

Overview of vocational training and education in Lebanon

This report was prepared by the European Training Foundation, with the assistance of Jean AKL, vocational education and training expert, during the second half of 1999 and reflects the situation at that date.



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The European Training Foundation is an agency of the European Union working in the field of vocational education and training in Central and Eastern Europe, the New Independent States and Mongolia and with the Mediterranean partner countries and territories. The Foundation also provides technical assistance for the European Commission's Tempus programme.



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Introduction

This report is one of a series produced by the European Training Foundation in the second half of 1999 on the state of play of vocational education and training systems in six countries of the South Mediterranean region. The countries covered are Algeria, Jordan, Lebanon, Malta, the Republic of Cyprus and Turkey.

Objectives

These reports were prepared at the request of the European Commission and seek to provide a complete overview of the national vocational education and training systems and indications of the key challenges faced by them in a wider development strategy.

It is important to note that, unlike most other studies on the subject, these reports do not aim principally to contribute to project identification. This factor has enabled a broader set of issues to be tackled and has facilitated the integration of information on specific circumstances and political issues that may hinder the development of responsive vocational education and training systems in the countries concerned and are usually not relevant or covered in project identification cycles.

Methodology

Staff from the European Training Foundation and a number of external experts worked in teams to produce the reports.

Work began with an analysis of existing studies carried out for the European Commission or other international organisations. This form of desk research was used to identify the main issues faced by each country and to select key interlocutors.

The second phase of preparation involved visits to the main stakeholders in the countries themselves.

The initial conclusions drawn from these first two stages were then discussed with the national authorities.

An on-going process

These are the first reports that the Foundation has prepared on these countries and, as with other partner countries, we see this as very much an on-going process, each new edition being used a measure of the progress achieved.

Furthermore, given the dynamic nature of the economic and social transformation the countries concerned are undergoing and bearing in mind the medium term goals of the Euro-Mediterranean policy, developments in the vocational education and training systems would benefit from regular evaluation through the updating of the information and the conclusions provided in the reports.

Acknowledgements

The work carried out has been possible thanks to the active collaboration of the following people and organisations:

- The European Commission and in particular its local delegations, whose role in facilitating and advising the team has been crucial;
- The many interlocutors met at different levels in the countries themselves, who have helped the team to focus on the key issues at stake;
- The members of the Foundation's Advisory Forum for the role that they played in the country visits and for the liaison function they played with the relevant national authorities.

1. Summary

1.1. Main conclusions

Lebanon is a parliamentary republic. The country's political system reflects its population and many religions, since power is shared between the different religious denominations. The two main religions are Christianity and Islam, but each is divided into several independent denominations. Seats in parliament and the State's main responsibilities are shared out between the denominations in an intricate way that has not been without problems. The country is divided into six regions which are further divided into departments. Power is highly centralised, although decentralisation has been accepted in principle and discussions of its implementation are continuing.

The State's authority was restored after the end of the war in 1990 and the beginnings of a return to normal life. The resumption of the work of the administration and the various decision-making centres has made it possible to start to regain control of and regulate the economy.

An economic recovery programme was launched in Lebanon in 1992 and has two facets: macro-economic adjustment with a fiscal and monetary component and an infrastructure rehabilitation plan which relaunched the country's economic activity. This programme had good results up to 1996.

The five-year tax adjustment plan introduced in 1998 by the Government was intended to reduce the budget deficit and lower the public debt. To achieve these objectives, the plan sets out a series of fiscal and monetary measures, ranging from improved collection of taxes and duties, through the introduction of value added tax (VAT) to the privatisation of some targeted sectors and the reduction of public expenditure. It is still too early to assess the results of this plan.

The dialogue between the State and the private sector in Lebanon is not based on organised structures but follows a regulated procedure. Communication takes place more often as a result of economic pressures than at organised formal meetings.

Equality of the sexes is generally respected, but varies in different religious denominations and regions. There is nevertheless a substantial labour market imbalance, with women accounting for 27.8% and men for 72.2%.

General education and training run along parallel tracks between which it is possible to transfer, although always from the general to the technical or vocational.

General secondary education leading to university and higher education (provided by universities) is widely preferred to vocational training.

There is a substantial private education market operating in all fields and cycles of education and training, including university and technical and vocational education.

Structure of vocational and technical education (VTE)

VTE has recently been restructured, but has retained a specific structure and organisation. It has two separate fields: **vocational training** and **technical education**.

1. Vocational training concerns trades of a manual type and those whose acquisition does not require substantial general knowledge. It has three levels, leading respectively to:
 - the CAP (Certificat d'Aptitude Professionnelle – Vocational training certificate);
 - the BP (Brevet Professionnel – Vocational certificate);
 - the Formation Professionnelle de Maîtrise (FPM – Advanced vocational training diploma) whose name has recently been changed to the *Baccalauréat Professionnel* (Vocational baccalaureat diploma).
2. Technical education covers trades whose acquisition requires scientific knowledge and high-level techniques. It has three levels leading to:
 - the Baccalauréat Technique (BT – technical baccalaureat diploma) for production technicians;
 - the Diplôme de Technicien Supérieur (TS – Higher Technicians' Diploma) for senior technicians and middle managers, of a post-secondary level;
 - the Licence Technique (LT - Technical diploma) for skilled and highly qualified managers and technicians;
 - the Licence d'Enseignement Technique (LET – Technical education diploma) for teachers for technical education (TE) and vocational training (VT).

Institutional structures

The Ministry of Vocational and Technical Education (the VTE Ministry) was established in 1993, but under a decision taken in principle in 1999 (and not yet implemented), responsibility for education of this kind could be returned to the Ministry of Education (prior to 1993, VTE was a directorate within the Ministry of Education).

There is a *Conseil supérieur de l'ETP* (Higher Council on VTE) in which the main socio-economic players required to play a leading role in the formulation of a VTE development strategy are represented, but this Council has not up to now played a major role in formulating VTE policy.

Conclusions – The main challenges facing the system from the point of view of creating a free trade area

- The increase in quantity that was sought after the war for the purpose of the country's reconstruction was shaped by economic pressures. Despite shortcomings in the quality of the system, **the VTE Ministry's main concern still is to increase the numbers that can be accommodated in the public sector** using joint funding from the State budget and a number of donors (chiefly the World Bank and the Arab Development Fund). The evident limits of this kind of approach highlight the need for a structured overall policy that addresses all the problems raised by VTE.
- In terms of **volume**, the technical education and vocational training system accounts for 26% of students aged 15 and over, a quarter of whom are registered with the 38 public-sector schools (some 16 800) and three quarters of whom are registered with the 400 or so private-sector schools (some 50 000). These figures give an idea of the importance of the private provision of technical training. It also reinforces the need to put in place a **regulatory mechanism that ensure the quality of the training offered by private institutions**.
- The **structure** of the system of technical education and vocational training is fairly appropriate for long technical education, but **inadequate and out-of-date for initial vocational training**.
- There is a **growing mismatch between the inflexible curricula currently being implemented and the quality needs of enterprises** in all sectors. The starting point therefore has to be the identification of skills needs within enterprise, on the basis of a sufficiently representative sample, and the consideration of (enterprise assistance) measures through which they can be identified.
- The **methods and technologies** used for education and training **are traditional and inappropriate**, and rely on an inadequately trained teaching body.
- The administration of this education sector is the responsibility of a specialist Ministry, the Ministry of Vocational and Technical Education. **The Ministry does not have the necessary staff**. It has no choice but to channel all its efforts into the management of day-to-day affairs.
- The refocusing of the VTE system towards the production sector cannot take place without **the involvement of social partners**. Concerted action with the socio-economic players is desired and often talked about by the VTE Ministry, but remains occasional and sporadic. In many cases, it fails to involve the players concerned in any concrete way and has not been placed on the institutional and structured footing that it needs to play the part that it should in the design of policy, strategies and initiatives.
- **Up to now there has been little development of continuing training**. Although employers are demanding this kind of training, they are doing so in a fairly halfhearted way as they fear that they will have to finance this training if it becomes institutional and compulsory.

- **The system for monitoring certificate holders has not been developed to a level that makes it possible to permanently assess** the rate of integration of certificate holders and to gain some idea of the match between education and employment. The establishment of a training /employment observatory should make it possible to adapt training programmes, rescale the output from training options and better gear investment and operating expenditure.

1.2. Main recommendations

Appropriate and evident recommendations, that it would serve little purpose to repeat here, can be formulated for each of the above conclusions. The report reviews those measures that are (or should be) part of actions already planned under projects currently being implemented. At this point therefore, we shall merely, summarise the actions geared to urgent needs that no current initiative is attempting to satisfy (see also Chapter 5 of the report).

1.2.1 Continuing training

Recommended assistance could cover:

- the **design** of a continuing training system;
- the **formulation of a policy and a timetable** for the introduction of continuing training bearing in mind that widespread training of this type is essential;
- the **preparation of the laws and regulations** governing continuing training;
- the establishment of **bodies and management mechanisms for** continuing training;
- the identification of **financing formulae** for this training;
- **assistance with the start-up** of operations.

1.2.2 Socio-economic dialogue

What is involved is dialogue between the training system and the social and economic players. This dialogue should **cover the directions that both initial and continuing training should take**.

Like continuing training, **a legal and regulatory framework needs to be established, appropriate bodies created, procedures formulated**, etc. The assistance discussed here is selective and could involve relatively modest finance. It is nevertheless just as technically indispensable and may, moreover, prove effective in helping to get this kind of dialogue off the ground.

1.2.3 New educational technologies

Making the most of the opportunities offered by the major initiatives currently underway to reform and extend the Lebanese education system, the **immediate introduction of recent educational technologies and teaching methods** is highly desirable. These instruments will help to **improve quality** and performance and will at the same time generate **cost savings**. Their introduction is inevitable over the longer term. The VTE Ministry is not able, however, to undertake this type of measure on its own.

2. Political, economic, social and cultural situation

2.1. Macro-economic context

2.1.1 Economic development over the last five years

The State's authority was restored after the end of the war in 1990 and the beginnings of a return to normal life. With the resumption of the workings of the central administration and the various decision-making centres the control and the regulation of the economy has been regained.

A programme of economic recovery was introduced in Lebanon in 1992 with two facets: a macro-economic adjustment policy and an infrastructure rehabilitation plan. Four years after it was introduced, the economic adjustment policy, through its fiscal and monetary components, had started to provide very encouraging results:

- GDP was increasing by an average of 6.5% per annum;
- The ratio of coverage of expenditure by revenue increased from 16% to 53%;
- Inflation fell from 131% to less than 10%;
- The currency exchange rate fell from 1838 to 1510 LBP/dollar.

Since 1996, however, economic growth has continued to decline as a result of the combined effect of a number of factors: increased cost of servicing the public debt, increased budget expenditure resulting from public sector pay increases and dwindling prospects of regional peace.

The following table shows changes in the GDP growth rate during this period.

	Year						
	1992	1993	1994	1995	1996	1997	1998
Growth rate	4.5%	7.0%	8.0%	6.5%	4.0%	3.5%	2.0%

The GDP growth rate for the current year (1999) is estimated at 1.5%.

The trade balance continued to show a deficit, over the same period.

	Year						
	1992	1993	1994	1995	1996	1997	1998
Imports (in US\$ millions)	3 565	4 940	5 541	6 722	6 992	6 876	6 477
Exports (in US\$ millions)	559	458	544	825	1 017	643	716
Trade deficit (in US\$ millions)	3 006	4 481	4 997	5 897	5 975	6 233	5 761

During the same period, inflation fell as follows.

	Year						
	1992	1993	1994	1995	1996	1997	1998
Rate of inflation as %	131.10	8.86	12.05	9.92	8.9	5.2	4.8

2.1.2 Five-year fiscal adjustment plan

The new Government appointed in November 1998 has drawn up an austerity plan to reduce the budget deficit from its current 13% to 4.5% of GDP by 2003 and, at the same time, to reduce the public debt, currently 128% of GDP, to 96%. The following table shows the anticipated results.

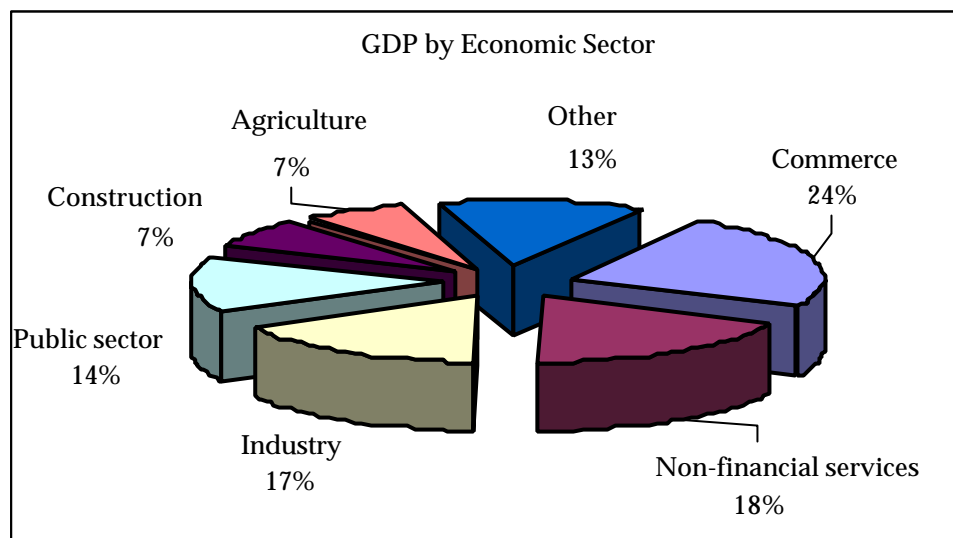
% of GDP					
	1999	2000	2001	2002	2003
Revenue (taxes)	16.8	17.1	19.0	19.1	19.3
Total deficit	-13.3	-12.4	-8.3	-5.6	-4.5
Total debt	127.6	126.7	115.0	105.4	96.3
Debt servicing	14.2	13.8	12.2	9.6	8.6

To achieve these objectives, the plan sets out a range of fiscal and monetary measures, ranging from improved collection of taxes and duties and the introduction of value-added tax (VAT) to the privatisation of some targeted sectors and the reduction of public expenditure. The Government hopes that the application of the plan will have the following impact on the economy as a whole.

	Economic indicators				
	1999	2000	2001	2002	2003
Nominal GDP (LBP billions)	25 999	27 716	30 266	32 735	35 403
Real growth rate (%)	2.0	3.0	4.0	4.5	5.0
Budget surplus (deficit/GDP)	-13.3%	-12.4%	-8.3%	-5.6%	-4.5%
Public revenue (LBP billions)	5 505	5 979	7 209	7 809	8 498
Public expenditure (LBP billions)	8 958	9 416	9 733	9 633	10 081

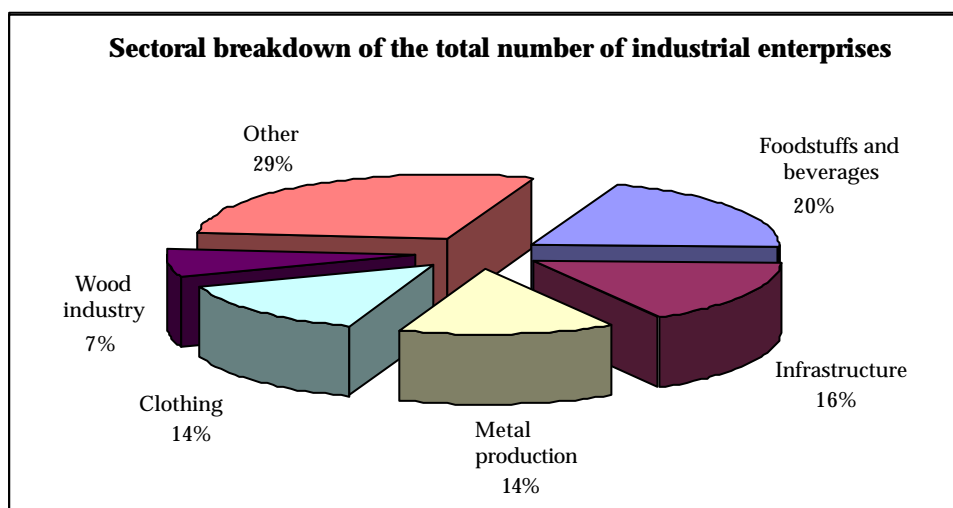
2.1.3 Main economic sectors

In 1996, GNP was US\$ 12 993 million, split as follows between the main sectors (as % of the total).



The chart shows the relative importance of the services sector (commerce and non-financial services), followed by "industry". In the case of the latter, the industrial census conducted in 1995 surveyed close on 22 000 enterprises, employing some 145 000 employees, i.e. an average of 6.5 people per enterprise. Lebanese industry is therefore not very concentrated and has only a small number of medium-sized enterprises; 70% of the total have less than five employees, while enterprises with more than 10 employees account for only 9.5% of the total.

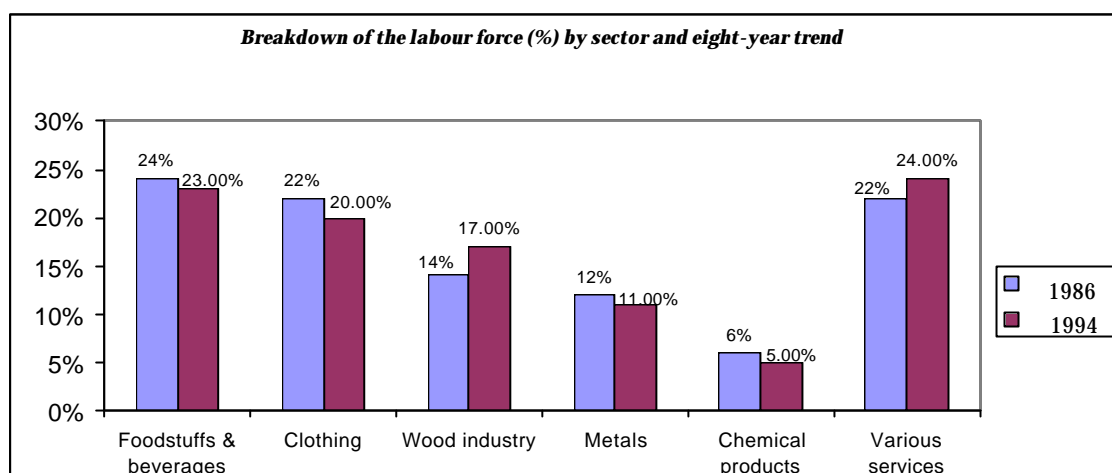
Within the industrial sector, five branches account for 71% of enterprises, i.e.



Source: "Le Commerce du Levant", 23 September 1999

The other sectors, accounting for 29% of enterprises, employ 40.4% of the labour force and generate 48% of revenue.

The breakdown of workers by main sectors of the economy is as follows (see Annex B).



Source: "Le Commerce du Levant", 23 September 1999

2.1.4 Employment levels and unemployment rates

The survey conducted in 1997 by the Central Statistical Administration on the living conditions of households gave the following results:

total population	4 005 025
workers	1 246 173
unemployed	116 058
in education	1 236 528
inactive population	1 406 266

The number of unemployed (including first-time job seekers) from the total active population of 1 362 000 was estimated in 1997 at 116 000, i.e. an unemployment rate of 8.5%. This rate is slightly higher among men (9.0%) than among women (7.2%). Different sources give, however, different estimates of the unemployment rate which range from: 15% according to the "Oxford Business Group", 12-14% according to the United Nations Development Programme (UNDP report, 1997).

Most of this unemployment is among young first-time job seekers (5.0%). The remainder of the unemployed (3.5%) have lost their jobs and are looking for a new position. Among young unemployed people, 28.6% are in the 15-20 age-group and 17.8% in the 20-24 age-group.

From a regional point of view, unemployment levels are highest in North Lebanon and the Bekaa (10.3 and 10% respectively). (See Annex F for further details.)

With regard to the official statistical estimates one common denominator is the doubt expressed by independent observers over the declared size of the workforce. Their view is that the foreign labour force is much larger than the official figure of 300 000 (duly registered population with the necessary permits) and may be more than three times this figure. These "illegal" workers work chiefly in agriculture and construction (chiefly Syrians and

Egyptians) and domestic services (nationals of Asian countries: Sri Lankans, Filipinos, Indians, etc.).

2.1.5 Factors influencing vocational training

In a context of ever increasing competition, of which the main features are the opening up of markets and the technological revolution, all components of the Lebanese economic fabric will have to introduce restructuring and modernisation measures enabling them to sustain competition both regionally and internationally. These measures must include the qualification of human resources.

A survey has recently been conducted among some industrial sectors in order to compare the future breakdown of workers, by vocational qualification levels, with the current breakdown. The findings are shown in the following tables.

1) Sector: Graphic arts

	Qualification level				
	Higher Technician	Technician	Skilled worker	No training	Average wage (US\$)
Current breakdown	8%	22%	30%	40%	533
Future breakdown	10%	40%	50%	0%	610

2) Sector: Plastics industry

	Qualification level				
	Higher Technician	Technician	Skilled worker	No training	Average wage (US\$)
Current breakdown	5%	10%	15%	70%	406
Future breakdown	30%	40%	20%	10%	595

3) Sector: Electrical industry

	Qualification level				
	Higher Technician	Technician	Skilled worker	No training	Average wage (US\$)
Current breakdown	5%	30%	25%	40%	397
Future breakdown	15%	45%	35%	5%	520

4) Sector: Clothing

	Qualification level				
	Higher Technician	Technician	Skilled worker	No training	Average wage (US\$)
Current breakdown	10%	40%	30%	20%	400
Future breakdown	20%	50%	30%	0%	475

Source: "VTE - preliminary assessment", Consultation & Research Inst. 1997.

Comments:

- a) There is an evident trend towards the employment of a highly skilled labour force.
- b) Unqualified labour force seems set to gradually and almost completely disappear.

2.1.6 Factors influencing social dialogue

Apart from some public utilities - such as electricity, telecommunications and water - the Lebanese economy is entirely in the hands of the private sector. There are also plans to privatise almost all the State's industrial enterprises.

There has long been informal dialogue between the State and the private sector. Each economic sector has a Ministry which is its natural interlocutor and has bodies responsible for dialogue. Although this dialogue is not based on organised structures and does not follow any regulated procedure, there are various channels of communication that tend to be used more as a result of economic pressures than at pre-planned working sessions.

The Conseil Supérieur de l'Enseignement Technique et Professionnel (Higher Council for Vocational and Technical Education) is the main player in social dialogue in the VTE field. The Council is chaired by the VTE Minister and has 33 representatives from the various economic sectors (including workers) and relevant Ministries. The Council, which must play an active role in formulating development strategies for VTE by analysing the supply of and demand for this service has not, however, fulfilled this role hitherto.

The obstacles can, unusually, be attributed to the private sector: economic, professional and social bodies generally lack structure: their cohesion, ability to plan action programmes and policies and internal administrative abilities and the rationalism of their approaches and their sense of national responsibility need to be further reinforced.

There seems, however, to be a growing interest in developing a coherent dialogue on an institutional footing: the growing maturity of State departments is making them more aware of their importance and the new generations of businessmen, employers and social actors are more aware of the benefits of corporate and national cooperation, cohesion and solidarity.

The main social interlocutors are as follows:

- Workers' trade unions, which are organised by production sector and are members of the Lebanese Labour Federation. They are not generally representative of particular political factions. Their action is currently limited to pay claims, social benefits and the fight against job cuts.
- Employers' organisations, which are also organised by production sector; some have grouped together to form associations. This is particularly true of the powerful Industrialists' Association. In some cases regional groups have also been set up. Their action focuses, understandably, on improving market conditions (customs tariffs, etc.), reducing social and fiscal charges and resisting pay increases. Paying more attention to training and matching it (in terms of both quality and quantity) to labour market needs is, however, becoming an increasingly explicit concern of some groups.

- Exclusively social movements: defence of women's or children's rights, environmental preservation, associations of parents of schoolchildren, etc. These are almost all NGOs, in some cases with links with similar international movements.
- To a lesser extent, some associations of self-employed workers, such as the Orders of Lawyers, Doctors, Engineers or Journalists. They tend to concentrate on organising and regulating the profession and defending certain rights, although in some cases a further objective is to acquire privileges (for instance, a judge cannot try a case brought against a lawyer without the prior authorisation of the Order of Lawyers!).

2.2. Social situation

2.2.1 Equality

Despite minor differences, gender equality is respected. Situations vary, however, in different religious denominations and different regions.

There is no discrimination from the point of view of civil rights: women have had the same electoral rights as men for the last fifty or so years. Although they are not well represented in parliament, the number of women standing as candidates for the legislative elections is increasing. Women are much better represented in regional authorities and the proportion of women elected in the 1998 municipal elections was very significant.

The situation is more complex from the point of view of personal status. Civil marriage does not exist in Lebanon, although there have been strong pressures to introduce it in recent years. Issues relating to marriage and inheritance are therefore dealt with by the religious authorities, through their rites and special courts, and according to their respective regulations. There are many different statutes, especially as regards divorce, custody of children, parental authority and rights of succession.

In social life, gender equality is laid down by law especially as regards women's entitlement to property, employment and public office. It is applied in practice, but the survival of some traditions in certain outlying (and generally poor) regions means that many women are effectively excluded from paid employment, and are limited to domestic work and some rural activities. Employment percentages (see below) reflect this imbalance.

A recent survey of employment has shown that:

- The level of education of working women is higher in relative terms than that of men: 27.5% have a university degree in comparison with 18.4% of men and 38.3% have completed secondary education in comparison with 21% of men.
- The female labour market population is relatively young (68% aged less than 30); the fact that this population includes a large number of single women (48.6%) reflects the tendency of women to leave the labour market as their family responsibilities increase.
- Even though equality is laid down by law, women's overall participation in the labour market continues to be much lower than that of men: 27.8% for women in comparison with 72.2% for men.

- 24.22% of the female active population are employed in the education sector, 16% in services and commerce, 15.34% in domestic work, 11.5% in industry and 8.34% in the health and social work sector.

2.2.2 Cultural situation

It would not be an exaggeration to say that the main concern of the Lebanese has always been to give their children an education that is as sound and extensive as possible. As the State has never been in a position to provide free education, a large private market has developed. It covers all cycles and all fields of education and training: nursery, primary, secondary and technical schools as well as university institutions. This particular feature has helped Lebanon to occupy a leading position among the countries of the region, with a literacy rate of 88.4%.

In Lebanon, education is seen both as a secure foundation and as a way of gaining social standing. The preference is therefore for the higher levels of university education. As a corollary to this trend, academic secondary education, leading to university, tends to be preferred to VTE. The growing poverty of the population, however, combined with some improvement of the status of VTE disciplines and qualifications since the 1960s, is helping to promote a growing interest in VTE.

The French mandate (1918-1943) played a large part in making French the predominant language. Cultural relations between France and Lebanon, although informal, date back at least to the 19th century. English is being used and taught to a growing extent. Under Lebanese curricula, it is compulsory for students to learn at least one foreign language, and most schools teach French and English, to varying extents, alongside Arabic which is the official language. Over 70% of schools teach French as the main foreign language.

In public-sector technical schools, whether secondary or post-secondary, teaching is almost always in French. Some private schools have, however, adopted English, although they represent a small proportion of the total in this sector. Very few specialised courses are given in Arabic.

The following table reviews the languages used in VTE:

	French only		English only		French and English	
	Number of schools					
	Level					
	Secondary	Post-secondary	Secondary	Post-secondary	Secondary	Post-secondary
Public sector	20	8	-	-	3	3
Private sector	202	23	30	4	46	14
Total	253		34		66	
%	71.67		9.63		18.70	

2.2.3 Political situation

Lebanon is a parliamentary republic. Under its constitution, citizens are equal, legislative, executive and judicial powers are separated and religious freedom and human rights are guaranteed.

The country's political system reflects its population and their many religions, since power is shared out between the different religious denominations. The two main religions are Christianity and Islam, but each is divided into several independent denominations. Seats in parliament and the State's main responsibilities are shared between the denominations in an intricate way that has not been without problems. Under the constitution, the Presidency of the Republic is the prerogative of the Christians (Maronites), the Presidency and the Vice-Presidency of the Council of Ministers are the prerogative of the Muslims (Sunnites) and the Christians (Greek Orthodox) respectively, and the Presidency of the Chamber of Deputies is the prerogative of the Muslims (Shiites). All powers relating to personal status (marriage, divorce, inheritance, etc.) are, moreover, held by the religious authorities or are subject to their respective regulations. Lastly, senior posts in the public administration are divided between the religions.

There is a single chamber of representatives elected by universal suffrage: the Parliament, whose term of office is four years. The President of the Republic is elected by the Parliament for a term of six years. Powers are exercised according to general democratic principles.

Lebanon is one of the founding members of the United Nations and the League of Arab Nations.

The country is organised into six administrative regions (mohafazat), each being further divided into departments or cazas (3 to 6). Powers are, however, highly centralised in central government, although decentralisation has been accepted in principle and discussions of its implementation are continuing. The local authorities, in particular municipalities, nevertheless have some powers: collection of local taxes, granting of building permits, administration of roads, urban development, etc.

The role of regional and departmental administrators is largely one of representing central government. Some prerogatives (not decision-making) have been conferred directly upon them, in particular in sectors that have already been decentralised, such as primary and secondary education, town planning and agriculture. There is no regional representation between the parliament and the municipalities.

Private sector intervention in social projects is not regulated. Many initiatives have been launched, however, by non-governmental organisations. They are chiefly social in nature and actions are often concerted with the relevant Ministries, especially the Ministry of Social Affairs. Professional organisations (orders of doctors, engineers, lawyers, pharmacists, etc.) play a regulatory role in the practice of these professions and for this reason have fairly extensive internal powers. These organisations, when they also act as unions, may be very influential. Workers' trade unions – acting as a confederation – are also a powerful pressure group. Over the last ten years, however, trade union action has simply involved defending workers' rights from the point of view of pay and direct social benefits, and has shown no explicit concern for training.

3. Analysis of the technical education and vocational training system

3.1. Description of the education and training system

3.1.1 Review of the education and training system

The new structure of the education system, which is being implemented *progressively* from the 1997/98 academic year, organises education and training into four main cycles: preschool, basic, secondary and higher education. General education and training follows parallel tracks between which it is possible to transfer, although always from the general to the technical or vocational.

- a) Preschool education includes kindergartens, possibly preceded by an infant class.
- b) Basic education has two sub-cycles: six years of primary education, which is set to become the period of compulsory education, from the age of 6 (there is no compulsory education at present in Lebanon) and lower secondary education lasting three years. The latter is divided into two options: general education and qualification module-based vocational training.
- c) These two sub-cycles (primary and lower secondary) lasting a total of nine years make up “basic education” leading to a national certificate. Basic education is normally completed at the age of 15. Under the previous system, which is gradually being phased out, primary education lasted five years and lower secondary four years; the total of nine years has not therefore been changed.
- d) There are two main options after basic education: general secondary education leading to the academic baccalaureate with four options and the technical education and vocational training system described in further detail below (see point 3.1.2).
- e) Academic secondary education lasts three years:
 - a first common-core year
 - a second year, with two options: humanities and sciences;
 - a third year with four pre-specialisation options: literature and humanities, sociology and economics, biology and general sciences.

3.1.2 Current structure of vocational and technical education

Even though a general structure of education and training, shown in the diagram of Annex A, setting out a specific architecture for technical and vocational education, has been approved, the latter *is continuing to apply its own organisation, as described below* (see diagram on following page).

Vocational and technical education (VTE) has two separate areas:

- vocational training
- technical education.

Vocational training concerns manual trades and those whose technological development does not involve very extensive general knowledge. There are three strands of vocational training leading respectively to:

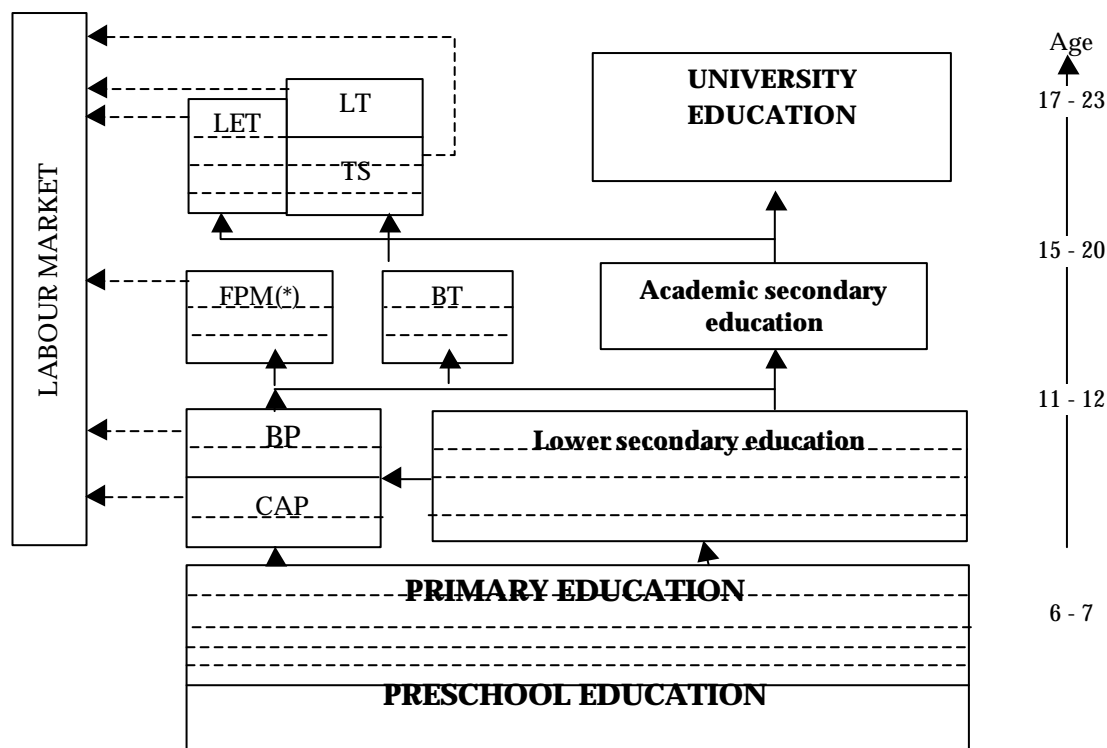
- the Certificat d'Aptitude Professionnel (CAP – vocational training certificate);
- the Brevet Professionnel (BP – vocational certificate);
- the Formation Professionnelle de Maîtrise (FPM – Advanced Vocational Training).

(Under a recent decree, the name of the Formation Professionnelle de Maîtrise (FPM - advanced vocational training diploma) certificate has been changed to the “Baccalauréat Professionnel” - vocational baccalaureat). Steps are also being taken to abolish the CAP and BP and replace them by a single cycle of initial vocational training for some purely manual trades.

Technical education concerns trades whose mastery requires high-level scientific and technological skills, thereby requiring more extensive general education. There are three levels leading to:

- the Baccalauréat Technique (BT – technical baccalaureat diploma), for technicians able to perform production tasks;
- the Diplôme de Technicien Supérieur (TS – Higher Technicians' Certificate), for senior technicians and middle managers, of a post-secondary level, able to perform production and supervisory tasks;
- the Licence Technique (LT – technical diploma) for highly skilled specialist managers and technicians able to design projects and put them into practice;
- and the Licence d'Enseignement Technique (LET – Technical education diploma) for teachers of technical and vocational education.

The following diagram summarises the technical and vocational education system currently in force (the length of the primary and lower secondary cycles will change to six and three years respectively in 2002).



(*) The name of the FPM (Advanced vocational training diploma) has been changed to the “Baccalauréat Professionnel” (Vocational baccalaureat diploma).

3.1.3 Legislative framework governing vocational and technical education

- 1) The system of education cycles, as described above, was introduced under Decree no. 7880 of 25 July 1967, as amended by Decree no. 2872 of 21 April 1980.
- 2) Prior to the creation of the Ministry of Vocational and Technical Education, vocational and technical education was a Directorate-General within the Ministry of Education. Its administrative structure, powers and prerogatives were governed by Decree-Law no. 15742 of 11 March 1964. This Decree-Law also set up the Independent VTE Fund, introduced the Multipartite Projects and authorised VTE to undertake profit-making work, marketed solely according to market principles and practices, in its schools. The Multipartite Projects, set up by simple contract with one or more public or private bodies, are financed by appropriations from the VTE budget, contributions from the Independent Fund and contributions in cash, services or materials from the contracting parties; they can be production-based or purely socio-educational. Financial revenue from commercial operations, and the school enrolment and public examination fees of school students are paid to the Independent Fund.
- 3) The Institut Pédagogique National de l'Enseignement Technique (IPNET – National Teacher Training Institute for Technical Education) was established under Decree no. 16983 of 27 July 1964.

- 4) Law no. 62/64 of 30 December 1964 organises private technical education and regulates the opening and operation of its schools. The most significant provision of this law is that it prohibits private schools from awarding qualifications: they may either prepare their students to sit public examinations leading to an official qualification or issue attendance certificates whose terms are strictly governed by law.
- 5) The Ministry of Vocational and Technical Education was established under Law no. 211 of 2 April 1993 and organised under Decree no. 8349 of 2 May 1996. This Decree merely extends the Ministry's administrative tasks and divides tasks and responsibilities between its departments in a new way.
- 6) Decree no. 7262 of 4 August 1961 introduced continuing training for teachers taking the form of summer schools that it was compulsory for teachers to attend. This Decree has fallen into oblivion and has not been replaced by any other provision.

3.1.4 Financing mechanisms

- 1) The VTE Ministry budget is part of the State budget. It is therefore funded solely from the various revenue items of the public exchequer, since no apprenticeship tax is specifically earmarked for this budget. All the administrative and operating expenses of public schools are covered from this budget. Relating the Ministry's total operating budget to the number of students in public schools gives an average annual public expenditure per student of US\$ 1 340. Students pay for their own supplementary expenses (books and supplies, transport, etc.) which are estimated at US\$ 343/annum. They also pay a modest annual registration fee as shown in the following table:

Level	Registration fee	
	LBP	\$ equivalent
Vocational training certificate(CAP)	120 000	80
Vocational certificate (BP)	120 000	80
Technical baccalaureat diploma (BT)	160 000	106
Higher Technicians' Diploma (TS)	200 000	133
Technical diploma (LT)	200 000	133

- 2) All funding for private schools run by individuals comes from the enrolment fees paid by students, which vary from US\$ 1 000 to 2 000 per annum.
- 3) Semi-public schools (of the NGO type) receive a State subsidy, paid chiefly by the Ministry of Social Affairs, that takes the form of study grants awarded to students but paid directly to the school. The amount of the grant is some US\$ 335 (LBP 500 000) per student per annum. Students pay a minimal additional contribution. In 1999, the Ministry of Social Affairs contributed in this way towards the education of some 20 000 students in 155 non-public schools.

This summary shows the major financial contribution that the State makes to education and training. Taking all sources into account, the State bears the education costs of some 60% of all students in the country's schools.

3.1.5 Links between training and general education

Under the regulations still in force, a student completing primary education can opt for vocational education leading:

- after a two-year course, to the CAP (vocational training certificate);
- after a two-year post-CAP course, to the BP (vocational certificate).

A student who has completed two years of lower secondary education can also enter vocational education and attend a two-year course leading to the BP.

Following lower secondary education, students can move on to general secondary education or opt for a three-year technical education course leading to:

- the BT (technical baccalaureat diploma), or
- the FPM (advanced vocational training diploma), now called the Baccalauréat Professionnel (vocational baccalaureat diploma).

Following secondary education (general or technical), students can enrol at a technical college to prepare for one of the following qualifications:

- the TS (higher technicians' certificate), after a three-year course;
- the LT (technical diploma), after a two-year post-TS or four-year post- technical or academic baccalaureate course.
- The LET (technical education diploma), after a two-year post-TS or four-year post-baccalaureate course.

Qualifications, corresponding course lengths and admission criteria are summarised in the following table.

Qualification	ISCED Level	Length (years)	Admission criteria
I- Vocational training			
CAP: vocational training certificate	1	2	Completion of primary education
BP: Vocational certificate	2	2	Award of CAP, or completion of two years of lower secondary education
FPM: Advanced vocational training diploma	3	3	Award of BP, or of lower secondary certificate
II- Technical education			
BT: Technical baccalaureat diploma	3	3	Award of BP, or of lower secondary certificate
TS: Higher technicians' certificate	4	3	Technical or academic baccalaureate
LT: Technical diploma	5	4	Technical or academic baccalaureate, two-year post-TS course
LET: Technical education diploma	5		

VTE therefore represents a more or less final exit from the general education system. Any movement in the opposite direction is extremely difficult, if not impossible.

3.1.6 Other official forms of vocational training

In 1994, the Ministry of Vocational and Technical Education (the VTE Ministry) signed a protocol of cooperation with the German Government, represented by the GTZ (Gesellschaft fuer Technische Zusammenarbeit - German Agency for Technical Cooperation), in order to introduce the DUAL training system into Lebanon. The first phase of the agreement was implemented from the 1996/1997 academic year onwards in four training centres and covered two trades: industrial engineering and automobile engineering. During the second phase, scheduled to start in 1999/2000, the DUAL system will be introduced into 10 centres and will cover five different trades. This training is at the new vocational baccalaureate level.

The VTE Ministry also introduced, from the 1995/1996 academic year, an accelerated vocational training programme, lasting between 300 and 900 hours and relating, in its first phase, to 12 construction sector trades. The VTE Ministry is planning to extend this kind of training to ten or so industrial trades. In both cases, the training relates to basic, often purely manual, trades and is aimed chiefly at young people and adults who left school prematurely during or towards the end of primary education.

Private schools offer short-term training which does not lead to any official qualification, but only to an attendance certificate signed by the school principal. It is estimated that some 18 000 students are attending this kind of training.

3.1.7 The private provision of vocational education and training

As has already been mentioned, the private sector plays a vital role in the provision of VTE. The private sector absorbs 75% of the total VTE demand.

The Law 62/64 of 30.12.1964 organised the private provision of vocational education and training and allowed for the establishment of private schools. The Law, however, forbids private schools to deliver official certificates (diplômes). Schools can prepare students to sit at the official examination but can only provide school certificates.

Since the introduction of this law the number of schools has increased constantly. At the moment it is estimated that there are almost 400 private vocational schools that enrol approximately 50,000 students. (The number of public schools is 38. They account for roughly 17,000 students).

Private VTE schools have to follow the official curricula if they prepare students to sit for the official diplomas, awarded by the Ministry. In circumstances where training is not geared to preparing pupils for these exams, schools execute their own curricula and provide the student with a school certificate. These certificates are not officially recognised. Some of these curricula can be compared to accelerated vocational training or to continuing training courses.

Concerning their financing, schools can apply the fees of their choice. Fees are then subject to the laws of supply and demand.

Private schools can also accept students of different ages in the same class. They often provide evening classes as a way to increase their revenue.

Most of the private schools are situated in densely populated regions, Beirut and its suburbs attracts 56% of the total number of private schools. The remaining 44% are situated in departmental/regional capitals.

As mentioned in previous chapters, the specialisation provided at private schools involves classroom-based training without any support for learning how to use equipment. This complies mostly with specialisation's in the tertiary sector, accountancy, business administration or light industry such as electronics and computer sciences. This is of course due to financial reasons: this type of specialisation not needing high capital investments.

Given the current trend to obtain government awarded diplomas, private schools are increasing their offer of long training courses, to the detriment of short training courses attested by school-delivered certificates.

The need for private provision of VTE is indispensable given the high number of students. It would be impossible for the public schools to cater for the demand that is currently absorbed by private schools. However, an important problem, that has been underlined in the conclusions, is the lack of mechanisms that can ensure the quality of training provided by those schools.

3.1.8 Comparison of numbers in general education and in vocational and technical education

1) Numbers by level

The following table is based on data for the academic year 1997/1998.

Level	General education	Vocational and technical education			Total	VTE as % of total
		Public	private	total		
Lower secondary	234 683	1 590	4 063	5 653	240 336	2.3
Secondary	86 564	11 096	20 287	31 383	117 947	26.6
Higher*	87 330	3 584	7 004	10 588	97 918	10.8
Crash Course	-	600	18 702	19 302	19 302	100
Total	408 577	16 870	50 056	66 926	475 503	14.1

The term "higher education" is used systematically in Lebanon for any regulated post-secondary education.

Sources: Direction Générale de l'Enseignement Technique et Professionnelle and Centre de Recherche et de Développement Pédagogique

Comments on this table:

- The negligible percentage (2.3%) of numbers in lower secondary vocational education is in keeping with the general policy to abolish the CAP and BP and replace them with accelerated initial training modules.
- Numbers in secondary technical education (BT and FPM) account for a moderate percentage (26.6%). This percentage, although improved in comparison with previous years, remains below training needs at this level.
- Numbers in higher technical education (TS-LT-LET) are low (10%) in comparison with total numbers in higher education, showing the preference for university education, which is seen as the only channel of social advancement.
- Accelerated and informal training is highly concentrated in the private sector (97%) and reflects a genuine demand.

2) Breakdown of numbers by region and by sex

The breakdown of students in vocational and technical education, by region and by sex, based on data from 1997/1998, is as follows.

Region	Numbers (public + private)	% of total	Sex			
			M	%	F	%
Beirut	11 655	17.4	7 073	10.6	4 582	6.8
Greater Beirut	28 399	42.4	15 932	23.8	12 467	18.6
Mount Lebanon	5 545	8.3	2 578	3.8	2 967	4.4
North Lebanon	9 569	14.3	5 437	8.2	4 132	6.2
Bekaa	4 983	7.4	2 684	4.0	2 299	3.4
South Lebanon	5 064	7.6	2 895	4.3	2 169	3.2
Nabatieh	1 711	2.5	756	1.1	955	1.4
Total	66 926	100	37 355	55.8	29 571	44.2

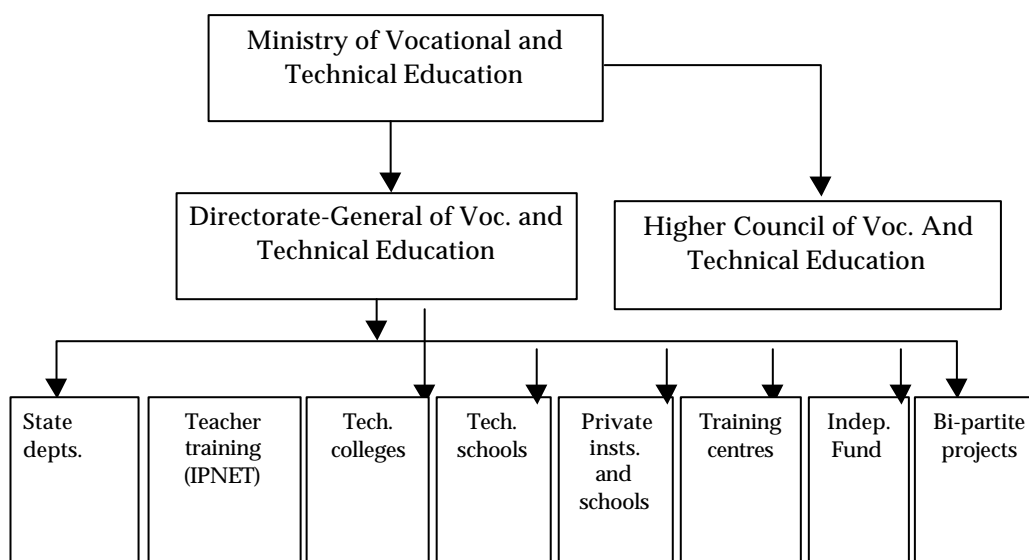
Source: Centre de Recherche et de Développement Pédagogique

Comments on this table:

- High concentration of numbers (42.4%) in Greater Beirut, an area of high population density and intensive economic activity.
- Low percentages in rural areas (Bekaa, South Lebanon, Nabatieh), which are relatively poor regions suffering the effects of migration to towns.
- Fairly balanced distribution between the sexes, although the numbers of men (55.8%) are slightly higher than the numbers of women (44.2%).

3.2 Institutional structure

Up to the end of 1992, vocational and technical education was the responsibility of a Directorate-General of the Ministry of Education. The creation of the Ministry of Vocational and Technical Education in 1993 reflected the importance that the State attached to this issue. Under a recent decision in principle (1999), however, VTE is to be returned to the Ministry of Education. The following chart shows a simplified picture of the structure of the Ministry.



The Conseil Supérieur de l'Enseignement Technique et Professionnel (CSETP - Higher Council of Vocational and Technical Education) is intended to play a major role in formulating a development strategy for technical education, by providing efficient links between educational establishments and production centres. The Council has unfortunately not fulfilled this role up to now.

3.2.1 The training supply

a) Establishments

Technical and vocational education is available in both public-sector and private-sector establishments. Under the legal provisions currently in force, the private sector has to apply the educational curricula drawn up by the VTE Ministry and its students have to sit the official examinations organised by the Ministry which has sole authority to award qualifications recognising this education. It is fairly free, however, to organise certain crash courses that do not lead to qualifications, but for which attendance certificates are issued.

a1 – Types of establishment

There are three types of establishment:

- Training centres: offering training to the CAP and BP levels
- Technical schools: preparing for the BT and/or FPM
- Technical colleges: preparing for the TS and LT diplomas.

From the sectoral point of view, establishments are public or private. Although they are subject in practice to special provisions, the non-profit-making schools run by various NGOs are governed by the legislation applying to private schools. The notion of a semi-public school does not exist in law.

a2 – Management of public establishments

Each establishment is directed by a Principal selected from the members of the teaching corps as a whole and appointed by central government. He or she is assisted by two education directors, one for theoretical and general education and one for practical education. The powers of the Principal and his or her deputies are limited to the internal running of the establishment: management of time and premises, monitoring of student and staff performance, organisation of tests and school examinations, application of curricula.

The following table shows the number of technical and vocational education establishments, in the 1997/98 academic year, by sector and by region, highlighting the extent to which each sector is involved.

Region	Number of establishments	
	Public	Private
Beirut & Greater Beirut	13	165
Mount Lebanon	4	41
South Lebanon	7	35
Bekaa	6	20
North Lebanon	4	58
Total establishments	34	319
Total numbers	16870	50056
Student/establishment ratio	496	157

Apart from a few establishments run by non-profit-making non-governmental organisations (NGOs), the private sector offers courses chiefly in the services sector, for which investment in premises, equipment, etc., is low. The public sector is largely responsible for industrial training options.

b) Curricula

92 specialisms are at present available in 25 occupational families such as engineering, electricity, computing, public works, health, hotels and tourism, accounting, etc. These specialisms are distributed by qualification level as follows:

Level	Number of specialisms
CAP – Vocational training certificate	8
BP – Vocational certificate	17
BT – Technical baccalaureat diploma	21
TS – Higher Technicians' Diploma	25
LT – Technical diploma	11
LET – Technical education diploma	10
Total	92

The following tables list these specialisms.

As mentioned above, other types of establishment that offer training are run by other Ministries or organisations:

- The Office National de l'Emploi (ONE – National Employment Office) has contracts with NGOs, in various parts of the country, to run accelerated initial training, lasting some 750 hours, in 40 trades. 2 280 people attended such training in 1998. The ONE pays subsidies similar to those of the Ministry of Social Affairs to educational establishments.
- The Ministry of Labour runs an accelerated training centre in premises provided by the VTE Ministry at Dekwaneh. This centre, whose work was suspended throughout the war in Lebanon (1975-1991), re-opened in 1999, with 120 trainees in seven specialisms.
- The UNRWA (United Nations Relief and works Agency for Palestine Refugees in the Near East), lastly, has been running a single training centre at Sibline, close to Saïda (South), since the beginning of the 1960s. The centre is reserved for Palestinian children. Training, lasting 3 300 hours, is very similar to that leading to the technical baccalaureate, but students are not entered for this examination. The centre has 650 students in 17 industrial specialisms.

Many curricula date from the end of the 1960s. Two revisions have been attempted, by the VTE Ministry one in 1992 for industrial specialisms at BT level and one in 1997 for all BT and TS specialisms; this last revision has not yet been put into practice and is still being assessed. Most of the curricula for the Licence Technique (LT) and the Licence d'Enseignement Technique (LET) were, however, drawn up between 1990 and 1993.

Curricula are designed solely for classroom-based teaching with no direct links with the production sector. There are therefore manifest shortcomings from the point of view of performance and skills. There is an urgent need to modernise these curricula and gear them to actual employment requirements in order to cover the needs of the various sectors of the economy in terms of both numbers and profiles.

Considerable emphasis is placed on theoretical education, whether general or technological, in the content of the BT and TS curricula. The rule applied, although unspoken, is that an average of 40% of school time should be devoted to general education (mathematics, sciences, languages, social education), 30% to occupational technologies and 30% to practical work – although the latter in some cases includes technology classes that are purely theoretical.

Annex A-2 gives, by way of example, two timetables, one for the BT “electricity” specialism and the other for the TS “air conditioning” specialism.

Lists of specialisms by qualification

1- Vocational training certificate (CAP)

- Typing
- Commis waiter
- Dressmaker's assistant
- Joiner
- Lathe operator
- Metal worker
- Welder
- Electrical fitter (buildings)

2- Vocational certificate (BP)

- Accounting clerk
- Shorthand-typist
- Restaurant waiter
- Pastry chef
- Beautician
- Auxiliary nurse
- Dressmaker
- Cabinet maker
- Motor mechanic
- Panel beater
- Electrical fitter (buildings)
- Machinery electrician
- Radio and TV repair
- Offset printer
- Vehicle engineering

3- Technical baccalaureat diploma (BT)

- Preschool education
- Commercial sciences
- Secretariat
- Documentation
- Hotel and catering (sales)
- Hotel and catering (production)
- Nursing care
- Industrial chemistry
- Interior decoration
- Advertising trades
- Air conditioning
- Industrial engineering
- Automobile engineering
- Aero engineering
- Electricity
- Electronics
- Computer programming
- Music
- Architectural drawing
- Buildings and public works.
- Topography
- Dental nurse

4- Higher technicians' diploma (TS)

- Social services
- Physiotherapy
- Medical lab. techniques
- Nursing care
- Accountancy
- Interpreting and executive secretarial
- Tourism techniques
- Special education
- Pre-primary and primary education
- Civil engineering
- Topography
- Electricity
- Electronics
- Management computing
- Aviation engineering
- Dental laboratory technician
- Interior decoration
- Banking techniques
- Fashion and dress design
- Hotel management
- Optometry
- Radiologist
- Industrial automation
- Industrial computing

5- Technical diploma (LT, LET)

- Electronics/Telecoms
- Industrial electronics
- Electricity
- Mechanical engineering
- Civil engineering
- Management computing
- Nursing care
- Physiotherapy
- Medical lab. techniques
- Accountancy
- Topography
- Optometry

c) Teachers

c1 – Their training

Within the VTE Ministry, teacher training is provided by the two Instituts Pédagogiques Nationaux de l'Enseignement Technique et Professionnel (IPNETs – National Teacher Training Institutes for Technical and Vocational Education), one is located at the industry park of Dekwaneh (eastern suburbs of Beirut) and the other at Bir-Hassan (south-west of Beirut). Training in technical subjects and education covers specialist disciplines from both a theoretical and a practical point of view. It leads to the Licence d'Enseignement Technique (Technical Education Diploma). This diploma is not an absolute requirement for entry into teaching as other qualifications may also be acceptable. General education subjects are taught by teachers trained at the teacher training colleges of the Ministry of Education or the Education Faculty of the University of the Lebanon.

The following may be eligible for the IPNETs:

- holders of a technical or academic baccalaureate, for a four-year training course,
- holders of the TS (Higher Technicians' Certificate), for a two-year training course.

Training includes two months work experience in an enterprise.

c2 – Status and numbers of teachers

The rapid growth of technical education and the inadequate number of IPNET graduates have made it necessary for the VTE Ministry to take on supply teachers to cover the operating needs of its establishments. There are therefore two main groups of teachers:

- permanent full-time teachers who are State employees,
- contract (or supply) teachers.

In the 1997/1998 academic year, there were 405 permanent teachers; supply teachers provided 2321 hours of teaching, equivalent to 850 full-time teachers. In budget terms and from the point of view of actual work provided, total numbers are therefore:

- 405 permanent teachers
- 850 supply teachers
- i.e. a total of **1 255** teachers.

Relating this figure to the number of students in public-sector VTE therefore gives a student/teacher ratio of 13.44.

A Decree giving tenure to 250 supply teachers is also about to be promulgated by the Council of Ministers.

Permanent teachers are grouped into three categories, each containing two grades. There are therefore six separate categories. There are seven assistant professors of higher technical education in the highest category (2). The largest number of teachers are in category 3. They include:

- Technical teachers possessing an LT, a TS or an equivalent qualification who work at BT level and, for practical work only, at TS level.

- Vocational trainers, possessing a BT, or recruited on the basis of professional experience in the trade concerned, who provide theoretical and practical teaching at the CAP and BP levels and in some cases practical teaching at BT level.

The following table gives a breakdown of teacher numbers, by region and category.

Region	Types of teachers			
	Permanent technical teachers	Permanent vocational trainers	Supply technical teachers	Supply vocational trainers
Greater Beirut	108	70	105	90
Mount Lebanon	10	10	32	19
Bekaa	24	50	130	88
North Lebanon	25	14	69	56
Nabatieh	33	19	71	49
South Lebanon	23	19	89	52
Total	223	182	496	354
Percentage	17.77	14.50	39.52	28.21

Source: Direction Générale de l'Enseignement Technique et Professionnel.

Comments on this table:

- Permanent teachers account for only 32.27% of the total.
- 17.77% of permanent teachers possess a TS or an LET or an equivalent qualification. These are “technical teachers”.
- The growth of the number of students in vocational and technical education, resulting from the Government’s determination to develop this sector, will exacerbate the already severe problems that the VTE Ministry has in finding enough appropriately qualified teachers to cover the operating needs of its establishments.

c3 – Continuing training of teachers

- Although the continuing training of teachers has not been placed on an institutional footing, there is concern to improve their performance. Making the most of the emergency rehabilitation plan for buildings and equipment, financed by the World Bank, the Ministry has therefore commissioned accelerated refresher training courses which have been attended by 480 teachers.
- A major strand of the new World Bank project is the training of trainers and the refresher training of teachers already in service (US\$ 4.8 million).

d) Premises and equipment

Public VTE facilities were literally devastated by the war. Many buildings were in ruins in 1990 and even though the little equipment that had escaped looting had become obsolete, it was still in use. The emergency rehabilitation plan discussed above has made it possible to rehabilitate buildings and to provide establishments with the most essential equipment. This plan was financed by a loan from the World Bank (US\$ 15 million), a contribution under the financial protocol with France (FRF 10 million) and a direct contribution from the Lebanese Government (some US\$ 8 million).

While these measures have made it possible to set the system in motion again, they have not enabled it to meet actual needs. The unavoidable increase in numbers is making it necessary to construct new premises, extend existing premises, purchase new equipment and replace obsolete equipment that is still in use. For this purpose, grants have been received from and loans contracted with several bodies, discussed later in this report. It is to be hoped that the VTE Ministry makes the most of this (costly) opportunity to opt for modern educational technologies and consequently chooses appropriate materials to equip its schools.

3.2.2 The training demand

a) Trends in numbers

Social attitudes towards technical education and vocational training have been improving in recent years. Although this change of attitude is still somewhat halfhearted and is limited within social groups with modest incomes, it is spreading to families with higher levels of education. Increasing numbers of people feel that this type of education is no longer a refuge for those who have failed at school, but a way of gaining jobs that provide income, social standing and well-being. University education is undoubtedly still as prestigious as ever, but the current vogue for the new technologies – that can be learnt by VTE – is undoubtedly one of a number of reasons for this change of mentality. People with a BT consequently seem to be in a better position than people with only an academic baccalaureate.

The following table shows an annual rise of 25% in the vocational training demand recorded over the last four years in public VTE.

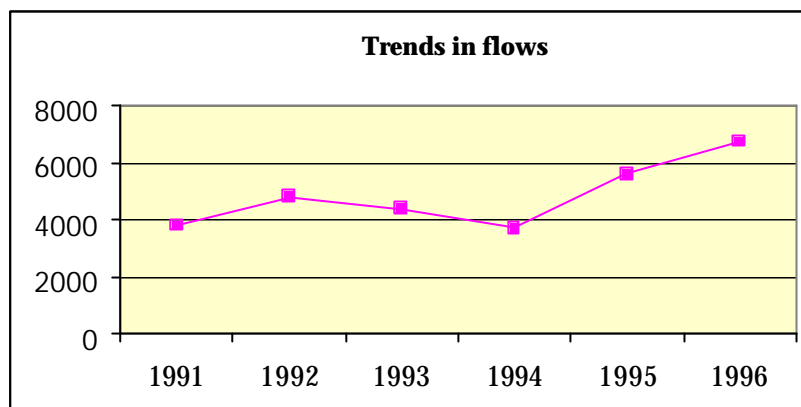
Academic year	Numbers in public technical education
1994 – 1995	9 973
1995 – 1996	12 460
1996 – 1997	13 502
1997 – 1998	16 870

At the same time, **private** sector numbers have increased from 35 803 students in 1994/1995, to 50 056 students (including those attending crash training courses) in 1997/1998, i.e. an annual growth rate of 12%.

In 1997/1998, 16 270 public school students and 31 354 private school students were studying for an official qualification.

The following graph shows trends in the annual flows of students leaving vocational and technical education.

Trends in flows leaving VTE



b) The employment supply

The Central Statistical Administration used two recent surveys to estimate the employment supply between 1999 and 2002: one of these surveys, conducted by the Ministry of Social Affairs, with the assistance of the UNDP, concerned population, and the other, conducted by the ONE (National Employment Office), concerned the labour force.

According to the data collected, the resident population in June 1997 was 4 005 025. The active population accounted for 34% of the total population, i.e. 1 362 000. According to demographic forecasts, the population growth rate is tending to fall and will be around 1.32% for the period 1999-2002. If, as is likely, the active population continues to account for 34% of the population, the following projection can be given for the next three years.

	Year			
	1999	2000	2001	2002
Total population	4 005 025	4 057 890	4 111 450	4 165 725
Active population	1 362 000	1 380 000	1 398 000	1 416 650

Over the next three years, new job creation is, moreover, estimated at 1.69% of the active population. This rate obviously varies in different sectors: 4.66% in hotels and catering, 4.36% in the clothing industry, 3.19% in electronics, 3.07% in graphic arts, 2.97% in public works equipment and transport and 0.33% in vehicle repair workshops, etc. (*ONE survey of the active population, 1997*).

Taking account of a replacement coefficient of 1.8% to offset people leaving work (retirement, illness and incapacity, death, etc.), the following table forecasting employment supply can be drawn up.

	Year				
	% of active population	1999	2000	2001	2002
New jobs	1.69%	23 000	23 300	23 600	23 900
Replacement	1.80%	24 500	24 800	25 200	25 500
Total supply	3.49%	47 500	48 100	48 800	49 400

A reasonable breakdown of this future employment supply by qualification levels, based on their current percentages among the active population, is as follows.

Occupation	% of the active population	Qualification level (ISCED)
Senior managers and proprietors	15.0	5
Specialists	14.1	4
Intermediate occupations	15.1	3
Clerical employees	27.6	3
Service and sales staff	0.8	3
Agricultural and skilled workers	0.1	2
Craftsmen and manual workers	11.0	2
Machine operators	7.4	1
Unskilled employees	8.9	1

The two ISCED levels most closely linked to VTE are level 3, corresponding to the technical baccalaureate and accounting for 43.5%, and level 4, corresponding to the Higher Technicians' Certificate and accounting for 14.1% of the active population. VTE also needs, however, to pay more attention to level 2.

In other words, VTE must train the following annual flows by 2002.

	Year			
	1999	2000	2001	2002
At BT level	20 660	20 920	21 220	21 490
At TS level	6 700	6 780	6 880	6 960

c) Satisfying the demand

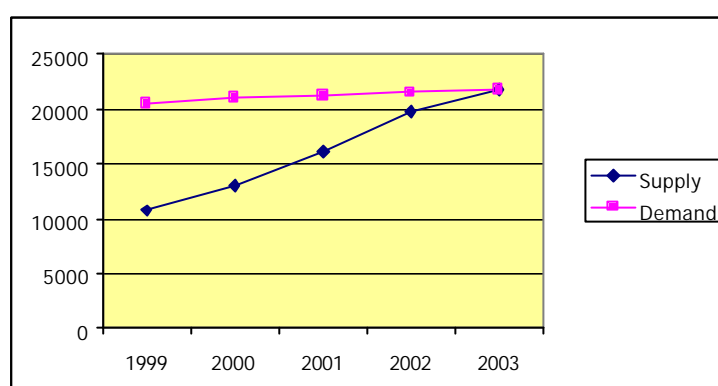
The flow of students who do not go on to general secondary education when they leave lower secondary education are the only source of flows into VTE through which the demand for BT training (ISCED 3) can be met, as shown in the table above (which includes the public and private sector).

In 1998-99, this flow was 52 800 students, some 22 000 of whom entered traditional secondary education and 12 800 of whom entered VTE. Over 18 000 students leaving lower secondary education either went straight into work or into some form of crash training. If the total flow of lower secondary school leavers increases by 1% every year, numbers will increase to 54 100 in 2002. The VTE Ministry's strategy is to attract 45% of this flow, i.e. 24 400, into the BT by 2002, according to the probable progression shown in the following table.

Year	Flow leaving lower secondary education	% of 15-year-olds	Flow into VTE – BT level	% of the flow from lower secondary education	Flow leaving BT
1999	52 800	83%	12 800	24%	9 603
2000	53 400	84%	16 500	31%	13 200
2001	53 700	85%	20 400	38%	16 320
2002	54 100	86%	24 400	45%	19 520

If the forecasts in the above table are correct, the demand for qualifying training and the employment supply should become balanced in 2002, as the following graph shows.

Comparative trend in the demand for and supply of training



Another problem that needs to be addressed in the context of the needs of the different economic sectors is the remedial training of the active labour force. According to a recent survey, 79.1% of workers have received no training for the work that they perform. Continuing training, which is non-existent in practice, is therefore an important issue.

3.3 Funding agency measures

The following table summarises action by various international bodies to consolidate and improve the performance of the vocational and technical education system in Lebanon.

Agency	Amount	Field of action	Comments
World Bank	US\$ 15 million	Emergency rehabilitation plan for VTE (buildings, equipment, accelerated training, continuing training for teachers, computerisation, etc.)	Plan now completed
World Bank	US\$ 68.85 million (including a contribution of US\$ 5.85 million from the Lebanese Government)	<ul style="list-style-type: none"> Around 1/3 of the loan for technical assistance (strengthening of administration, links with the economic sector, design of curricula and production of textbooks, training of trainers, continuing training, etc.) Around 2/3 of the loan for the rehabilitation of buildings and technical equipment 	Plan approved but not yet implemented

Agency	Amount	Field of action	Comments
Islamic Bank	US\$ 30 million	Equipment for 32 new technical schools	Plan approved but not yet implemented
Arab Development Fund	US\$ 50 million	Construction and partial equipment of 32 new technical schools	4 new schools have been built under this project
OPEC	US\$ 4 million	Construction of 3 new technical schools	Plan approved but not yet implemented
French Financial Protocol of 1995	FRF 10 million	Equipment for the Bir-Hassan and Dekwaneh technical schools	FRF 5 million used as planned, with the IUT of Saïda receiving the remaining FRF 5 million
French Financial Protocol (FFP) of 1996	FRF 18.4 million	Creation of 4 new specialisms required by the production sector	A call for tenders has been launched to draw up curricula and specifications for technical equipment
Protocol of Cooperation with the German Government (GTZ)	DEM 15 million	Introduction of the DUAL system	Under phase 1 of the project (1995-1998), valued at DEM 3 million, 2 specialisms have been set up in 5 training centres, with 417 trainees
	DEM 5 million	Training of coaches for the dual system	In cooperation with the AMILIEH school
	DEM 10 million	Establishment of a Fachhochschule (college of higher education) to train engineers/technicians	In cooperation with the AMILIEH school
	DEM 0.4 million	Revision of the curricula of 7 industrial specialisms	Completion scheduled for June 2000

The US\$ equivalent of these funds is US\$ 188.40 million.

The Lebanese Government has also enacted, under the 1997 budget law, a framework law for new school creation with total funding of LBP 10 billion (US\$ 67 million, i.e. equivalent to 35% of the funds made available by financing agencies), bringing the total funds available to US\$ 255.40 million.

Subtracting the following amounts from this total:

- US\$ 20 million – the “technical assistance” component scheduled under the World Bank project,
- FRF 2 million – the “educational assistance” component scheduled under the FFP,
- DEM 7.5 million – the “technical assistance” component scheduled under the cooperation protocol with the GTZ,

leaves a balance of US\$ 225.9 million which will be channelled into extending the public sector's accommodation capacity. Assuming that the mean investment per student is US\$ 5000, this capacity could increase by some 45 000 students, multiplying its current volume threefold and increasing it to over 60 000 students.

Such an extension would have a fatal impact on numbers in the private sector, 40% of whom (some 20 000) could well transfer to public schools. There would then be a total of some 86 000 students in the private and public sector.

In the absence of a policy to distribute these new numbers between the various levels of education, annual outputs to the labour market can be estimated only hypothetically. It can be assumed that initial vocational training (ISCED-2) lasts an average of one year and BT (ISCED-3) and TS (ISCED-4) each last three years. It is also reasonable to assume that 40% of new students will be channelled into initial vocational training. This would give an output of 35 000 students leaving the ISCED-2 level and a cumulative total of 17 000 students leaving the ISCED-3 and ISCED-4 levels, i.e. a total output of 52 000, which is slightly in excess of the employment supply forecast of some 50 000 jobs (4%).

The training market does not, however, merely fill vacant jobs, whatever form they take. It has to include continuing training which, over time, will probably become its major component. This would tend to rule out any fears that the training system is too large, as in practice it will remain below needs: the accommodation capacity corresponding to the 2 000 surplus outputs, as well as the capacity that the private sector will have lost to the public sector (20 000 student places), will gradually be offset and even exceeded by the potential development of continuing training programmes. A numerical impasse may ultimately be avoided by a judicious allocation of new facilities.

The same cannot be said of the quality of the service provided at this level. Reforms of the structures, content and methods of the education system, which has already reached its numerical limits, and rehabilitation of its operators, in particular teachers, are urgently needed. These reforms obviously require much more time than the creation of new schools and urgently need to be set in motion. Any extension, prior to such reforms, would not only fail, however, but would also worsen the service which is currently being (inadequately) provided: some of schools' present staff would have to be transferred to these new establishments to get them underway.

4. Summary of findings and conclusions

The strengths and weaknesses of the education system can be outlined from the description in Section 3 above. The war has undoubtedly had far-reaching effects. The system, designed and constructed during the 1960s, has only recently begun to develop again and only from the point of view of its numerical capacity. Rapid development was undoubtedly needed to meet the urgent need for labour generated by the reconstruction of the country and its infrastructure. Since this development has merely entailed an increase in capacity without a strengthening of structures, it has placed the whole of Lebanon's technical education in a precarious position.

The following table summarises the Strengths, Weaknesses, Opportunities and Threats as regards the main components of the system. It is followed by a brief review of initiatives that have been decided or envisaged, assessed against modern standards and trends, and in terms of the labour market needs and constraints that the system will have to face.

4.1. *Strengths and weaknesses*

(see table on next page)

4.2. *Policy and priorities*

1. The Ministry has no structured and officially adopted policy. The only lines of action being pursued are those set out in the agreements with donor agencies: the Arab Development Fund (ADF), Islamic Bank (IB), World Bank (WB) and the Financial Protocols with France (FFP).
2. The programmes set out in the agreements with the ADF and the IB relate exclusively to the construction and equipment of new establishments. The FFP have up to now focused on providing technical assistance for the IPNET by participating in the training of future teachers and, to a smaller extent, on assistance with the formulation of new BT and TS curricula.
3. The agreement signed with the WB has, however, a more ambitious scope as it covers, among other things, a complete overhaul of the Ministry (administration, schools and advisory bodies) in order to install modern structures, systems and procedures for management, education and planning. The implementation of this project is still being delayed, however, because of the (watering down) revision of its "technical assistance" component. The appropriateness of this choice is questionable.

	Strengths	Weaknesses	Opportunities	Threats
Levels and options	Long options: BT and TS Good architecture; good links upstream with education cycles and downstream with target employment levels	Long options: LT and LET Objectives not well defined and few clear links with employment Vocational training: CAP and BP: outdated but persistent; FPM: neglected by the authorities which is absurd Continuing training: Non-existent	Increased enterprise awareness: potential, but limited, scope for work experience Obvious and urgent need for continuing training. Agricultural sector changing. Significant innovations in the services sector	Risk that the economy and employment may become completely submerged in the (likely) case of peace. Globalisation of the employment market with no accompanying globalisation of training opportunities
Curricula	Many BT and TS curricula have recently been overhauled. Some will be applied in 1999/2000. Few textbooks available commercially	Rigid (monolithic) structure; no (modular) articulation; extensive and therefore cumbersome specialisms; lengthy revision and modernisation procedures; too small a proportion of practical work in some cases	Possibility of giving new curricula a modular structure to make options more flexible and create bridges between specialisms. Incentives to publish textbooks	Growing mismatch between inflexible curricula and enterprises' changing quality requirements
Provision of education	Creation of new establishments; optimisation of accommodation capacity in existing schools. Existence of the IPNET teacher training institutes	Very inadequate qualification of teaching staff; outmoded and unproductive education methods; no focus on modern educational technologies. IPNET's tasks and action resources need to be strengthened and extended. Equipment is in some cases outdated and badly maintained	Establishment of a computer network linking establishments and for the distance (and continuing) training of teachers; implementation of some continuing training curricula in cooperation with enterprises	Current increases in quantity may exacerbate the shortcomings of the training provided. Increasing numbers of young people will thus be increasingly unprepared for the employment opportunities on offer.
Concerted action with socio-economic players and coordination with other authorities	The authorities concerned, and the socio-economic partners, are represented in the Conseil Supérieur de l'Enseignement Technique (Higher Council for Technical Education). Relaunch (albeit halfhearted) of the Conseil Supérieur de l'Enseignement Technique.	Meetings of the CSET are infrequent. Its findings, in the form of recommendations, are not systematically followed up. No support (or secretarial) structures for this kind of follow-up. <u>Employers, workers, students and parents, private schools:</u> more or less no participation in policy formulation and decision-making. Lack of transparency and receptiveness (interaction with schools)	The various Ministries have already started dialogue with the economic partners and should act as an interface for communication between VTE and the socio-economic partners. Their abilities in this area need to be improved. The interest that various economic sectors are showing in training should be channelled by creating sectoral committees having powers and responsibilities	Concerted action with the partners should be tripartite (VTE + Authorities + Private Sector) if it is to be fruitful. Otherwise, the divide will grow. In the absence of an active and structured partnership, the gulf between VTE and the working world will increase. Dialogue should be extended to schools, as otherwise they will be marginalised

	Strengths	Weaknesses	Opportunities	Threats
Assessment systems	Centralised public examination system able to guarantee fairness and impartiality in examinations – and anxious to do so	Single assessment at the end of the cycle covering the whole of the training received. Candidates failing examinations receive no training qualification	If modular curricula were to be adopted, the single examination would necessarily have to be split up, thereby providing more detailed and more precise measurements of knowledge acquired	Examination administration would raise enormous logistical problems in the short term. Decentralising and computerising examinations would be essential
Follow-up and feedback		No follow-up of successful candidates. No associations of former students or certificate holders. The authorities have no source of information on links between education and careers.	Establish a monitoring unit. Encourage the establishment of associations of former students and certificate holders.	In the absence of information on the occupational practices of certificate holders, initiatives by the authorities will take place by trial and error.
Partnership with the socio-economic players				
Financing	National Budget: urgent operating needs honoured; efforts made to implement projects, financed by the loans obtained	Random financing by the State of innovations and development projects. Lack of a long-term development plan and outline laws. Schools have no financial autonomy.	Loans and assistance available	Inadequate allocation of available funds. Slow implementation of projects which means that they are sometimes out of date even before they are completed.

It therefore seems that the Ministry's main concern is, at present at least, to extend the numerical capacity of public sector education. This concern is justified by:

- A desire to improve the ratio between the number of students in technical education and in general education.
 - A concern to meet the growing demand for education, often from candidates who have no financial resources.
4. An evaluation of the operating budget implications of the school building programmes underway has been commissioned by the VTE Ministry. The forecast is that the necessary budget will be three times higher once the new schools are established. Since 1999, however, the country has had a very strict budget austerity policy and it may well be that some new school buildings remain closed as there is no operating budget for them.

Like the financial implications of the implementation of extension programmes, technical prerequisites have not received the necessary attention either. Urgent action is needed in two areas: the choice of the specialisms to be offered by each of the new establishments and the training of the necessary teachers. The risk, in the case of specialisms, is that they will be chosen too hastily due to deadline pressures for the completion of the ADF and IB programmes. The effect of this would be to widen the gulf between VTE and the actual labour market, which would be regrettable, as measures to correct any errors would be costly. In the case of teachers, and assuming that operating budgets will be allocated for their recruitment, these same deadline pressures will mean that insufficiently qualified people will be recruited. A third technical consideration deserves further thought in this respect: the choice of the levels (options) of education to be given in the new schools; until the levels of (short) vocational training have been restructured and the issue of continuing training has been addressed, the only possible levels are the BT and TS. This may not be the best, or the only, choice.

4.3. *Current and future concerns*

1. The importance of vocational training and technical education is invariably stressed in political and social discourse, and the local press echoes this concern. Parliament is often a platform for this debate. The approach is often social in nature, taking the form of demands for an extension of VTE's accommodation capacity. At this level, there is hardly ever any mention or discussion of the internal options of this type of education or of its mechanisms.
2. Two arguments are put forward in support of an extension of the quantity of VTE: on the one hand, most workers have received no basic education and, on the other, the social demand for education is growing, especially among the poorer classes in society. If too much emphasis is placed on the creation and dissemination of new schools without paying the necessary attention to the quality of the educational service that they would be able to provide, however the system may well run the risk of collapse. Thanks to the funds awarded by the ADF and the IB, amounting to US\$ 84 million (leaving aside the US\$ 40 million scheduled under the WB project), public VTE numbers are to be tripled at least, even when serious quality problems have long been an issue: the number and quality of teachers, the outdated nature of curricula, equipment and teaching methods, the lack of compatibility between options and needs, etc.

3. The social dimension of the problem, i.e. meeting the demand for training from the least advantaged, has made the Ministry and the authorities aware of the economic dimension, albeit in an episodic and somewhat chaotic way. Everyone agrees that it is important to bring flows and options into line with labour market needs. It is also agreed that this harmonisation does not just require simple dialogue with the players involved, but also their active and responsible participation in its implementation. However, no plan of action has yet been formulated for this purpose.
4. Initial education, whatever its level, is currently the only type of education given by VTE. Continuing training is not on the agenda, although there is a vague and rather fainthearted demand for it from employers. Employers are reluctant due to the fear they have of having to fund it, if it were to be placed on an institutional and compulsory footing. Employers already complain that they are subject to very high social security contributions, estimated at close on 45% of the wage bill, and that the social benefits that result do not justify such contributions. Their proposal is therefore that continuing training should be financed from these contributions – *a suggestion that is worth exploring*.
5. Whether the issue is one of matching initial training flows with the employment market supply, or one of continuing training, or of any other issue involving the existence of channels linking VTE with the economic sectors, it is important to set up interfaces and to formulate mechanisms for cooperation between the authorities and the working world. The Ministry is in principle aware that this is necessary. It is also aware that little can be accomplished in this area without outside assistance. One of the spin-off benefits of outside assistance is that it provides a way of exerting pressure on the administration's supervisory bodies to pave the way for the necessary reorganisation of the Ministry, creating the necessary specialist services, facilitating the recruitment of personnel and providing such personnel with appropriate training.
6. The importance of providing VTE with the structures and tools that it currently lacks can be more readily perceived by looking at the extent of its responsibilities. These responsibilities are not just in the area of public establishments. VTE must also play a regulatory role in the private sector and coordinate the training services provided by other public agencies: the Ministries of Labour, Social Affairs, Agriculture, Health, Tourism, the National Employment Office, etc. If the national training system is to be fully geared to the needs of the labour market, it is essential for all flows to be regulated in terms of numbers as well as characteristics. This often entails a very complex strategy, as it means, among other things, that the private sector has to be included in the dialogue. Merely including this sector among the interlocutors is not enough to ensure its spontaneous acceptance of any regulation measures. As this sector will continue to account for over half of (student) numbers, the problems that it could raise will not be negligible and could mean that results are not at all in keeping with the objectives targeted.
7. Regional and worldwide developments show that a very tight timetable of reforms urgently needs to be adopted to open up markets and upgrade Lebanese production. The Ministry of the Economy is taking active steps to set up many relevant projects. The role of training is clearly perceived and expressed in these projects, but it seems that it is then left up to the VTE Ministry to take, at the right time, those initiatives for which it is responsible. Training, however, is obviously an area in which any action, through its nature, takes a long time to bear fruit. Consequently, making the restructuring of this Ministry part and parcel of wider-ranging projects such as administrative reform, or simply using current procedures to carry out this

restructuring, would ultimately deliberately deprive the Lebanese economy, especially industry, of any competitive edge. The importance of this issue and the fact that needs are so urgent make it necessary to adopt an emergency timetable. Here again, dialogue between the authorities needs to be set in motion.

4.4. *Training and integration*

1. We have seen above that public VTE plays no role in the socio-occupational integration or re-integration of adults. The same cannot be said of the private sector where many establishments offer short courses in line with actual employment opportunities. This training does not follow official curricula and does not lead to qualifications; it is recognised only by attendance certificates issued by the establishment itself, since only the VTE Ministry has powers to award qualifications (BT, TS, etc.) to candidates successful in the public examinations that it organises. In the absence, however, of any reference profile describing the occupational content and characteristics of the jobs for which they provide preparation, the scope and efficiency of these “parallel” training schemes designed by schools are both variable and questionable. Were these initiatives to be coordinated and supervised, they could nevertheless provide a starting point for more than one kind of continuing training.
2. The long-standing initiatives of the Banking Association are worth citing as a model in this area. In addition to the continuing training programmes that some banks have organised for their own staff, the Association runs several training courses every year at its training centre in Beirut and in the other regions (1 048 employees of 75 banks in 1995). The Banking Research Institute set up by the Banking Association and run on its behalf by the Saint Joseph University offers high-quality initial and continuing training for the middle and senior management of banks. These schemes made it possible for Lebanese banks rapidly to modernise their services, products and management and thus to comply with the most recent standards in this sector, soon after the Lebanese war. The VTE Ministry and other economic groupings could find it useful to study this example, which shows the part that solidarity can play in the re-integration of both enterprises and their staff.
3. The main objective of VTE is to integrate young people. Where training curricula are in keeping with the quality requirements of the employment supply, young people who have gained qualifications enter the labour market. There is unfortunately no census or statistics on the match between the training received and the job obtained. According to some surveys, there is often no match since mechanical engineering graduates, for instance, are often employed as cooks. The VTE Ministry would have much to gain from establishing a system for monitoring certificate holders. This would make it possible to adjust training programmes, appropriately scale the output from specialist options and ultimately ensure that investment and operating expenses are suitably targeted.

5. Recommendations for improving technical education and vocational training

As a review of the current situation, this report can conclude only by comparing the resources available from loans and aid programmes with actual needs. This comparison highlights a large number of problems for which no solution has yet been envisaged.

The task of VTE is to prepare people to find and hold down a job. We have seen that, with its current structures and practices, Lebanese VTE is not able fully to perform this task. Some weaknesses, of which the Ministry is well aware, can be corrected by internal action which is already underway. Other shortcomings, however, have not yet been perceived and require more radical action, as recommended below.

5.1. *Institutional and structural recommendations*

1. The VTE Ministry must be able to take some decisions very rapidly, so that they can be applied immediately, without having to refer to higher authorities such as the Council of Ministers. This applies, for instance, to: changes to teaching curricula, possible changes of specialisms in some schools, the powers to be conferred on school principals, etc. The Ministry therefore needs to be given various flexible and extended operational powers that it does not at present possess.
2. In urgent cases, the traditional procedures laid down for all authorities should be exceptionally shortened: creation of specialist units, reorganisation of administration, increased numbers of managers, recruitment and training of personnel, etc. Concerted action is one of the main areas in which a specialist unit urgently needs to be set up. This unit's remit would be to design mechanisms for dialogue with relevant bodies, both private and public, to initiate and document this concerted action and lastly to follow up the decisions and recommendations to which it leads. It could also provide a permanent secretariat for the Conseil Supérieur de l'Enseignement Technique (Higher Council for Technical Education).
3. The same applies to continuing training which is a vast field that has yet to be explored. What is needed is wide-ranging consultation with centres involved in decision-making, formulating priorities, setting deadlines and conducting practical operations. Complex mechanisms, yet to be designed, are needed to govern the overall system. The administration involved will in some cases be laborious and time-consuming. One proposal would be to set up a specialist unit. This unit would work in close cooperation with bodies for social concerted action and with schools which are at the grass roots of education.
4. Monitoring certificate holders would provide very valuable information for the evaluation of training. Collecting this information, inputting it into an appropriately designed database and processing it rationally would make it possible rapidly to correct any problems and avoid many errors. This is specialist work, that has to be ongoing and permanent, and should be handled by a competent team able not only to

collect and process the information, but also to extract lessons from it and present them in an intelligible and coherent form to decision-making centres. As well as collecting and processing information, this unit could also encourage former students to set up associations and provide a forum for these associations which could in the future play more than one important role in education and training as well as a useful part in socio-economic dialogue.

5. VTE, seen by society as the “poor relation” of education and lacking attraction, also needs to be brought out of the shadows within which it has always been confined. Modern culture is now a technical culture and, if they are appropriately designed, BT curricula require much more intellectual ability and work than academic baccalaureate. The public should be better informed about this sector of education, through regular campaigns targeted chiefly at parents, students in general education and their teachers. Permanent information, guidance and documentation services, open to everyone and able to provide accurate and full advice and information, should be set up in all VTE schools.

5.2. *Operational recommendations*

1. Opening and equipping a school is not enough to ensure high-quality education. Minimum quality standards must be guaranteed, starting from the qualification of teachers. IPNET training should take account of various parameters: candidates’ initial skills, specific technical and educational features of the various options and of the subjects to be taught. Above all continuing training for teachers should also be included in IPNET’s remit. This kind of training should be placed on an institutional footing, made compulsory for both the public and the private sectors and regulated. IPNET’s remit should be extended to teachers in the private sector and its resources improved, in particular by introducing distance learning. This continuing training should include the following three components: refresher and remedial training, career advancement training and re-integration training for teachers forced to change specialism.
2. Other quality standards, covering many fields, should be adopted and imposed on – or proposed to – educational establishments, whether public or private. Continuing to bring schools into line with trends in the labour market is one of many examples: this would help to gear outputs from training to market demand and, at the same time, better to target young people’s integration into work. The VTE Ministry should use various types of incentive to encourage private schools to comply with this kind of standard: classifying schools into categories (public amenity schools, recognised schools, schools that are simply authorised – along the lines of the star classification system for hotels), service and possibly assistance exchange schemes, State awards to selected students in the private sector, etc. This would pave the way for constructive and consistent cooperation and would forge links between these two sectors.
3. There needs to be more interaction between VTE and the socio-economic fabric at the level of schools themselves, by opening them up to their social, economic and cultural environment: exchanges of services with local enterprises, creation, in each school, of a modern documentation centre open to the public, organisation of conferences, cultural and sports meetings, exhibitions and all kinds of events designed to forge closer links between schools and their environment.

5.3. *Technical and educational recommendations*

1. Initial vocational training should be thoroughly overhauled as a type of training separate from technical education. The Ministry is aware that its current structure is outmoded and inappropriate and is proposing to reform it. The complexity of the administrative tasks involved, combined with shortages of administrative personnel, make it impossible for the Ministry to address this problem systematically. The only innovation underway in this area is the introduction of the dual training system, in cooperation with the GTZ. This system, although efficient, has operational, technical and geographical limits. An overall solution could be sought through the WB project, but the time-scale for this project does not seem to allow for any short-term solution. At the same time, new schools are being built that could offer short vocational training programmes, generating a significant output. A particular recommendation is therefore to set in motion clear thinking leading to the establishment of a modern vocational training programme, accompanied by adequate curricula.
2. In both vocational training and technical education, precisely identifying specialisms geared to labour market needs and calibrating them in terms of the numbers that can be absorbed every year are absolute imperatives. This analysis should precede any new physical extension of VTE, since it has an impact on both the design of buildings and the choice of equipment. This study could, for instance, be conducted in the context of the loans granted by the ADF and the IB.
3. In parallel with the definition of specialist options, training programmes also need to be overhauled. The starting point should be a policy to define their architecture and profiles, determine how often they are to be revised, create the bodies responsible for drafting, validating and evaluating them and appoint the authority responsible for promoting them. It would in particular be useful to adopt a flexible and modular structure because of the many interactions between all levels of vocational training, continuing training and technical education.
4. Looking at options and curricula makes it necessary to look at assessment systems. Organising public examinations currently occupies all the Ministry's staff for four months of the year. This system should be revised to make it simpler, more automatic, less monolithic and lighter. The WB project proposes to tackle this major problem. The close link between this problem and curricula, and in particular their architecture, needs, however, to be stressed.
5. VTE has not yet moved on from traditional and often outmoded educational technologies. Introducing new teaching resources would entail a vast improvement, in terms of cost savings and efficiency: linking schools through a computer network, use of multimedia, teleconferencing and simulation, use of modern teaching aids. These techniques could pave the way for very close cooperation between the public and private education sectors through mutually shared services, would facilitate the dissemination of continuing training, in particular for teachers in service, would resolve the problem of remedial classes thereby improving the performance of the education system, would make it possible to improve the student/teacher ratio and would provide IPNET with valuable resources for the training of new teachers, etc. The introduction of these technologies would also pave the way for the creation of a new

industrial sector producing teaching curricula and educational aids: an exportable resource.

5.4. *Urgent needs for technical assistance*

Some of the problems discussed above require urgent action as a result of unavoidable pressures and developments. The creation of regional (or global) free trade areas is perhaps the most pressing development in this respect. The Government is not able to solve all these problems on its own. Prioritising them, by order of urgency and importance, highlights three key areas in which external assistance is required but is not as yet available: continuing training, concerted socio-economic action and new educational technologies.

5.4.1 *Continuing training*

The urgency with which continuing training needs to be introduced is evident. It has a fundamental role to play in developing the private sector. The immensity of this undertaking has to be stressed, however, because of the time that will be needed. As there is presently no base to work from, it is necessary to plan, negotiate, legislate, structure and gradually introduce, which will obviously take time. This somewhat succinct list nevertheless highlights how complex the problem is and the very large number of tasks involved. If it is fully to play its part, continuing training must be designed for four different groups using different approaches:

1. ancillary training to update the knowledge and skills of workers in their present jobs
2. training to help the unemployed and those who have to change jobs
3. career training to prepare some workers to occupy more responsible jobs
4. training in entrepreneurial skills.

Without external assistance, Lebanon will be unable to introduce a coherent and efficient system. It is more likely that serious errors could be made which would be costly and would entail results not in keeping with those anticipated.

5.4.2 *Socio-economic dialogue*

Links between VTE and its social, economic and political partners, whether public or private, cannot remain occasional and episodic without running the risk of a lack of impact or continuity. They need to be structured, placed on an institutional footing and regulated. It is essential, in particular, to divide roles and responsibilities, define their boundaries and ensure active support and involvement. It is these links that will shape most, if not all, of the measures undertaken by VTE: choice of education levels, construction of options, design of curricula, organisation and operation of continuing training, etc. Dialogue has never been regulated in any way and practice is lacking in this field. Lebanon needs to draw on experience acquired in Europe in order to set up a rational system of concerted action.

5.4.3 New technologies

The new technologies are now too widespread to continue to be seen as sophisticated innovations. One of the tasks of VTE is to disseminate their knowledge in order to encourage their use. It is precisely in the field of education and training that they are making services more valuable and are becoming increasingly necessary. In the long term, their widespread introduction is inevitable and it would be a serious error for Lebanon to postpone their introduction, at a time when VTE is being overhauled. Many developments have taken place in this field in Europe, the United States and other parts of the world. These instruments could be adapted for use in many Arab countries and Lebanon is ideally placed to act as a platform for this adaptation. Technical assistance is obviously needed here.

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B.3	Breakdown of workers by sex, sector of activity and occupational situation
B.4	Breakdown of the active population by sex, age and level of education
B.5-a	Increase in job numbers by sector (1996 forecasts)
B.5-b	Reduction of job numbers by sector (1996 forecasts)
B.6	Creation of new jobs by sector (1996 forecasts)
C.1	Overall school enrolment rate by sex and cycle of education
C.2	Education participation rate by age-group
C.3	Vocational training participation rate by cycle of education
D	Public expenditure on education, as % of GDP
E	Breakdown of persons not attending school by age, sex and level of education acquired
F	Unemployment rate by sex, age and level of education
G	Sources
H	Visits and meetings

A. Description

1 – Geographical data:

Area (Km ²)	10.452
Average temperature (°C)	20,7
Humidity	68%
Mean rainfall (mm/year)	893

2 – Demographic data:

Population (resident)	4.005.000*
Population density (persons /Km ²)	400
Growth rate (1996)	1,6
Expectation of life at birth	69
Infant mortality rate	35/1.000
Human development index (UNDP)	0,60

3 – Macro-economic indicators (1998):

Nominal GDP (US\$ millions)	16.547
Growth rate	2,0%
GDP per capita (US\$)	4.400
Inflation rate	4,8%
Exports, FOB (US\$ millions)	716
Imports, FOB (US\$ millions)	6 477
Exchange rate	1.507,5 LL/US\$

4 - Education:

School enrolment rate	
Age-group 5-9	95,4%
Age-group 10-14	93,8%
Age-group 15-19	64,4%
Age-group 20-24	26,8%
Age-group (25 and over)	6.1%
Illiteracy rate	11,6%

Sources: AUDI Bank, UNDP, Central Statistical Administration of Lebanon (ACS)

* Resident population in June 1999. (Source: ACS)

Annex A.1

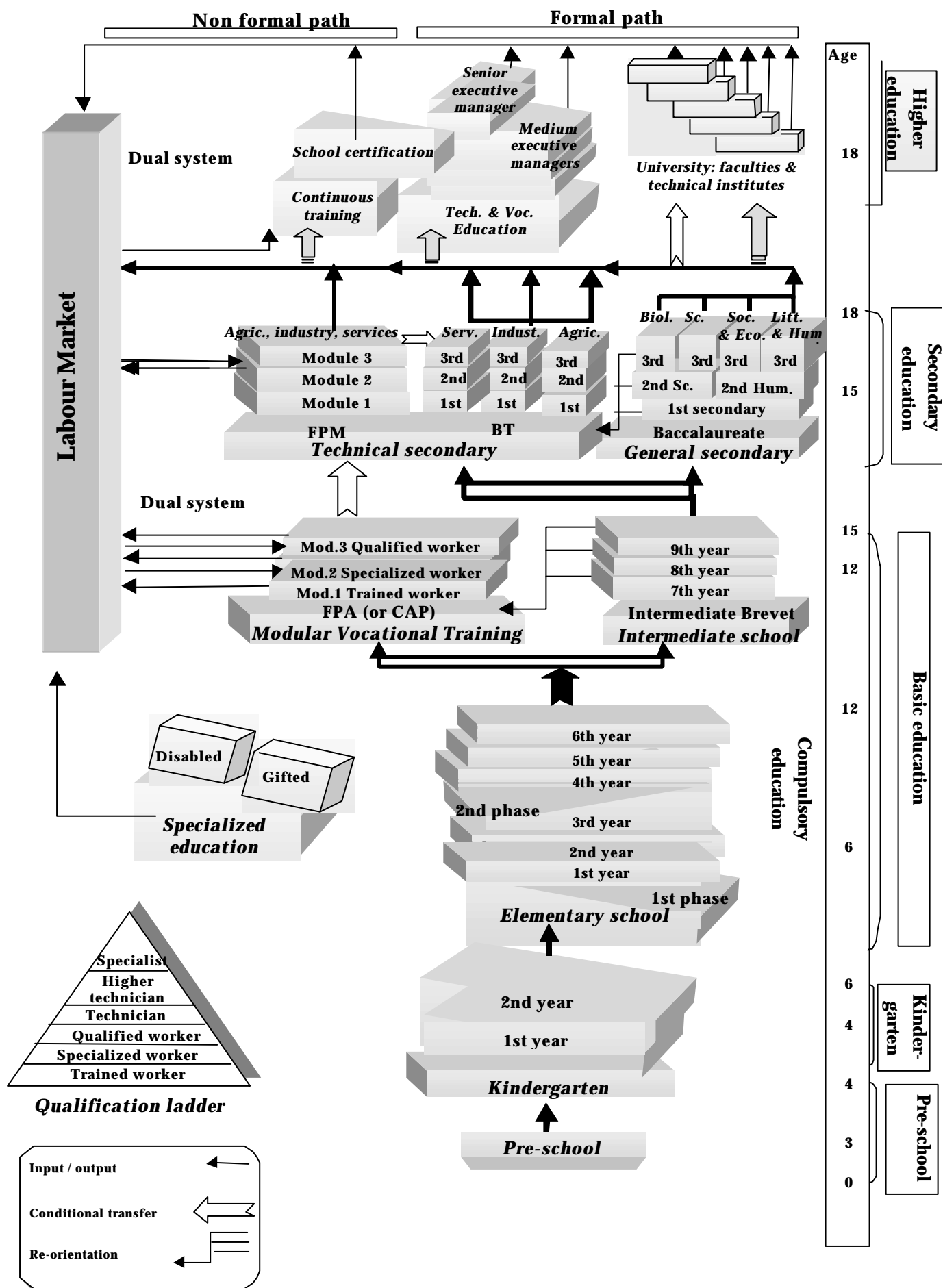
Synoptic diagram of the structure of the education/training system¹

See page 56

Annex A.2-a - Specialism: BT - Electricity

Group		Subject	Year 1 h/week	Subject	Year 2 h/week	Subject	Year 3 h/week	Grand total	%
1	General education	Arabic	2	Arabic	2	Arabic	2		
		French	2	French	2	French	2		
		English	2	English	2	English	2		
		Social sciences	1	Social sciences	1	Social sciences	1		
	Scientific education	Mathematics	4	Mathematics	4	Mathematics	4		
		Physics	2	Physics	4	Physics	2		
		Chemistry	2	Chemistry	2	Computing	2		
		Computing	2	Computing	2	Technical drawing			
		Technical drawing	2						
			19		19		15	53	48
2	Technical education	Electricity, Electronics		Electricity	2	Electrical machinery	4		
		Logic circuits	6	Electrical machinery	2	Production, transport and distribution	3		
		Equipment and installation	4	Equipment and installation	2	Industrial electricity	4		
				Electronics, logic circuits	2	Industrial electronics	2		
	TOTAL		10		8		13	31	28
3	Practical work	General	2	Machinery	3	Machinery	3		
		Installation	3	Installation	3	Installation	3		
		Electronics and measurements	3	Electronics	3	Electronics	3		
	TOTAL		8		9		9	26	24
GRAND TOTAL			37		36		37	110	

¹ The structure shown in this Annex started to be applied two years ago in primary and secondary education, in a gradual way starting from the first year of each cycle. The former system still applies to technical and vocational education (cf. 3.1.1).



Annex A.2-b - Specialism: TS – Air conditioning

Group	Subject	Year 1 h/year	Subject	Year 2 h/year	Subject	Year 3 h/year	Grand total	%
1	Mod. Language 1	60	Mod. Language 1	60	Mod. Language 1	60		
	Mod. Language 2	60	Mod. Language 2	60	Mod. Language 2	60		
	Physics	60	Economics and business management	60	Economics and business management	60		
	Chemistry	30	Physics	60	Physics	60		
	Mathematics	90	Chemistry	30	Chemistry	30		
	Computing	60	Mathematics	90	Mathematics	90		
	Information technology	60	Computing	60	Computing	60		
			Information technology	60	Information technology	60		
		420		480		480	1380	38%
2	General mechanical engineering	60	Summer and winter heating	90	Aeraulics and ventilation	60		
	Thermodynamics	60	Electrical machinery	60	Cold and heat pumps	90		
	Electrical circuits and instruments	60	Active solar systems	60	Air conditioning systems	90		
	Heat insulation and sound- proofing	60	Domestic heating and hot water	90	Regulation and automation	90		
	Hydraulic networks	60						
	TOTAL	300		300		330	930	26%
3	Technical drawing (CAD)	60	Technical drawing (CAD)	90	Summer school (5 weeks) with report			
	Sheet metal and welding work	90	Work experience Domestic heating and hot water appliances	120	Work experience. Regulation and automation	120		
	Working of wood, plastics and metals	60	Work experience Electrical machinery	60	Work experience Air conditioning systems	120		
	Work experience Electrical measurements and circuits	60	On-the-job training Installation work	60	Heating and air conditioning project	120		
	Work experience Fluid distribution	90	Work experience. Active solar systems	60				
	Work experience Heat science and acoustics	60						
	TOTAL	420		390		360	1170	33%
4	Sport	30	Sport	30	Sport	30		
	Other activities	30						
	TOTAL	60		30		30	120	3%
Grand Total		1200		1200		1200	3600	

Annex B.1-a – Breakdown of the population by age and sex

Age	Men	Women	Total
0-4	162 663	157 820	320 483
5-9	205 102	187 627	392 729
10-14	209 895	195 016	404 911
15-19	224 973	214 987	439 960
20-24	211 942	185 031	396 973
25-29	179 838	181 186	361 024
30-34	149 732	169 653	319 385
35-39	122 572	142 493	265 065
40-44	96 210	110 989	207 199
45-49	88 571	95 162	183 733
50-54	82 630	84 028	166 658
55-59	74 791	71 596	146 387
60-64	67 951	63 957	131 908
65-69	53 273	50 527	103 800
70 and over	78 286	77 238	155 524
Unknown	3 295	5 991	9 286
15-64	1 299 210	1 319 081	2 618 291
Total	2 011 724	1 993 301	4 005 025

Annex B-1-b -

Breakdown of the population by age, sex and region as %

Age	Beirut	Greater Beirut	Remainder Mount-Lebanon	North Lebanon	South Lebanon	Nabatieh	Bekaa	Total Lebanon
1 – Men								
0-4	5.1	7.9	6.5	10.0	9.8	8.2	7.9	8.1
5-9	8.6	10.4	8.0	12.4	10.7	10.7	9.6	10.2
10-14	9.3	9.5	8.7	12.2	11.2	10.6	11.3	10.4
15-19	11.5	10.7	9.5	11.4	11.5	11.6	12.8	11.2
20-24	10.0	10.2	9.9	10.4	10.8	9.8	12.4	10.5
25-29	8.5	9.4	9.4	8.8	8.9	7.5	8.9	8.9
30-34	7.2	8.1	8.5	6.7	7.6	7.2	6.6	7.4
35-39	5.9	6.8	7.5	5.6	6.0	5.3	4.8	6.1
40-44	5.7	5.2	5.5	4.0	4.3	4.7	4.3	4.8
45-49	5.8	5.0	5.1	3.5	3.5	4.3	3.9	4.4
50-54	5.5	4.4	4.7	3.3	3.3	3.5	4.1	4.1
55-59	4.4	3.8	4.8	2.6	2.9	4.6	3.9	3.7
60-64	4.1	3.2	3.9	3.0	3.0	3.4	3.4	3.4
65-69	3.0	2.5	3.1	2.2	2.4	3.4	2.5	2.6
70 and over	5.2	2.9	5.1	3.5	3.7	5.2	3.4	3.9
Unknown	0.2	0.1		0.4	0.1		0.2	0.2
Sample (individual) = 100%	3 924	9 080	6 100	8 160	4 690	2 723	5 616	40 293

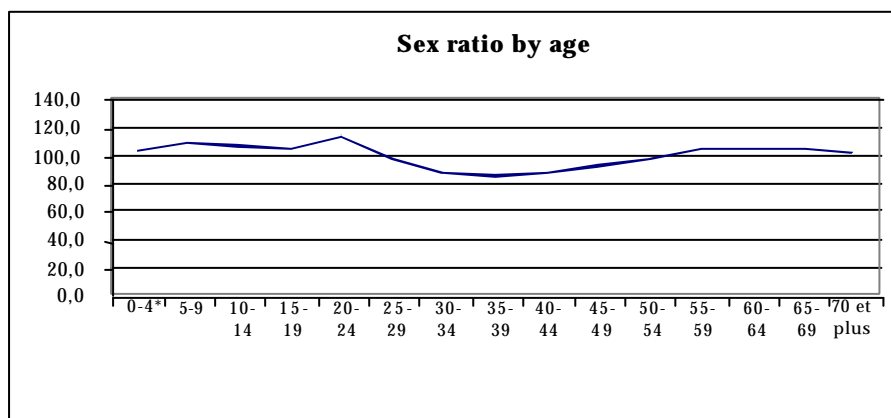
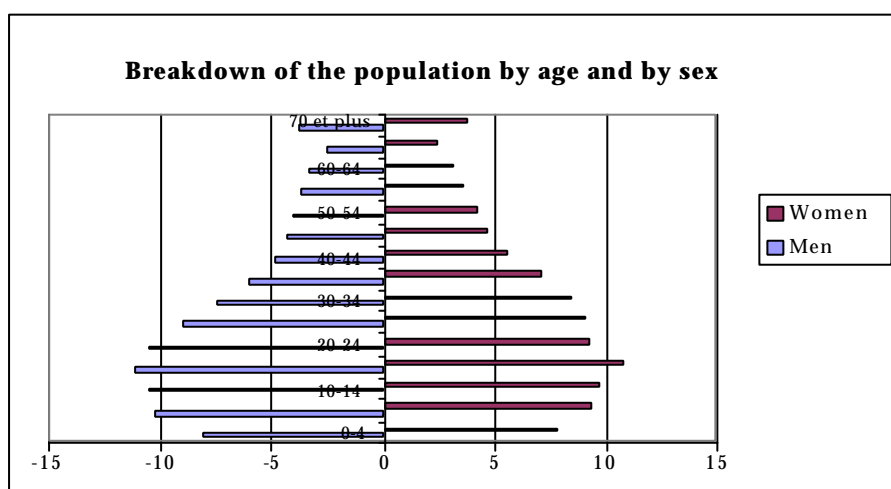
2 – Women								
0-4	5.1	7.6	7.0	9.9	8.5	8.1	8.1	7.9
5-9	7.3	9.1	7.5	11.2	11.5	9.3	9.4	9.4
10-14	7.3	8.9	7.8	11.8	10.9	9.8	11.3	9.8
15-19	9.3	10.3	9.6	11.9	11.5	9.6	12.5	10.8
20-24	9.3	9.8	8.8	8.9	8.8	8.8	10.1	9.3
25-29	8.7	9.7	9.5	8.6	9.2	9.3	8.6	9.1
30-34	9.2	9.2	9.5	7.4	8.5	8.3	7.4	8.5
35-39	8.0	7.6	8.1	6.5	6.9	7.0	5.9	7.1
40-44	7.4	6.1	6.7	4.5	4.4	4.6	5.0	5.6
45-49	5.8	5.1	5.2	3.9	4.4	5.0	4.6	4.8
50-54	5.4	4.3	4.4	3.4	3.3	4.6	4.7	4.2
55-59	4.1	3.3	4.5	3.2	3.1	3.4	3.9	3.6
60-64	4.4	3.0	3.6	2.9	2.8	4.0	2.7	3.2
65-69	3.3	2.4	3.0	2.2	2.4	2.7	2.1	2.5
70 and over	4.5	3.3	4.5	3.4	3.5	5.6	3.7	3.9
Unknown	0.8	0.3	0.2	0.4	0.1		0.1	0.3
Sample (individual) = 100%	4 123	8 945	6 027	7 949	4 777	2 788	5 315	39 924
3 – Men and women								
0-4	5.1	7.8	6.7	9.9	9.2	8.1	8.0	8.0
5-9	7.9	9.7	7.7	11.8	11.1	9.9	9.5	9.8
10-14	8.3	9.2	8.3	12.0	11.1	10.0	11.3	10.1
15-19	10.4	10.5	9.5	11.7	11.5	10.6	12.6	11.0
20-24	9.6	10.0	9.4	9.7	9.8	9.3	11.3	9.9
25-29	8.6	9.5	9.4	8.7	9.1	8.4	8.7	9.0
30-34	8.2	8.6	9.0	7.0	8.0	7.8	7.0	8.0
35-39	7.0	7.2	7.8	6.1	6.5	6.1	5.3	6.6
40-44	6.6	5.7	6.1	4.2	4.4	4.6	4.6	5.2
45-49	5.8	5.0	5.1	3.7	4.0	4.6	4.2	4.6
50-54	5.5	4.3	4.6	3.3	3.3	4.1	4.4	4.2
55-59	4.2	3.5	4.6	2.9	3.0	4.0	3.9	3.7
60-64	4.3	3.1	3.7	2.9	2.9	3.7	3.1	3.3
65-69	3.2	2.5	3.1	2.2	2.4	3.0	2.3	2.6
70 and over	4.9	3.1	4.8	3.4	3.6	5.4	3.6	3.9
Unknown	0.5	0.2	0.1	0.4	0.1		0.1	0.2
No. of individuals in sample group	8 047	18 025	12 127	16 109	9 467	5 511	10 931	80 217

Annex B-1-c – Sex ratio as %

Age	Beirut	Greater Beirut	Remainder Mount-Lebanon	North Lebanon	South Lebanon	Nabatieh	Bekaa	Total Lebanon
0-4	95.7	106.4	93.8	102.8	113.3	98.7	103.7	103.1
5-9	113.4	116.1	106.8	114.0	91.5	112.4	107.8	109.3
10-14	121.3	108.8	112.5	105.7	101.0	105.1	105.3	107.6
15-19	116.9	105.2	100.7	98.8	98.4	117.9	108.3	104.6
20-24	102.1	105.8	113.3	119.9	120.1	109.4	129.7	114.5
25-29	93.3	98.2	100.0	106.0	95.7	79.5	109.6	99.3
30-34	74.0	88.7	90.4	92.5	87.7	85.3	93.9	88.3
35-39	70.8	89.8	93.2	89.0	85.5	73.3	86.2	86.0
40-44	73.0	86.3	83.0	89.5	96.7	100.0	90.9	86.7
45-49	94.2	99.6	100.0	92.9	78.7	83.5	89.3	93.1
50-54	96.9	103.9	106.7	101.1	97.5	74.4	92.0	98.3
55-59	104.2	117.1	106.2	83.3	91.3	131.3	107.3	104.5
60-64	87.9	109.0	107.3	107.9	104.5	83.8	139.7	106.2
65-69	84.8	105.5	105.5	105.2	99.1	124.0	125.0	105.4
70 and over	109.6	89.5	113.6	104.8	103.6	91.6	95.5	101.4
Total	95.2	101.5	101.2	102.7	98.2	97.7	105.7	100.9

Not including births in the second half of 1997.

Annexe B.1-d



Annex B-1-e –

Breakdown of the active population by age, sex and region

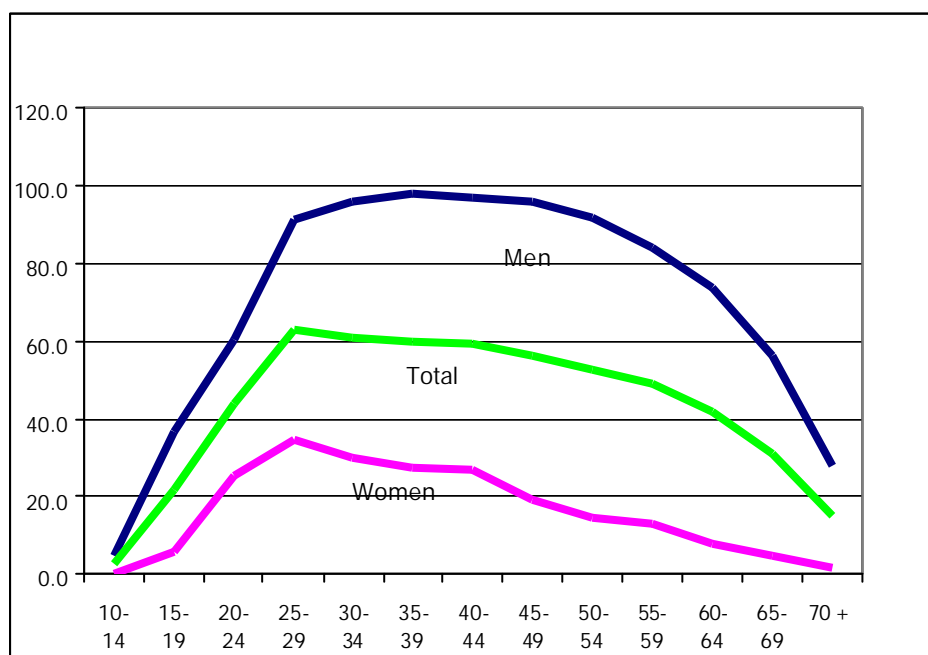
Age	Beirut	Greater Beirut	Remainder Mount-Lebanon	North Lebanon	South Lebanon	Nabatieh	Bekaa	Total Lebanon
1 – Men								
5-9		...		...	...	...	...	...
10-14	...	1 697	...	3 594	1 697	...	2 246	10 582
15-19	5 890	17 919	6 988	21 812	12 179	5 490	12 029	82 307
20-24	9 184	25 805	16 821	28 451	16 721	7 786	23 160	127 928
25-29	14 924	39 132	25 805	33 592	18 917	9 434	22 461	164 264
30-34	13 077	35 189	25 406	25 905	16 871	9 334	17 569	143 351
35-39	11 430	29 948	22 361	22 461	13 676	6 988	13 127	119 991
40-44	10 881	22 860	16 471	15 723	9 883	5 940	11 480	93 238
45-49	10 981	21 463	156 074	13 626	7 737	5 391	10 432	84 703
50-54	10 132	18 618	13 427	11 730	7 138	4 342	10 182	75 569
55-59	7 637	14 275	12 728	8 435	5 940	5 291	8 485	62 791
60-64	6 289	10 382	8 585	8 685	5 441	3 644	7 188	50 213
65-69	2 945	6 239	5 141	4 991	3 145	2 745	4 692	29 898
70 and over	2 995	3 394	3 843	4 143	2 146	2 046	3 194	21 762
Unknown	...	...	...	...	...		...	1 497
15-64	100 425	235 590	163 665	190 419	114 501	63 639	136 113	1 004 353
Total	107 313	247 170	172 999	204 095	121 638	68 780	146 544	1 068 539
As %								
15-64	10.0	23.5	16.3	19.0	11.4	6.3	13.6	100.0
Total	10.0	23.1	16.2	19.1	11.4	6.4	13.7	100.0
2 – Women								
5-9								
10-14	...	...		...	...	...	...	...
15-19	...	3 394	...	2 196	2 396	...	1 647	12 478
20-24	8 086	13 576	8 585	6 539	4 143	1 747	4 442	47 118
25-29	10 432	18 019	12 578	7 836	6 289	2 845	4 243	62 242
30-34	9 983	14 674	8 885	6 539	4 193	2 945	3 544	50 762
35-39	6 988	9 783	7 188	6 688	3 793	2 096	2 496	39 032
40-44	6 688	8 785	5 091	3 793	2 645	...	2 146	30 148
45-49	3 045	5 690	2 595	3 344	1 947	...	...	18 368
50-54	2 546	3 045	1 697	2 546	...	...	...	12 378
55-59	...	2 246	...	1 747	...	...	...	9 134
60-64	...	...	...	...	...	...	...	5 091
65-69	...	...	...	...	...	...	...	2 496
70 and over	...	...	...	...	...	...	...	1 447
Unknown	...	...	...	...	...	...	...	2 146
15-64	51 761	80 310	49 913	42 226	28 101	13 476	20 964	286 751
Total	52 908	81 658	51 061	43 674	28 751	13 977	21 663	293 692
As %								
15-64	18.1	28.0	17.4	14.7	9.8	4.7	7.3	100.0
Total	18.0	27.8	17.4	14.9	9.8	4.8	7.4	100.0

Age	Beirut	Greater Beirut	Remainder Mount-Lebanon	North Lebanon	South Lebanon	Nabatieh	Bekaa	Total Lebanon
3 – Men and women								
5-9		...		...	...	...	...	...
10-14	...	1 847	...	3 743	1 797	...	2 595	11 430
15-19	7 237	21 313	8 286	24 008	14 575	5 690	13 676	94 785
20-24	17 270	39 382	25 406	34 989	20 864	9 533	27 602	175 046
25-29	25 356	57 151	38 383	41 428	25 206	12 279	26 704	226 506
30-34	23 060	49 863	34 290	32 444	21 063	12 279	21 113	194 112
35-39	18 418	39 731	29 549	29 149	17 470	9 084	15 623	159 023
40-44	17 569	31 645	21 563	19 516	12 528	6 938	13 626	123 385
45-49	14 026	27 153	17 669	16 970	9 683	6 189	11 380	103 071
50-54	12 678	21 662	15 124	14 275	8 136	5 241	10 831	87 947
55-59	8 984	16 521	14 175	10 182	7 088	5 840	9 134	71 925
60-64	7 587	11 480	9 134	9 683	5 990	4 043	7 387	55 304
65-69	3 344	6 489	5 890	5 540	3 294	3 045	4 792	32 394
70 and over	3 095	3 544	3 893	4 692	2 446	2 146	3 394	23 210
Unknown		...	...	...	...	...	...	3 644
15-64	152 185	315 901	213 579	232 645	142 602	77 116	157 077	1 291 105
Total	160 221	328 828	224 060	247 769	150 389	82 757	168 207	1 362 231
As %								
15-64	11.8	24.5	16.5	18.0	11.0	6.0	12.2	100.0
Total	11.8	24.1	16.4	18.2	11.0	6.1	12.3	100.0

Annex B-1-f

Participation rate by age and sex

Age	1 – Men as %	2 – Women as %	3 – Total as %
10-14	5,0	0,4	2,8
15-19	36,6	5,8	21,6
20-24	60,4	25,5	44,1
25-29	91,4	34,4	62,8
30-34	95,8	29,9	60,8
35-39	97,9	27,4	60,0
40-44	96,9	27,2	59,6
45-49	95,7	19,3	56,1
50-54	91,5	14,7	52,8
55-59	84,0	12,8	49,1
60-64	73,9	8,0	41,9
65-69	56,1	4,9	31,2
70 and over	27,8	1,9	14,9
15-64	77,3	21,7	49,3
Total	53,1	14,7	34,0



Annex B-2

Breakdown of workers by sex, sectors of activity and region

Sector of activity	Beirut	Greater Beirut	Rem. Mount-Lebanon	North Lebanon	South Lebanon	Nabatieh	Bekaa	Total Lebanon
Men								
Agriculture & fisheries	...	1 597	10 183	29 450	18 768	10 482	27 553	98 229
Mining	...	...	...	1 947	...	...	...	4 642
Industry	13 426	46 370	19 566	25 855	12 977	6 938	14 176	139 308
Electricity, gas & water	...	...	2 047	...	...	...	...	6 788
Construction	9 184	27 852	30 048	22 960	19 816	12 778	14 325	136 962
Commerce	29 249	60 047	34 340	40 430	28 051	14 824	28 151	235 091
Hotels & restaurants	3 794	7 687	6 040	4 592	2 795	...	4 592	30 747
Transport & communications	6 141	16 172	11 181	12 079	5 940	3 095	7 138	61 743
Financial brokerage	4 642	4 991	4 043	...	...	...	...	17 320
Business services	7 238	9 833	9 484	4 193	2 246	...	2 246	36 387
Public administration	7 137	22 062	16 471	22 212	6 140	5 091	18 169	97 281
Education	4 692	8 635	6 439	7 038	4 892	4 093	5 091	40 879
Health & social work	3 793	4 642	3 444	1 997	2 596	...	...	18 668
Other services	4 093	10 332	5 640	5 241	2 645	...	2 795	31 695
Domestic services	4 642	3 294	1 697	...	...	...	...	12 828
International bodies	...	...	...	...	...	...	...	2 695
Unknown	...	...	...	...	...	...	...	2 324
Total	99 430	226 214	161 524	182 439	110 611	62 394	130 976	973 587
Women								
Agriculture & fisheries	...	...	...	3 394	3 794	2 546	3 294	13 576
Mining	...	...	...	...	...	...	...	...
Industry	3 393	12 628	6 140	3 594	2 047	1 797	1 697	31 296
Electricity, gas & water	...	...	...	...	...	...	...	...
Construction	...	...	...	...	...	...	...	2 046
Commerce	6 638	13 577	8 286	6 189	4 343	1 697	2 645	43 375
Hotels & restaurants	...	...	...	...	...	...	...	3 344
Transport & communications	...	1 597	...	...	...	...	...	4 592
Financial brokerage	3 095	2 795	1 947	...	...	...	...	9 384
Business services	3 444	4 293	2 496	...	...	...	...	12 977
Public administration	2 096	2 246	...	...	...	...	...	8 435
Education	8 934	14 775	11 330	14 276	6 539	3 843	6 339	66 035
Health & social work	3 145	5 940	3 594	3 843	2 745	...	2 196	22 760
Other services	2 396	3 594	1 897	...	...	...	...	10 582
Domestic services	13 277	11 780	7 138	2 795	3 694	...	1 897	41 828
International bodies	...	...	...	...	...	...	...	...
Unknown	...	...	...	...	...	...	...	...
Total	48 767	75 920	47 120	39 782	27 204	13 327	20 465	272 586

Sector of activity	Beirut	Greater Beirut	Rem. Mount-Lebanon	North Lebanon	South Lebanon	Nabatieh	Bekaa	Total Lebanon
Men and women								
Agriculture & fisheries	...	1 747	10 582	32 844	22 561	13 028	30 847	111 806
Mining	...	...	...	2 096	...	...	...	4 941
Industry	16 819	58 998	25 706	29 449	15 024	8 735	15 873	170 603
Electricity, gas & water	...	...	2 047	...	...	...	...	7 038
Construction	9 484	28 750	30 448	23 110	20 015	12 827	14 375	139 008
Commerce	35 887	73 623	42 627	46 619	32 394	16 521	30 796	278 466
Hotels & restaurants	4 343	8 535	6 938	5 041	3 045	...	4 892	34 091
Transport & communications	7 138	17 770	12 029	12 529	6 489	3 145	7 238	66 335
Financial brokerage	7 737	7 787	5 990	1 847	...	...	1 747	26 704
Business services	10 682	14 126	11 980	5 391	2 945	...	2 945	49 364
Public administration	9 233	24 308	17 869	23 460	6 838	5 341	18 668	105 716
Education	13 626	23 409	17 769	21 314	11 430	7 936	11 430	106 914
Health & social work	6 938	10 582	7 038	5 840	5 341	2 047	3 644	41 428
Other services	6 489	13 926	7 537	6 489	3 394	...	3 244	42 276
Domestic services	17 919	15 074	8 835	4 193	4 492	...	2 695	54 655
International bodies	...	...	...	...	...	...	...	4 043
Unknown	...	...	...	...	...	...	...	2 785
Total	148 197	302 134	208 644	222 221	137 815	75 721	151 442	1 246 173

Annex B-3

Breakdown of workers by sex, sector of activity and occupational situation as %

Sector of activity	Occupational situation						Total
	Self-employed	Employer	Employee	Family worker	Trainee (apprentice)	Unknown	
Men							
Agriculture & fisheries	43.3	8.8	41.0	6.9			100.0
Mining	...	...	83.9	...			100.0
Industry	19.2	11.5	65.4	1.8	2.1		100.0
Electricity, gas & water	...	...	93.4				100.0
Construction	29.8	12.9	55.4	1.3	...		100.0
Commerce	43.9	12.6	39.2	2.4	1.9		100.0
Hotels & restaurants	13.1	11.0	72.9	...	...		100.0
Transport & communications	57.5	3.3	38.7	...	...		100.0
Financial brokerage	...	...	91.9	...			100.0
Business services	41.6	12.5	43.2	...	...		100.0
Public administration	...		99.4		...		100.0
Education	3.2	...	95.0				100.0
Health & social work	30.7	10.7	56.4	...	...		100.0
Other services	26.9	9.3	59.8	...	...		100.0
Domestic services			100.0				100.0
International bodies			100.0				100.0
Unknown	...	...	...		...	...	100.0
Total	29.4	9.1	58.4	1.8	1.1	...	100.0

Sector of activity	Occupational situation						Total
	Self-employed	Employer	Employee	Family worker	Trainee (apprentice)	Unknown	
Women							
Agriculture & fisheries	23.2	...	45.6	29.8			100.0
Mining			...	...			100.0
Industry	21.7	...	73.2	...	...		100.0
Electricity, gas & water			...				100.0
Construction	...	...	85.4	...			100.0
Commerce	20.6	...	66.4	9.7			100.0
Hotels & restaurants	...	...	68.7	...			100.0
Transport & communications	...		96.7	...			100.0
Financial brokerage	...	...	96.8	...			100.0
Business services	11.9	...	81.5	...	...		100.0
Public administration			99.4		...		100.0
Education	...	...	97.1	...			100.0
Health & social work	7.0	...	89.5	...	...		100.0
Other services	29.2	...	57.1	...	...		100.0
Domestic services			99.8	...			100.0
International bodies			...		...		100.0
Unknown			...			...	100.0
Total	10.1	1.3	84.0	4.0	0.6	...	100.0
Men and women							
Agriculture & fisheries	40.9	7.9	41.6	9.6			100.0
Mining	...	...	82.8	...			100.0
Industry	19.6	9.7	66.8	2.0	1.8		100.0
Electricity, gas & water	...	...	93.6				100.0
Construction	29.5	12.8	55.8	1.3	...		100.0
Commerce	40.2	11.2	43.4	3.5	1.6		100.0
Hotels & restaurants	13.2	10.4	72.5	...	...		100.0
Transport & communications	53.6	3.1	42.7	...	...		100.0
Financial brokerage	...	...	93.6	...			100.0
Business services	33.8	9.5	53.3	...	...		100.0
Public administration	...		99.4		...		100.0
Education	2.6	...	96.3	...			100.0
Health & social work	17.7	5.4	74.6	...	...		100.0
Other services	27.5	8.3	59.1	...	4.1		100.0
Domestic services			99.8	...			100.0
International bodies			98.8		...		100.0
Unknown	...	...	...		...	...	100.0
Total	25.1	7.4	64.0	2.3	1.0	...	100.0

Annex B-4

Breakdown of the active population by sex, age and level of education

Age	Level of education							Total
	Illiterate	Read & write	Primary	Lower sec.	Secondary	University	Unknown	
	ISCED-0	ISCED-0	ISCED-1	ISCED-2	ISCED-3	ISCED-4 & +		
Men								
0-9	...	...	...					...
10-14	...	2 296	6 139	...				10 582
15-19	3 743	8 286	47 517	19 316	2 945	...	...	82 307
20-24	3 743	6 089	46 569	43 325	20 315	7 836	...	127 928
25-29	4 143	8 934	47 767	43 025	35 289	25 056	...	164 264
30-34	5 041	7 287	41 777	35 688	28 251	25 156	...	143 351
35-39	4 742	7 188	34 740	29 149	24 058	20 065	...	119 991
40-44	4 592	5 540	27 452	21 313	17 619	16 721		93 238
45-49	5 540	7 836	23 459	17 170	14 924	15 723	...	84 703
50-54	7 237	9 434	23 060	12 528	9 783	13 526		75 569
55-59	8 086	10 332	20 414	8 635	6 888	8 435		62 791
60-64	10 831	10 881	14 924	5 940	3 344	4 293		50 213
65-69	8 086	8 136	7 986	2 695	...	1 697		29 898
70 & over	7 237	6 039	4 842	1 547	...	...		21 762
Unknown	...	...	...	...		...	...	1 497
Total	74 620	98 579	347 446	241 530	165 812	140 056	...	1 068 539
Women								
0-9								
10-14	...	...	...	...				...
15-19	...	...	5 141	3 244	...	...		12 478
20-24	1 897	2 645	7 936	10 731	13 526	10 332	...	47 118
25-29	2 645	2 845	8 885	8 385	18 069	21 363	...	62 242
30-34	3 145	2 396	8 186	8 485	11 380	17 070	...	50 762
35-39	2 795	2 446	5 990	6 389	10 582	10 781	...	39 032
40-44	3 344	1 697	4 692	6 139	7 038	7 237		30 148
45-49	2 795	...	3 344	2 695	4 592	4 043		18 368
50-54	2 546	...	2 246	2 645	2 046	2 046	...	12 378
55-59	2 695	...	1 597	...	1 697	...		9 134
60-64	2 246	...	...	...	...	...		5 091
65-69	...	...	...	...		...		2 496
70 & over	...	...	...	...	...			1 447
Unknown	...	...	...	...	...	...	...	2 146
Total	28 101	17 719	50 313	50 911	71 326	74 970	...	293 692

Age	Level of education							Total
	Illiterate	Read & write	Primary	Lower sec.	Secondary	University	Unknown	
	ISCED-0	ISCED-0	ISCED-1	ISCED-2	ISCED-3	ISCED-4 & +		
Men and women								
0-9	...	...	...					...
10-14	...	2 496	6 638	...				11 430
15-19	4 592	9 533	52 658	22 561	4 342	...	...	94 785
20-24	5 640	8 735	54 505	54 056	33 841	18 168	...	175 046
25-29	6 788	11 780	56 651	51 411	53 357	46 419	...	226 506
30-34	8 186	9 683	49 963	44 173	39 631	42 227	...	194 112
35-39	7 537	9 633	40 729	35 538	34 640	30 846	...	159 023
40-44	7 936	7 237	32 144	27 452	24 657	23 958		123 385
45-49	8 336	8 735	26 803	19 865	19 516	19 766	...	103 071
50-54	9 783	10 232	25 306	15 174	11 829	15 573	...	87 947
55-59	10 781	11 280	22 012	9 933	8 585	9 334		71 925
60-64	13 077	11 280	15 673	6 489	3 993	4 792		55 304
65-69	9 484	8 535	8 485	2 845	...	1 747		32 394
70 & over	8 236	6 189	4 891	1 597	...	...		23 210
Unknown	...	...	...	...	...	...	...	3 644
Total	102 721	116 298	397 758	292 441	237 138	215 026	...	1 362 231

Breakdown of the active population by sex, age and level of education as %

Age	Level of education							Total
	Illiterate	Read & write	Primary	Lower sec.	Secondary	University	Unknown	
	ISCED-0	ISCED-0	ISCED-1	ISCED-2	ISCED-3	ISCED-4 & +		
Men								
0-9	...	...	...					...
10-14	...	21.7	58.0	...				100.0
15-19	4.5	10.1	57.7	23.5	3.6	...	...	100.0
20-24	2.9	4.8	36.4	33.9	15.9	6.1	...	100.0
25-29	2.5	5.4	29.1	26.2	21.5	15.3	...	100.0
30-34	3.5	5.1	29.1	24.9	19.7	17.5	...	100.0
35-39	4.0	6.0	29.0	24.3	20.0	16.7	...	100.0
40-44	4.9	5.9	29.4	22.9	18.9	17.9	...	100.0
45-49	6.5	9.3	27.7	20.3	17.6	18.6	...	100.0
50-54	9.6	12.5	30.5	16.6	12.9	17.9		100.0
55-59	12.9	16.5	32.5	13.8	11.0	13.4		100.0
60-64	21.6	21.7	29.7	11.8	6.7	8.5		100.0
65-69	27.0	27.2	26.7	9.0	...	5.7		100.0
70 & over	33.3	27.8	22.2	7.1	...	...		100.0
Unknown	...	...	...	...		...	...	100.0
Total	7.0	9.2	32.5	22.6	15.5	13.1	...	100.0

Age	Level of education							Total
	Illiterate	Read & write	Primary	Lower sec.	Secondary	University	Unknown	
	ISCED-0	ISCED-0	ISCED-1	ISCED-2	ISCED-3	ISCED-4 & +		
Women								
0-9								...
10-14	...	...	...	...				100.0
15-19	...	...	41.2	26.0	...	...		100.0
20-24	4.0	5.6	16.8	22.8	28.7	21.9	...	100.0
25-29	4.3	4.6	14.3	13.5	29.0	34.3	...	100.0
30-34	6.2	4.7	16.1	16.7	22.4	33.6	...	100.0
35-39	7.2	6.3	15.3	16.4	27.1	27.6	...	100.0
40-44	11.1	5.6	15.6	20.4	23.3	24.0		100.0
45-49	15.2	...	18.2	14.7	25.0	22.0		100.0
50-54	20.6	...	18.1	21.4	16.5	16.5	...	100.0
55-59	29.5	...	17.5	...	18.6	...		100.0
60-64	44.1	...	...	...	...	...		100.0
65-69	...	...	...	...		...		100.0
70 & over	...	...	...	...	...			100.0
Unknown	...	...	...	...	...	...	...	100.0
Total	9.6	6.0	17.1	17.3	24.3	25.5	...	100.0
Men and women								
0-9	...	...	...					...
10-14	...	21.8	58.1	...				100.0
15-19	4.8	10.1	55.6	23.8	4.6	...	...	100.0
20-24	3.2	5.0	31.1	30.9	19.3	10.4	...	100.0
25-29	3.0	5.2	25.0	22.7	23.6	20.5		100.0
30-34	4.2	5.0	25.7	22.8	20.4	21.8	...	100.0
35-39	4.7	6.1	25.6	22.3	21.8	19.4	...	100.0
40-44	6.4	5.9	26.1	22.2	20.0	19.4		100.0
45-49	8.1	8.5	26.0	19.3	18.9	19.2		100.0
50-54	11.1	11.6	28.8	17.3	13.5	17.7	...	100.0
55-59	15.0	15.7	30.6	13.8	11.9	13.0		100.0
60-64	23.6	20.4	28.3	11.7	7.2	8.7		100.0
65-69	29.3	26.3	26.2	8.8	...	5.4		100.0
70 & over	35.5	26.7	21.1	6.9	...	...		100.0
Unknown	...	...	...	...	...	...	...	100.0
Total	7.5	8.5	29.2	21.5	17.4	15.8	...	100.0

Annexe B-5-a –
Increase in job numbers by sector

Code	Sector	Forecast number		
		1996	1997	1998
11-14	Mining industries	578	460	603
15, 16	Agri-food industries	1 781	1 048	1 246
17	Textile industries	71	85	96
18	Clothing industry	1 121	851	1 014
19	Leather, footwear and leather goods industries	314	188	
20	Wood and woodworking industries, excluding furniture	157	356	355
21	Paper industry	105	43	43
22	Printing and publishing	112	443	191
23, 24	Chemical industries	84	168	125
25	Rubber and plastics industries	11	42	11
26	Non-metal minerals industries	311	416	498
27	Metallurgical industries	209	229	354
28	Metal production industries	933	609	592
29	Machinery industries not classified elsewhere	210	55	34
30 – 34	Transport appliances and equipment industries	164	289	185
36	Furniture industry	896	1 245	1 388
40, 41	Electricity, water	108	435	201
45	Construction	1 141	1 437	1 361
50	Sale of vehicles, garages and petrol stations	416	372	163
51	Wholesale trade	662	901	923
52	Retail trade	930	929	788
55	Hotels and restaurants	379	315	233
60 – 62	Transport	42	95	32
63	Travel agencies	188	209	241
64	Posts and telecommunications	32	240	11
65	Financial services	350	523	421
66, 67	Insurance and other forms of brokerage	30	28	47
70, 71	Real estate services and business services	410	526	631
72	Computer services	105	250	105
74	Other business services	512	570	781
80	Education	1 298	1 646	1 480
85	Health services	925	627	728
91 – 95	Other services	686	379	316
Total		15 270	16 006	15 195

Source: **ONE (National Employment Office)** - Survey of establishments (1996), June 1997

Annex B-5-b –
Reduction of job numbers by sector

Code	Sector	Number forecast		
		1996	1997	1998
11-14	Mining industries	42	42	42
15, 16	Agri-food industries	264	191	191
17	Textile industries	23	23	2
18	Clothing industry	104	72	19
19	Leather, footwear and leather goods industries	0	0	0
20	Wood and woodworking industries, excluding furniture	136	125	115
21	Paper industry	27	33	33
22	Printing and publishing	86	26	5
23, 24	Chemical industries	0	0	0
25	Rubber and plastic industries	0	0	0
26	Non-metal minerals industries	13	29	16
27	Metallurgical industries	229	73	73
28	Metalworking industries	92	56	13
29	Machinery industries not classified elsewhere	0	0	0
30 - 34	Transport appliances and equipment industries	0	0	0
36	Furniture industry	470	397	449
40, 41	Electricity, water	4	2	2
45	Construction	558	526	526
50	Sale of vehicles, garages and petrol stations	63	84	63
51	Wholesale trade	8	11	11
52	Retail trade	208	168	0
55	Hotels and restaurants	119	267	222
60 - 62	Transport	21	0	0
63	Travel agencies	0	0	0
64	Posts and telecommunications	0	0	0
65	Financial services	111	162	127
66, 67	Insurance and other brokerage services	0	0	0
70, 71	Real estate services and business services	21	0	0
72	Computer services	0	0	0
74	Other business services	32	0	0
80	Education	42	274	84
85	Health services	48	2	4
91 - 95	Other services	0	0	0
Total		2 722	2 563	1 998

Source: **ONE** – Survey of establishments (1996), June 1997

Annex B-6 - Creation of new jobs by sector

Code	Sector	Number forecast		
		1996	1997	1998
11-14	Mining industries	187	147	196
15, 16	Agri-food industries	455	572	676
17	Textile industries	35	16	16
18	Clothing industry	356	198	219
19	Leather, footwear and leather goods industries	11	188	0
20	Wood and woodworking industries, excluding furniture	104	73	219
21	Paper industry	106	19	19
22	Printing and publishing	64	722	95
23, 24	Chemical industries	4	0	36
25	Rubber and plastics industries	55	65	63
26	Non-metal minerals industries	168	421	516
27	Metallurgical industries	203	154	286
28	Metalworking industries	338	371	277
29	Machinery industries not classified elsewhere	21	64	0
30 - 34	Transport appliance and equipment industries	42	147	126
36	Furniture industry	576	849	491
40, 41	Electricity, water	11	52	16
45	Construction	111	373	319
50	Sale of vehicles, garages and petrol stations	416	148	96
51	Wholesale trade	239	582	176
52	Retail trade	261	167	73
55	Hotels and restaurants	409	144	884
60 - 62	Transport	0	0	21
63	Travel agencies	21	73	63
64	Posts and telecommunications	42	84	0
65	Financial services	53	139	115
66, 67	Insurance and other brokerage services	11	19	4
70, 71	Real estate services and business services	32	95	32
72	Computer services	0	0	0
74	Other business services	334	229	250
80	Education	448	808	612
85	Health services	657	373	366
91 - 95	Other services	241	121	121
Total		6010	7413	6383

Source: **ONE** - Survey of establishments (1996), June 1997

**Annex C-1 –
Overall enrolment rate (as %)**

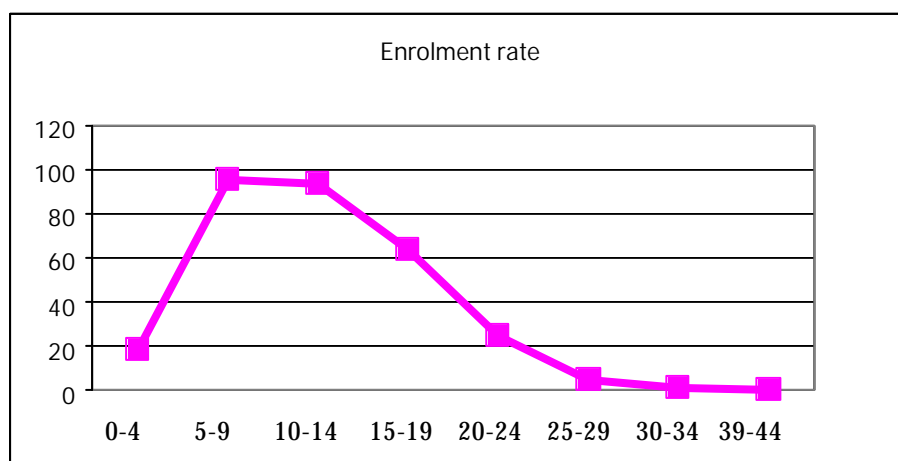
Total	Men	Women
30.3	30.8	29.8

Enrolment rate by cycle of education (as %)

Nursery (ISCED-0)	Primary (ISCED-1)	Lower secondary (ISCED-2)	Secondary (ISCED-2)	University (ISCED-4-5-6)
13.4	38.9	25.9	12.2	9.7

**Annex C-2 –
Education participation rate by age-group**

Age	Rate
0-4	18.5
5-9	95.4
10-14	93.8
15-19	63.6
20-24	24.4
25-29	4.6
30-34	1.2
35-39	0.3
40-44	
45-49	
50-54	
55-59	
60-64	
65-69	
70 and over	
Unknown	12.4
5-20	83.4
15-64	15.2
Total	30.3



Annex C-3 – Vocational training participation rate

Lower secondary (ISCED-2)		Secondary (ISCED-3)		Post-secondary (ISCED-4)	
% of total enrolment	% of cycle	% of total enrolment	% of cycle	% of total enrolment	% of cycle
0.6	2.3	3.4	26.6	1.2	10.8

Annexe D. Public expenditure on education as % of GDP

Ministry of Education (MEN)						
Year	Budget (MEN) (in LBP M)		Budget (MEN) (in US M)	GDP (in US M)		% of GDP
1997	Operation	360.621,50	234,322	14,788		1,58
	Construction & Equipment	17.262,00	11,216			0,08
Total						1,66
1998	Operation	446.084,55	294,639	16,547		1,78
	Construction & Equipment	4.515,40	2,982			0,02
Total						1,8

Ministry of Culture and Higher Education (MCES)						
Year	Budget (MCES) (in LBP M)		Budget (MCES) (in US M)	GDP (in US M)		% of GDP
1997	Operation	142.663,42	94,23	14,788		0,64
	Construction & Equipment	7.184,50	4,75			0,03
Total						0,67
1998	Operation	139.621,86	92,22	16,547		0,56
	Construction & Equipment	5.735,86	3,79			0,02
Total						0,58

Ministry of Technical and Vocational Education (METP)						
Year	Budget (METP) (in LBP M)		Budget (METP) (in US M)	GDP (in US M)		% of GDP
1997	Operation	23.901,20	15,53	14,788		0,105
	Construction & Equipment	6.002,50	3,9			0,026
Total						0,131
1998	Operation	26.949,92	17,8	16,547		0,107
	Construction & Equipment	721,00	0,48			0,003
Total						0,110

Annex E –

Breakdown of persons not attending school by level of education acquired, and by age and sex (as %)

Age	Level of education acquired							Sample (Ind) = 100%
	Illiterate	Read & write	Primary	Lower sec.	Sec- ondary	Univer- sity	Infants & unknown	
	ISCED - 0	ISCED - 0	ISCED - 1	ISCED - 2	ISCED - 3	ISCED - 4 +		
Men								
0-4							100.0	2 659
5-9	20.2	4.7	5.2				69.6	193
10-14	20.3	21.7	49.7	4.9			3.5	286
15-19	6.3	10.3	57.8	22.4	2.4	0.1	0.7	1 747
20-24	3.6	5.1	37.7	34.2	15.7	3.5	0.2	3 157
25-29	3.1	5.6	29.9	26.7	21.4	12.9	0.3	3 314
30-34	4.1	5.2	29.5	24.9	19.5	16.5	0.2	2 920
35-39	4.4	6.1	29.2	24.3	19.7	16.2	0.1	2 437
40-44	5.1	6.1	29.8	22.8	18.7	17.5		1 923
45-49	7.0	9.4	27.9	20.1	17.6	17.9	0.1	1 773
50-54	10.7	12.6	30.8	16.6	12.8	16.6		1 655
55-59	13.8	16.8	32.9	13.9	10.6	12.0		1 497
60-64	22.1	22.0	29.6	12.0	6.7	7.5		1 361
65-69	28.3	26.1	26.5	9.0	4.7	5.2	0.2	1 067
70 and over	34.1	27.9	21.7	6.9	5.3	4.1		1 568
Unknown	33.3	14.8	27.8	11.1	1.9	7.4	3.7	54
Total	8.7	9.7	29.1	19.3	12.9	10.0	10.3	27 611
Women								
0-4							100.0	2 573
5-9	17.5	4.8	3.6	1.2			72.9	166
10-14	33.2	20.5	37.6	4.4			4.4	205
15-19	7.2	10.0	50.4	26.9	4.4	0.3	0.8	1 395
20-24	5.4	5.7	29.6	30.6	21.7	6.9	0.1	2 666
25-29	6.0	4.9	25.6	24.9	23.8	14.7	0.1	3 437
30-34	7.9	5.3	25.2	25.5	21.9	14.1	0.2	3 350
35-39	10.7	6.0	27.2	24.6	19.2	12.3	0.1	2 839
40-44	16.7	6.9	27.3	22.9	16.4	9.9		2 222
45-49	23.9	8.9	29.1	18.4	12.3	7.4		1 906
50-54	30.8	10.9	28.2	16.0	9.9	4.2	0.1	1 683
55-59	42.1	11.2	23.5	12.2	8.4	2.6		1 434
60-64	50.7	13.1	20.4	8.4	5.1	2.3	0.1	1 281
65-69	58.0	12.9	19.7	5.8	2.9	0.7		1 012
70 and over	63.1	15.2	13.1	5.1	3.0	0.5	0.1	1 547
Unknown	45.0	18.3	22.0	4.6	7.3	1.8	0.9	109
Total	19.1	7.5	24.2	18.6	13.6	7.3	9.8	27 825

Age	Level of education acquired							Sample (Ind) = 100%
	Illiterate	Read & write	Primary	Lower sec.	Secon- dary	Universi- ty	Infants and unknown	
	ISCED - 0	ISCED - 0	ISCED - 1	ISCED - 2	ISCED - 3	ISCED - 4 +		
Men and women								
0-4							100.0	5 232
5-9	18.9	4.7	4.5	0.6			71.3	359
10-14	25.7	21.2	44.6	4.7			3.9	491
15-19	6.7	10.2	54.5	24.4	3.3	0.2	0.8	3 142
20-24	4.4	5.4	34.0	32.6	18.5	5.1	0.2	5 823
25-29	4.6	5.2	27.7	25.8	22.6	13.8	0.2	6 751
30-34	6.1	5.2	27.2	25.2	20.8	15.2	0.2	6 270
35-39	7.8	6.0	28.1	24.5	19.4	14.1	0.1	5 276
40-44	11.3	6.5	28.4	22.8	17.5	13.4		4 145
45-49	15.7	9.1	28.5	19.2	14.9	12.4	0.1	3 679
50-54	20.8	11.7	29.4	16.3	11.3	10.3		3 338
55-59	27.7	14.1	28.3	13.1	9.5	7.4		2 931
60-64	36.0	17.7	25.1	10.3	5.9	5.0		2 642
65-69	42.8	19.7	23.2	7.5	3.8	3.0	0.1	2 079
70 and over	48.5	21.6	17.4	6.0	4.2	2.3		3 115
Unknown	41.1	17.2	23.9	6.7	5.5	3.7	1.8	163
Total	14.0	8.6	26.6	19.0	13.2	8.6	10.1	55 436

Annex F –
Unemployment rate by sex, age and level of education (as %)

Age	Level of education						Total
	Illiterate	Read & write	Primary	Lower sec.	Secondary	University	
	ISCED - 0	ISCED - 0	ISCED - 1	ISCED - 2	ISCED - 3	ISCED - 4+	
Men							
10-14	33.3	26.1	38.2	15.8			33.0
15-19	33.3	23.5	29.3	32.0	37.3	19.1	29.7
20-24	9.3	16.4	19.7	20.4	23.6	7.8	20.1
25-29	7.2	6.1	9.3	10.9	11.5	6.5	9.7
30-34	10.9	3.4	4.5	5.5	6.4	4.7	5.6
35-39	5.3	2.8	2.4	4.1	4.4	3.0	3.7
40-44	3.3	4.5	4.0	2.8	2.5	2.2	3.3
45-49	7.2	4.5	3.8	3.8	2.3	4.8	3.5
50-54	1.4	8.5	3.0	3.2	2.0	1.2	3.8
55-59	3.1	4.3	3.4	1.2	1.4		2.7
60-64	4.1	0.9	3.7	0.8	1.5		2.4
65-69	2.5	2.5	1.3	1.9	3.8		2.0
70 and over		1.7	1.0				0.7
Unknown			9.1				3.3
Total	6.3	7.0	10.6	10.3	8.4	5.5	8.9

Age	Level of education						Total
	Illiterate	Read & write	Primary	Lower sec.	Secondary	University	
	ISCED - 0	ISCED - 0	ISCED - 1	ISCED - 2	ISCED - 3	ISCED - 4+	
Women							
10-14			40.0				23.5
15-19	17.6	8.0	23.3	26.2	28.6		21.6
20-24	2.6	3.8	6.3	14.4	14.0	13.0	11.5
25-29	1.9	7.0	6.7	10.1	8.3	6.3	7.3
30-34	1.6	2.1	6.1	6.5	5.7	11.7	7.5
35-39	1.8		5.0	6.3	7.1	6.5	5.6
40-44	3.0		5.3	6.5	3.5		3.3
45-49			4.5	3.7	3.3	4.9	3.3
50-54			2.2	1.9	4.9		1.6
55-59	3.7			3.8	2.9		2.2
60-64	2.2		6.7				2.0
65-69	7.1						4.0
70 and over							
Unknown					33.3		2.3
Total	2.5	2.5	7.5	9.4	8.1	7.5	7.2
Men and women							
10-14	30.8	24.0	38.3	15.0			32.3
15-19	30.4	21.5	28.7	31.2	34.5		28.6
20-24	7.1	12.6	17.8	19.2	19.8	15.7	17.8
25-29	5.1	6.4	8.9	10.8	10.4	7.1	9.1
30-34	7.3	3.1	4.8	5.6	6.2	8.6	6.1
35-39	4.0	2.1	2.8	4.5	5.2	5.3	4.2
40-44	3.1	3.4	4.2	3.6	2.8	2.1	3.3
45-49	4.8	4.0	3.9	3.8	2.6	2.8	3.5
50-54	1.0	7.8	3.0	3.0	2.5	4.2	3.5
55-59	3.2	4.0	3.2	1.5	1.7	1.1	2.6
60-64	3.8	0.9	3.8	0.8	1.3		2.3
65-69	3.2	2.3	1.2	1.8	3.8		2.2
70 and over		1.6	1.0				0.6
Unknown			4.8		33.3		2.7
Total	5.2	6.3	10.2	10.1	8.3	6.2	8.5

Annex G

Sources

1-	Central Statistical Administration (ACS) – 1997 survey
2-	Office National de l'Emploi (ONE – National Employment Office) – 1997 survey
3-	Direction Générale de l'Enseignement Technique et Professionnel (DGETP – Directorate for Technical and Vocational Education)
4-	Centre National de Recherche et de Développement Pédagogique (CNRDP – National Centre for Educational Research and Development)
5-	United Nations Development Programme (UNDP)
6-	Ministry of Industry, survey of Lebanese industry – survey conducted by GTZ, December 1995
7-	“Le Commerce du Levant”, 23 September 1999

Annex H

Visits and meetings

Institution	Person met
Technical Support Unit (World Bank Project)	Mr Burhan KRAYTEM, Project Director
GTZ (German Agency for Technical Cooperation)	Mrs NASSER, Administrator's Assistant
Amilieh School (NGO)	Mr Imad BEYDOUN, Principal
Conseil du Développement et de la Reconstruction (Development and Reconstruction Council)	Mrs Jihane Haïdar, Economist
UNDP	Mr Renaud Meyer, Head of Programme
European Commission Delegation to Lebanon	Mr Giorgio FICCARELLI, Chargé d'Affaires
Ministry of Industry	Mr Sami ASSY, Head of Technical and Industrial Services
Ministry of Vocational and Technical Education (VTE Ministry)	Mr Abdel Latif KOTEICH, Director General Mrs Leila Barakat, Ministerial Adviser Mr Ali Hajj HOSSEIN, Head of Technical Department Mr Ahmad DIAB, Head of Accounting Department
National Employment Office	Mr Moussa GEDEON, Director General

Ministry of Social Affairs	Mrs Neemat KANAAN, Director General
Al-Kafaat School (NGO)	Mr Raïf SHWAYRI, Principal
Ministry of the Economy	Mrs Alia MOUBAYED, Mrs Taline URNECHLIAN, Mrs Hala YARE
Industrialists' Association	Mr Ghassan BOULBOL, Association member

