (allowed to open many faculties) and 7 higher education institutions (restricted to one discipline), all located in Beirut, except for the University of Kaslik -USEK which is located in the city of Jounieh (USEK was simply a faculty of theology and religious studies at the time).

The civil war (1975-1990) had devastating and lasting effects on higher education in Lebanon:

[5] See for a good overview Mounir Bachour : « Higher Education in lebanon in its historical process » (in Arabic) in « Higher Education in Lebanon », Adnan El Amin (ed.) LEAS, Beirut

[6] This episode clearly demonstrated the complexity and the ambiguities of the "dual system" of education in Lebanon. It also put into light the sensitivity of higher education issues to the interests of professional lobbies and the determining role of access to statuses and barriers to entry in shaping the higher education regulations.

- A certain number of foreign institutions closed, namely the prestigious French "Ecole des Lettres" and "Centre d'Etudes Mathématiques", situated on the front line; their premises were later used to house the French research centre called "Cermoc".
- A massive wave of emigration struck the Lebanese society and affected especially the highly educated, many of them being encouraged by the oil boom that happened in the same period. This emigration created a massive new Diaspora (in reference to the large wave of migration that had occurred at the end of the XIXth at the beginning of the XXth centuries) that made further emigration much easier for the young Lebanese, in terms of residence and work information and facilities.
- The remittances from the Diaspora helped residents to survive under war, along with the "political" money that was pouring in the country as subsidies from foreign Governments to the fighting Lebanese and non-Lebanese militias. The feeling of insecurity and the appeal of emigration led to an intensification of investment in human capital because it enjoys mobility unlike physical capital that falls prey to destruction and ransom.
- This propensity for higher education was fuelled by large numbers of scholarships provided by foreign countries, especially from Eastern Europe, and channelled through leftist parties (several thousands a year and about 40,000 in total). During the eighties, the wealthy Saudi-Lebanese businessman Rafic Hariri created a foundation that distributed around 30,000 scholarships, half of them to the USA and Western Europe. It is estimated that each of these channels implied a total investment of 1.5 billion USD. The impact of these systematic scholarships on the social composition of the professional elite in Lebanon was huge and more than half of the graduates emigrated for good (a much higher proportion for the "Hariri" students).
- Because of the war that was particularly intense in Beirut and its suburbs, and the de facto partition of the country into a patchwork of territories controlled by fighting militias, most of the faculties of the Lebanese University split and "branches" were located in the different regions of the country. This led a complete reshaping of the geography of higher education that spread to the whole territory and deeply affected the internal functioning of the Lebanese University, encouraging the emergence of autonomous units and jeopardizing the efficiency of the education process.
- The war also affected the composition of the student body enrolled in higher education institutions. Lebanon was an international centre for education in the region, attracting a large number of students from different nationalities into its institutions. However,, with the outbreak of the civil war and the political instability that engulfed the country for years afterwards, the number of foreign students enrolled in higher education institutions in Lebanon dropped significantly from almost 50% enrolment on 1970 to 20% at the end of the war and down to 12% enrolment in 2000, because of the large investments in higher education in other countries of the region.

Table 1: Number of Lebanese and non-Lebanese students in universities

Academic Year	**Number of Students**	**% Lebanese**	**% Non –Lebanese**
1969 - 1970	39284	53.0	47.0
1970 - 1971	42578	52.0	48.0
1974 - 1975	56593	42.7	57.3
1977 - 1978	78628	54.4	45.6
1979 - 1980	85087	65.0	35.0
1980 - 1981	79073	60.8	39.2
1981 - 1982	70314	62.5	37.5
1982 - 1983	73052	60.0	40.0
1983 - 1984	63000	72.0	28.0
1985 - 1986	78500	70.5	29.5

1986 - 1987	83891	74.0	26.0
1994 - 1995	79029	77.5	22.5
1995 - 1996	82446	81.3	18.7
1996 - 1997	87957	82.2	17.8
1997 - 1998	87330	86.2	13.8
1998 - 1999	101440	84.7	15.3
1999 - 2000	103869	87.1	12.9
2000 - 2001	119487	88.3	11.7

Source: Centre of Research and Education Development (CRDP)

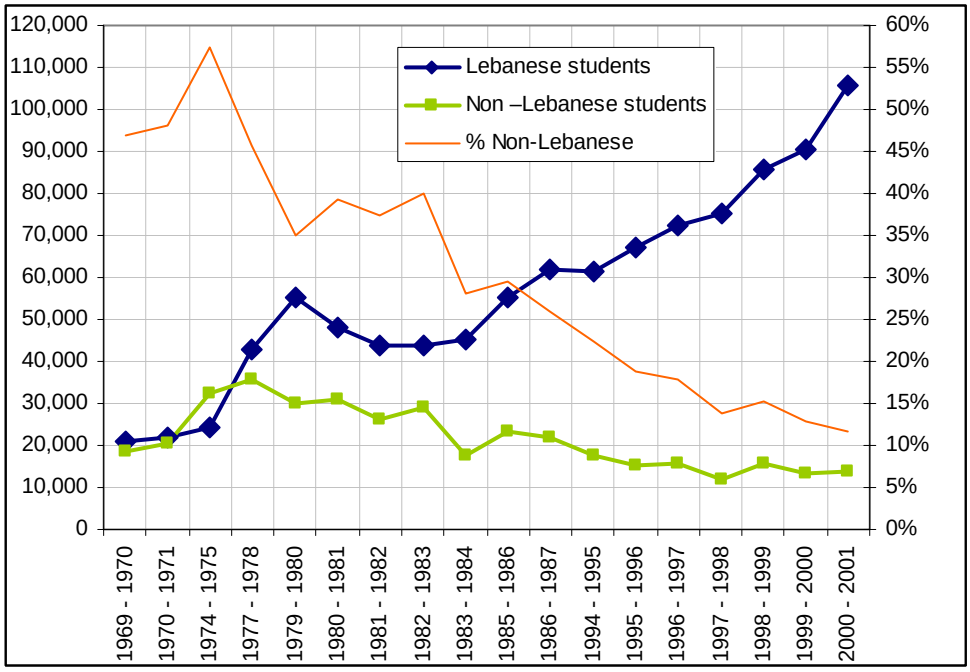


Figure 2: Number of Lebanese and non-Lebanese students in universities

At the end of the war, Lebanon had around 20 higher education establishments: 6 universities (allowed to open many faculties) and 14 higher education institutions, coming respectively from 5 and 7 before the war. Since 1995 and 2001, 23 additional establishments were created, 10 were formally authorized in 1999-2000 and 9 in 2000-2001, totalling 43 establishments: 24 universities and 19 higher education institutes, 38 are actually operational.

II- 3 How did Lebanon get to where it is?

Education in general and higher education in particular are directly linked to the process of elite formation in any society whether through the impact of education achievements on revenues or through the prestige attached to diplomas.

The territories that constituted Lebanon after the collapse of the Ottoman Empire and especially the city of Beirut enjoyed an early and marked advantage on the entire surrounding region, polarizing much of its intellectual activity (universities, press, knowledge of foreign languages, translations, modern skills, etc.) and attracting an “elite” of diverse origins. This elite was mostly formed in non-governmental institutions and was deeply involved in international trade.

For a long period, until the sixties, they felt strong and sufficiently widely-dispersed to avoid the “massification” of higher education through the development of public higher education and more generally through larger involvement of the state in the economy that would have brought competitors from poorer origins as it did happen since the early fifties in most of the neighbouring

countries where the military coups brought new elites to the front stage at the expense of the isolated old bourgeoisie.

This “advance”, coupled with myopia turned into fragility and when the rural migration accelerated, the competition of the newcomers and their ambitions to join the circles of the elite transformed into violence. But the outcome was not a “normalization” along the lines of the Arab model. The result was segmentation: the old elitist system was preserved, with the prestigious classical universities, it expanded to welcome the new strata of elite brought during and after the war, while a parallel system of “lower quality” (or perceived as such) was established, with the Lebanese University playing a pivotal role and an increasing number of “second class” private universities gravitating around it, targeting niche markets and/or asserting the sociopolitical positions of their sponsors.

This specific path deserves being compared to what happened in the other Arab countries (Syria, Egypt, Jordan, Tunisia, Morocco) as regards the modes of incorporation and/or substitution of elites.

III - Institutional structure

III- 1 A dual system or two adjacent systems?

Education in Lebanon is theoretically structured around a dualist system[7], where both the private and public sectors work hand in hand to bridge the gaps in the overall education of the country, but this is not the case in practice. This alleged dualist system is the direct consequence of a historic heritage where education was, at first, only provided by private schools, characterised mostly by missionaries, followed by the delayed entrance of public education that appeared in the wave of the Ottoman modernisation process, at the end of the 19th century.

However, no real partnership was ever established between these two systems to allow a form of cooperation to take place. Consequently, the most accurate description of "adjacent systems" is more precise than that of a "dual system", since the two sectors (private and public) function independently of one another, with minimum bridges and coordination, making them adjacent, rather than coordinating and complementary, i.e. "dual".

Both from an economic and from a social equity perspective, public involvement in education is normally expected to be maximal in the basic cycles of education and to diminish with higher cycles.

In Lebanon, the "public sector" accommodates 37% of students enrolled in the Lebanese educational system and education as a whole is controlled mostly by private institutions, which is by itself specific. However, important discrepancies exist between the cycles. The share of the public sector (in terms of the number of students enrolled) varies from 22% in kindergartens to 32% in the primary cycle, then to 42% in the intermediate, only to reach 53% in the secondary cycle and close to 50% in the university.

The "pyramid" seems to be inverted, where the government's role (through public schools) increases significantly in the cycles of general education and university level, reaching almost 50%, while the private sector dominates the vocational education.

The role of the government in supervising and controlling the quality and the learning aspects of private higher education is weak. Other than enforcing minimum requirements for establishment and structure, the government plays a weak role in enforcing standards on the quality of learning. The classical "Lebanese baccalaureate" exams that used to determine the end of the secondary cycle and the entry to university is more and more disregarded in the private schools where the students pass foreign exams (French or American) and get equivalences to the official diploma.

The inversion of the "educational pyramid" in Lebanon reveals that the Lebanese attach a greater importance to the educational and sociological "quality" increments in basic education than in middle or higher education. This means that the critical threshold of social and economic differentiation seems to be attached to low levels of formal education and probably relates to the mastering of foreign languages and basic intellectual skills rather than to the acquisition of more developed knowledge. Differences at this level are perceived as largely irreversible and drive the parents to enrol their children in private schools. This is not to say that no attention is given to differences in the educational and sociological quality of middle and especially of higher education but, in higher education, the differentiation of courses and disciplines as well as the modulation of the conditions of access make the choices more complex and allow the supply to be much more flexible to adapt to the different components of the demand. The distinction between private and

[7] The argument about the "dual" or "adjacent" structure of the Lebanese educational system draws on the report prepared by CRI (Consultations and Research Institute) for the CDR, under the supervision of the author: "Development Program 2005-2020- Education Sector", 2006

public becomes less and less relevant and the degree of accessibility becomes probably more pertinent be it through the level of fees or through entrance exams or through any other form of rationing.

Many indications tend to prove the heterogeneous character of the Lebanese educational system. On average in Lebanon, out of 1,000 students that integrate the scholar system (from the first year of primary cycle), 75 students obtain the baccalaureate without repetition. This number is 161 for students living in Beirut, 48 for North Lebanon and 24 for Bekaa. It reaches 224 for students of middle-class families, and 27 for students of disadvantaged families. Nationally,, this rate is 9 students in public schools, and reaches 255 students in private schools[8].

It would be however erroneous to draw, on the basis of these indicators, hasty conclusions on the relative "quality" and "efficiency" of the public and the private sectors. It is well known the performance of the educational system is strongly correlated with two types of variables that are hard to disentangle: The first type includes the external characteristics of the students which directly impact their education performance (educational background of parents, social class, family income, etc.), and the second type includes the endogenous variables of the system (quality of teaching, availability of equipment and laboratories, qualifications of teachers, conditions of work, overall educational environment, etc.). Not to talk about the circular causalities that deepen the initial differences: the best teachers going to the institutions that attract the most "gifted" and the "wealthiest" students who, in turn, head for these same institutions because they offer the "best education", etc.

Intrinsic quality of education is, at the best, difficult to assess. And what is commonly observed is the mixed result of self fulfilling perceptions and reinterpreted facts.

III- 2 Basic data

In 2007, 917,977 students were enrolled in general education, 160,364 in university studies and 99,731 in technical and vocational studies. Thus, about 1.178 million students were registered throughout the academic year 2007-2008, representing about 31% of the resident population of Lebanon[9]. The table below shows, for each of the sub-sectors and cycles in question, the distribution of students between the public and private sectors.

Table 2: Distribution of students per cycle and sector

Level	Total Number	Number in Public	Share of Public	%. of Students
Pre-School	150,732	33,364	22%	13%
Elementary	450,566	145,862	32%	38%
Intermediate	193,310	81,855	42%	16%
Secondary	123,310	64,422	53%	10%
Total General Education	917,877	326,503	36%	78%
University	160,364	72,961	45%	14%
Technical & Vocational	99,731	37,446	38%	8%
Grand Total	1,177,972	436,910	37%	100%

Source: Centre of Research and Education Development (CRDP), 2007 data.

[8] CDR Development Program, "Education Sector", 2006
[9] Central Administration for Statistics, Lebanese Republic, Statistical Yearbook 2007

III- 2- a General Education

There are three categories of schools in Lebanon, Public, Private and Private Free10. In the pre-school level, 22 % are enrolled in Public, 16% in Private Free and 62% in Private schools. On the other hand , the percentage of elementary enrolment in the same year was 32 % in Public, 22% for Private Free and 45 % for Private .The role of the public sector improves dramatically in secondary schooling whereby the percentage of students enrolled in public schools amount to 52 % for general education and 38% for Technical and Vocational education .

III- 2- b Vocational education

Lebanon has a large number of vocational and technical institutions. Vocational institutions, both public and private, constitute a large segment of the student body in Lebanon. In 2007 alone, 37,446 students were enrolled in public Vocational Schools, whereas 62,285 students were enrolled in private vocational schools, this makes up almost 62% of the number of students enrolled in higher education institutions, both public and private.

Table 3 provides a snapshot of the 2004 vocational schools data for both public and private sectors pertaining to number of students, number of institutions per region and number of instructors.

Table 3: Distribution of Vocational Education students among sectors and mohafazas

Sector	Public	Private	Total
School-Institutes	64	368	432
Beirut	0	58	58
Beirut Suburbs	16	131	147
Mount-Lebanon	6	44	50
North Lebanon	16	72	88
Bekaa	10	22	32
South Lebanon	9	28	37
Nabatieh	7	13	20
Number of Students	32,655	67,223	99,878
Share of Sectors(%)	32.7%	67.3%	100%
Number of Teachers	8,532	7,660	15,292

Source: Centre of Research and Education Development (CRDP)

III- 2- c Higher Education

Considering that the resident population of Lebanon in 2005 was 4 million, the ratio of students in higher education (including vocational institutions) for every 100, 000 is 0.4143[11] . This ratio is one of the highest in the Arab region. In the academic year 2006-2007, the total number of students registered in universities amounted to 160,364, of which 45% were registered in the LU, the rest were divided among the other 37 private institutions.

The Lebanese university graduates about 45 % of the Lebanese graduate body on a yearly basis, whereas the other 55% graduate from 37 different private institutions.

[10] Private free schools are schools that are run by private institution or organization and get subsidies from the government to provide free education to mostly pre-school & elementary students

[11] The Strategy for National Education, Lebanese Association for Educational Studies, 2006

III- 3 Legislative aspects of Higher Education

III- 3- a Ministry of Education and Higher Learning

All forms of education in Lebanon are governed by the Ministry of Education and Higher Learning. The current structure of this ministry goes back to 1959. Two major amendments were made throughout the years. In 1971 the Centre of Educational Research and Development was created. The Centre for Educational Research and Development is a public institution with total financial and administrative independence, supervised by the Minister of Education and Higher Learning. It was established as per the decree number 2356, 10/12/1971. The 1990s witnessed an attempt to distribute the Ministry's task and obligations on to three Ministries (Vocational & Technical Educational, Culture and Higher Education, Nationalism Education); however, this notion was disregarded and all aspects of education were joined under the umbrella of one ministry which is independent from all culture & sports related issues. Currently the decision making process in the Ministry is divided among two management units: General and Vocation Education unit and the Centre of Educational Development and Research. The Higher Education management unit was established a few years ago, it supervises all aspects of higher education but do not have any executive decision making. Moreover, article 10 of the Lebanese constitution states that "Education is free insofar as it is not contrary to public order and morals and does not interfere with the dignity of any of the religions or creeds. There shall be no violation of the right of religious communities to have their own schools provided they follow the general rules issued by the state regulating public instruction".

III- 3- b The 1961 Law

The 1961 law issued on 27/12/1961 is made up of 28 articles that state and describe the legal framework of establishing and running private higher learning institutions, the conditions for this establishment, the specifications of obtaining a degree in Lebanese law, and the penalties of opposing the contents of the law.

By looking closely at the law, its occasional nature (equivalence, law studies, etc.) appears clearly. Very little is actually said on requirements pertaining to the faculty members, the buildings and supplies, etc. The decision body comprises the Minister of Education, the General Director of the Ministry, the general Director of the Ministry of Justice, the President of the LU and the heads of professional orders concerned by the specializations concerned. But it is left without clear criteria and the supervision process and the control of the quality of education are left very vague.

III- 3- c Decree number 9274

The 9274 decree was issued on 5/10/1996, and consists of 11 articles that lay down the criteria, standards and conditions for establishing an institute of higher education. These include the buildings& facilities, libraries, and faculty & staff and administrative bodies.

Article 7 of this decree, calls for the establishment of an Education Committee made up of eight members headed by the Minister of Education, six of these eight members are chosen from the candidate list which are provided by the following universities: American University of Beirut, Saint Joseph University, Beirut Arab University, University of Kaslik, Lebanese American University and Balamand University. The other two candidates are selected from a list provided by the Lebanese University. This committee is tasked with looking over all applicants for the establishment of new institutions for higher learning and ensuring that all requirements and criteria that are described in this decree and the 1961 law are met.

IV - Adequacy of Financing of Higher Education

The term of adequacy has been adopted to account for the quantitative appraisal of the resources allocated to higher education. Broadly speaking, spending on education can be divided into household spending, government spending and external or private grants (from different local & international charitable or political institutions and foundations).

Financing of Education in general and of Higher Education in particular show two striking features in Lebanon: the amounts mobilized are extremely high in absolute and relative terms (13.1% and 4.1% of the GDP respectively) and the bulk of them directly come from the families, the share of public expenditure not exceeding one third for the whole sector and one fifth for Higher Education.

IV- 1 Government Spending

Table 4: Government spending on Education (in Billions of LBP)

	2004	2005	2006	2007
Wages General Directorate of Education	481.0	534.0	478.0	506.0
Benefits and pensions	130.0	132.1	137.0	140.8
Centre for Research and Educational Development	9.5	11.0	11.0	11.0
Contribution to NGOs (private Schools)	82.0	89.0	108.0	107.0
Construction under execution	21.0	40.0	29.0	28.0
School Rent and Maintenance	18.5	19.2	17.0	20.0
School Stationary	0.0	0.1	0.0	0.0
Education allowances in Private Sector	70.8	69.5	72.9	77.0
Total Government Spending on General Education	**812.9**	**894.8**	**852.9**	**890.1**
Spending on General Education % of primary Spending[12]	*8.0%*	*8.8%*	*6.8%*	*6.7%*
Spending on General Education % of total Spending	*2.5%*	*2.7%*	*2.5%*	*2.4%*
Spending on General Education % of GDP	*13.0%*	*13.3%*	*10.4%*	*10.4%*
Wages General Directorate of Technical Education	58.0	61.0	71.0	70.0
Construction under execution	5.3	10.0	7.3	7.0
Total Government Spending on Vocational Education	**63.3**	**71.0**	**78.3**	**77.0**
Spending on Vocational Education % primary Spending	*1.0%*	*1.1%*	*1.0%*	*0.9%*
Spending on Vocational Education % of total Spending	*0.6%*	*0.7%*	*0.6%*	*0.6%*
Spending on Vocational Education % of GDP	*0.2%*	*0.2%*	*0.2%*	*0.2%*
Wages General Directorate of Higher Education	1.0	0.0	1.0	1.0
Contribution in the Salaries of the Lebanese University	149.0	146.0	152.0	161.0
Construction under execution	6.0	11.4	8.3	8.0
Students University Scholarships	0.8	0.9	0.4	0.4
Education allowances in Private Secto	32.2	31.5	33.1	35.0
Total Government Spending on Higher Education	**188.9**	**189.9**	**194.8**	**205.3**
Spending on Higher Education % of primary Spending	*3.0%*	*2.8%*	*2.4%*	*2.4%*
Spending on Higher Education % of total Spending	*1.9%*	*1.9%*	*1.5%*	*1.5%*
Spending on Higher Education % of GDP	*0.6%*	*0.6%*	*0.6%*	*0.5%*
Total Government Spending on Education	**1065.1**	**1155.6**	**1125.9**	**1172.4**
Spending on Education % of primary Spending	*17.0%*	*17.1%*	*13.7%*	*13.7%*
Spending on Education % of total Spending	*10.5%*	*11.4%*	*9.0%*	*8.8%*
Spending on Education % of GDP	*3.2%*	*3.5%*	*3.3%*	*3.1%*
primary spending	6,256	6,739	8,197	8,560
total spending	10,177	10,149	12,578	13,292

[12] Primary spending includes all Government outlay except interest payments on the public debt.

GDP	32,815	32,955	33,824	37,754

Source: Economic Accounts of Lebanon, Presidency of the Council of Ministers, 2007 and author's calculations

Government spending is subdivided into direct spending, which are funds directly channelled to the Ministry of Education and Higher Learning and to the Lebanese University to finance the different levels of education . Indirect Spending includes the cost of the Centre for Educational Research and Development but mainly the Government' educational allowances & transfers allocated on one side to support the operations of "free" private schools operated by various organisations and, on the other side, to government employees at specific levels in the government for the tuition of their children in private establishments.

Government expenditure on Education at all levels , General, Vocational and Higher Education, was slightly above 3% of GDP for the years 2004 to 2007; in the 2008 World Bank MENA development report, the average public expenditure on education as a percentage of GDP for 18 Arab countries stood at 6.4 % for 2003(World Bank MENA Development Report, 'The Road not Travelled', Education Reform in the Middle East & Africa, 2007), this puts Lebanon well below this average, and well below the averages of 5.4 % and 5.3% for low middle income and OECD countries (UNESCP-UIS 2007 and Edstas database). However, government expenditure on education as a percentage of primary spending is close to 17% over the period (excluding 2006 and 2007 that were affected by the war destructions) and the percentage to total spending is around 11%, for 2007 & 2006 and 9% for 2005 as indicated in the table above.

IV- 1- a Direct Government Spending

Direct Government spending on education covers the cost of operating the different levels of public education institutions. It represents, on average, 85% of total government spending on education and about 2.5% of the GDP.

Of these sums, 70% goes to General Education, 10% to Vocational and 20% to the Lebanese University.

The bulk of the outlays are devoted to wages, salaries and compensations, about 90%. The rest goes to construction, maintenance and supplies, in all cycles of education, implying low levels of service (except for the new campus of the Lebanese University where maintenance is still covered by the contractor for one more year as part of the construction contract). Direct spending on Higher Education does not exceed 0.5% of the GDP, which is far below the average levels of OECD countries and lower middle income countries which both amount to 1% of GDP.

Table 5: Summary of Government spending on Education (in Billions of LBP)

	2004	2005	2006	2007
General education	650.5	725.3	661.0	695.0
Vocational education	63.3	71.0	78.3	77.0
Higher education	156.0	157.4	161.3	170.0
Direct spending	869.8	953.7	900.6	942.0
Indirect spending	195.3	201.9	225.4	230.4
Total spending	1065.1	1155.6	1125.9	1172.4
% direct spending	82%	83%	80%	80%
% indirect spending	18%	17%	20%	20%

IV- 1- b Accounts of the Lebanese University

The Lebanese University enjoys administrative and financial autonomy and hence the General Budget only mentions the global amount that is transferred to it. The detailed structure of revenues and expenditure of the Lebanese University is shown in the table:

Table 6: Budgetary accounts of the Lebanese University in 2007 (millions LBP)

Revenues	
Government Transfers	120,000
Student Contributions in Examinations	8,104
Student Contributions in Entrance Examinations	703
Training Fees	108
Sales from publications	10
Leasing out of play areas	613
Revenues from Public heath and dental care center	196
Reserves	55,882
Other revenues	111
Total Revenues	185,728
Expenditures	
Salaries and wages of which	98,044
Academic Staff	45,961
Administrative Staff	9,081
Part-time Instructors	14,537
Hourly Contractual Part-time Instructors	9,649
Hourly Contractual Part-time Trainers	4,567
Contractuals in charge of laboratories	1,162
Part-time Contractual Athletic Instructors	0
Hourly Contractual Athletic Instructors	221
Contractual Staff for the Computer Center	23
Contractual Technical team	224,
Contractual Administrative Staff	368
Part-time researchers for the computer Center	229
Contractual Academics and Instructors	32
Contributions ,allowances rewards, fees ,of which	15,494
Research support	287
Administrative supplies	19,671
General Management expenses	808
Maintenance	1,042
Advertising and Public relations	229
Rewards and Allowances	2,273
Miscellaneous expenses	892
Debt	536
Lawsuits	5,225
Investment and Equipment	6,422
Appliances	5,378
Construction	1,044
Total Expenditure for 2007	150,636
Total Number of Students in 2006-2007	72,961
Number of Professors	4,577
Non academic personnel	1,712

Budgeted revenues largely exceed budgeted expenditure, but the significant figure is the latter since revenues comprise reserves that are only virtual and derive from the accumulation of unspent credits because of the formal financial independence of the LU. In practical terms, the UL expenditures are tightly controlled by the Ministry of Finance since budget transfers are practically the only source of financing. The contract for the construction of new campus in Hadath, south of Beirut, was managed by the CDR and does not appear in the UL accounts. It covered the maintenance of the premises for a period of five years and the UL has to face a significant increase in expenditure once this period is finished.

The UL expenditure is practically restricted to wages and common consumables and supplies. Research allowances do not exceed the equivalent of 180,000 USD.

IV- 1- c Indirect Government Spending

Indirect Government Spending is divided in three categories, Centre of Educational Research and Development, support to "Free Private Education" and Education Allowances.

The Centre for Educational Research and Development is a public institution with total financial and administrative independence, supervised by the Minister of Education and Higher Learning. It was established as per the decree number 2356, 10/12/1971.

Free private education is provided by private institutions (supposed to be non-profit) and its cost is covered by transfers from the General Budget. It represents 14% of the enrolment (126,000 pupils), as compared to 33% in public schools and 52% in Private schools. It is restricted to the primary cycle and its share is the highest in the peripheral areas of the country.

Around 75% of civil servants are paid by the government to enrol their children in private schools or universities that are considered of higher quality. These education allowances make up a large portion of government spending on education; included also in this spending is the amount of university scholarships the government provides to students.

Table 7: Indirect Government Spending (in Billions LBP)

	2004	2005	2006	2007
Centre for Research and Educational Development	9.5	11	11	11
Education allowances in Private Sector	103.8	101.9	106.4	112.4
Contribution to non-profitable organizations (private schools)	82	89	108	107
Total Indirect Spending	195.3	201.9	225.4	230.4
% of primary spending	3.1%	3.0%	2.7%	2.7%
% of GDP	0.6%	0.6%	0.7%	0.6%

IV- 1- d Capital Government Spending

The Lebanese Government's efforts to improve education, especially pertaining to the amount and number of investments it provided to this sector over the last decade have been considerable. Below is a table that describes the public investments made in the education sector between 1992 and 2004 (in million USD) (this information was provided by the Council of Development and Reconstruction)

Table 8: Government Capital Expenditure (in millions USD)

Type	Technical Assistance	Investment in Capital	Total
General Education			
Contracts covering the period(January 1992-December 2004)	10.7	145.5	156.2
Contracts of the year 2004	0.7	18.7	19.4
On-going contracts	0	84.9	84.9
Technical & Vocational Education			
Contracts covering the period(January 1992-December 2004)	7.4	85.7	93.1
Contracts of the year 2004	0	20.8	20.8
On-going contracts	0	51.3	51.3
Youth & Sports			
Contracts covering the period(January 1992-December 2004)	0	134	134
Contracts of the year 2004		5.9	5.9
On-going contracts		13.9	13.9
Culture and Higher Education			
Contracts covering the period(January 1992-December 2004)	1.7	267.2	268.9
Contracts of the year 2004	0	0.2	0.2
On-going contracts	0	72.1	72.1

Source: Council of Development and Reconstruction

Almost 98% of the amounts indicated above were attributed to physical investments, whereas the rest was allocated to technical support & maintenance .Contracts related to general education amounted to 156 million USD between the above disclosed periods.

It is important to mention that the Lebanese University benefited from significant investments, the most important being the construction of the New Campus in Hadath, South-East of Beirut, for an amount of 320 millions USD.

The contracts in with the CDR include primarily the construction project of a Lebanese University campus in North Lebanon[13], estimated at around USD138 million divided into three phases, according to the available finances.

IV- 2 Household spending on education

Due to the strong presence and spread of private education, household spending on education in Lebanon far exceeds that of Government spending on all levels of education. Based on the Household Survey data of 2004, we were able to derive household spending on different types of education as follows:

The 1997 and 2004 household surveys are available to evaluate private spending on education: .

The 2004 survey gives the following results:

Table 9: Households' expenditure on education (based on 2004 survey)

Annual income category of household in thousands LBP	< 3600	3600-5999	6000-7799	7800-9599	9600-11999	12000-14399	14400-19199	19200-28799	>28800	**Total**
Expenditure on Education	**375.8**	**493.4**	**809.6**	**1,073.9**	**1,329.8**	**1,724.8**	**2,321.8**	**2,690.2**	**4,091.5**	**1,478.3**
KG and Primary	177.5	278.9	404.2	487.2	640.0	866.5	884.5	655.6	955.3	563.2
Secondary	125.9	153.4	247.7	319.0	404.1	543.6	750.1	847.7	1,063.5	446.6
Post Secondary	70.8	59.1	152.6	262.8	281.4	310.1	669.9	1,167.4	2,017.8	458.5
Tuitions Total	374.2	491.4	804.5	1,068.9	1,325.5	1,720.2	2,304.4	2,670.7	4,036.6	1,468.2
Special Programs	1.6	2.0	5.1	4.9	4.4	4.5	17.4	19.5	54.9	10.1
Total expenditure	**9,150.3**	**10,955.8**	**13,011.1**	**16,161.0**	**17,635.1**	**20,979.8**	**23,986.5**	**30,965.9**	**45,348.3**	**19,210.1**

This survey unfortunately does not cover the whole spectrum of expenditure on education. However, total household expenditure is not in line with the prevailing estimations of domestic consumption as per the National Accounts. One has therefore to go back to the 1997 survey that was used as a base for the National Accounts and that included, besides fees and tuitions, expenditure on books and stationery, other education expenditure and costs of studying abroad. The 1997 figures were adjusted to 2004 by applying the total CPI index for total expenditure and the education CPI for education expenditure, leading to the following table:

Table 10: Households' expenditure on Education (based on 1997 survey)

Annual income category of household in thousand LBP	< 6900	6900-11100	11100-16600	16600-22200	22200-33300	33300-44400	> 44400	Total
Expenditure on Education	**814**	**2,040**	**3,340**	**4,202**	**5,376**	**8,105**	**12,051**	**4,895**
Fees and Tuitions	632	1,472	2,390	2,954	3,922	5,793	9,320	3,609
expenditure on books and stationery	35	128	334	300	266	477	295	263
other education expenditure	141	422	578	797	1,066	1,617	1,833	874
costs of studying abroad	7	17	37	151	121	217	604	149
Total expenditure	**10,013**	**16,580**	**23,903**	**28,511**	**36,774**	**48,483**	**82,384**	**33,893**

The two series remain of course inconsistent at a global level but, within categories of comparable levels of expenditure, the structure of expenditure on the relevant items remains acceptable. This

[13] the campus will include 10 departments and will accommodate around 15,000 students, along with an athletic complex.

allows for the integration of the items disregarded in the 2004 survey, leading to the following final results:

Table 11: Households' expenditure on Education, a synthesis

	1997 survey		2004 survey		Result for 2004		
	% total expenditure	*Elasticity to expenditure*	% total expenditure	*Elasticity to expenditure*	% total expenditure	%GDP	Billions LBP
Education	11.2%	1.27	7.7%	1.53	10.6%	9.1%	2941
Fees and tuitions	8.2%	1.27	7.6%	1.53	10.6%	9.0%	2927
KG and Primary Levels			2.9%	0.99	3.9%	3.4%	1086
Secondary Level			2.3%	1.44	3.1%	2.7%	862
Post Secondary Education			2.4%	2.30	3.5%	3.0%	979
Other programs			0.1%	2.15	0.1%	0.0%	15
books and stationery	0.6%	1.01					
other education expenditure	2.0%	1.23					
costs of studying abroad	0.3%	2.20					

Hence, private expenditure on education exceeds 10% of the households' total expenditure and 9% of the GDP, out of which 3.5% of the total expenditure and 3% of the GDP are devoted to higher education. These levels are exceptional by any standard.

IV- 3 Complementary financing

On top of government and household expenditure, education benefits from external or private grants as a third source of funding that is not negligible, especially at the level of higher education.

Some universities that follow the American model (mainly AUB – American University of Beirut- and the Greek Orthodox Balamand University) benefit from endowments and gifts that finance buildings, equipment, programs and scholarships. For the AUB, whose accounts are accessible, the amount in 2007 reached 21.5 millions USD.

Foreign Governments give support to some universities and schools through the provision of professors or teaching material or the support of joint programs. This is particularly the case with the French. Amounts are not regularly published.

Many charitable and/or political foundations and some foreign governments grant scholarships to students (such as Rafic Hariri or Issam Fares or Walid Bin Talal foundations).

Many Lebanese students study abroad, especially in countries where higher education is free. The survey carried by the USJ (Jesuits' Université Saint Joseph) in 2002[14] estimates their number at 12500, 37% to Western Europe, 30% to North America and 20% to Eastern Europe.

Finally, many schools and universities belong to religious communities that provide not only the land but also the labour cost of the religious personnel who work as teachers or administrative (priests and nuns).

It is not easy to assess the value of this complementary financing but an estimate of 120 billions LBP seems reasonable.

IV- 4 Total spending on general and higher education

It is possible to put together the three sources of financing of education (calculated for the academic year 2004-2005 because of the availability and representativeness of data):

[14] Choghig Kasparian: « L'entrée des Jeunes Libanais dans la vie active et l'émigration », Presses de L'Université Saint-Joseph, 2003

About 4.200 billions LBP (2.8 billions USD) are devoted annually to formal education in Lebanon. Two thirds go for general education and one third to higher education. For analytical purposes, vocational education has been split among general and higher. Public expenditure covers hardly one quarter of the total; it reaches 27% for general education but only 16% for higher education. Complementary assistance accounts for 9% of the financing of higher education.

This means that as much as 13.1% of the GDP is devoted to education. Controlling for the age structure and the levels of enrollment, the average yearly cost per student for education in total is 3.600 millions LBP (2,400 USD or 45% of the GDP per capita), it reaches 6,800 millions LBP (4,500 USD or 84% of the GDP per capita) in Higher education and 3,000 millions LBP (2,000 USD or 37% of the GDP per capita) in General Education.

Table 12: Overall expenditure on Education by source

(billions LBP)	General education	Higher education	Total
private expenditure	1,957	985	2,941
public expenditure	937	218	1,156
complementary financing	30	120	150
total expenditure	2,924	1,323	4,247
% GDP			
private expenditure	*6.0%*	*3.0%*	*9.1%*
public expenditure	*2.9%*	*0.7%*	*3.6%*
complementary financing	*0.1%*	*0.4%*	*0.5%*
total expenditure	*9.0%*	*4.1%*	*13.1%*
Number students	**981,378**	**194,298**	**1,175,676**
expenditure per student			
private expenditure	1,994	5,068	2,502
public expenditure	955	1,123	983
complementary financing	31	618	128
total expenditure	2,980	6,809	3,612
% GDP per capita			
private expenditure	*0.25*	*0.63*	*0.31*
public expenditure	*0.12*	*0.14*	*0.12*
complementary financing	*0.00*	*0.08*	*0.02*
total expenditure	*0.37*	*0.84*	*0.45*

In order to show the exceptionality of the Lebanese case, it is worth comparing the global picture of education financing in Lebanon with that of various other countries with different age structure and levels of economic development:

Table 13: Education expenditure as share of GDP in selected countries in 2000

Country	Public Expenditures	Private Expenditures	Total Expenditures
China	2.2%	-	-
Japan	3.6%	1.2%	4.8%
Korea	3.8%	2.8%	6.6%
Mexico	4.2%	0.8%	5.0%
Ivory Cost	4.6%	-	-
United States	4.9%	2.2%	7.1%
Hungary	4.9%	0.6%	5.5%
France	5.8%	0.4%	6.2%
Lebanon	4.1%	9.1%	13.1%

Source: Public expenditure: World Bank,, private expenditure: OECD; figures for China and Mexico for 1998

With such high levels of expenditure, the question becomes: how efficient is the response?

V - Efficiency of Higher Education Financing

It is not easy to measure the efficiency of an educational system because of the intrinsic complexity of its process in terms of means and outcomes and because of the multiple interferences of exogenous factors (economic, sociologic, political, psychological…) with its own performance. This is why the assessment relies on comparisons and benchmarks and usually distinguishes internal (looking at the means) and external (looking at the outcomes) efficiency.

We shall first present the general observed trends at the levels of demand, supply and prices of higher education. Internal efficiency of higher education is then roughly appreciated through a number of partial comparisons for which some data was available and a proposed classification of universities into categories that present institutional and functional similarities. External efficiency of higher education is then studied more thoroughly, first through the calculation of returns on higher education and second through the assessment of some salient features of the labour market.

Higher education in Lebanon has become completely driven by emigration. This explains the steep increase in the supply at the levels of quantities and prices. Domestic returns to higher education are hence very low. The flexibility of the supply is remarkable and several categories of universities have appeared to cover a very broad spectrum of demand and support various learning, work and migration strategies.

V- 1 General trends: demand, supply and prices

The number of students in higher education has steadily increased over the past years (with an almost stagnant population). In the same time the number of students in the VTE was also rapidly increasing also: since 1992, higher education students have doubled (5.1% yearly) and VTE students increased five times (11% yearly).

In the same period, public expenditures on education increased by 9 percent on average each year, and rose as a share of GDP from 2.1 percent in 1994 to an average of 2.6 percent since 1998 and to 3% in 2005. The budget expenses attributed to LU grew from LBP 52 billion for 1993 to LBP173 billion for 2005.

More globally, during the past three decades, the cost of the educational system in Lebanon rose from approximately 8.6% of GDP in 1973, to 11.4% in 2001 and to 13% in 2005.

Based on the CPI calculated by the “Consultation and Research Institute”, prices of education services in the household budget increased, on average, between 1991 and 2007, at a yearly rate of 13.9% while the overall CPI increased at an average yearly rate of 7.7%. The increase was much steeper until 1999 (28% a year) than after (see figure 3)

All these indicators show clearly the intensity of demand on education in general and on higher education more specifically. The massive increase in the supply due to the opening of many new universities at the end of the nineties did probably ease the pressure on prices.

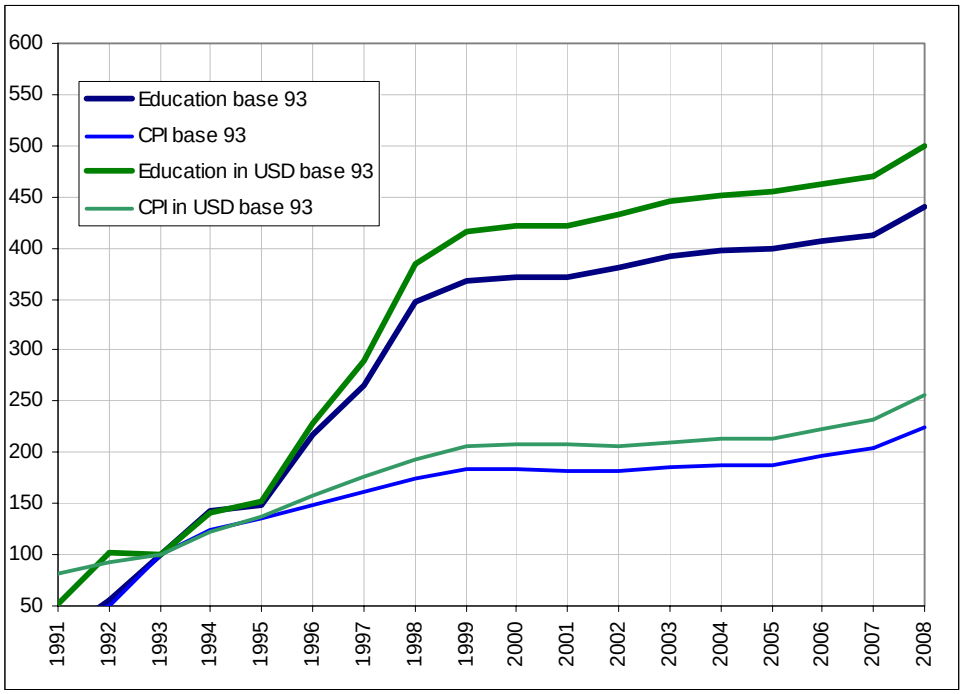


Figure 3: Comparative evolution of the general CPI and the index of the cost of education (1991-2008)

V- 2 Internal efficiency

In broad terms, internal efficiency of education is understood as the efficiency in the use of the available resources for a given outcome, while external efficiency can be understood as the efficiency in producing the maximum outcomes in terms of quantity and quality, out of a given set of resources.

It is unfortunate that financial information about the universities is not available (even to the public authorities because of the peculiarities of the Lebanese system). Apart from the Lebanese University, the only accessible accounts are those of the AUB, at an aggregated level. This situation prevents direct analysis of the question of internal efficiency in a systematic way, discipline by discipline. Some general remarks can nevertheless be made.

The general picture is extremely contrasted. The operational costs per student cover an exceptionally wide range: AUB costs are more than tenfold those of the LU. The supply response of the Lebanese higher education system has been extremely flexible and is revealed in the variety of categories of universities that emerged over years.

V- 2- a Transfers and unit costs

The duality of the Lebanese education system does not prevent the public sector from subsidizing the private. It is therefore necessary, with the aim of assessing efficiency of each of the subsystems, to take these transfers into account and to reallocate expenditure, already described by sources, according to its targets.

Table 14: Overall expenditure on Education by channels of expenditure (in billions of LBP)

	General education	Higher education	Total
Expenditure by source			
private expenditure	1,957	985	2,941
public expenditure	937	218	1,156
foreign expenditure	30	120	150
Total expenditure	2,924	1,323	4,247
Transfers from public to private	158	32	0
Expenditure by target			

in private education	2,145	1,136	3,281
in public education	779	187	966
Number students	981,378	194,298	1,175,676
in private education	630,178	104,122	734,300
in public education	351,200	90,176	441,376
Expenditure per student (thousands LBP)			
in private education	3,404	10,913	4,469
in public education	2,218	2,071	2,188

It appears that the cost per student in the public education system is almost half that in the private system. In general education, the cost in the private exceeds that in the public by almost 50% while the difference in higher education is as high as five times. Surprisingly, the cost per student in the Lebanese University is even lower than that of a student in the general public education.

This striking result holds in spite of the high level of political overstaffing in general education. It is somehow supported by the apparent swell in the number of students of the LU due to not attending first year registered students in specific faculties. But it nevertheless indicates a good performance of the Lebanese University, at least in relative terms, and that is recognized by the pressure of students to join it.

V- 2- b The LU versus the AUB cases

Total expenditure for LU for 2007 amounted to USD 100,424,000 whereas the total expenditure for AUB amounted to USD 108, 130,000, the university costs per student enrolled in that particular year were 1,380 USD /student for LU and 15,500USD/student for AUB, which is almost 11 times greater than LU. In 2007, there were 72,900 students enrolled in LU as opposed to 6,057 students enrolled in AUB.

The tightness of the LU budget translates into an overwhelming share of expenditure going to wages and salaries, the least compressible item: LU capital expenses make up 5 % of the total expenses, whereas the operating costs make up 90%, these operating costs includes 41% in wages & salaries for academic staff and 41% for administrative staff. In 2007, LU allocated around 5% of its expenses to capital expenditures which make up for maintenance and construction. In comparison, at AUB Salaries, wages and benefits make up 62% of the overall university expenses whereas maintenance and updating of infrastructure makes up 8 %. AUB has implemented an average increase of 5 % in wages and salaries over the last few years, which falls in line with the 5% average yearly increase in tuitions.

Another common indicator of efficiency is comparing student/teacher ratios; UL has a 1:16 ratio, AUB 1: 8 and Saint Joseph University (USJ) has 1:7 ratios. These ratios are relatively low compared to those of Egypt which are 1:32 and the MENA which is 1:32. This indicates these institutions are meeting the minimum requirements of ensuring that the student body is being placed in a suitable learning environment.

Table 15: Comparaison of Revenues of AUB and LU in 2007 (in thousands of USD)

Revenues 2007 (10^3 USD)	American University of Beirut	Lebanese University
Student tuition/fees	82,708	5,871
Scholarships	7,690	n/a
Grants	13,271	n/a
Endowment	7,880	n/a
Government transfers	n/a	80,000
investment	7	415
Other revenues	16,169	37,532
Total	127,725	123,818

In comparing the revenues of AUB to UL, we excluded the revenues obtained from the "AUB Medical Centre" which amount to 209,549,000 USD. Since the American University of Beirut is a Not for Profit institution, all incurred expenses are equal to accumulated revenue.

V- 2- c Comparison through categories of universities

In order to analyse the available data on universities (number of students, graduates, professors and administrative employees) and considering their large number (38 operating) and the very specific conditions of their establishment, it is instructive to regroup the universities under 7 categories: the Lebanese University, the "Classical Foreign" universities, the Beirut Arab University (BAU), the universities created and managed by local religious communities (Muslim and Christian) which cover a vast array of disciplines, the private commercial universities, the universities strictly or mainly devoted to religious studies and the technical university institutes.

The table below presents a snapshot of 2006-2007 university data pertaining to students, academic and non academic staff and to some comparative ratios:

Table 16: Comparison of the different categories of universities

2007	Lebanese University	Classical foreign	BAU	Local Community	Commercial	Religious	Technical	Total
Number	1	4	1	9	12	7	4	38
Average size (students)	74,176	5,426	17,661	2,760	1,900	798	99	4,399
Total students	74,176	21,703	17,661	24,836	22,805	5,589	395	167,165
Lebanese students	70,202	19,292	7,977	22,872	21,015	1,544	389	143,291
foreign students	3,974	2,411	9,684	1,964	1,790	4,045	6	23,874
male students	24,309	9,663	11,143	14,034	13,422	3,159	159	75,889
female students	49,867	12,040	6,518	10,802	9,383	2,430	236	91,276
Graduates	8,886	5,220	2,989	4,060	4,906	454	106	26,621
male graduates	2,704	2,352	1,784	2,091	2,877	238	39	12,085
female graduates	6,182	2,868	1,205	1,969	2,029	216	67	14,536
management	1,840	1,259	512	488	851	86	28	5,064
professors	5,256	2,786	534	3,804	1,880	192	156	14,608
student/management	40.3	17.2	34.5	50.9	26.8	65.0	14.1	33.0
student/professor	14.1	7.8	33.1	6.5	12.1	29.1	2.5	11.4
graduate/student	12%	24%	17%	16%	22%	8%	27%	16%
m graduate/student	11%	24%	16%	15%	21%	8%	25%	16%
f graduate/student	12%	24%	18%	18%	22%	9%	28%	16%
Total students	44%	13%	11%	15%	14%	3%	0%	100%
Lebanese students	49%	13%	6%	16%	15%	1%	0%	100%
foreign students	17%	10%	41%	8%	7%	17%	0%	100%
male students	32%	13%	15%	18%	18%	4%	0%	100%
female students	55%	13%	7%	12%	10%	3%	0%	100%
Graduates	33%	20%	11%	15%	18%	2%	0%	100%
male graduates	22%	19%	15%	17%	24%	2%	0%	100%
female graduates	43%	20%	8%	14%	14%	1%	0%	100%
management	36%	25%	10%	10%	17%	2%	1%	100%
professors	36%	19%	4%	26%	13%	1%	1%	100%
%foreign	5%	11%	55%	8%	8%	72%	2%	14%
% female students	67%	55%	37%	43%	41%	43%	60%	55%
% female grad	70%	55%	40%	48%	41%	48%	63%	55%

The different categories of universities show clearly differentiated patterns:

1. The Lebanese University (LU) alone absorbs around 44% of all university students; the percentage for Lebanese students is close to 50% and that for female students reaches 55%.

But its share of the graduates does not exceed 33%, reflecting the over-registration in the first year in some faculties of working people and this in spite of the rapid and recent increase in the share of new universities where many students did not yet reach graduation. This also shows a relatively strict selection among LU students. The ratio of graduates to students stands only at 12%. It is worth noting that the LU is by far, the most feminine university: 67% of the students and 70% of the graduates.

2. The "classical foreign" universities (AUB, USJ, LAU[15]…) group 13% of the students and deliver 20% of the graduates. The graduate/student ratio reaches 20% indicating a more severe selection at entrance than along the course but also a relatively stable size of the faculties. The ratio of students per professor is 7.8, almost half its value in the LU.

3. The share of the Beirut Arab University (BAU) is 11% of all the students but is main characteristic is that it groups alone 41% of the non-Lebanese students (largely Palestinians) and almost 50% if religious studies are put aside, as opposed to 6% of the Lebanese. The ratio of graduates to students is 17%, in a middle position between that of the LU and that of the "classical foreign" universities. But the ratio of students to professors is particularly high at 33. Note that the BAU is located in one single block with no branches and its size (17,600 students) is almost three times that of the average "foreign classical" that spread over large campuses; this indicates that a large proportion of its students are absentees.

4. The "local communities" universities are more recent but nevertheless already regroup 15% of the students. It is obvious that they try to follow the model of the "foreign classical": they build campuses, have a unit size that tends to be comparable (half on average, considering that many of them are still new) and they maintain an equivalent student/teacher ratio. The relatively low ratio of graduates to students relates to their rapid and recent expansion.

5. The "commercial" universities tend to compete with the Lebanese University and present similar features, the student/professor ratio stands at 12.1. The graduate/student ratio looks closer to that of "classical foreign" universities but this is largely due to two factors: 1) not being free, there are no absentee students in first years like in the LU and 2) many specializations focus on short cycles..

6. "Religious" universities teach theology and religious sciences and are not comparable to the other types. It is worth noting that they group quite a large number of students (comparable to AUB or USJ) representing 3% of the total but 72% of them are non-Lebanese.

7. Finally "technical" university institutes remain marginal and very specific.

In order to better assess the logic of the supply side of higher education, a comparison of the present situation with that prevailing in 2000 is necessary because the late nineties witnessed a major shift in the higher education landscape with the opening of many new universities.

Table 17: Evolution of the different categories of universities between 2000 and 2006

2000	Lebanese University	Classical foreign	BAU	Local Community	Commercial	Religious	Technical	Total
Total students	71050	17738	8866	13586	4542	3332	190	119304
Lebanese students	65564	15888	4928	12671	4193	1836	181	105261
foreign students	5486	1850	3938	915	349	1496	9	14043
male students	27568	8367	5599	8172	3527	2288	65	55586
female students	43482	9371	3267	5414	1015	1044	125	63718
Graduates	6265	4296	2039	1874	81	165	22	14742
male graduates	2358	1929	1250	1010	49	108	4	6708
female graduates	3907	2367	789	864	32	57	18	8034
Ratios 2007/2000								
Total students	104%	122%	199%	183%	502%	168%	208%	140%

[15] Lebanese American University was previously known as BUC (Beirut University College) and before as BCW (Beirut College for Women).

Lebanese students	107%	121%	162%	181%	501%	84%	215%	136%
foreign students	72%	130%	246%	215%	513%	270%	67%	170%
male students	88%	115%	199%	172%	381%	138%	245%	137%
female students	115%	128%	200%	200%	924%	233%	189%	143%
Graduates	142%	122%	147%	217%	6057%	275%	482%	181%
male graduates	115%	122%	143%	207%	5871%	220%	975%	180%
female graduates	158%	121%	153%	228%	6341%	379%	372%	181%
share students 07	44%	13%	11%	15%	14%	3%	0%	100%
share students 00	60%	15%	7%	11%	4%	3%	0%	100%
share graduates 07	33%	20%	11%	15%	18%	2%	0%	100%
share graduates 00	42%	29%	14%	13%	1%	1%	0%	100%
graduate/student 07	12%	24%	17%	16%	22%	8%	27%	16%
graduate/student 00	9%	24%	23%	14%	2%	5%	12%	12%
Distribution of differences								
Total students	7%	8%	18%	24%	38%	5%	0%	100%
Lebanese students	12%	9%	8%	27%	44%	-1%	1%	100%
foreign students	-15%	6%	58%	11%	15%	26%	0%	100%
male students	-16%	6%	27%	29%	49%	4%	0%	100%
female students	23%	10%	12%	20%	30%	5%	0%	100%
Graduates	22%	8%	8%	18%	41%	2%	1%	100%
male graduates	6%	8%	10%	20%	53%	2%	1%	100%
female graduates	35%	8%	6%	17%	31%	2%	1%	100%

Over the period, taken globally, the number of students increased by 40% (slightly more for female: 43%, and significantly more for non-Lebanese: 70%) reflecting the steady increase of demand on higher education. In the meanwhile, the number of graduates increased by 80% and the shares of the different categories of universities were substantially modified: that of the LU dropped from 60% to 44% and that of the “classical foreign” dropped from 15% to 13% while that of the BAU rose from 7% to 11%, that of the “community” universities rose from 11% to 15% and that of the “commercial” universities rose from 4% to 14%. In terms of shares, hence the shift affected 18%.

This movement is quite revealing of the dynamics of supply of higher education.

The “classical foreign” universities went on their way with a parallel increase in students and graduates (+22%) more for the girls (+28%) tan for the boys students (+15%). At the other end the “religious universities” students increased by 68%, mainly because of the non-Lebanese students.

The most prominent change affected the “commercial universities” whose number of students increased 5 times and whose number of graduates increased 60 times (reminding that they were new at that time). They absorbed alone 38% of the total increase in the number of students.

Next is the category of “community” universities: the number of their students increased by 83% and their graduates doubled (revealing older institutions). They absorbed 24% of the total increase in the number of students.

The same trend applies to the BAU: 99% more students and 47% more graduates.

The negative side of the picture appears in the LU where the number of students remained stable (+4%) and actually decreased for males (-12%) while the number of graduates increased by 42%, revealing an “aging” of the students population.

Taken together, these developments reveal:

- A steady increase in the demand for higher education;
- Separate and stable markets for the “classical foreign” and the “religious” universities;

- A strong competition against the LU mainly from the "commercial" and the "community" universities;
- An increased feminisation of the LU.

Considering the difference in cost between the LU and the private universities and leaving aside the "classical foreign" who enjoy a level of prestige and a social environment that can justify their autonomy on the market and also the "religious universities" who act on different grounds, the question of understanding the reasons behind the rise of the "community" and "commercial" universities remains unanswered. The strategies adopted follow some explicit lines:

Several faculties in the LU necessitate entry competitive exams, they include the most desired specialities: engineering, business administration[16], computer and media, etc… this has pushed many "commercial" universities to target the failed candidates by focusing on these same specialities or on adjacent ones; the same applies to many higher VTE institutes. Some of these universities have also taken profit of the uneven distribution of the "desired" faculties of the LU over the territory and located outside the Central region of the country (mainly in the North and the Bekaa).

The "community" universities followed a similar path but wanted in the same time to assess a "prestigious" image to compete also with the "foreign classical" universities, adopting a less opportunistic approach.

The female students, being –only relatively- less oriented towards professional specialities have therefore seen their presence in the LU increasing.

V- 2- d Humanities and Sciences

References have become frequent in the literature to the distribution of university students over humanities and sciences specializations, suggesting more or less explicitly a positive appreciation of scientific courses.

Table 18: Distribution of university students by ISCED categories of specialization (year 2007-2008)

ISCED categories	Males	Females	Private Universities	Lebanese University	Total
Agriculture	0.4%	0.2%	0.3%	0.3%	0.3%
Education	0.6%	3.4%	2.1%	2.1%	2.1%
Engineering, manufacturing and construction	14.5%	5.1%	11.4%	6.8%	9.4%
Health and welfare	6.5%	9.8%	11.1%	4.7%	8.3%
Humanities and Arts	13.8%	24.1%	13.3%	27.1%	19.4%
Science	19.4%	15.2%	12.9%	22.5%	17.1%
Services	1.9%	1.4%	2.4%	0.6%	1.6%
Social sciences, business and law	43.0%	40.8%	46.5%	35.9%	41.8%
Total	75881	91384	92989	74276	167265

Source: Centre for Research and Educational Development

The distribution of university students for the year 2007-2008 shows that "Humanities and Arts" are the field of study of less than one fifth of the students. Considering private universities alone or male students alone, the share of "Humanities and Arts" falls down to less than one seventh.

The most attractive field of studies is, by far, "Social sciences, business and law". It groups more than 40% of the students. Science and engineering, together group 26% of them, while health groups 8%.

This pattern reveals a close adaptation of the outcomes of Lebanese universities to the economic structure of the country and to the labour market. It also shows that a significant number of female students, almost 20% of the total university students, even though (or rather because) they have

[16] In the 4 branches of the faculty of Business Administration, there are about 10,000 competitors for about 1000 registered students

little hopes for finding a job, register, mostly at the Lebanese University, mainly in Humanities and, to a lesser extent, in Social Sciences and Science.

More generally, the usual grievances against the « soft specialties » reproaching them as useless for growth and being diversions of the education system and its resources are largely unjustified. Actually most of the growth is taking place in services where these soft specialties are requested. On the other hand, these courses are far less demanding and costly than scientific and technical courses both for the students and the institutions.

"Though the average is between 18 and 20 students/ teacher, there is a large variability of the average number of students per teacher among the different sections and departments of LU. Thus, the average cost per student in 1999/2000 varies from a minimum of LBP 1.356 million in the Department of Law and Political Science (all sections included), to a maximum of LBP 11.53 million in the department of dentistry. The average cost of all sections and departments in LU per student is around LBP 2.6 million in 2003, and LBP 2.4 million in 1999/2000. The average cost within the departments of sciences along with the Department of Economic Sciences and Administrative Management is quite close to this total average, while it increases in the Department of Engineering, Agriculture, and Dentistry, where the costs in private universities are less significant"[17].

V- 3 External efficiency: returns on Higher Education

In spite of the apparent simplicity of the definition, it is often difficult to assess in practice returns to education. In the Lebanese case, data on income and wages are scarce and of limited reliability: the most recent data on budget expenditure, in 2005, supposedly more reliable than declarations of income in surveys, lead to a level of private domestic consumption close to 16.000 billions LBP, while the official National Accounts for the same year put it at 28.000 billions!

The difficulties related to the quality of data are compounded with the very wide range of the costs of higher education on one hand and, on the other hand, with the very wide range of expected income when both domestic labour market and emigration are taken into account bearing in mind the weight of emigration in the decisions of investment in education.

But when looking carefully, even the definition is not so simple: "In common usage, the coefficient on schooling in a regression of log earnings on years of schooling is often called a rate of return. In fact, it is a price of schooling from a hedonic market wage equation. It is a growth rate of market earnings with years of schooling and not an internal rate of return measure"18.

We have therefore adopted a progressive approach to the problem of evaluating the returns to higher education in Lebanon

V- 3- a Indirect assessment through the regression of wages to schooling

The official 1997 data give estimates of wages along categories of professions that can be related to an average level of education and therefore to a given number of years of schooling. Regression gives a rate of increase of wages by year of education of 8.6% (that is a rough indication of the private rate of return of schooling for students in the public sector who do not incur fees). If the average public cost of education is accounted for and deducted from the wages, the rate of increase (that roughly captures the social return of schooling for students in the public sector) falls to about 3.0%, while, if costs of schooling in the private sector are taken into account, the return becomes negative.

[17] report prepared by CRI for the CDR, under the supervision of the author: "Development Program 2005-2020- Education Sector", 2006

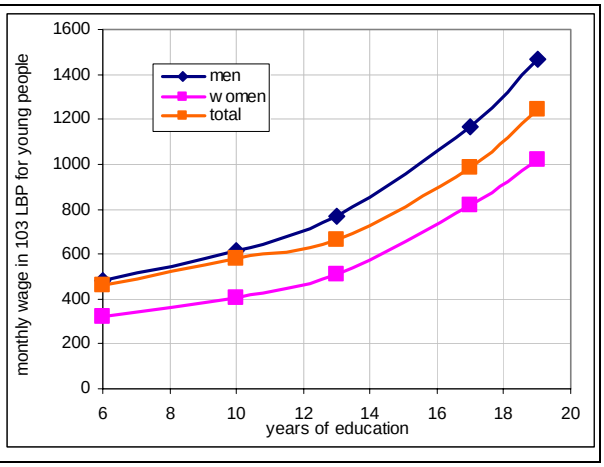
[18] "Earnings Functions, Rates of Return and Treatment Effects: The Mincer Equation and Beyond" James J. Heckman, Lance J. Lochner and Petra E. Todd, NBER Working Paper No. 11544, August 2005

The study of the USJ on the Youth in Lebanon in 2002 only covers people under 35 years old but provides direct data about wages in relation with the levels of education (and implicitly the years of schooling). It therefore allows doing the same calculations. It shows that the average monthly wage in 2002 was 640,000 LBP.

Please explain the usefulness of this data for the analysis here.

Table 19: Evolution of young people wages by level of education

Monthly wage in thousands LBP	men	women	total
without any diploma	482	321	462
intermediate general	617	407	577
intermediate technical	623	470	580
baccalaureate general	769	507	667
baccalaureate technical	729	560	662
university	1170	814	984
masters	1469	1021	1247
university technical	1040	701	907
Total	**661**	**584**	**640**



The results are quite similar: the rate of increase of wages by year of education is 7.6%; the social return in the public sector stands at 3.6% and in the rate of return in the private sector is negative.

V- 3- b Comparison of data with administrative sources

Since declaration of income is often biased, it was useful to confront the results of surveys with the administrative database of the National Security that might also be biased but to a much lower extent since the benefits are linked to the declared wages. Unfortunately the database does not include any information about the levels of education; it includes age and sectors. It covers 270,000 wage earners whose average monthly salary stands at 895,000 LBP.

For some sectors, data was available also for age. The average wages are shown in the table, for these sectors, for all workers on one hand and for the youth below 35, on the other hand.

Table 20: Average wages by sector

sector	Average monthly wage LBP All workers	Average monthly wage LBP below 35 years	average age	Number of workers
Insurance	1,621,616	1,127,890	38.8	1,619
Trade	777,434	655,742	36.6	32,143
Public services	841,828	773,538	47.6	3,081
Banks	2,202,431	1,395,404	40.0	11,414
Transports	1,025,761	678,120	41.7	9,492
Printing	875,364	607,311	39.1	3,813
total	1,162,220	792,407	38.8	61,562

Apart from the banking and insurance sectors who enjoy well known privileges, the results are in line with those of the surveys. Under-declaration could be in the order 15% and that should slightly improve the estimated returns.

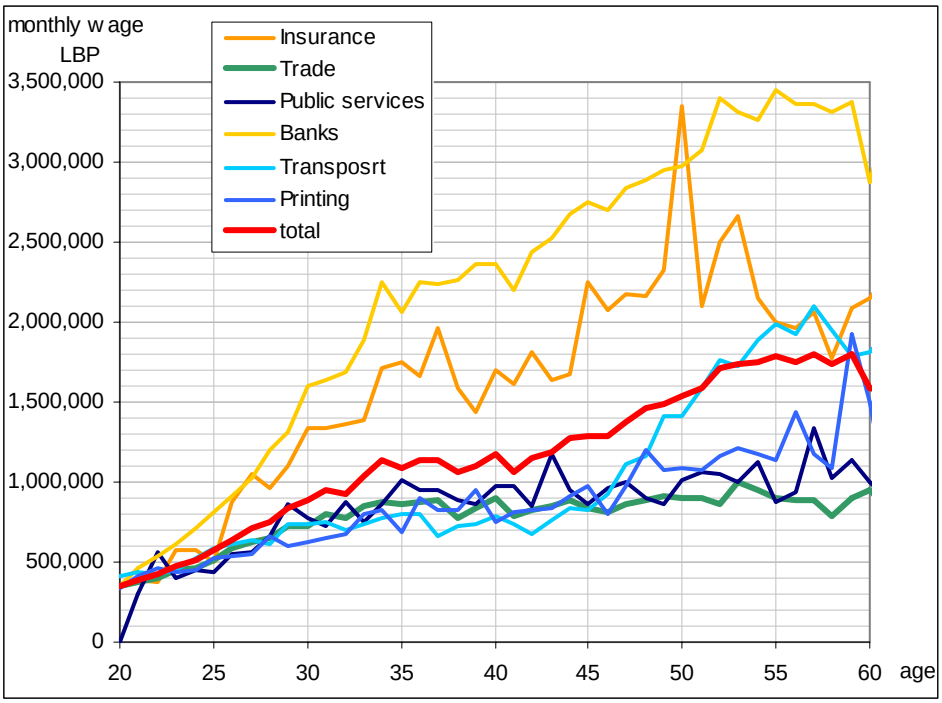


Figure 4: Wages by age in selected sectors (source : administrative data)

V- 3- c Regression based on data specially extracted from the 2004 and 2007 Living Conditions surveys

On the basis of a special request, the Central Administration of Statistics kindly provided tables extracted from the 2004 and 2007 household surveys showing the average wages as a function of age, sex and level of education.

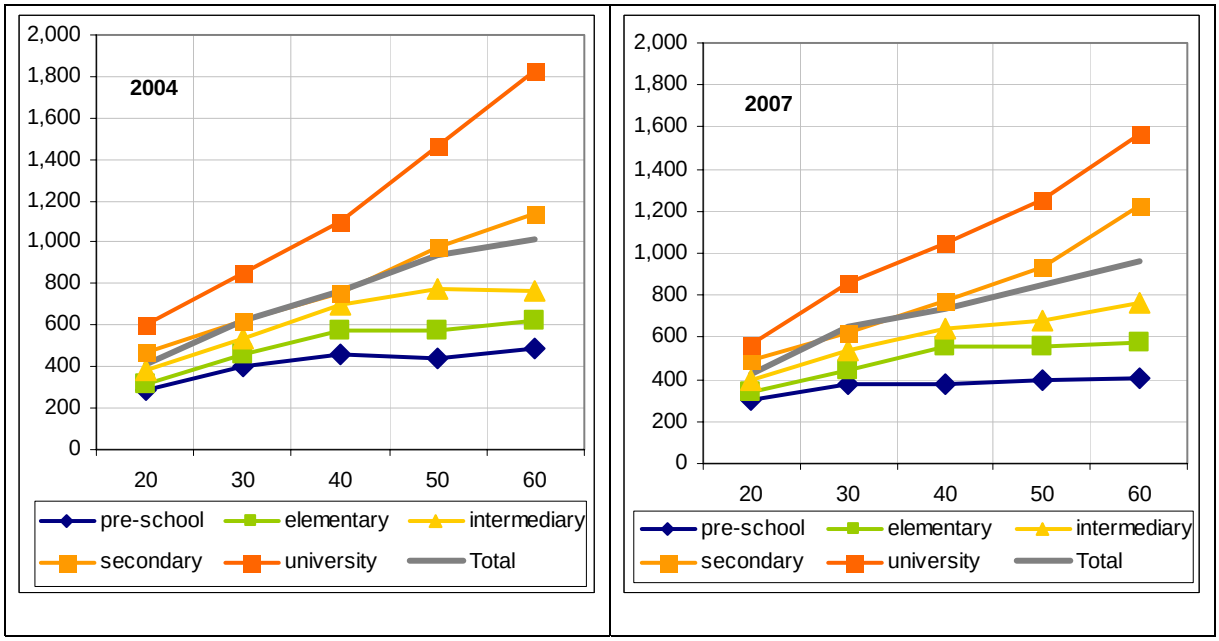


Figure 5: Wages by age and levels of education in 2004 and 2007 (source: CAS surveys)

After adding 15% to the declared wages, monthly wages (w) were regressed against age (y) and number of years of schooling (s) leading to the following function, with an excellent fit:

Ln(w) =	5.21	+ 1.9%*y	+ 6.4%*s
t	(0.09)	(0.2%)	(0.5%)
	R2=0.93		

The rate of increase of wages per year of schooling is therefore 6.4%, slightly less than the previous estimates.

In order to properly estimate the IRR for one more year of higher education still needed to define the cost of education. We considered the annual tuition to be a parameter and calculated the rate of return that equates the NPV of studying for 15 years (13 years of schooling corresponds to the end of secondary general education) and that of studying 16 years, leaving aside unemployment (active life begins after 5+the number of years of schooling and lasts until the age of 64, ie at the age of 21 and 22 respectively) and pensions after retirement.

The marginal IRR of one more year of education was plotted against the ratio of the annual tuition fee to the monthly average wage because these two parameters are the most decisive and account for the type of education (in the private or in the public sector; for the private or for the social return) and for the basic choice of working in Lebanon or abroad (with the wage differential implied).

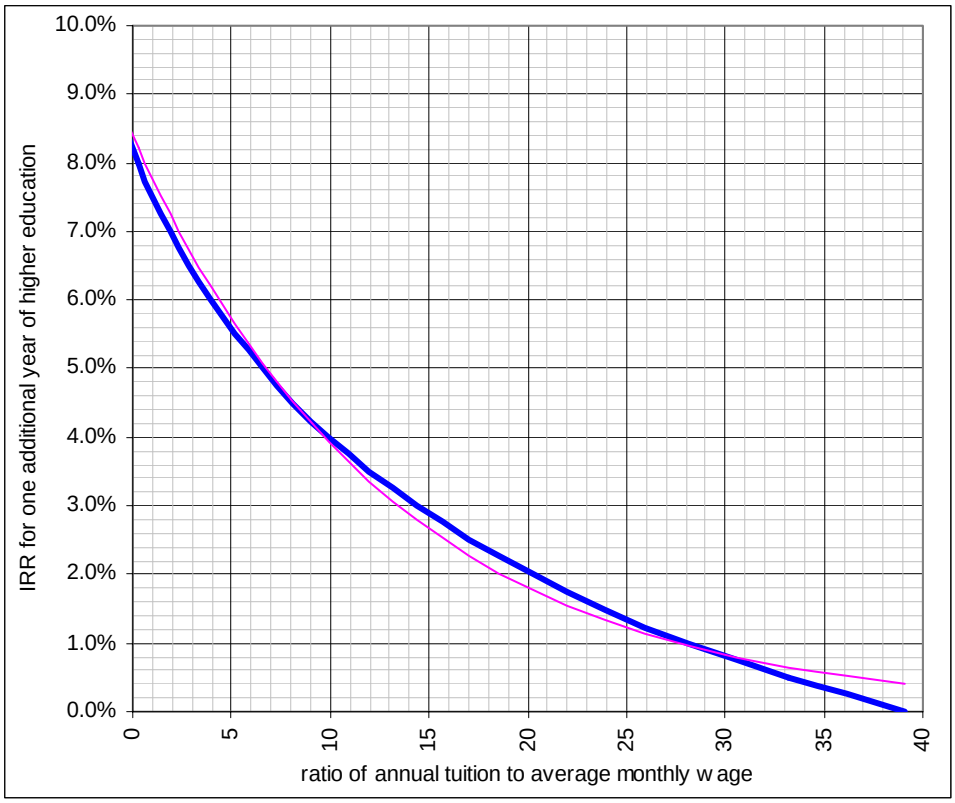


Figure 6: IRR for one additional year of higher education as a function of the ratio of annual tuition to the average monthly wage

The marginal IRR (I) was then regressed against the ratio k= Annual tuition / average monthly salary, giving the following equation:

Ln(I) =	- 2.48	- 7.69% *k
t	(0.03)	(0.22%)
	R2=0.99	

It becomes possible, on this basis, to evaluate the rationale of the main strategic choices in terms of education and emigration. Assuming that work remuneration abroad (accounting for unemployment at home and PPP) is 4 times higher than in Lebanon, that studying in a private university gives 10% advantage while studying in the Lebanese University (LU) gives a -10% handicap on wages and that remittances represent 15% of the earnings of the migrant, we get the following results:

Table 21: Marginal IRR for higher education under different education and labour strategies

sector of study	place of work	yearly tuition (10^3 LBP)	average wage (10^3 LBP)		adjusted wage (10^3 LBP)	K	Marginal IRR
individual return							
LU	Lebanon	0	796	0.90	717	0.0	8.4%
Private	Lebanon	10 136	796	1.10	876	11.6	3.5%
LU	Abroad	0	3,185	4.00	12 740	0.0	8.4%
Private	Abroad	10 136	3,185	5.00	15 925	0.6	8.0%
social return					remittances		
LU	Lebanon	1 123	796	0.90	717	1.6	7.4%
Private	Lebanon	11 260	796	1.10	876	12.9	3.1%
LU	Abroad	1 123	3,185	0.60	1 911	0.6	8.0%
Private	Abroad	11 260	3,185	0.75	2 389	4.7	5.8%

It is of course possible on this basis to test different strategies related to education (type and length) and to migration under different hypotheses (wage differentials according to type of education and between Lebanon and abroad). If behaviours are deemed to be rationale, the various equilibria can be useful in indirectly quantifying some real (or expected) differentials.

V- 3- d Direct IRR calculations under different hypotheses

On the basis of the available information, it was possible to go beyond the marginal IRR and to try evaluating the economic return on the whole process of schooling.

For this purpose the lifecycle NPV was calculated function of the discount rate and the number of years of schooling in the public and in the private sector. Results are shown in the two following graphs:

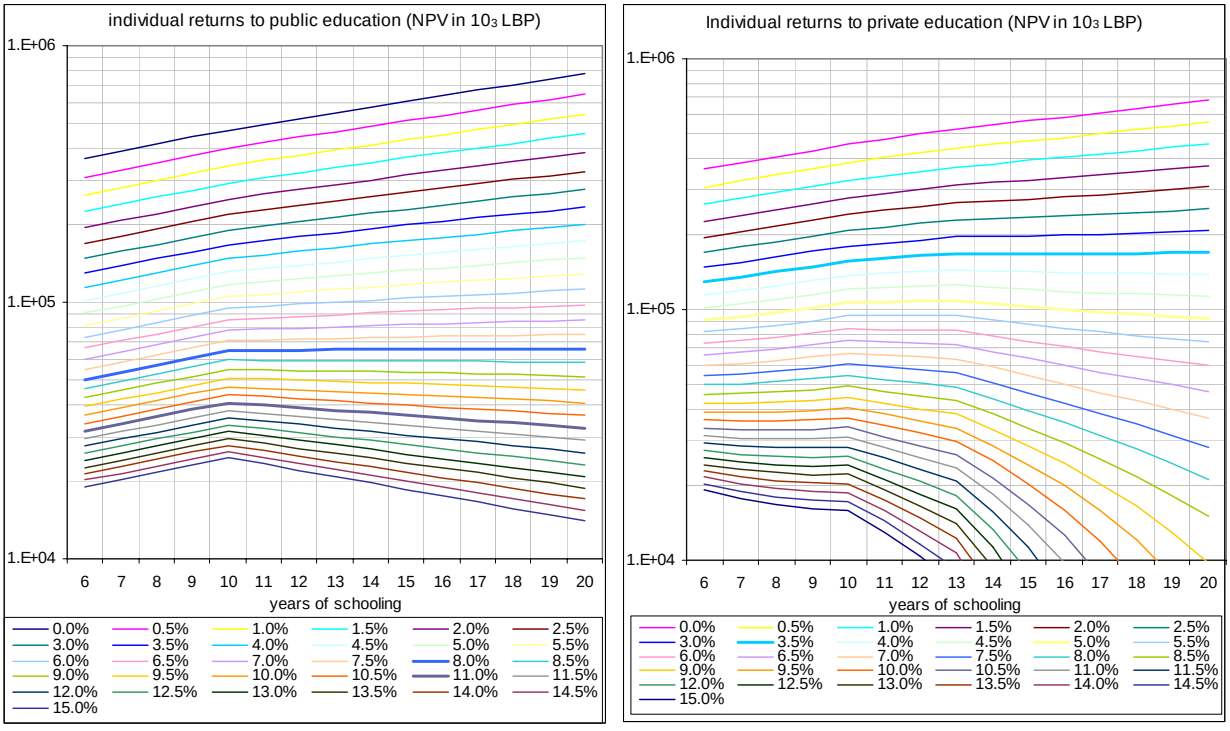


Figure 7: NPV of private and public education as function of the discount rates and the number of years of schooling

From there on, it was possible to calculate the relative variation of the lifecycle NPVs as a function of the discount rates first by looking at the whole schooling period above primary education, then by looking only at higher education, and this from three perspectives: the flow for the individual in

public education, the flow for the individual in private education, and the social flow for studies in the public sector.

It appears that, for the individual, in the public education system, it is on average advantageous to continue studying one more year as long as the discount rate does not exceed 10.25% (the average IRR); more specifically, it is interesting to continue into higher education one more year for discount rates lower than 8%. From a social perspective, public education as a whole shows an average IRR of 8% and higher public education an IRR of 7%. Things are much darker in private education: the overall IRR falls down to 5% and the higher education IRR does not exceed 3.5%. It is obvious that the overwhelming demand of the Lebanese on higher education, including private higher education, cannot be explained on the basis of the laws of the domestic labour market.

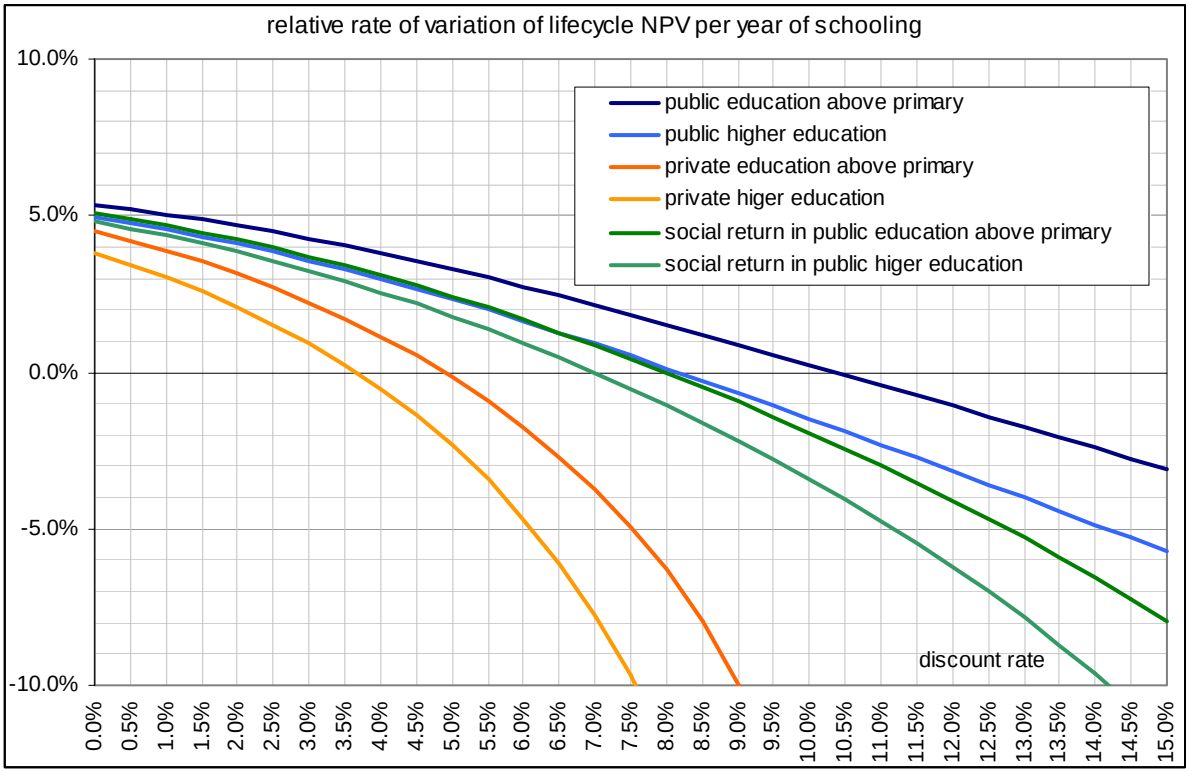


Figure 8: Relative rate of variation of the lifecycle NPV per year of schooling

V- 4 External efficiency: Human Capital and the labour market

One of the most prominent classical arguments for higher education is its impact on productivity, employment and growth through the accumulation of Human Capital. It is therefore natural to try to appreciate the external efficiency of higher education through the assessment of the prevailing trends at these levels and their relation with the evolution of higher education in the country.

V- 4- a Demographic trends and qualitative misalignments in the labour market

The steady increase in the number of higher education students and graduates does not derive from a demographic bulge. The population in the age bracket of 20-25 is stagnating and the pyramid of age is shrinking at its bottom. But the working age population should still grow (emigration put aside for the moment) at a pace decreasing from 2% now to 1.4% in the period 2010-2020. It is estimated that over the next 10 years, with stable participation rates, there will be an average of 19,000 new entrants to the labor market each year.

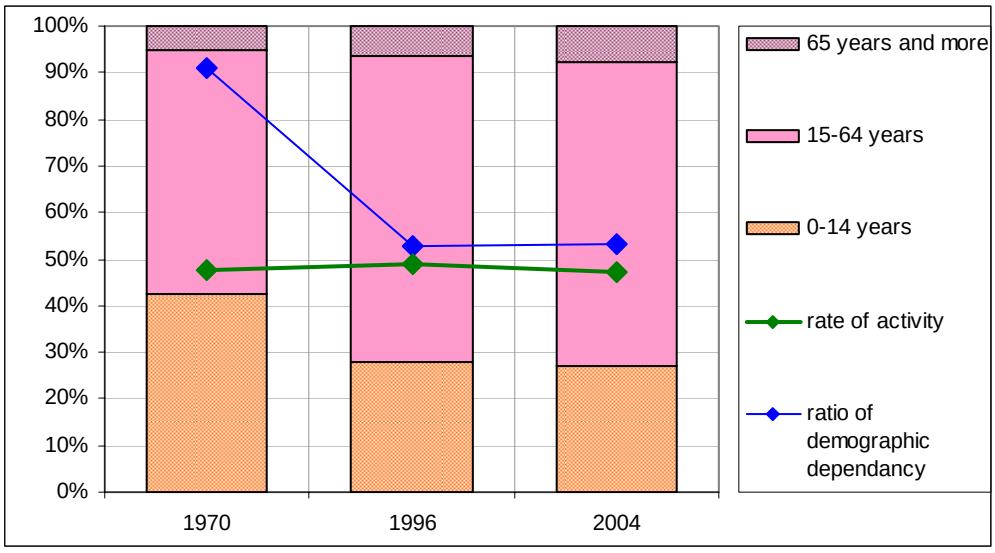


Figure 9: Evolution of the demographic structure (1970-2004)

Table 22: Evolution of the main demographic indicators (1970-2004)

	1970	1996	2004	1970 to 2004 variation	1996 to 2004 variation
0-14 years	906,450	1,116,226	1,022,878	12.8%	-8.4%
15-64 years	1,112,010	2,604,813	2,448,608	120.2%	-6.0%
65 years and more	105,345	258,475	282,299	168.0%	9.2%
	2,123,805	3,979,514	3,753,785	76.7%	-5.7%
Effective workers	496,440	1,175,404	1,062,098	113.9%	-9.6%
Unemployed	31,530	104,329	92,093	192.1%	-11.7%
Working population	527,970	1,279,733	1,154,191	118.6%	-9.8%
rate of activity (15-64)	47.5%	49.1%	47.1%		
unemployment rate (15-64)	6.0%	8.2%	8.0%		
demographic dependency ratio	0.9	0.5	0.5		
effective dependency ratio	3.3	2.4	2.5		

Looking backwards, Lebanon witnessed during the past three decades a sharp decrease in the share of the youth (less than 14) from 42% to 28% of the resident population while the share of the elderly (65 and more) increased slowly. Over the past eight years, the absolute numbers of the 0-14 age group decreased by 8.4% while those of the elderly increased by 9.2% while the whole population was also decreasing. Hence the ratio of demographic dependency fell from more than 90% to 50%. In the meantime, the rate of activity for the 15-64 years category remained stable around 47%, which is quite low.

Actually the size of the workforce has not expanded over the last ten years, showing a zero elasticity of jobs to growth.

Table 23: Elasticity of employment of Resident Lebanese to growth

Elasticity of employment of Resident Lebanese to Growth	1997-2004	2004-2007	1997-2007
Agriculture	-1.182	0.534	-2.175
Industry and Construction	-0.768	-1.682	-1.199
Trade, Services & Transports	0.193	0.786	0.351
Whole Economy	-0.039	0.104	0.001

Source: Authors based on National Accounts 1997-2007, Labour Force Study 1998, Household Survey 2004, Living Conditions 2007

These quantitative facts rule out the argument of the youth bulge and seriously challenge the classical linkages between growth and employment.

Looking at the qualitative side, over the same period, the levels of education of the labour force have been improving, but not at a pace commensurate to the outcomes of the education system because of the massive emigration and the fact that migrants have a higher level of education than the average.

Table 24: Evolution of the structure of the labour force by levels of school attainment (1997-2007)

	Percent of Labour Force		
Educational Attainment	1997	2004	2007
Illiterate	8%	5%	4%
Read & Write, Pre-school	9%	6%	4%
Elementary	29%	28%	24%
Intermediate	21%	22%	23%
Secondary	17%	16%	18%
University	16%	20%	25%

Source: 2007 Living Conditions Survey, 2004 National Survey of Household, Living Conditions, La Population active en 1997.

In qualitative terms, the distribution of the labour force among sectors has evolved in favour of the services and more specifically in activities related to personal services and tourism that are typically low qualified.

Table 25: Evolution of the structure of the labour force by sectors of activity

Employment by sector	1997	2004	2007	% change in employment (1997-2007)
Agriculture	100,625	83,345	80,788	-19.71%
Industry	164,324	165,793	154,511	-5.97%
Construction	125,107	96,826	62,627	-49.94%
Trade	281,301	244,421	253,131	-10.01%
Transport, Post and Telecom	59,702	82,846	78,350	31.24%
Services	360,318	414,328	464,881	29.02%
Financial Intermediation & Insurance	24,034	20,200	22,976	-4.40%
NA	2,507	369	1,115	
TOTAL	1,117,917	1,108,128	1,118,379	0.04%

Source: 2007 Living Conditions Survey, 2004 National Survey of Household ; Living Conditions, La Population active en 1997.

The freeze of hiring in the Public Sector since 1996 has also severely limited the domestic opportunities for higher education graduates and the few recruitments that took place outside the military services were mostly at low skill levels. The successive wage increases were all capped and the last one was a lump sum narrowing the range of wages and making the public sector wages higher than those of the market for low skills but significantly lower for medium and high skills. Employment in the public sector does not get the interest it deserves[19]. It appears that, in 2002, the public sector employs 15% of the labour force, 11.2% in the civil and 4.1% in the military and 16% of the female working force. The hiring in civil employment declined since the early eighties: 32% are older than 50 as opposed to 16% in the private sector, the average age is 42 years as opposed to 36. Women stay longer in the public sector (average age 40 versus 32 in the private) and represent a clear majority among the young employees. 21% of the civil employees hold university degrees.

[19] Communication by Mrs Choghig Kasparian at a conference about "The Economy of Public Service", organized by the Lebanese Economic Association in may 2006.

V- 4- b Unemployment and Migration

The consequence of this quantitative and qualitative misalignment of the supply and demand of an increasingly qualified young labour force is twofold: unemployment for a small part and migration for a larger part.

Table 26: Unemployment by levels of educational attainment

Educational Attainment	Unemployment Rate		
	1997	*2004*	*2007*
Illiterate	5.2%	9.6%	4.9%
Read & Write, Pre-school	6.3%	6.2%	5.0%
Elementary	10.2%	8.4%	8.4%
Intermediate	10.1%	10.1%	9.2%
Secondary	8.3%	9.6%	9.7%
University	6.1%	9.0%	11.1%
National Average	*8.6%*	*7.8%*	*8.6%*

Source: 2007 Living Conditions Survey, 2004 National Survey of Household, Living Conditions, La Population active en 1997.

In a recent study tracing the whereabouts of the graduates of University of Saint Joseph (USJ) the following data from 2000 to 2004 was presented:

Table 27: Percentage of migrants among graduates by years of graduation

	Year of degree					
	2000	2001	2002	2003	2004	Total
Male(%)						
Lebanon	61.7	59.8	63.2	73.2	78.8	69.9
Abroad	38.3	40.2	36.8	26.8	21.2	31.1
Number	164	189	230	297	324	1204
Female(%)						
Lebanon	80.7	77.6	84.9	87.3	86.2	84.1
Abroad	19.3	22.4	15.1	12.7	13.8	5.9
Number	229	326	396	594	662	2207
Total(%)						
Lebanon	73.1	71.3	76.6	82.3	83.5	78.5
Abroad	26.9	28.7	23.4	17.7	16.5	21.5
Number	393	515	626	891	986	3411

Source: University of Saint Joseph

On the basis of these results, it appears that after five years of graduation, 40% of male graduates 20% of female graduates would have emigrated.

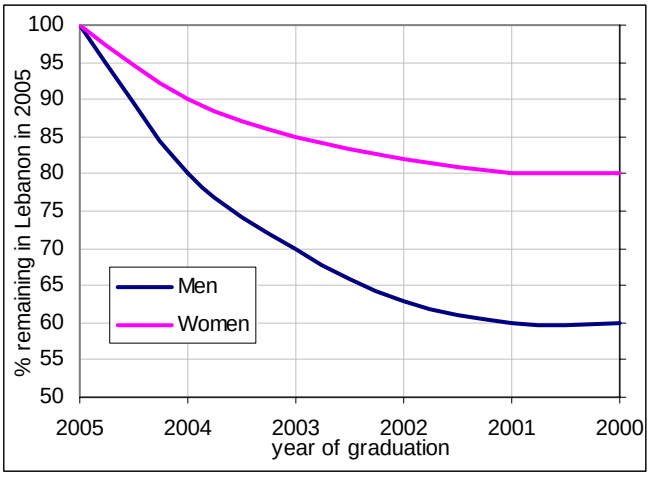
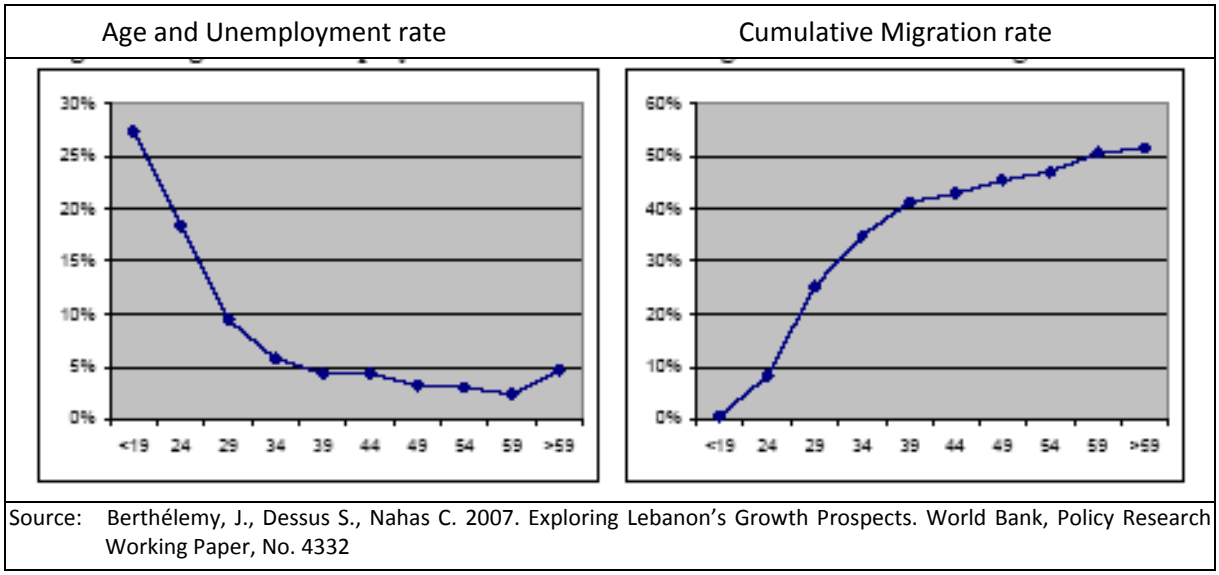


Figure 10: Percentage of graduates remaining in Lebanon by years of graduation

The complementarity between unemployment and migration can be easily demonstrated:



Source: Berthélemy, J., Dessus S., Nahas C. 2007. Exploring Lebanon's Growth Prospects. World Bank, Policy Research Working Paper, No. 4332

Figure 11: Complementarity between unemployment and migration

The interaction of the rules of the labour market with the structure of the "reservation wages" that translate opportunity costs and unaccounted for externalities lead to some paradoxical results: women's participation rate is extremely low, the rate of unemployment for university graduates is the highest, whereas the lowest unemployment rate is that of the illiterate… It remains however that education appears as a major factor in the categorization of households in poverty brackets: the lowest rates of poverty in Lebanon are found with households whose head hold a university degree. University degree holders in Lebanon have the highest rate of unemployment but however have the lowest rate of poverty. The question becomes: what is the direction of causality?

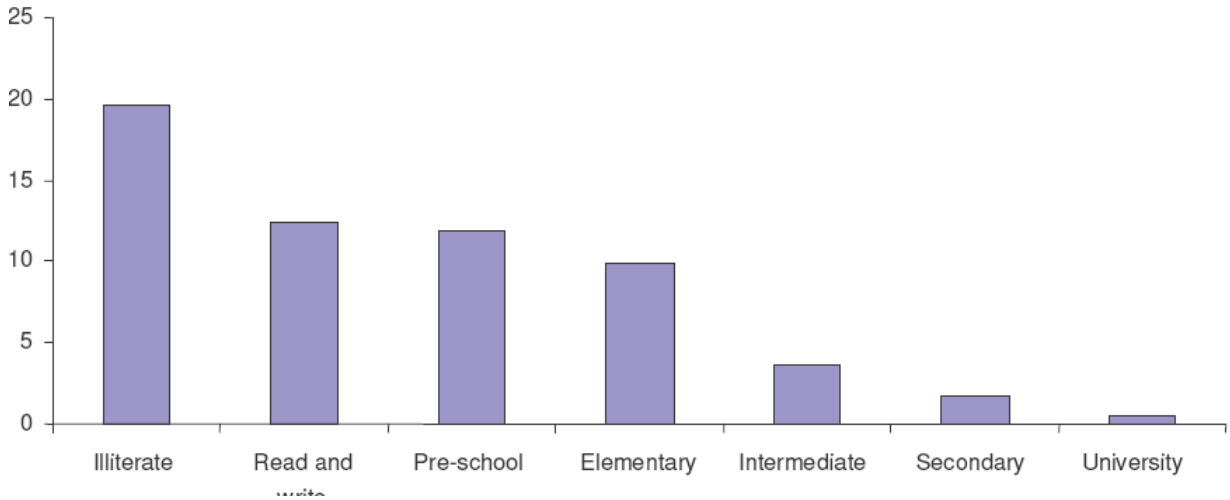


Figure 12: Extreme poverty rates by educational status of the head of household (2004-5)

Source: Country Study, Poverty, Growth and Income Distribution in Lebanon, International Poverty Centre, January 2008

V- 4- c Accumulation and des-accumulation of human capital

Accumulation of human capital in the country is negatively affected by low rates of return to education and by external factors that increase reservation wages and take the more qualified workers abroad. Human capital seems to be poorly valued in Lebanon's domestic labour market. The private returns to education are very low by international standards. This is, in part, a reflection of

low levels of productive investments in sectors that demand skilled labour. A low stock of physical capital per worker can also reduce returns to education by reducing the level of labour productivity. In these conditions, it is not a surprise that investments in education are made with the expectation of finding a job abroad. Thus, the educational level of Lebanese emigrants is significantly higher than that of residents.20 Under current migration patterns, approximately half of a given generation will have eventually left the country at the age of 59[21].

Consequently, Lebanon's active population is stagnating, its human capital progressively eroding and its resident population ageing. To reverse such worrying trends, not only the number of jobs created every year should increase, but their quality as well. Demand for skilled labor remains indeed structurally much below its supply, given the very high level of education expenditures in Lebanon.

V- 4- d Qualitative outcomes and price effects[22]

Education spending is not commensurate with outcomes. Though commendable in many respects, education indicators are commensurate neither with the overall (private plus public) spending in these sectors nor with Lebanon's stage of development.

"At USD 4,000 GNI per capita in 2002, Lebanon had a lower primary completion rate than Tunisia, Jordan, Iran, Algeria, and Egypt, all countries with significant lower GNI per capita. The primary completion rate in Lebanon has also not shown any improvement between 1995/6 and 2003/4. Another international benchmark of the performance of Lebanon's education system is the 2003 Trends in International Mathematics and Science Study (TIMSS) scores. TIMSS assesses student learning in 8th grade in Mathematics and Science. As presented in Table 8(where is this table, or do you mean the figure below?), the national performance of 8th grade Lebanese students was 393 in science and 433 in mathematics. Both these scores are below the international averages of 474 and 467, respectively, and in science, Lebanon was outperformed by all participating MENA countries (except Saudi Arabia). Furthermore, when adjusted for level of income Lebanon performs well below expectations.

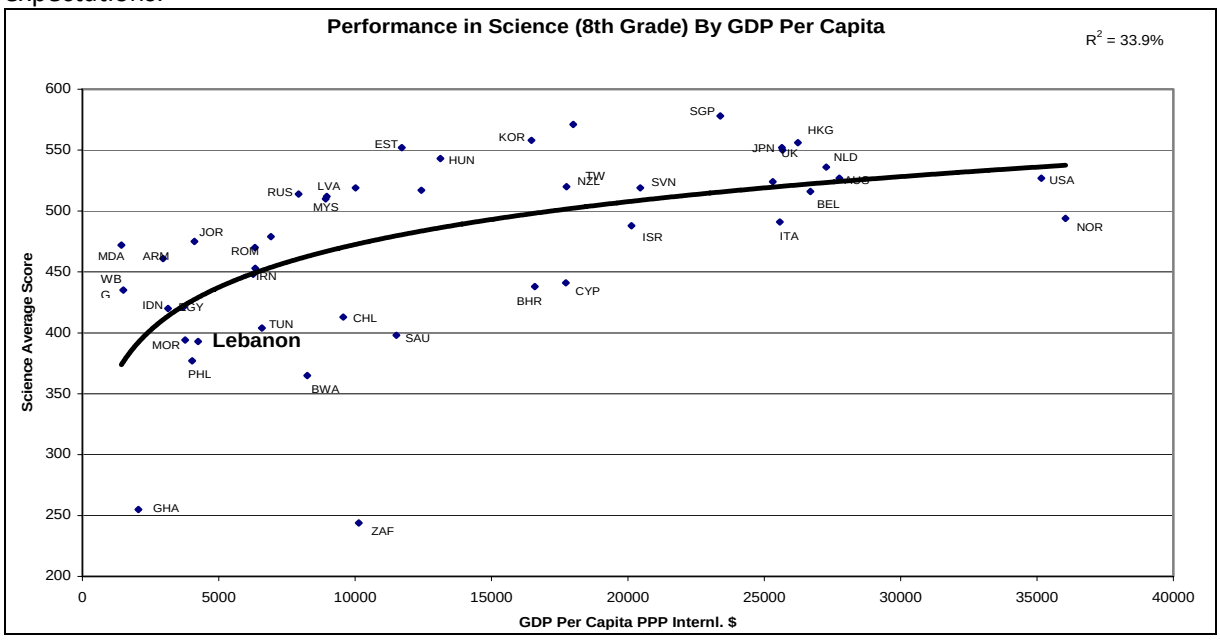


Figure 13: Performance in Science (8th grade) by GDP per capita

Nor is public spending commensurate to outcomes. Figures discussed so far compare different education attainment indicators across countries, controlling for per capita GDP. Though, these

[20] See Kasparian, 2003

[21] Berthélemy, J., Dessus S., Nahas C. 2007. Exploring Lebanon's Growth Prospects.World Bank, Policy Research Working Paper, No. 4332

[22] Tthis paragraph is largely based on the PER of the World Bank in 2005

comparisons could give a biased picture of Lebanon's public expenditure efficiency, for two reasons: first because there is a well known positive association between social spending and GDP23; second because social spending in Lebanon is mostly private. But this is actually not the case. Controlling for these two factors, Herrera and Pang (2005) estimate that input efficiency - excess (public) input for a given level of (public and private) output is of the order of 79-87 percent for education24 and 71-75 percent for health25. In other words, Lebanon uses at least 25 percent more inputs (public spending) to produce the same health outcomes than best practices countries26 (and at least 13 percent more inputs for education). And this does not account for the fact that Lebanon's share of private spending in total social spending (at least for health – but also probably for education) is much higher than in most of the countries considered in this study (more than 180, including industrialized countries)27.

Social sectors in Lebanon include some state-of-the-art education facilities, which have little impact on the poor. These activities have flourished in recent years. Much of these services, however, are inaccessible to a large segment of the population and serve to further deepen the duality of the Lebanese social sector system.

High price levels are one of the explanations for the low value for money of social spending in Lebanon. Price levels are high in Lebanon, maybe the result of strong Dutch disease effects stemming from massive capital inflows, and much above what should be expected from its developmental stage. Another explanation relates to the severe quality differentiation in education with a minority who get a very high quality and an expanding majority who get low quality education.

[23] This positive association between expenditure and the level of economic development stems from the fact that wages tend to be higher in richer countries, reflecting the higher marginal productivity of labor. This in turn tends to increase the cost of labor-intensive activities such as health and education.

[24] Net primary and secondary school enrolment.

[25] Life and Life disability-adjusted expectancy at birth and immunization rates (DPT and measles).

[26] Korea, Malaysia, Thailand, Trinidad and Tobago, Oman, United Arab Emirates, Mauritius, Kuwait, Chile.

[27] Private spending on health over GDP averages 2.3 percent for the 187 countries sampled – to be compared with 10.2 percent in Lebanon. There is no similar figure for private education. Public education spending averages 4.5 percent of GDP for 166 countries sampled.

V- 5 The result: Increased production with little accumulation of human capital

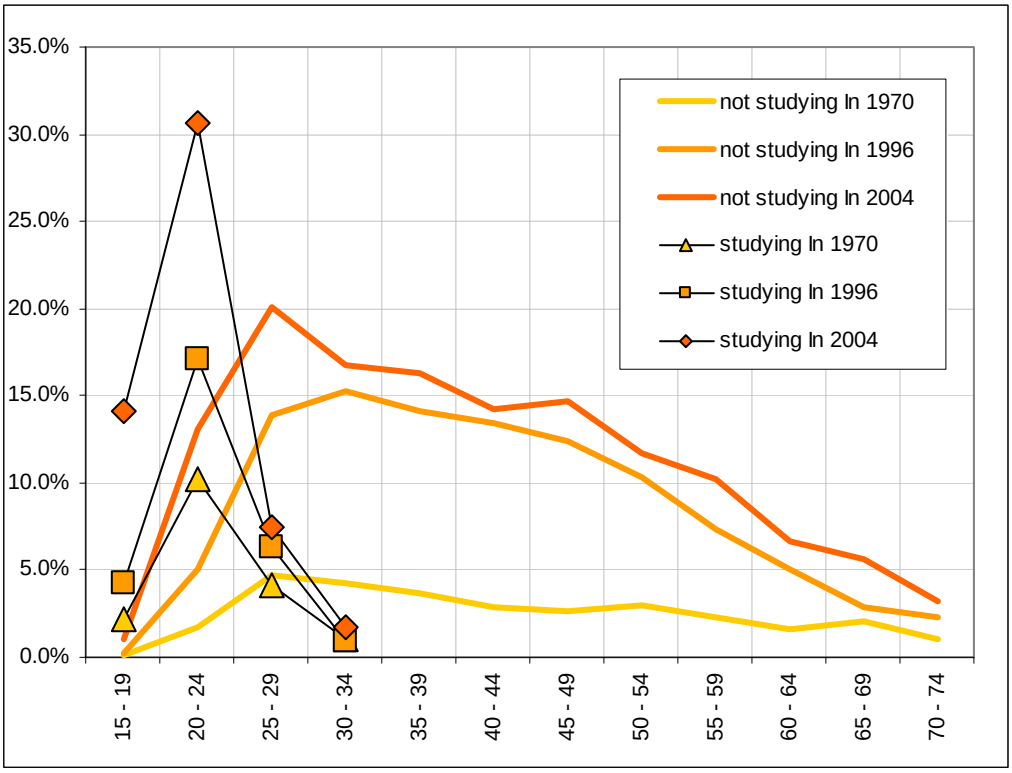


Figure 14: Evolution of the proportion of higher education graduates among the studying and the non studying population (1970 to 2004)

The supply of university students in Lebanon has been increasing throughout the years, the growth in the number of students between the ages of 20-24 studying in 1970 and those in 2004 , is almost 20%. More so, this increase is higher with students enrolled in university level is further highlighted in the 3 charts below, in 1970 they made up around 10% , in 2004 this rate increase to 30%.

The figures about the number of higher education students deserve two corrections:

- Many Lebanese students attend foreign universities. According to a recent study[28] and in line with available data from foreign consulates, the number of Lebanese students abroad is about 12,500 (10,700 males and 1,800 females, on the basis of the study sample)
- Vocational education comprises several channels of higher studies (3 or 4 years post-secondary) that regroup[29] 29,500 students (13,300 male and 16,200 female)

On this basis, the total number of students in higher education climbs to more than 200,000.

[28] Choghig Kasparian: L'entrée des Jeunes Libanais dans la vie active et l'émigration , Presses de L'Universite Saint-Joseph, 2004
[29] CRDP statistical yearbook 2007-2008

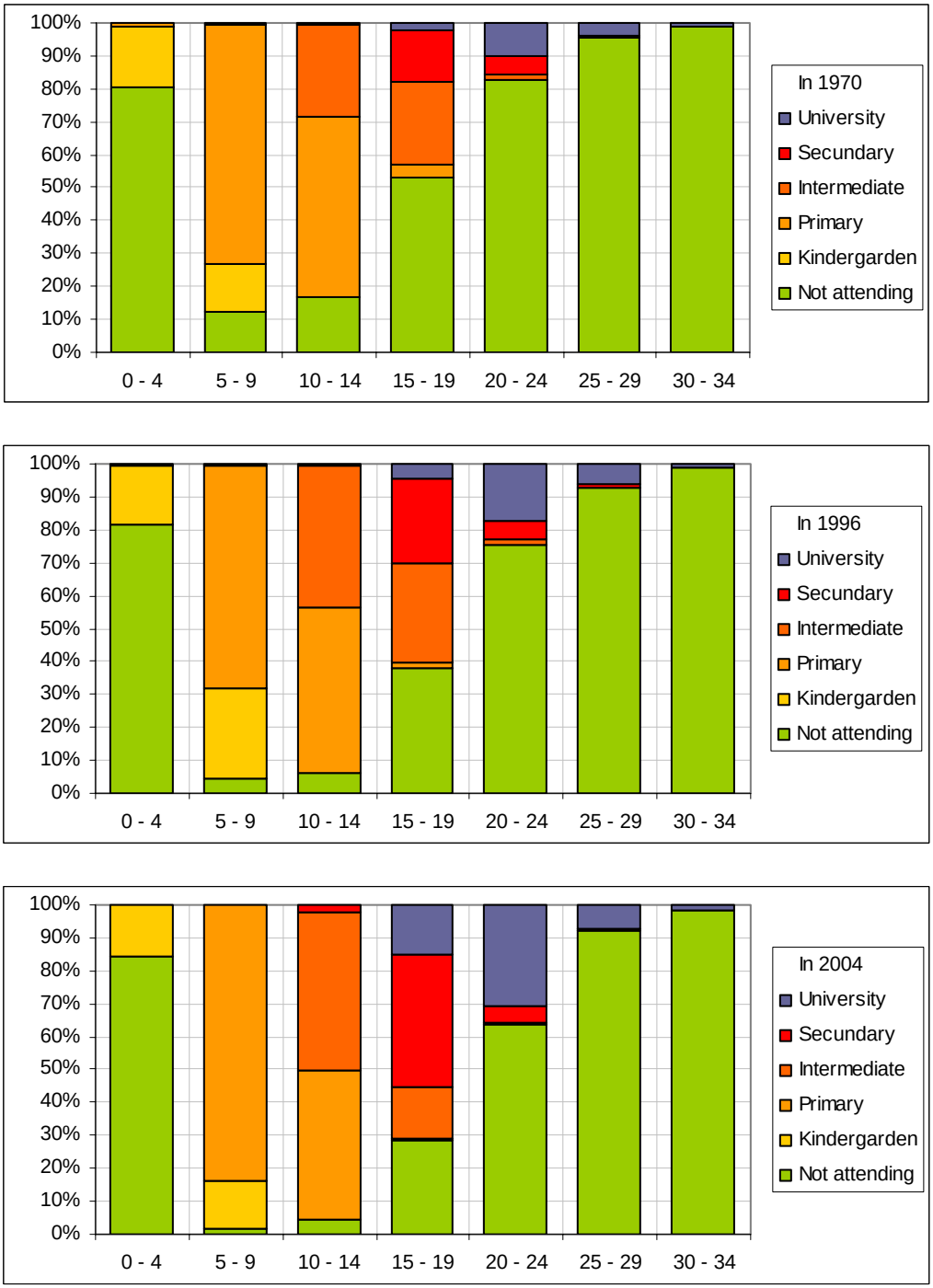


Figure 15: Evolution of the education structure by age of students (1970 to 2004)

The Lebanese population's age pyramid shows a shrinking trend in the 20-35 age categories, due to the increasing rate of emigration of the youth segment that prefer to leave Lebanon either temporarily or permanently to work abroad, leading to a decline in the country's human capital and welfare. Emigration is fuelled by pull and push factors, pull factors pull the graduates out of the country, such as high paid salary positions abroad especially in the nearby Arab states. Push factors on the other hand, are internal factors that further push the graduates to leave, these include high cost of living, low wages, low domestic return on education, the weak government role in job creation, in addition to political instability.

To put things in perspective, below is a chart that portrays the actual number of students in universities, the theoretical number of graduates if they stayed in the country and the actual number

of graduates that are really found in the country, the difference between the theoretical and actual is immense.

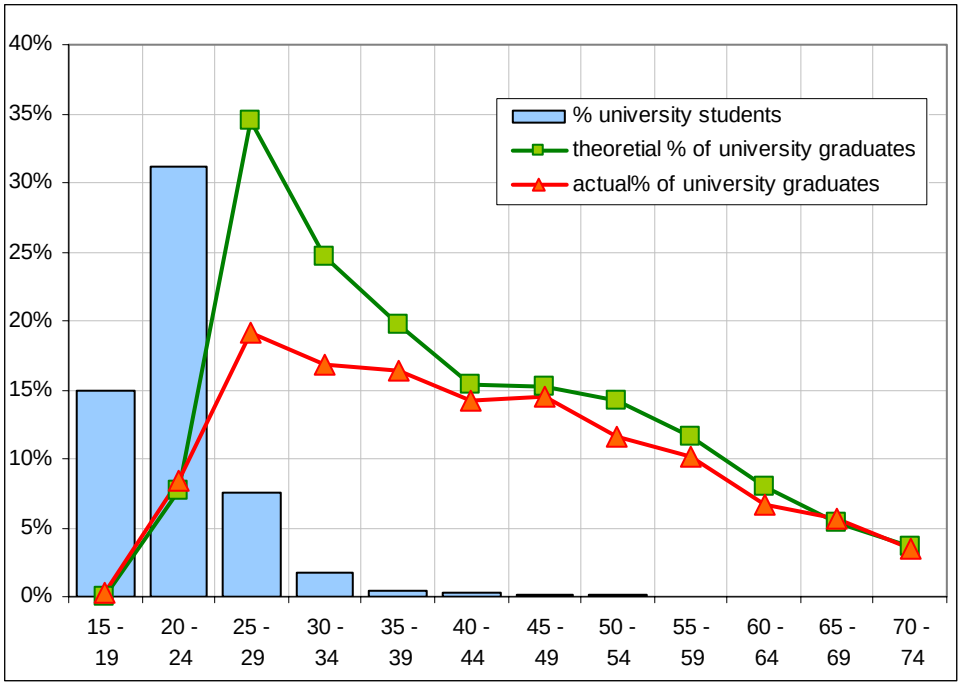


Figure 16: Comparison of the stock of university graduates with and without emigration

VI - Inequality in Higher Education Financing

The question of inequality is essential for higher education since higher education is as much designed to produce and reproduce inequality in social status as to produce skills for economic activity.

The inequality question being extremely sensitive generally hides behind claims about efficiency or sustainability or even accessibility. Most of the debates about higher education involve issues on inequality, though in an implicit manner. This "gentle hypocrisy" makes the idea of equity so apparently widespread that the demographics of higher education are usually considered to be exogenous as if higher education was an inalienable right for everyone while, in the real world, significantly appreciated higher education remains the privilege of a few. A corollary to the axiom of "equity" in the access to higher education is the recurrent theme of the labour market "needs" and hence the persistent and universal mismatch between higher education outcomes and those labour market needs. Actually, except in specific cases of rationing, that mainly occur for sociopolitical reasons, there is little ground for "mismatch" between the outcomes of the education system and the "needs" of the labour market, apart from the necessary delay of adaptation and response.

How otherwise to understand the insistence on equity in Higher Education while inheritance of physical and financial wealth is accepted as a fact of nature? Culture in general and education in particular is simply a part of the endowment from the parents to their children, they come with the social networks and many other decisive factors that all favour the genealogical reproduction scheme of the elites.

The ideas of cost sharing and larger involvement of the private sector can be viewed in this perspective: neither the budgetary constraints are new nor the adequacy between costs and benefits in the public and in the private. The reemergence of the debate can largely be understood as the result of some transformation or some threshold being reached in the process of reproduction of the elites. One should note that sociopolitical statuses are not only linked to higher education; religion, genealogy, coercion power, wealth, old and new, can all confer prestige and authority, in proportions that vary among social formations and hence the sensitivity of the issues related to higher education varies significantly[30].

Most of the questions related to higher education actually envisage it from the perspective of the reproduction of elites with little if any connection to the economy. The main economic dimension in education ends being the economy of education itself. Hence most of the questions debated about higher education find actually their answers outside the scope of higher education. In particular, the question of financing higher education is clearly overdone: it does generally not exceed the proceeds of an average size tax; it is the most interesting as a revelator of the more or less smooth functioning of the system of reproduction. When debates focus on equity in higher education, it is almost always about higher education as a supply of social status and almost never as a supply of culture or a supply of skills, bearing in mind that culture and skills come only for a limited part from the university while status is largely commanded by university.

The reciprocal arguments for and against public and private funded higher education are paradoxical. The supporters of private higher education insist on the "demand side" and put forward that a system that would let those can afford pay for their studies while providing access to financing and some assistance to those who cannot is more equitable than a system that would make the tax payers bear the cost of the whole system. The "supply response" is left aside: private higher

[30] The six Arab countries study cases are extremely interesting because of the variety of their sociopolitical configurations.

education institutions have interest in attracting the students with the highest cultural and relational capital and this goes hand in hand with attracting the most prestigious professors; the differentiation process comes back from the other end. In publicly funded systems, the pre-university inequality in the cultural capital of the students generally translates in easier success in exams. Taken globally, the differences between the two systems depends more on the type of elite differentiation and reproduction in the society than on their alleged equity.

VI- 1 Dynamics of inequality

Inequality is a major dimension of education in general and of higher education in particular and this is so for several reasons: Education has significant positive externalities for the community: extension of knowledge and culture, and economic and institutional innovation. It is hence recommendable that education investment be concentrated on the most talented individuals and not miss them. This objective militates strongly in favour of publicly funded education based on competitive exams.

1. But education is a decisive factor in the definition of lifecycle income of the individual; this makes the provision of education by public means or on public funds, beyond the level that is considered as the universal norm that should be provided to the whole population, a regressive transfer.
2. But if the performance in the acquisition of knowledge and skills is related to the innate individual talents, it is also largely influenced by the social environment of the individuals, reducing significantly the fairness of the selection process based on individual merits; and if education is private this “social” heritage mechanism is amplified by the “economic” selection logic that gives the wealthy a double privilege in the access to good quality higher education.
3. Private universities, in their search for prestige and resources (especially in the attraction of renowned professors and researchers) tend, in response, to focus their recruitment on the students who enjoy both “social” and “economic” advantages along with “innate” inclinations; such policies reinforce the social and professional network of the alumni and a self reinforcing phenomenon of segregation tends to develop.
4. The positive externalities of education are seldom captured and require proper institutional setups and depend largely on circular effects of agglomeration: the distribution of human capital tends spontaneously to be more and more concentrated, be it across regions within a single country or across countries, through the migration of the highly educated.

The theoretical principle of the equality of access falls clearly short of addressing the complexity of the problem of inequality in higher education with its individual, financial, social, economic and spatial dimensions. In each country, the institutional setup gives specific answers.

VI- 2 Economic inequality

Household budget surveys show that the elasticity of expenditure on higher education (be it domestically of abroad) to total expenditure is 2.3 as compared to 1.0 for primary and 1.4 for secondary. Onerous higher education is clearly perceived a very desirable luxury item.

The exceptional level of overall expenditure on education in Lebanon clearly demonstrates that education is perceived as a necessity to confront the pressures and opportunities of the complex labour market.

According to their economic means, households adopt specific strategies that deserve specific research to be properly identified; in this paper, we shall simply outline some simple ideas.

- The flatness of the rate of return on education as a function of the length of schooling explains the relatively high level of drop outs among the poorest before the completion of the secondary level.
- The low level of labour participation of women after marriage cannot be explained by some "cultural" factor and is very probably related to the exceptional importance given to the education of children as compared to the low level of expected wage for women in Lebanon (wages are low and wage earning jobs are rare). It should rather be seen as an investment decision.
- Women are less mobile than men in terms of migration because the importance of family ties both with the parents and the children; this decreases significantly their average expected income.
- The allocation of the available resources of the household is "optimized" over time and among the different members of the family:
    - since formal education is a long process where cost increases with grades and where results follow a sequential chain pattern, more resources are devoted to the early grades where the marginal returns on the whole process are the highest (children get a "good base") and hence the "inverted pyramid" that characterizes the place of public education (whose share increases with the levels of education);
    - since the expected economic return from girls is significantly lower than from boys, the share of women in public education is higher than that of boys and significantly increases with grades, to reach its maximum in the Lebanese University.

The "supply side" of education aligns itself along with these "demand side" behaviours. In this process one has to bear in mind the inertia that governs the education process: apart from the length of programs, the build-up of institutions and that of their "reputation" need a lot of time and explain alone a large part of the alleged mismatches between the "market needs" and the "education outcomes". This characteristic lays the foundations for a phenomenon of circular causality: for instance, once the public sector education (as a whole or in a specific segment) is perceived as being of lower quality than the private sector, it tends to attract socially and economically less favoured students, its outcomes in terms of pedagogic success and in terms of labour market appreciation are therefore negatively affected, this in turn tends to confirm and reinforce its poor image of quality. Initial conditions and brutal shocks acquire a determining influence while image building and niche consolidation strategies become decisive. In this perspective, the brutal rise of the "commercial" and "community" universities in Lebanon in past years deserve being seen as a remarkable phenomenon.

The very high flexibility of the "supply response" can be seen at the level of the very wide range of tuitions available: at one end, Lebanese University students pay only a symbolic annual registration fee of LBP 125, 000 (USD 83) for their education while, at the other end, the American University of Beirut appears as a fairly costly university even by international standards; and the nearby "LAU" (Lebanese American University) that offers programs similar to those of AUB but with lower academic requirements is even more costly. The "commercial" and "community" universities came to fill the whole range.

The trade-off between selectivity and cost is a basic feature of the higher education system and many of the commercial universities have built there strategy on offering, at significant costs, specializations for which the LU imposes competitive entrance exams.

But other factors play also a role: the tuitions at the USJ have always been significantly lower than at AUB probably because of the differences between their respective American and French models, with good quality higher education being mostly private and costly in the first and mostly public and free in the second. Tuitions disparities between these two universities are extensive:

Table 28: Tuition fees in AUB and USJ in 2009 (in USD)

Degree	AUB	USJ	Difference
Sciences	In Average Total Tuition	In Average Total Tuition	In %
Undergraduate	32,040	18,900	41%
Graduate	13,152	6,300	52%
Business			
Undergraduate	36,654	18,900	48%
Graduate	25,500	12,600	51%
FEA			
Undergraduate	51,384	45,900	11%
Graduate	20,559	n/a	

Source: Data obtained from Universities' websites

USJ and AUB have the same size (2% more students in USJ than AUB), however, the difference in tuitions is more than 40 %. Moreover, even though AUB has witnessed on average a steady 5% increase in its tuition in the last few years, the yield of registration has remained constant at 37% (Registered students / Accepted students) and its admission requirements have remained fairly the same.

Regarding student distributions per region and university, it is noticed that the Lebanese University still assumes the largest portion of the student body in all regions of Lebanon around 40%. However, emergence of new universities all over the regions has led us to perform further investigations regarding the student market of these universities.

Most of these newly established universities offer degrees which cater to the demands of the market, especially in Business Administration, Computer Sciences & Information Technology, in addition to diverse Engineering degrees. Lebanese University offers the same degrees but the quota of enrolled students is sufficiently low compared to the number of applicants. LU filters out the enrolled students through extensive examinations and minimum requirements for admission especially in the sciences and technical areas. LU's low acceptance ratio is based on the capacity and resources of the university, with its current structure and base; it is unable to cater to a larger student body. Thus, these newly established universities offer degrees that are highly demanded by the market and for which LU has minimum requirements and examinations for entry such as business, engineering, computer science etc. Thus the students who are unable to meet the requirements of the LU, pursue their education in these universities for a tuition fee which is far more expensive than the LU but far less expensive than the top private universities such as AUB, LAU, USJ etc..

Business Administration is a much coveted degree in Lebanon, in 2007, the number of students registered in Business Administration in the Lebanese University was 2,882 , interestingly though , the largest number of enrolment in the LU is found in specializations that don't have requirements for entry and examinations, these specializations include Social Sciences (6,237 students), Arabic Literature (6,562 students), and English literature(4, 622 students) these amounted to 23% of total LU student enrolment in 2007 (Centre of Research and Educational Development , 2007 data). If we take a look at the number of enrolled students in private institutions who are majoring in the above – mentioned specializations, we perceive a huge disparity. In 2007, 18,245 students were majoring in Business Administration which amounts to 21% of the student body enrolled in the private sector; moreover, Social Sciences included 1,141 students, English Literature 576 and Arabic Literature 487. This disparity between the number of students majoring in Social Sciences, Arabic and English Literature in the private sector as opposed to LU, indicates that students enrol in these majors in the LU simply because these majors do not have examinations for entry and the LU fees are minute compared to the private sector. However, since Business Administration is a much demanded degree in the labour market, we see a staggering number of students applying for this degree in the LU but are filtered away by the extensive examination process; this forces these students to pursue their

degree elsewhere as indicated in the huge number of enrollment of business students in the private sector.

Excluding the Lebanese University & several theological and religious universities, the following universities had the largest number of enrolled students in 2007, they include: American University of Beirut, Lebanese American University, Notre Dame University, University of Saint Joseph, Balamand University, Lebanese International University, Arab Open University, Jinan University, American University of Science and Technology (AUST), and Institute of Management and Computer Science (Hawaii). The last 4 universities are newly established universities, some of which have several branches such as Lebanese International University (5 branches), Hawaii University (3 branches) and AUST (3 branches), all offer degrees in Business Administration and include a large enrolment of students, however the tuitions of vary enormously.

Table 29: Comparison of tuition fees in "Business Administration" between new private universities

	Business Degree	
University Name	BS(3 yrs)	MBA(2yrs)
AUST	16,275	9,945
Hawaii	16,200	7,600
Jinan	14,500	6,300
LIU	10,395	7,800
Arab Open University	6,400	n/a

Source: Data obtained from universities' websites

The most expensive university is AUST who charges 16,250 USD for a bachelor in business administration and the least expensive is Arab Open University who charges 6,400 USD, this difference of 200% is surprising. The Lebanese student who wishes to major in Business Administration is burdened with the Lebanese University's limited student intake because of its limited capacity and resources and is thus forced to pay a minimum fee of 6,400 USD to insure he obtains a degree that allows him to survive in the local and international market.

VI- 3 Geographic inequality

Lebanon is a small country and the distance from Beirut to the furthest point in the territory does not exceed 130 km. In most cases, sociological division is more important than physical distance. Until 1975, all higher education establishments were located in Beirut and there was little claims for opening branches or universities elsewhere and instead the construction of a large campus for the Lebanese University in Hadath (in the south east suburbs of the capital) was launched with extensive dormitories for students coming from remote areas. The split of the Lebanese University happened within the boundaries of Beirut between "Eastern Beirut" that was dominated by Christian militias and "West Beirut" that was dominated by Muslim militias. It was clearly the result of the political and communitarian division and not an answer for any spatial problem. Actually the AUB did also open the "off campus program" for the Eastern region of Beirut. The opening of branches for the LU in the North came also because of the emergence of a political frontier that cut the coastal road from Beirut to Tripoli. Branches in the South and in the Bekaa that were not cut from Beirut came much later as a consequence of the generalization of the model. The efforts to "reunify" the 1st (western) and 2nd (eastern) branches of the LU in the new campus have failed.

In the wave of the war, the "community" universities were geographically distributed in conformity with the communitarian divisions of the country and many of them, after the end of the war, have opened branches in remote areas to serve islands of their mother communities within areas dominated by other communities.

The "commercial" universities spread over the territory with the aim of gaining niche markets.

As a result, the present geographical distribution of students for each category of universities reflects the cumulated effects of these dynamics. The Central area comprises the city of Beirut, its suburbs

and the region of Mount Lebanon that is to a large extent part of the same agglomeration, it has been split into a Western and an Eastern part to account for the historical process described:

Table 30: Comparison of the spatial deployment of the different categories of universities

Number of students	LU	Classical	BAU	Commu-nity	Commer-cial	Religious	Technical	Total
Greater West Beirut	24,932	12,342	17,661	5,087	10,505	4,331	0	74,858
Greater East Beirut	15,229	7,489	0	15,419	3,273	199	60	41,668
Central area	40,161	19,831	17,661	20,506	13,777	4,530	60	116,526
North	14,518	655	0	4,330	1,340	611	256	21,711
Bekaa	7,507	562	0	0	7,688	448	0	16,204
South	11,990	655	0	0	0	0	79	12,725
	74,176	21,703	17,661	24,836	22,805	5,589	395	167,165
Greater West Beirut	33%	16%	24%	7%	14%	6%	0%	100%
Greater East Beirut	37%	18%	0%	37%	8%	0%	0%	100%
Central area	34%	17%	15%	18%	12%	4%	0%	100%
North	67%	3%	0%	20%	6%	3%	1%	100%
Bekaa	46%	3%	0%	0%	47%	3%	0%	100%
South	94%	5%	0%	0%	0%	0%	1%	100%
	44%	13%	11%	15%	14%	3%	0%	100%
Greater West Beirut	34%	57%	100%	20%	46%	77%	0%	45%
Greater East Beirut	21%	35%	0%	62%	14%	4%	15%	25%
Central area	54%	91%	100%	83%	60%	81%	15%	70%
North	20%	3%	0%	17%	6%	11%	65%	13%
Bekaa	10%	3%	0%	0%	34%	8%	0%	10%
South	16%	3%	0%	0%	0%	0%	20%	8%
	100%	100%	100%	100%	100%	100%	100%	100%

The geographical distribution of the students of the Lebanese University over the 4 large parts of the country is almost exactly identical to that of the resident population (54% to 50% for the Centre, 20% for the North, 10% to 13% in the Bekaa and 16% to 17% in the South); but within the Central Area the western part is overrepresented. The “Classical universities” and the BAU are all concentrated in the city of Beirut itself. “Community” universities are mainly present in the Eastern part of the Central Area and to some extent in the North: in Eastern Great Beirut, their weight compensates for the under representation of the LU and that is where most of the Christian religious communities are established; in the North the socio political division is still visible and it reflected in the creation of several Sunni universities and in the University of Balamand by the Greek Orthodox. “Commercial” universities have a large coverage but are mainly concentrated in the Western part of the Central area and in the Bekaa.

It is worth noting that the LU is dominant in the peripheral parts of the country: 67% in the North and 94% in the South (the situation in the Bekaa is altered by the presence of one relatively large “commercial” university) against 34% in the Central area. In the Great Eastern part of Beirut, “community” universities share is equivalent to that of the LU (37% each).

Table 31: Places of residence and places of enrolllment of university students

	Students by place of		residents	Ratio by place of		residents	Ratio by place of	
	enrolment	residence	20-24 years age	enrolment	residence	Total	enrolment	residence
Central area	116,526	103,444	192855	60%	54%	1892073	6.2%	5.5%
North	21,711	23,325	73152	30%	32%	768709	2.8%	3.0%
Bekaa	16,204	16,625	46768	35%	36%	471209	3.4%	3.5%
South	12,725	23,771	59970	21%	40%	623042	2.0%	3.8%
Total	167,165	167,165	372,745	45%	45%	3755033	4.5%	4.5%

If we compare the distribution of university students by place of residence[31] and by place of enrolment, it appears that the Bekaa is almost auto sufficient (97%) closely followed by the North (93%) while the South is largely integrated with the Central Area (only 54% of the students whose families live in the South study in the area).

Looking at the levels of enrolment by place of residence, the least favoured areas are the North (32% of the 20-24 years age cohort or 3% of the whole population) followed by the Bekaa (36% and 3.5% respectively) while the South is much closer to the Central area 45% to 54% of the 20-24 years cohort and 4.5% to 5.5% of the total population). Not considering the strong links between the South and Beirut and looking at the places of enrolment would have led to the opposite conclusion.

It appears therefore that the division that has split the country and that affected mainly the North has impacted negatively its rate of higher education enrolment as it did for several other indicators.

Geographic inequality is also portrayed in the majors of the students, considering the different share of the LU across regions and the fact that most of the students in the LU are majoring in humanities (60.25%) as opposed to (20.7 %) in the private universities. It is hence manifested in the presence or absence of departments in the LU branches depending on geographic location. The campuses of Bekaa and South Lebanon do not include Departments of Education, Engineering, Agriculture, Natural Sciences, Dentistry, Pharmacy, Technology and Tourism. Thus local geographical competition emerges in these areas: newly established universities such as Lebanese International University and Institute of Management and Computer Science (Hawaii) have established branches and faculties in these regions, offering degrees not provide by the regional LU Branch this includes, Business Administration, Engineering, and several Sciences degrees. The number of students registered in these branches is significant in Bekaa for examples, in 2007, there were 7,869 students enrolled in the LU Bekaa branches as opposed to 1,060 enrolled in Institute of Management and Computer Science (Hawaii) and 1,164 enrolled in the Lebanese International University.

VI- 4 Gender inequality

One can hardly find any trace of gender inequality in higher education in Lebanon when looking at the global figures: the share of female students is larger than that of males (55% as opposed to 45%).

But some differences emerge:

Table 32: Gender structure of students in the different categories of universities

	LU	Classical	BAU	Community	Commercial	Religious	Technical	Total
female students	67%	55%	37%	43%	41%	43%	60%	55%
female graduates	70%	55%	40%	48%	41%	48%	63%	55%

The share of female students is very different across the various types of universities: it is the highest in the LU (67%) and then in the "classical" universities (where it is exactly equivalent to the average share), in the least and in the most expensive universities. The proportion with boys is inverted in all the other categories. This simply means that, on one hand, for the wealthy, there is no gender bias: boys and girls go to the same universities; and, on the other hand, for the households who have to manage under serious financial constraints, boys tend to be sent to "community" and "commercial" universities that are perceived (wrongly in most cases) as better while girls tend to be sent to the

[31] It is worth noting that the estimated number of university students in the "Living Conditions of Households" survey in 2004 is 183,791 while the administrative statistics of the CEED for the same year gives 141,479, out of whom 12,860 are non-Lebanese. The discrepancy is probably due in part to the incorporation of many VEC students with higher universities. The figures in the table have been adjusted proportionally to fit with the CERD data.

free LU. It is worth noting that the share of girls is higher among graduates than among students in all the types of universities.

Moreover, there is also inequality in the number of students continuing their education in the public university as opposed to the private universities. The number of first year LU students majoring in humanities especially Law, Political Sciences, Social Sciences and Literature is inflated (57%.3 in AY of 2003-2004),

One striking feature of the Lebanese labour market is the persistently low level of female participation in spite of the equivalent participation at all levels of education and of the absence of any social negative consideration relative to women's work. In 1970 it was 16% (in the age bracket of 15-64) and is still 21% 35 years later. The entry age of women into work has been delayed since 1970 (because of longer period of studies) and the exit age has also been delayed and this can be largely attributed to the delay in the age of marriage.

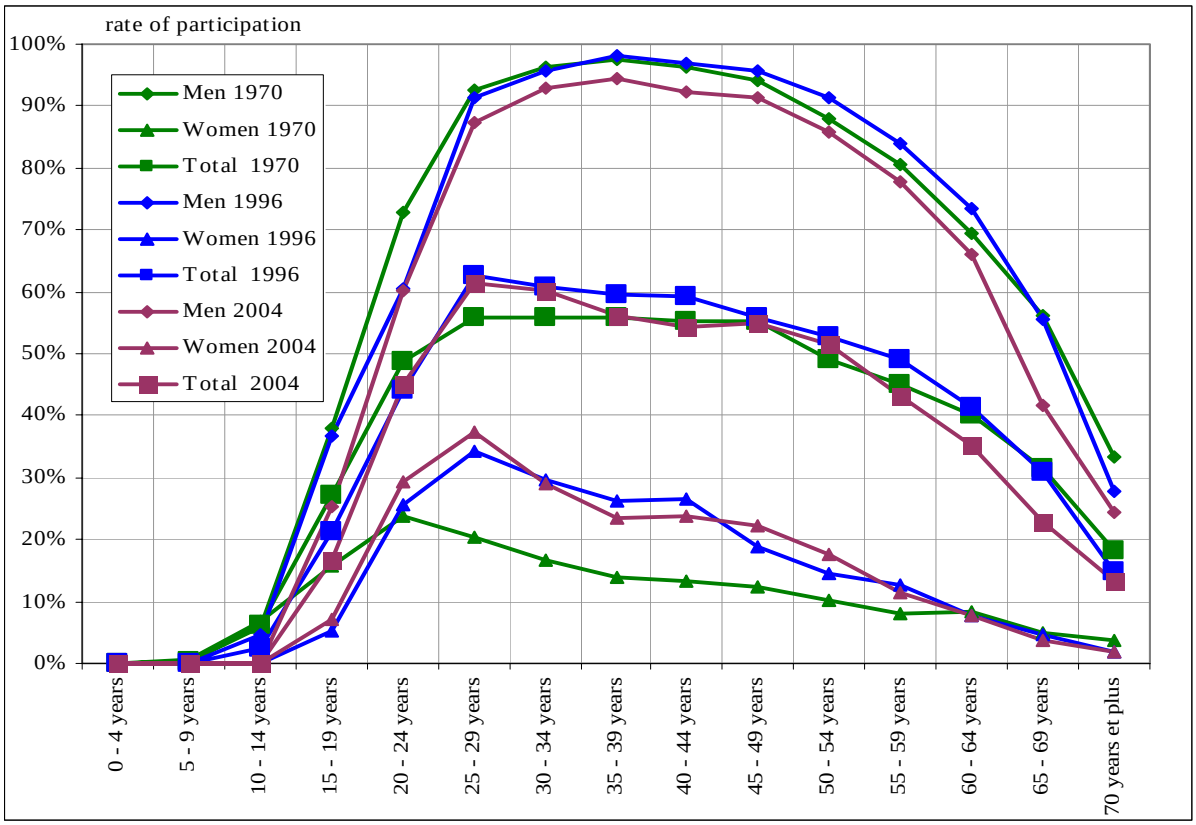


Figure 17: Evolution of the rate of labour participation by age and sex (1970-1997-2004)

Interestingly the female participation is directly linked to the level of education: 45% of university graduates work as opposed to a range of 13% to 20% for the less educated women; higher education is directly correlated to the feminine participation.

Table 33: Labour participation rate for men and women accoding to the evel of educational attainment

	Labour participation rate in 2007		
Attained educational level	% female	% male	% female & male
Illiterate	4.3	43.2	16.5
Elementary	13.2	78.7	49.5
Intermediate	13.1	76.9	45.5
Secondary	20.4	59.0	38.9
University	45.4	62.5	54.0
Pre-school and read and write	6.8	52.2	31.0
Undefined education level	12.4	45.7	28.6
Total	21.1	66.9	43.4

There are 250,000 resident female workers in Lebanon, out of whom, 195,000 are monthly employees[32]. On the other hand, official statistics[33] show that 87,700 working permits were issued or renewed for maids who are overwhelmingly female monthly employees. Foreign housemaids represent hence one third of the female working force (and almost 45% of the monthly female employees), bringing down the rate of participation from 21% to about 16% that is its same level as in 1970. The presence of housemaids is most probably a determining factor for the work participation of married women with school age children.

Schools timetable include many holidays and, since the war period, have been shortened until 2hOOpm. Such a timetable is incompatible with usual working hours, except in public service were work stops at 2hOOpm. This makes work in the public sector and/or in the education sector particularly attractive for married women with children, the more so as schoolteachers enjoy by usage scholarships for their children. The absence of reliable schemes to provide care to the elderly puts heavy responsibilities on the women.

One can reasonably infer that, under the prevailing institutional conditions (schools timetable, systems of care for the elderly, etc.) the additional cost incurred by a married woman with school age children if she goes to work exceeds the minimum wage be it to pay a maid or to pay for a nursery, not to count the opportunity cost of educating the children.

As a conclusion female participation, apart from the two extreme tails of the income distribution, with the very poor who do not have any choice and the very rich for whom work is a personal fulfilment, ends being restricted to specific age brackets (before birth of the children) or to specific professional niches (teachers) or conditioned by high wage levels (that are not easily affordable and that require high professional skills and education).

[32] CAS 2004 Living Conditions
[33] CAS 2007 Yearbook

VII - Challenges, Alternatives and Solutions for Financing Higher Education

Challenges of financing higher education have been exposed through the analysis of its adequacy, efficiency and inequality.

VII- 1 Particularities of the "Lebanese case"

In a strict sense, financing relates to the availability of the means that are deemed necessary to achieve a given objective. These needs can be expected to increase for several reasons: demographic expansion, rise in enrolment, and the demand for higher levels of skills.The available means can also be expected to decline with budgetary restrictions on public spending…

Put in this form, the question does not really apply to the Lebanese case.

- In terms of the availability of means, the quantity of financing is more than adequate by any standard, the revenues accessible to migrants make investment in education in general and in higher education in particular look quite appealing while the remittances they send back provide the means for the financing of this investment, whether directly by households or through public expenditure that is in turn financed through the inflows of capital.
- The performance of the system in terms of efficiency and equality can be undoubtedly improved but it has proven to be remarkably flexible and responsive to changes and constraints, splitting its supply into a complex array of institutions, disciplines, locations, prices that were able to accompany a very rapid expansion over the past 10 or 15 years.
- In this sense, talking about "mismatch" in the outputs of higher education and the "needs" of the labour market falls short of capturing
    - that the labour market for the Lebanese is not only (and even not essentially) domestic
    - and that higher education does not only serve direct "market" objectives but serves also many complementary objectives: providing social status, rising the levels of education among the population in general, ensuring socialization and access to social and professional networks, etc.

Based on international comparisons, one could even easily say that the quantity of financing available to the system and its degree of internal flexibility are excessive: spending 12% of the GDP on education is not necessarily justifiable with regard to the alternative needs and does not really reflect in the average quality of the outcomes; and allowing for such a scattering of higher education does not encourage effective production of knowledge and hence quality in its transmission nor does it favour national integration in a fragile society exposed to regional violence.

But in order to go beyond simple comparisons that often lead to false evidences or to paradoxes, there is a serious need of moving interest from the perspective of means to the perspective of objectives and to question the rationale of the system of human capital production and accumulation as a whole, higher education being one of its prominent but interlinked aspects.

The basic rationality is that, due to a very high degree of mobility of factors, a small economy can witness a stable and self sustained equilibrium whereby high levels of investment in education occur in correlation with high levels of skilled emigration and translate into low levels of return on education for the domestic labour market but also in low levels of return on physical investment. The main point here is the forces that perpetuate this model once it is established are extremely strong. And the entry of a specific country into this model can be due to various sources: economic, political,

institutional, etc. In the case of Lebanon, it was the conjunction of the oil boom of the seventies with the burst of the civil war., the policies adopted in the post war period focused on accommodating with this model, although after some hesitation, and some learning of the its processes. It is in this perspective that fits the expansion of higher education both on the demand side (levels of expenditure, rates of enrolment, etc.) and on the supply side (creation of new universities, redeployment of the education system among regions, specialities and categories of universities, etc.).

This analysis leads to the following conclusions:

1. The Lebanese education system in general, and higher education in particular, cannot be considered as an independent and exogenous element vis-à-vis the economic system as a whole as it would have been the case with a dominating monolithic public sector, run according to rigid administrative orientations that are little affected by the labour market signals or with large delays.
2. On the contrary, the education system can rightfully be viewed as a market driven system where the public sector intervention is minimal and complementary, ensuring two major roles: giving "good" education to a restricted number of "gifted" students with little financial means (this function covers the engineering, health and business faculties with selective entry procedures); and giving "low level" and non-competitive education to the categories of the population who do not represent an interesting demand for the private higher education (women of lower middle class; several specializations that do not affect significantly affect the labour market but rather represent a form of extended general education; peripheral regions…)
3. The private system itself is quite sophisticated, offering a range of products that integrate the two main dimensions of education: economic and socio-political.
   - In its economic function, it provides, for various prices, a wide array of skills and levels of quality but also gives access to internal and external networks of relations and equivalences.
   - In its socio-political function, the higher education system covers both symbolically and geographically most of the elements of the fragmented Lebanese society (regions, confessional communities, classes…) and also most of their external allegiances (Anglo-Saxon, French, Arabist, Gulf, Vatican, Orthodox, Islamist, globalized…) and the trends observed over years have been towards an increasing efficiency in this

VII- 2 Salient features

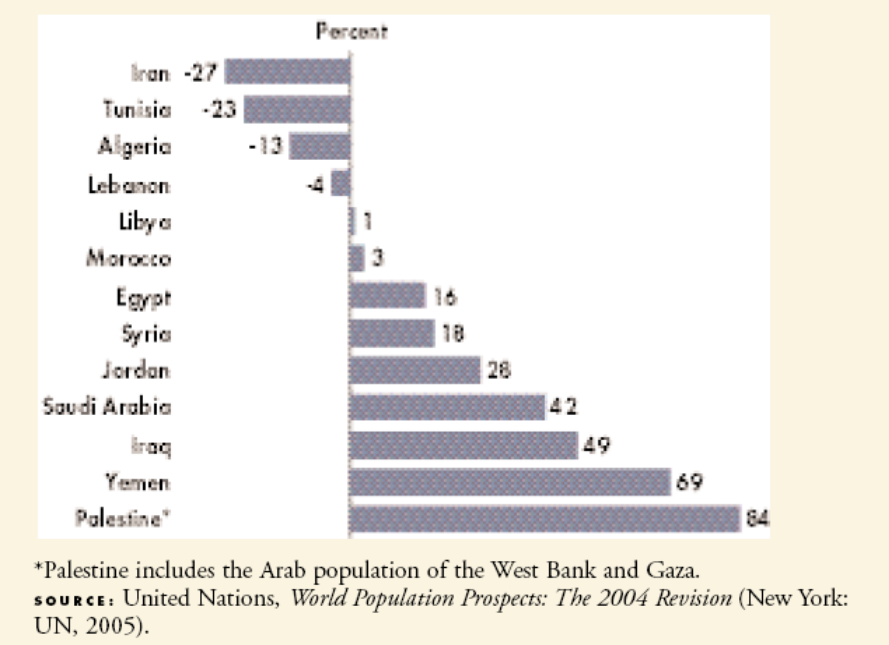
VII- 2- a Demographic Challenge

The population of MENA is growing at about 2 % a year, higher than the world average which is 1.2 %(Population Reference Bureau 2007, Youth in the Mena: Demographic Opportunity or Challenge). With the decline of child mortality and the slow onset of fertility decline, the MENA region is experiencing an increase in the proportion of children under 15 and those between the ages of 15 and 24, this phenomenon is called a youth bulge.

In 2005, the share of the youth population in MENA countries ranged from 25 percent in Iran to around 15 percent in Bahrain, Kuwait, and Qatar. This percentage goes up to 40% in countries that have a very high fertility rate such as Iraq, Palestine and Yemen(On average, an Iraqi woman gives birth to 4.8 children in her lifetime, while Palestinian and Yemeni women give birth to more than five children). As a result, 15-to-24-year-olds will still constitute around 20 percent of the population in these countries in 2025.

Lebanon on the other hand, has overcome this youth bulge phenomena due to declining fertility and birth rates, on average a Lebanese woman gives birth to 2.5 children. In the graph below, Lebanon's

youth population is expected to decline by 4% in the coming 20 years, where as Egypt will witness a 16% increase, Jordan 28%, Syria 18 and the highest increase will be Palestine 84%



*Palestine includes the Arab population of the West Bank and Gaza.
SOURCE: United Nations, *World Population Prospects: The 2004 Revision* (New York: UN, 2005).

Figure 18: Percent change in the size of youth population in MENA countries (2005-2025)

The Lebanese population pyramid will adopt an inverted structure, where the bulk of the population will be middle-aged . The demand on education as a result of a youth bulge is not applicable in Lebanon as in other MENA countries. Lebanon will still need to provide sufficient access to education for its youth population, but the major challenge is securing sustainable living conditions and job opportunities for its other growing age groups.

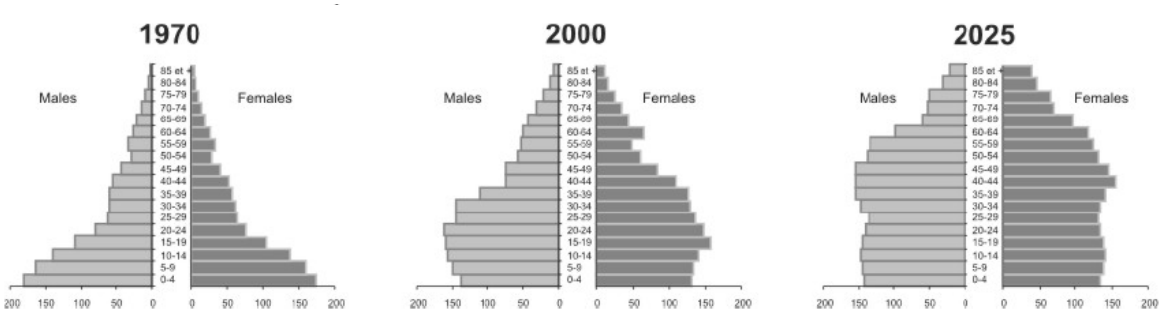


Figure 19: Evolution of the age pyramid in thousands (1970-2000-2025)

VII- 2- b The Job Market

The Lebanese Job Market is highly competitive and unmerited when it comes to the employment of the Lebanese Youth. With 41 higher education institutions and over 26,000 graduates a year, the Lebanese population is suffering from an undervalued over-education human capital due to several reasons. The pursuit of educational attainment is a form of self- actualization as indicated in Maslow's pyramid of needs. Individuals pursue education to improve their social status in society and the way they are perceived in social circles.

The local competition for the scarce job opportunities is very high resulting in the recruitment of over qualified candidates in job post that require less education. Our analysis of the Lebanese Banking Sector over the past ten years has shown that for the same age group of 20-25 the percentage of degree holders has more than doubled reaching 66% in2005. However, the overall

increase of wages in the country has been very minimal; the country's minimum wage was 200 USD up until a few months ago.

Moreover, the increase of wages based on education attainment in Lebanon is not very high. On average a person with a university degree earns 140% more than a person with no degree and only 52% more than an individual with only a secondary degree. These small wages increase in the domestic market, pushes the graduates to seek opportunities else where to insure a fair return on their education.

Currently the age group with the highest unemployment rates are university graduates due to the stagnation of the Lebanese Economy and the scarce job opportunities found in the private and public sector, even government positions are hard to come by, since recruitment in the government has reached a form of a stand-still. These conditions are forcing the Lebanese Youth population to migrate looking for better opportunities outside, more accurately in the nearby Gulf countries. This makes our youth population pursue education as a ticket to secure jobs abroad. Studies about the private return to education in Lebanon has shown it to be very low, confirming the notion that human capital is poorly valued in Lebanon's domestic labour market. Clearly, given its high cost and low domestic return, educational investment mostly makes sense to improve access to better remunerated jobs abroad. Despite the poor domestic return on education, which is stipulated in the low wages offered in the country, and the high cost of living, the Lebanese youth still continue to pursue their education to insure emigration later on.

The fact that unemployment declines strongly with age could suggest that unemployment is temporary for new entrants due to the opportunities for emigration. Under current migration patterns, approximately half of a given generation will have eventually left the country before the end of the age of activity.

With the excessive presence of over-educated humane resources in the country that are placed in low –paying jobs, the world of the unskilled worker his slowing falling apart. In the private sector, the Lebanese unskilled workers are paid very low wages and in the majority of times, the private employers prefer to employ foreign workers who are paid much less than the local Lebanese. In 2007 alone, 121,375 work permits were renewed and issued by the government (Ministry of Labor statistics, 2007), these foreign workers constitute a major threat to the livelihood of the unskilled Lebanese worker who is the forced to pursue his education and secure the education of his children simply as a means of survival. Another option of survival for the unskilled worker is to ensure a low-key post in a governmental agency. The wages paid for government employees with undeveloped skills are relatively higher than those paid by the private sector. A prominent Lebanese Governmental Agency pay as much as 2,000 34USD monthly for unskilled workers in very low posts, even though these employees have been in the agency for more than 20 yrs, the salary they are obtaining simply doesn't compare to the one offered in the private sector which is estimated to be 308 USD/month (Refer to Table 16.16).

Since, recruitment in government agencies is quit difficult and the recruitment process has been at a stand-still for a while, the unskilled worker is again left with the option of either working with an unliveable salary or pursuing education to insure an access to a job abroad.

VII- 2- c Challenges of the Lebanese University

The Lebanese University suffers from a wide array of challenges that can be divided on many levels. First the laws that govern the Lebanese University are archaic and do not reflect the demands of the present and lack many important criteria such as the procedures of hiring new staff and the conditions of retirement. Moreover, the Lebanese University lost a lot of its academic and administrative independence when some of the responsibilities of the university council were shifted

[34] These numbers were give in confidence to the author, and can't be disclosed to the public.

to the council of ministers especially those pertaining to the hiring of employees, which fits well with the political interference of key figures in the matters of the university.

Due to the civil war, the Lebanese University split its faculties and opened in all the regions of the country, this chaotic separation of departments remained until the present and even lead to the development of autonomous units that are totally independent and lack a strategic vision in terms of unity, centrality and identity. These units have tremendous disparities between one another in terms of the quality of teaching, faculty members, facilities and administration. This creates inequality in the delivery of education to the public, and jeopardizes the public sector's competitiveness in the face of the private sector.

Even though the government spending on higher education has increased slightly from year to year, there has been a drop in the number of students registered in the Lebanese University over the years, in 2003, 50.4% of students were enrolled in the LU, in 2007 this percentage dropped slightly to 45%, this can be explained with the flow of university students towards the private sector, especially with the emergence of a large number of new higher education institutions. This drop in students' registration despite the stable (increasing) public spending indicates a form of mismanagement of government resources and strategic inefficiencies of the public sector.

In addition, The Lebanese University lacks a student council, which ensures that the students are involved in the university life since they are key stakeholders. The findings of the study conducted by R. Nasser and K. Abouchedid "Graduates Perception of university training in the light of occupational attainment and the university type"(Education Training, vol 47. No 2, 005, p: 121-133) indicated that the students of the Lebanese University are displeased with the fact that they have no voice in the matters of the university, and have a number of complaints regarding quality of teaching, facilities of the university and the services provided. Moreover, the administration of the Lebanese university suffers still from paper-based system, which is time-consuming and ineffective; the presence of a PC is somehow minimal in the daily administrative tasks of the university.

VII- 2- d The large number of newly established universities

In the past decades, a large number of higher education institutions were established; amounting to 40 in 2008, most of these institutions were established in the late 1990's early 2000s. Since the Education sector in Lebanon lacks a strategic vision and governmental monitoring, the spurt of these universities was uncontrolled, chaotic and lacked any form of direction other than profitability and business.

VII- 3 The sequence of choices

On the basis of this diagnosis, what are the challenges?

- External challenges that relate to the system as a whole, questioning first its desirability (objectives) and second its resilience, efficiency and sustainability (means).
- Border challenges that relate to the interaction between the system as a whole and the higher education subsystem in particular, questioning first the extent to which and the channels through which the subsystem serves the global one (physiology) and, second, the extent to which voluntary or involuntary changes in the subsystem can affect the global one (surgery or pathology).
- Internal challenges that relate to the internal functioning of the higher education system; they depend first on the definition of the actors of the system with their respective positions and relations (structuring) and second on the actual performance of each of them within its domain with all the broad spectrum of the "sciences of education" (operations).

This is not a simple enumeration but rather a logical sequence where the choices and the responses adopted at one level command the questions that have to be addressed at the next one. And within each level, "reforms" have to be set in two stages: defining objectives and then choosing the path (or the strategy of alternative paths) to achieve it; acknowledging the rules of functioning as a prerequisite to proposing proactive or preventive actions;

The matters that appear at the first stage of each of those three levels can hardly be considered as matters for which recommendations can be proposed: they are either commanded by higher level considerations or they derive from initial conditions or they result from normative trade-offs or any mix of these three situations. Matters that fall within the second stage of the three levels are more prone to rational, technical and economic choices, but only as a function of recognized and accepted outcomes for the first stage matters.

VII- 4 Path for solutions under the prevailing socioeconomic system

We shall briefly overlook each of the successive links in the chain of decision:

It can be argued that Lebanon should take advantage of a privileged access to a sizeable solvent demand on its fixed assets and resources and that it should do its best to transform these "non-tradable" assets and factors into tradables and to promote them to get the best overall returns. This option is rendered more attractive by the fact that it can develop without the need for a constraining institutional structure; its main requisites are an efficient redistributive system that should be able to redistribute a share of the proceeds of this sale of domestic assets to the whole population so that the feeling of "deprivation" does not provoke reactions that would jeopardize the smooth continuation of the process. This is the choice made by the successive Lebanese governments and one can easily recognize the difficulties of the regulation it implies in the ups and downs of the Lebanese political scene.

But it can also be argued that the Lebanese economy should be able to mobilize the large human and financial resources that are available to it domestically and should hence enjoy much higher growth rates and productivity and go into exporting goods ad services (including education services) rather than deepening its specialization in the "export of skilled labour for remittances". This would require a different mix in the use of the resources (higher investment and lower consumption) but also, most probably, a different institutional setting to cope with the internal tensions that would be exacerbated, at least for a period of time that would be needed to progress on the transition to significantly higher levels of production.

Those two basic orientations deserve being compared at the level of their desirability and feasibility. The choice between them is central in today's Lebanon.

But what whatever orientation is adopted, due attention should be given to the means that are necessary to ensure its efficiency and sustainability.

A recent study[35] systematically explores the conditions under which changes in behaviours or initial conditions can make skilled migration induce an accumulation in human capital. The "results suggest that while certain structural parameters can favour simultaneously higher human capital accumulation and higher skilled migration - such as high ratio of remittances over domestic incomes, high dependency ratios in migrant households, low dependency ratios in source countries, increasing returns to scale in the education sector, technological transfers and export market access with Diasporas, and efficient financial markets - this should nevertheless not prompt to conclude that higher migration encourage the constitution of higher stocks of human capital in source countries". Nevertheless the closer factors to producing an accumulation of human capital appear to be the

35 Sébastien Dessus et Charbel Nahas: "Migration and Education Decisions in a Dynamic General Equilibrium Framework", World Bank Policy Research Working Paper Series, number 4775, November 2008

increase of returns in education (internal efficiency) and swifter allocation of resources to meet the advantage of investing in education (larger expenditure).

Moving towards the "trade in goods and services" option is clearly a more desirable option for a country like Lebanon mainly from a collective and long term view (since remittances significantly sustain the consumption levels for the time being) but only under the condition of a stronger political will and a smarter management of opportunities and shocks. But even within the prevailing "trade in factors" option, several serious difficulties have to be confronted:

- In view of the persistently high migration of skilled people, the accumulation of human capital domestically remains vital to ensure the competitiveness of several sectors that are exposed to the exterior, to maintain an acceptable level of public services and management and to feed the education system (and its higher education segment more specifically) with competent professors. It hence necessitates an ever increasing mobilization of resources towards education and more acutely significant improvements in the efficiency of education.
- In quantitative terms, the well-off households will be able to cope and, considering the "duality" of the system, exempting (private) education from VAT is highly regressive and should be removed. But, external and charitable assistance put aside, the main challenges will fall on the Lebanese University that will face the difficult trade-off between an ever increasing number of students and an acceptable level of quality, considering the tight constraints that the poor situation of public finance will put on its budgets.
- In qualitative terms, the segmentation of the supply induces higher costs and lower efficiency: the available resources for higher education (qualified professors and material equipment alike) are limited and Lebanon is not able to reconcile the redundancy of branches and specializations across universities in general and within the Lebanese University in particular:
    - Specializing the different branches of the same faculties, at least beyond the first cycle of higher education, would allow for a mobilization of the resources available in the whole country but would also require a higher mobility of students with the subsequent costs of transportation and investments in dormitories.
    - As a complementary action, disentangling redistribution from the provision of public services would be welcomed and would translate into better remunerations and larger research means for the qualified professors but would also imply political and financial costs to reallocate the others who have been hired for social and political considerations.
    - Several actions could be undertaken with the aim of reinforcing complementarities between the different private universities and the LU: common programs, pooled resources, coordinated curricula, more transparent management, etc.
- Lebanon still benefits from significant advantages to regain its regional position in exporting higher education services but this has certain prerequisites: attracting a prestigious teaching body, building academic reputation and develop collaboration with international higher education establishments.

VII- 4- a Structural actions that impact the job market

At the Governmental level, the Lebanese government should adopt new developmental strategies and initiatives that encourage the investment in physical capital as opposed to human capital to insure the creation of new job opportunities that would provide the Lebanese youth with a fair return on their investment and would mitigate their migration abroad in the pursuit of their living. Moreover, since the market for Lebanese unskilled labor is overflowed with cheap foreign unskilled labor, thus discouraging investment in physical capital and keeping productivity low, a different immigration policy should be designed.

. Regarding education, the Government should adopt a more hands on and strategic approach regarding the vision and objectives of education in Lebanon. It should monitor and supervise the quality of learning and education of these newly established universities and higher education institutes to insure that the students are getting the quality that are paying for. Moreover, it should encourage research and publications as a form of public goods that are issued by these universities. Lebanon has a strong research capacity which is pillared on its educated human capital, this would make it easy for it to perform extensive researches and issue publications that would benefit the Arab world.

VII- 4- b Actions at the level of the Lebanese University

The Lebanese University has several areas that require improvement. The Lebanese University should guarantee an optimal distribution of departments and specializations between the four campuses (taking into account the specific regions and their needs concerning the job market), with an orientation more focused on disciplines that have an applied or technological approach since they are currently more coveted by the market. It should revise the status of teachers, subscribe them in continuous training, and encourage research and scientific publications according to internationally recognized norms. There should be a form of unity between all the branches of the Lebanese University to insure equity in the quality of education. Physical unity of students on the graduate level is deeply encouraged, it would be beneficial and cost affective to unite the physical campuses of the Lebanese University on the graduate level to allow a form of interaction between the students.

VII- 4- c Actions at the level of the other universities

The lack of coordination between providers also generates important waste. From a developmental perspective, it is important that clear policy objectives and targets guide budgetary allocations, and, in turn, the budget itself generates the adequate information to insure a proper funding of key policy objectives. This review of public expenditures could not identify neither clear policy objectives nor how budgetary allocations relate to them. This issue is not specific to social sectors (as is neither the quality of the public administration or governance), and should be dealt with through civil service, public administration and budget process reforms (See Chapter IV). Yet, it implies at the sector level an overlapping of public providers in the provision of heath, education and social services, hence redundant or excessive capacities. The insufficient coordination[36] with the private sector, in the face of lacking information on the nature and extent of services provided and absence of sector and nation-wide objectives (which could help both public and private operators to plan future needs and investment opportunities), is also a great source of potential duplication and waste of national resources.

VII- 4- d Other fields of action

From a purely public expenditure perspective, various cross-cutting reforms need to be considered. An important principle to keep in mind is that public expenditures should focus on key public goods domains (primary health care and education, and social protection for instance), and complement the provision of social services supplied by the private sector, particularly given the historically large size of the latter in Lebanon. In addition, better regulation of the private sector is needed (such as setting up an accreditation and quality assurance mechanism for universities) and enhanced coordination between the private and public sectors must be sought. Beyond general recommendations regarding public expenditure management or civil service reform, the following actions could be considered in the social sectors[37]:

[36] Worth noticing however that the Ministry of Health made important progresses in that regard in the recent years by putting in place an accreditation system for public and private hospitals, hereby setting quality and price standards.

[37] There are additional areas of government interventions that can have effects on the social sectors but are not examined in this chapter though they should be part of any human development strategy. Such issues

- Public social sector spending must be focused on poor and low-income groups and on reducing regional disparities;
- Through changes in the public sector salary system, incentives and a level playing field in the labor market must be created by gradually shifting away from the currently "benefit based" system and towards increasing the share of wages and decreasing the share of benefits in total worker compensation;

range from an overall assessment of the performance of the Government's budget process (including specific recommendations for the budget, for example performance based budgeting) to sectoral issues such as pensions, labor, employment, unemployment policies, civil service performance and reform, water, electricity, housing, roads, infrastructure, rural development, civil society/NGOs, SMEs development, informal and income generation policies including microfinance, and producer subsidies.

VIII - Conclusion

Lebanon is not faced with the challenge of financing higher education since this is mostly monopolized by the private sector. However, with the absence of a strong Governmental agency to supervise higher education in Lebanon and provide some form of vision and strategy especially for the Lebanese University, we see the percentage of students enrolled in public university decrease and shift to the newly established universities. Moreover, the Government should be able to monitor the growth in tuition fees in the private sector which rarely reflect actual costs but are inflated on the basis of unclear grounds. More importantly, the Lebanese Government should focus on job creation and the investment of physical capital that would generate job opportunities for our youth who are forced to accept local underpaid and undervalued jobs or become the business backbone of regional and international markets.

Annexes

Table 34: Main functional characteristics of Universities in Lebanon, 2007-2008

		Students 2007-2008					Management			Professors			Graduates 2007		
University	Category	Male	Female	Total	Lebanese	Non Lebanese	Male	Female	Total	Male	Female	Total	Male	Female	Total
Lebanese University	LU	24,309	49,867	74,176	70,202	3,974	784	1,056	1,840	3,539	1,717	5,256	2,704	6,182	8,886
Université Saint-Joseph	Classical	3,405	5,956	9,361	8,968	393	176	280	456	819	647	1,466	874	1,492	2,366
American University of Beirut	Classical	3,521	3,557	7,078	5,906	1,172	136	209	345	582	332	914	768	745	1,513
Lebanese American University	Classical	2,555	2,324	4,879	4,038	841	220	218	438	124	72	196	648	564	1,212
Ecole Supérieure des Affaires	Classical	182	203	385	380	5	6	14	20	140	70	210	62	67	129
Beirut Arab University	BAU	11,143	6,518	17,661	7,977	9,684	401	111	512	318	216	534	1,784	1,205	2,989
Université Saint-Esprit Kaslik	Community	3,403	3,388	6,791	6,704	87	57	82	139	661	425	1,086	574	652	1,226
Notre Dame University Luwaize	Community	3,083	1,876	4,959	4,770	189	19	28	47	311	158	469	518	383	901
Islamic University of Lebanon	Community	2,021	1,719	3,740	3,099	641	25	8	33	315	118	433	192	177	369
Balamand University	Community	1,726	1,468	3,194	2,994	200	21	23	44	623	324	947	399	364	763
Université de la Sagesse	Community	1,327	947	2,274	2,255	19	36	29	65	216	59	275	174	151	325
Jinan University	Community	1,116	499	1,615	865	750	43	37	80	164	51	215	72	82	154
Université Antonine	Community	1,004	408	1,412	1,394	18	24	17	41	185	91	276	85	63	148
Haikazian University	Community	271	384	655	619	36	11	19	30	45	44	89	58	80	138
Makassed University in Beirut	Community	83	113	196	172	24	4	5	9	6	8	14	19	17	36
Lebanese International Univerity	Commercial	4,305	3,340	7,645	7,290	355	150	83	233	275	165	440	699	600	1,299
Business and Computer University College Hawai	Commercial	2,046	1,698	3,744	3,210	534	65	85	150	190	120	310	751	472	1,223
Arab Open University	Commercial	2,186	1,266	3,452	3,290	162	25	25	50	90	82	172	181	150	331
Institut C&E Amercian University	Commercial	1,191	999	2,190	1,698	492	32	42	74	139	79	218	354	287	641
American University of Science and Technology AUST	Commercial	1,336	766	2,102	1,954	148	90	54	144	122	89	211	256	174	430

Canadian Hariri University Group for Sciences and Technology	Commercial	567	243	810	778	32	24	21	45	59	49	108	41	30	71
University Institute for Technology and Teaching	Commercial	512	296	808	807	1	10	7	17	63	58	121	114	84	198
Modern University Institute for Business and Sciences Damour	Commercial	405	288	693	635	58	7	7	14	25	18	43	58	63	121
American Institute University for Technology	Commercial	253	168	421	421	0	42	28	70	61	36	97	134	57	191
Ecole Supérieure et Internationale de la Gestion des Affaires Aintoura	Commercial	248	160	408	407	1	7	12	19	33	13	46	145	66	211
University Center for Technology Deddeh	Commercial	294	105	399	397	2	7	9	16	46	17	63	108	34	142
Manar University	Commercial	79	54	133	128	5	11	8	19	26	25	51	36	12	48
Imam Ouzai Islamic Faculty	Religious	2,473	2,009	4,482	840	3,642	25	12	37	57	3	60	129	156	285
Islamic University of Beirut	Religious	284	146	430	274	156	8	3	11	23	1	24	28	24	52
Daawa University Institute for Islamic Studies	Religious	193	106	299	161	138	9	2	11	29	0	29	36	14	50
Tripoli Institute for Islamic Studies	Religious	55	108	163	117	46	3	2	5	19	1	20	3	6	9
Middle East University	Religious	80	44	124	114	10	6	4	10	18	5	23	28	13	41
Saint-Paul Institute for Philosophy and Theology	Religious	64	11	75	32	43	5	2	7	22	4	26	12	0	12
Theology Faculty for the Middle East	Religious	10	6	16	6	10	3	2	5	10	0	10	2	3	5
Institut Supérieur Sainte-Famille pour les Sciences de l'Infirmière et la Physiothérapie	Technical	68	188	256	256	0	0	7	7	32	55	87	16	47	63
Higher Education Institute for Physiotherapy Jounieh	Technical	37	23	60	60	0	5	10	15	33	18	51			0
Jouaya Technology University Institute	Technical	34	16	50	50	0	3	0	3	11	3	14	17	16	33
Saidoun Higher Institute for Dental Laboratories Technology	Technical	20	9	29	23	6	2	1	3	4	0	4	6	4	10
Total		75,889	91,276	167,165	143,291	23,874	2,502	2,562	5,064	9,435	5,173	14,608	12,085	14,536	26,621

Source: Centre of Research and Education Development, 2009

Table 35: Distribution of university students by specialty (according to UNESCO ESCED-1997 classification) in 2007-2008

Specialization	Male Private	Female Private	Total Private	Male UL	Female UL	Total UL
Education						
Teacher training and education science						
Arabic Teacher				0	188	188
Art of Education	0	20	20			
Chemistry teacher	0	3	3	2	29	31
Economics teacher				0	10	10
Education	181	858	1039	3	5	8
Education administration	42	110	152	0	4	4
Education and Automation	4	2	6			
Education teacher				1	4	5
Elementary Education	70	399	469			
English Teaching	11	90	101	1	298	299
French Teaching	0	49	49	0	423	423
Geography teacher				1	7	8
History teacher	0	1	1	1	6	7
Information education	1	2	3	28	169	197
Math & sciences teacher	0	1	1	6	218	224
Math teacher	2	15	17	2	11	13
Nursery Education	2	73	75	58	4	62
Philosophy teacher				4	7	11
Physics teacher	2	3	5	3	6	9
Sciences Teacher	7	41	48	2	15	17
Social Studies Teacher				0	22	22
Humanities and Arts						
Arts						
Advertising and creative design	114	219	333	65	158	223
Arts	115	190	305	58	167	225
Cinematography	77	40	117			
Drawing	2	4	6			
Fashion Design	0	13	13			
Music	123	133	256	16	32	48
Photography	213	270	483	10	67	77
Theater	16	16	32	81	114	195
Visual Sciences	2	3	5			
Humanities						

Specialization	Male Private	Female Private	Total Private	Male UL	Female UL	Total UL
Anthropology	2	12	14			
Arab and Oriental Studies	215	272	487	1174	5352	6526
Archeology	11	11	22	87	230	317
Armenian	0	3	3			
Christianity Studies	470	92	562			
English literature	61	515	576	736	3886	4622
French Literature	7	248	255	88	1850	1938
General Culture	386	610	996			
Geography	99	41	140	728	1534	2262
History	194	231	425	1187	1239	2426
Islamic Studies	3654	2518	6172			
Languages & translation	19	346	365	2	24	26
Languages and communication	9	32	41	2	61	63
Literature	0	15	15			
Middle eastern Studies	23	18	41	3	196	199
Philosophy	43	69	112	297	468	765
Religion	53	65	118			
Theology	21	14	35			
Translation	38	410	448	7	228	235
Social sciences, business and law						
Social and behavioural science						
Administration and political sciences	454	275	729	769	1064	1833
Economics	468	457	925	144	533	677
International affairs	57	52	109	8	6	14
Political Science	158	182	340	100	123	223
Psychology	280	884	1164	477	3498	3975
Social Sciences	676	465	1141	840	5397	6237
Journalism and information						
Audio-visual Arts	189	241	430			
Documentation				11	73	84
Journalism	15	89	104	43	201	244
Media	163	411	574	0	3	3
Press and television	164	265	429	37	288	325
Business and administration						
Accounting	1033	698	1731	315	395	710
Accounting Information	124	66	190			
Administration & Accounting				0	316	316
Agriculture Economics	3	2	5	2	5	7

Specialization	Male Private	Female Private	Total Private	Male UL	Female UL	Total UL
Bank Funds Trading	13	19	32			
Banking and Finance	1178	1033	2211	269	475	744
Banking Studies	90	110	200			
Business Administration	8906	7128	16034	1143	1729	2872
Coding of medical information	3	8	11			
Economics and Administration	201	126	327	868	989	1857
Economics of Technology and Communication	3	1	4			
Engineering Management	68	44	112			
Financial Management	1790	1340	3130	8	11	19
Health Management	10	14	24	12	40	52
Human Resource	2	15	17			
Human Resources Management	111	251	362			
Information Management	1549	652	2201	112	112	224
Insurance and reinsurance	40	94	134			
Management	1062	796	1858	99	149	248
Management and Accounting	291	149	440			
Marketing and Advertising	330	435	765			
Marketing and management	874	629	1503	49	56	105
Money and Economics	35	49	84	39	176	215
Money and Tariffs	173	141	314			
Public Relations	15	68	83	55	419	474
Law						
Arbitration	5	5	10			
Church Law	31	15	46			
Criminal Law				3	3	6
General Law	95	43	138	3	8	11
International Law	12	13	25			
Labor Law	5	7	12	6	14	20
Law	3969	1217	5186	2477	2695	5172
Monetary Law	4	1	5			
Specialized Law	40	35	75	4	3	7
Technical Law	10	12	22			
Science						
Life sciences						
Animal Production				1	5	6
Biology	704	1191	1895	1074	2398	3472
Botany	2		2	13	40	53
Microbiotics	10	29	39			

Specialization	Male Private	Female Private	Total Private	Male UL	Female UL	Total UL
Plant Production				4	3	7
Preservation Botany	3	5	8	4	2	6
Zoology	3	1	4	81	237	318
Physical sciences						
Bio- Chemistry	181	324	505	942	2473	3415
Chemistry	341	592	933	691	1583	2274
Geology	9	3	12	1	0	1
Physics	138	125	263	885	483	1368
Sciences	117	117	234	16	36	52
Mathematics and statistics						
Forensic Science	6	8	14			
Math and Economics	10	12	22			
Mathematics	176	280	456	1571	1318	2889
Statistics	19	22	41	120	123	243
Computing						
Communication and networks engineering	95	26	121	130	6	136
Computer Science	1879	792	2671	1375	748	2123
Electrical and Information Engineering	253	62	315	4	3	7
Geographical Information	12	1	13			
Industrial IT	0	8	8	50	31	81
Information Technology	990	180	1170			
Telecommunication	2191	532	2723	185	48	233
Wireless Communication engineering	395	27	422			
Wireless networking	69	14	83			
Engineering, manufacturing and construction						
Engineering and engineering trades						
Civil Engineering	864	158	1022	337	142	479
Computer Engineering	508	97	605			
Electrical Engineering	929	112	1041	71	13	84
Electronic and Electrical Engineering				234	105	339
Electronic Engineering	105	2	107	560	88	648
Engineering Basics	886	129	1015	829	381	1210
Hydraulic Engineering	8	6	14			
Mechanical and Electrical engineering	75	13	88			
Mechanical Engineering	1709	85	1794	556	77	633
Public works engineering	57	20	77	5	4	9
Technological Medical Engineering	337	100	437			
Manufacturing and processing						

Specialization	Male Private	Female Private	Total Private	Male UL	Female UL	Total UL
Craftsmanship design	638	945	1583			
Dental Lab	60	25	85			
Industrial engineering	66	12	78	158	7	165
Industrial Maintenance	37	0	37			
Petroleum Studies	27	4	31			
Technology	13	30	43			
Architecture and building						
Architecture	827	486	1313	430	324	754
Interior Design	323	740	1063	177	495	672
Topography	95	9	104			
Urban design	34	64	98	20	11	31
Urban Planning				2	9	11
Agriculture						
Agriculture, forestry and fishery						
Agriculture	180	82	262	115	127	242
Irrigation	1	3	4			
Health and welfare						
Health						
Dentistry	319	312	631	53	105	158
Food Sciences	30	68	98	3	5	8
General Medicine	1053	783	1836	282	258	540
Health	100	279	379			
Medical Lab	142	298	440	25	268	293
Midwife	0	56	56	0	235	235
Neuro-science	1	1	2			
Nursing	428	922	1350	227	722	949
Nutrition	59	1177	1236	0	13	13
Nutrition Management	35	110	145			
Pharmaceutical Science	2	9	11			
Pharmacy	616	1243	1859	45	188	233
Physiotherapy	143	139	282	71	177	248
Radiology	3	10	13			
Specialized dentistry				46	51	97
Specialized medicine	171	102	273	114	78	192
Speech therapy	0	47	47	1	66	67
Social services						
Advising and counseling	7	34	41	0	2	2
Athletics	118	38	156	124	92	216

Specialization	Male Private	Female Private	Total Private	Male UL	Female UL	Total UL
Phsychogical Rehabilitation	1	69	70			
Psycho-social education	675	514	1189			
Rehabilitation of the disabled				3	33	36
Social and health counseling	3	15	18	2	211	213
Social Counselor	10	74	84			
Special Education	5	120	125			
Services						
Personal services						
Hotel Management	627	330	957	94	64	158
Hotels and Tourism	456	300	756			
Tourism	59	113	172	16	120	136
Tourism guide	1	18	19	2	60	62
Transport services						
Transportation	95	28	123			
Environmental protection						
Environmental Engineering	0	8	8	4	4	8
Environmental management	27	86	113			
Environmental Safety	2	5	7			
Environmental Sciences	10	14	24	2	57	59
Landscaping and environmental management	4	8	12	8	25	33
Total	**51572**	**41417**	**92989**	**24309**	**49967**	**74276**

Source: Centre of Research and Education Development, 2009

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