CHAPTER IX

MANPOWER PLANNING IN JORDAN

9.1 Manpower Planning Model in Jordan

It is necessary to understand the future trend of Jordanian labour market. However, the detailed data on the labour market of Jordan is not available after 1987. Therefore, some projections on the labour market of Jordan are offered here for the period after 1985 so that one gets an idea about the labour market. A situational analysis of labour market of Jordan is provided in the previous chapter, though it is confined to a few segments of it. It is necessary to know the manpower planning in Jordan and the efforts put in by the government. Manpower projections and the policy of the government in various five year plans regarding the labour market of Jordan are also discussed.

Manpower Planning is often defined as an attempt to match the supply of people with the jobs available for them. The provision of an infrastructure suitable for a viable development of the economy is a minimum objective in the overall formulation of the macro economic planning. This infrastructure includes the educational system which is primarily responsible for developing the human resource base of the economy.

In Jordan the projections of manpower requirements are based on the 1979 actual value added and estimated productivity rates

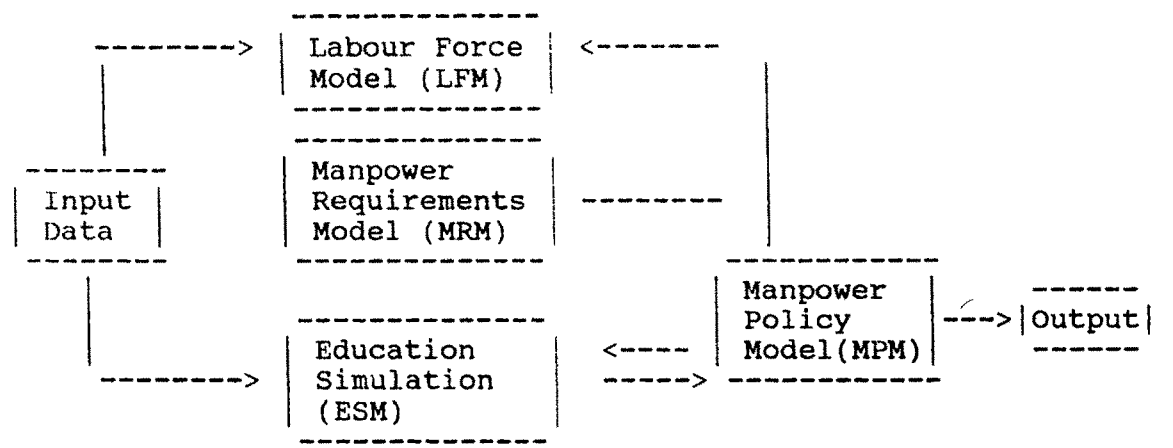
for each sector during 1979-1982 in the Manpower Planning Model which is based on the Manpower Forecasting Model of the World Bank[1].

This model has been applied to several Middle East countries. The Middle East and North Africa projects Department of the World Bank developed the model with the problems of both labour importing and exporting countries in view. The approach of the model is as follows.

- To forecast manpower requirements to meet specific sectoral output targets.
- To identify and isolate specific problems in the supply of manpower through simulation of flows of students and trainees through the education and training system in the light of such modifiable parameters as participation, repetition and drop out rates, and qualifications required to enter programs. The system also permits the planner to set specific manpower targets through an allocation sub model, such as maximizing the number of nationals in certain occupational categories in a given sector or optimizing the allocation of qualified labour to occupations in those sectors of the economy which are thought to have a high priority.

The model incorporates sectoral production targets together with certain assumptions about productivity growth for the sectors concerned Thus it can be used to estimate the production levels in the given sectors. The manpower requirement is also estimated based on the existing indigenous manpower stocks and desired numbers of expatriate manpower.

The scheme of the model is:-



A brief discription of the major elements of the above system is given below.

(A) Labour Force Model(LFM)

i) **Function:**

It identifies the available national labour force at the beginning of each stimulation year by occupation within sector and applies an attrition rate. It takes new labour force entrants from Education Simulation Model into account (ESM) after applying a participation filter. It provides the net supply of manpower for the simulation year.

ii) **Principal data requirements:**

a) Labour force for the base year disaggregated by nationals and expatriates by occupation within the sector; and b) Attrition rates by occupation within sector and by nationality.

iii) **Principal Reports:**

National labour force by occupation within sector, indicating; a) Labour force at the beginning of the simulation year, b) Numbers affected by attrition, c) Current labour force allocation from the ESM, d) Total labour force availability at the end of the simulation year,e) National labour force disaggregated by occupations, f) National labour force by sectors g) Analysis of expatriate labour force by nationality, by sector,occupation for the simulation year, indicating expatriate labour force, attrition (number affected),expatriate labour force after attrition, expatriate requirements needed to fill deficits and net importation of expatriates.

(B) Education Simulation Model (ESM)

i) **Function:**

The ESM simulates flows of students and trainees through a system on the basis of initial enrollments (in the base year) and assumptions about participation rates, repetition rates and drop out rates. These parameters can be changed to reflect educational policy decisions such as, higher participation of girls in a given program, increased flows from secondary to vocational/technical programme or specification of particular proportions of upper secondary school entrants to literary and science-oriented courses, introduction of "automatic promotion" or limiting of repetition to a minimum number of times for the

purpose of flows to the labour force. The model considers any year of programme as an exit point classifying on the basis of boy/girl; completers/drop-outs.

ii) **Data Requirements:**

a) Base year enrollments of national in each course with age/grade distribution if possible, b) Participation, drop-out and repetition rates, c) Stock of teachers by types and d)Desirable student/teacher ratios for each program.

iii) **Principal Reports:**

a) Status of the underage school dropouts by age and level b) The current dropout rate and potential participants by grade and programme.

(C) Manpower Policy Model (MPM)

i) Functions:

The MPM allocates the supply from the labour force and from the ESM according to specific priorities. The MPM can also be set to maximize the number of nationals employed in a specific occupation within a sector. If the supply is greater than the demand, the ESM will have to be made in some case adjustments in participation and repetition coefficients. In those cases where supply is less than demand, the critical priorities will be satisfied first. Where priorities are equal and supply insufficient, allocation between occupation/sector cells is made on the basis of each cell's net requirements weighed by the degree of nationalization already obtained.

ii) **Data Requirements :**

Data requirement is determined by (a) Sectoral/occupation Manpower (SOM) priorities, b) Percentage of nationalization targets.

iii) **Principal Reports :**

This contains the details of (a) Sector/occupation requirements, b) Existing national labour force c) Nationalization, d) Number of nationals needed, e) current ESM supply, f) Difference (a) & (b), g) Net additional requirements. Total sector employment distributed by nationality, total employment by occupation distributed by nationality groups; comparison of target sectoral outputs with "achievable" outputs given existing and manpower availability by "pool" .

iv) **Allocation of Expatriate Personnel :**

The allocation of the expatriates to the SOM cells is made by a linear programming model (LPM). This allocation is constrained in several ways: a) General availability, b) Availability of the specific skill "mix" required, c) Government "tolerance" levels set for certain nationalities and d) Eventually the cost of different expatriate groups.

9.2 Projections of Demand and Supply of Labour

This section gives a brief discription of projections done by World Bank and Government of Jordan on Jordanian labour market.

9.2.1 World Bank Projections

On the basis of the model outlined above the World Bank made projections of labour demand and supply in Jordan. Some of the major findings of the study are given below.

According to their model value added is projected to grow at 6.2 percent and labour productivity at 3.3 percent for the period 1980-85. For 1986-90 the value added is projected to grow at 4.9 percent per annum and labour productivity at 2.4 percent per annum. Based on these assumptions, total manpower requirements will increase from 464.1 Thousand to 603 thousand between 1986-90 (Table 9.1). The sectionwise projections are as follows: The highest manpower requirement would be in public administration and defence. Construction sector would be the second largest. Requirement in this sector is expected to be modest (around 1.4 percent) during 1980-1985 and 1.0 percent in 1985-1990. Manpower requirement in manufacturing sector is projected to grow at a rate of 5.5 and 4.3 percent during 1980-1985 and 1985-1990. This would raise its share in total employment from 9.1 percent in 1980 to 11.3 percent in 1990.

Table 9.1 : Manpower Requirement By Sectors During 1980-1990

	1980		1983		1985		1990		Growth Rate(%)		Change in '000	
	000's	% of total	000's	% of total	000's	% of total	000's	% of total	80-85	85-90	80-85 (% total)	85-90
Agriculture	46.8	10.1	51.2	10.1	52.7	9.9	54	9	2.4	0.5	5.9	1.3
Mining	4.4	0.9	4.6	0.9	5.4	1	8.4	1.4	4.2	9.2	1	3
Manufacturing	42.4	9.1	51.2	10.1	55.5	10.4	68.6	11.4	5.5	4.3	13.1	13.1
Chemicals&Petrol	4.5	1	5.6	1.1	5.9	1.1	7.2	1.2	5.6	4.1	1.4	1.3
Non-Metallic Minerals	5.2	1.1	6.2	1.2	8	1.5	9	1.5	9	2.4	2.8	1
Other Manufacturing	32.7	7	39.4	7.2	41.6	7.8	52.4	8.7	4.9	4.7	8.9	10.8
Electricity&Water	8.2	1.8	9.5	1.9	10.2	1.9	12.1	2	4.7	3.3	2	1.9
Construction	73	15.7	76.9	15.1	78.4	14.7	82.4	13.7	1.4	1	5.4	4
Trade	44.1	9.5	48.8	9.4	49.1	9.3	54.4	9	2.4	1.8	5.6	4.7
Transport	39.1	8.4	41.6	8.2	42.9	8	46.2	7.7	1.9	1.5	3.8	3.3
Finance	9.6	2.1	10	2	10.3	1.9	11	1.8	1.4	1.3	0.7	0.7
Public Administration	174	37.5	191.6	37.6	203.2	38.1	236.3	39.2	3.2	3.1	29.2	33.1
Other services	22.7	4.9	24.4	4.8	25.5	4.8	29.6	4.9	2.4	3	2.8	4.1
Total	464.1	100	509.2	100	533.9	100	602.9	100	2.8	2.5	69.8	69

Source : Jordan-Issue of Employment and Labour Market Imbalances, Volume 1, World Bank, 1987.

Occupation wise Manpower Requirement

- Manpower requirements by occupations (Table 9.2) are projected according to 14 different skill levels. The table shows that manual workers (blue collar) at all skill levels (supervisors, skilled and semi-skilled) are the largest group comprising over half of the total manpower requirement in Jordan. Blue collar occupations are projected to increase by only 0.9 percent during 1980-1985 and by 2.2 percent during 1985-1990. The low increase in demand for blue collar workers during 1980-1985 is explained by the emphasis on large capital intensive projects combined with the effect of the recession in the manufacturing industries which started in late 1982. The demand for blue collar workers is, expected to pick up during the 90s with the development of labour intensive small and medium scale industries.

- Another large group is that of the professionals. Their proportion of the total requirement in 1980 was 11.8 percent which will increase to 17.5 percent in 1985 and 17.8 percent in 1990. The large increase during 1980-1985 is explained by the boom years of the early 1980s, which would lead to an expansion of the public services requiring a large number of teachers, physicians and engineers. The expansion of private services in banking and financing would also require more professionals. Demand for other white collar occupations at the supervisory, semi-skilled and skilled levels is projected to increase by 5.8 percent during 1980-1985 and by 3.5 percent during 1985-1990.

Table 9.2 : Manpower Requirement By Occupations During 1980-1990

('000)

	1980		1985		1990		Annual Average			
	No	% of total	No	% of total	No	% of total	80-85	85-90	85-90	85-90
A-1 Scientists & Mathematicians	0.6	0.1	5.8	1.1	6.8	1.1	57.4	3.2	5.2	1
A-2 Architects & Engineers	3.8	0.8	9.4	1.8	10.8	2.6	19.9	2.8	5.6	1.4
A-3 Health Professionals	7.1	1.5	14.5	2.7	16.9	2.8	15.4	3.1	7.4	2.4
A-4 Teachers	33.5	7.2	38.4	7.2	44	7.3	2.8	2.8	4.9	5.6
A-5 Other professionals	10.0	2.2	25.4	4.8	23.8	3.9	20.8	-1.3	15.4	-1.6
A-6 Managers	34.1	7.3	32.7	6.1	33.6	5.6	-0.8	0.5	-1.4	0.9
B-1 Scientists & Technicians	2.3	0.5	2.7	0.5	8.1	0.5	3.3	25.0	0.4	5.4
B-2 Wh.Collar supervisors	5.0	1.1	12.7	2.4	14.9	2.5	20.5	3.2	7.7	2.2
B-3 Bl.Collar supervisors	19.0	4.2	16.5	3.1	21.4	3.6	-3.2	5.3	-2.9	4.9
C-1 Sk.office workers	26.1	5.6	30.2	5.7	35.8	5.9	3.0	3.5	4.1	5.6
C-2 Sk.Manual	66.3	14.3	76.1	14.3	86.1	14.3	2.8	2.5	9.8	10.0
D-1 Semi-skilled Manual	158.4	34.1	162.7	30.5	177.6	29.5	0.5	1.8	4.3	14.9
D-2 Semi-skilled office	24.5	5.3	30.8	5.8	36.9	6.1	4.7	3.7	6.3	6.1
E-Unskilled	73.0	15.7	75.9	14.2	86.3	14.3	0.8	2.6	2.9	10.4
Total	464.1	100	533.9	100	603.0	100	2.8	2.5	69.8	69.2

	1980	1985	1990	Change 1980-85 ('000)	Change 1985-90 ('000)	Annual Average Growth rate (%)	
						1980-85	1985-90
Professional A-1 A-2 A-3 A-4 A-5	55.0 (11.8)	93.5 (17.5)	107.1 (17.8)	38.5	13.6	11.2	2.8
White Collar B-2 C-1 D-2	55.6 (12.0)	73.7 (13.8)	87.6 (14.5)	18.1	13.9	5.8	3.5
Blue Collar B-3 C-2 D-1	244.1 (52.6)	255.3 (47.8)	284.9 (47.2)	11.2	29.7	0.9	2.2

Source : Same as in Table 9.1
Note : Figures in brackets are percentage to table.

Projected Surpluses and Shortages

- A severe shortage hits the occupations like skilled farm workers and semi-skilled manual workers (Table 9.3). There will be a considerable shortage of skilled manual workers, blue collar supervisors and foremen. Shortages in the case of health professionals, architects, engineers, managers and unskilled workers will also prevail.

- Occupation which showed the largest surplus in national labour was semi-skilled non-manual workers numbering 1,26,227. The next largest group is that of skilled office workers numbering 72,799. There would be a surplus of teachers also. Scientist and Mathematicians and Science Technicians showed a lower surplus - e.g. 2,767 and 2,513 respectively. This clearly shows that a large majority, being semi skilled non manual workers, will need to be absorbed in the labour market.

Even in the absence of data to verify projections by the World Bank, it reflects the nature and intensity of the problem.

Table 9.3 : Projected Manpower Surplus And Shortages In 1990

Pools	National Labour Supply	National Labour Demand	Labour balances	
			Shortage of National labour	Surplus of National labour
1. Scientist & Mathematicians	9592	6825		2767
2. Architects & Engineers	8074	10772	2698	
3. Health professionals	13044	16931	3887	
4. Teachers	73677	44034		29643
5. Other professionals	34386	23764		10617
6. Skilled farm workers	14208	24637	10429	
7. Managers	21663	24588	2925	
8. White collar supervisors	54856	23063		31793
9. Science Technicians	10585	8072		2513
10. Blue collar supervisors& Foreman	13721	21415	7694	
11. Skilled office workers	108591	35792		72799
12. Skilled Manual workers	53152	62317	9165	
13. Semi-skilled non-manual workers	190923	64696		126227
14. Semi-skilled manual workers	93763	149759	55991	
15. Unskilled workers	83950	86272	2322	
Total	784185	507826	95111	276359

Source : Same as in Table 9.1.

9.2.2 Government of Jordan's Sponsored Study

A study by Adel Lutfi Badrnah and Mazen Odeh was conducted at the instance of government of Jordan[2] on the future projections of the demand and supply of labour in Jordan. According to them the largest supply of labour would be of the specialists and the technicians during 1990-95, 1996-2000 and for 1990-2000,(Table 9.4). This projection is based on the expected high enrollment of students in various educational fields. This surplus of specialists and technicians reflects that there would be a problem in their getting absorbed in the labour market. This projection is in line with the projections of the World Bank for 1990.

The supply of administrators and clerks however would be in excess. In case of categories such as salesmen, services, agriculture and productive and related workers, the demand will exceed the supply and thus there will be a deficit of labour. This deficit would amount to above eighty thousand workers as salesmen and other productive workers for the period 1990-2000. From the projections of 1996-2000, one gets an optimistic picture of the labour market of Jordan as the total demand for labour will exceed supply and the unemployment would not be so acute. There would be an imbalance in the labour market as unemployment in the category of specialists and technicians, administrative staff and clerks would be there along with the shortages for the salesmen and other labour in services, in agriculture and in the other productive work category.

Table 9.4 : Demand and Supply of Jordanian Labour Force During 1990 - 2000

Occupational Group	1990-1995			1996-2000			1990-2000		
	Supply	Demand	Deficit or Surplus	Supply	Demand	Deficit or Surplus	Supply	Demand	Deficit or Surplus
1	2	3	4	5	6	7	8	9	10
Specialists & technicians	94621	23227	71394	93487	26104	67383	188108	49331	138777
Administrative	7356	2603	4753	7278	3068	4210	14634	5671	8963
Clerks	43686	19543	24143	39846	17647	22199	79932	33590	46342
Salesmen	20544	50507	-29963	20192	72901	-52709	40736	123408	-82672
Services	10115	13914	-3799	9897	16952	-7055	20012	30866	-10854
Agriculture	6696	8768	-2072	6200	8581	-2381	12896	17349	-4453
Productive Workers & related workers	140514	164194	-23680	144077	200725	-56648	284591	36919	-80328
Total	319932	279156	40776	320977	345978	-25001	640909	625134	15775

Source : Adel Lutfi Badarneh & Mazen Odeh Nased,"Balances of Labour Force in Jordan During the 1990s 1990 -2000", Paper presented at the Experts Meeting on Structure of Manpower in the Jordanian Labour Market, Royal Scientific Society and International Labour Organisation, Amman -Jordan, May 1990, (Arabic Origin).

Table 9.5 shows the expected rise in the number of educated young persons from foreign Universities and institutes. This data highlights the changes in the quality of labour supply and the pressure of the educated employable persons in the labour market. The additional supply of the lower diploma holders from among the Jordanians graduated abroad in 1990 is that of 175 persons. By fitting trends using regression analysis, experts estimate that their number would be 210 by the end of 2000. The total number of graduates by the end of 2000, however, would be 33,250, and the number of higher diploma holders, post graduates, PhDs would also increase and thus the highly educated would number 42643 in 2000 AD. Absorbing such a vast number of educated employable persons in the labour market could be problematic. The acuteness of the problem is also reflected in table 9.6 dealing with the total number of illiterate and literate young persons. It is estimated that the number of illiterates would be 10,549 and their percentage to the total (Table 9.7) would be 1.8. Those with education above elementary and below higher diploma etc would be around 80 percent. Thus, Jordan will have to create employment opportunities for an additional supply of the educated labour force.

On the basis of the projections of the World Bank and Jordanian Government, Jordan will face the problem of absorbing a large number of unskilled and semi skilled workers and also the growing number of educated manpower.

In the absence of adequate domestic savings the government will have to attract foreign and domestic investments for developing its agriculture and industrial sectors. It will have to reduce inland inmigration through dispersal of industries in less developed regions and by discouraging emigration. Jordan has wealth of mineral deposits but for want of capital and technology, the country is unable to expand its mining and manufacturing industries. There is an ample scope for developing agriculture through modern and scientific methods. For many years, aid from Arab world, especially from the oil rich countries was the main source of the development fund for Jordan. However, Jordan will have to emphasize trade in place of aid as well as loan instead of grants to facilitate its progress for a sustainable long term growth.

The sections above and Chapters III and VIII expose the past, present and future of the development in the labour market of Jordan, which is affected by various socio-economic and political factors. The out and in migration of labour and relatively backward agricultural and industrial sectors have failed to provide stability to the labour market of Jordan. The future projections are done on the assumption that out migration and in migration would be restricted. This naturally would lead to the problems in absorbing the educated manpower in the economy. It is therefore necessary to know the major issues of manpower policy in Jordan and the steps undertaken by the government to tackle them.

Table 9.5 : Additional Supply of Labour Force of Graduates Studying Abroad During 1990 - 2000

Year	Educational Level					
	Lower Diploma	B.A. B.Sc.	Higher Diploma	M.A. M.Sc.	Ph.D.	Total
1	2	3	4	5	6	8
1990	175	2400	285	225	95	3180
1991	200	2550	295	235	100	3380
1992	200	2750	295	240	100	3585
1993	200	2900	300	245	105	3750
1994	200	3000	300	250	108	3858
1995	205	3100	300	250	110	3965
1996	205	3200	300	250	115	4070
1997	205	3250	300	250	115	4120
1998	210	3350	300	250	115	4225
1999	210	3350	300	255	115	4230
2000	210	3400	300	255	115	4280
Total	2220	33250	3275	2705	1193	42643

Source : Same as table 9.4.

Table 9.6 : Additional Supply of Labour Force From Jordanian Educational System During 1990-2000

Level of Education	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
Illiterate	959	959	959	959	959	959	959	959	959	959	959	10549
Ablle to read and write	603	603	603	603	603	603	603	603	603	603	603	6633
Elementary	6433	6737	7045	7521	7649	7855	7983	8091	8219	8337	8337	84207
Preparatory	11331	11361	11463	11981	12245	12642	13143	13437	13823	14325	14435	140186
Vocational Training	1210	600	2207	2545	2867	3150	3520	4057	4427	4495	4580	33658
Secondary	5200	4775	5100	5750	5950	6000	6125	6563	6825	6925	7125	66388
Lower Diploma	12767	13340	14760	14620	14533	15641	16335	16955	16255	17350	17820	170376
B.A. B.Sc	4833	5086	5640	6389	6914	7651	6961	7185	7185	7185	7185	72214
Higher Diploma	342	385	409	416	420	422	424	424	424	424	424	4514
M.A. M.Sc.	597	682	756	814	856	896	925	947	965	980	993	9411
Ph.D.	4	6	9	12	13	14	14	15	15	15	15	132
Total	44279	44534	48951	51610	53009	55833	56992	59236	59700	61648	62476	598268

Source : Same as in Table 9.4.

Table 9.7 : Percentage Distribution of the Additional Supply of Labour Force From Jordanian Educational System During 1990-2000

Level of Education	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
Illiterate	2.2	2.2	2.0	1.9	1.8	1.7	1.7	1.6	1.6	1.6	1.5	1.8
Ablle to read and write	1.4	1.4	1.2	1.2	1.1	1.1	1.1	1.0	1.0	1.0	1.0	1.1
Elementary	14.5	15.1	14.4	14.6	14.4	14.1	14.0	13.7	13.8	13.5	13.3	14.1
Preparatory	25.6	25.5	23.4	23.2	23.1	22.6	23.1	22.7	23.2	23.2	23.1	23.4
Vocational Training	2.7	1.3	4.5	4.9	5.4	5.6	6.2	6.8	7.4	7.3	7.3	5.6
Secondary	11.7	10.7	10.4	11.1	11.2	10.7	10.7	11.1	11.4	11.2	11.4	11.1
Lower Diploma	28.8	30.0	30.2	28.3	27.4	28.0	28.7	28.6	27.2	28.1	28.5	28.5
B.A. B.Sc	10.9	11.4	11.5	12.4	13.0	13.7	12.2	12.1	12.0	11.7	11.5	12.1
Higher Diploma	0.8	0.9	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.8
M.A. M.Sc.	1.3	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Ph.D.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source : Based on Table 9.6

The Jordanian labour market has witnessed a major inflow of labour from 1978 onwards. Sizeable out migration has considerably eased the problem of unemployment. However, for a long term solution it is necessary to strengthen the economy and also to take specific measures to absorb the labour force in the domestic market. We, therefore, discuss the policies adopted by the government in its five year plans after 1976 to deal with labour market.

9.3 Economic Planning and Labour Market

This section deals with the various measures and policies adopted by Government of Jordan in its various plans for the labour market.

9.3.1 Three Year Development Plan - 1973-1975

Five Year Planning began in Jordan in 1976. During 1973-75, the government had three year plan. The present section deals with the several measures which the government has taken in relation to manpower planning in Jordan.

The target of the Three Year Development Plan (1973-1975) was drawn up to tackle the problems that emerged from the occupation of the West Bank. The Jordanian Government therefore aimed at following in this plan:

- Conducting manpower studies in order to determine the education and training levels of the manpower requirement of the plan.
- Establishing a vocational training department.

- Establishing an advisory council dealing with vocational training.
- Establishing a vocational guidance system.
- Establishing professional and technical institutions such as Youth Vocational Rehabilitation Centres, Polytechnic Institutes, Agricultural Schools, Women Craft Schools, Hotel Training Centre for Rehabilitation and also to train workers Different Vocational and Industrial Schools
- Introducing necessary measures to encourage the Jordanians working abroad to come back and work in Jordan, especially the skilled labour.
- Encouraging economic participation of females in the labour market and to give special attention to the agricultural labour force.

The policy of the three year development plan of 1973-75 was expected to provide around 70,000 new jobs. The percentage distribution was 25,16,23,19,13,4 respectively for agriculture, industry, services, construction, trade and finance and miscellaneous jobs. Thus during the Three Year Plan the focus was to create more employment in agriculture and service sectors.

Some of the achievements of the plan are listed below.

i) During this plan the following Institutions were established a) Two Youth Vocational Rehabilitation Centers, b) Polytechnic Institute in Marka, c) The Agricultural Secondary School in Wadi Yobes, d) Four Industrial Schools outside Amman area, e) Women

Crafts School in Amman, f) Agricultural Teacher Training Division in the Shobak Agriculture School, g) Training Center for Tele communications technicians, h) Agriculture Extension Centers, i) Hotel Training Center, j) Para Medical Institute[3].

ii) During the Plan, manpower requirements were identified and Vocational Training Department in the Ministry of Education was established along with the nomination of an Advisory Council dealing with vocational training.

iii) The Social Security System was introduced. Employment offices at Amman, Zarqa and Irbid were established. Placement of labourers in available vacancies was expected to be conducted through the employment offices for improvement of educational and technical levels and raising of the labour productivity.

iv) Labour Education Institutes were established in Amman, Zarqa and Irbid. Seventy percent of the training was required to be managed by the industrial and construction enterprises. During the training of apprentices, nominal wages were sanctioned by the government. Three month and six month intensive courses were conducted for training ordinary labourers in various jobs with the government support.

v) Labour unions were encouraged to depute their members for training courses. Thus the main focus was to create institutions which would create specific manpower for the requirement of the economy.

9.3.2 First Five Year Plan - 1976-1980

The first Five Year Plan (1976-1980) attempted to tap the Arab assistance and loans to Jordan in the wake of oil boom in the Gulf, and to create the demand for Jordanian workers in the

oil producing countries. While this policy helped in increasing the remittances, it also created a shortage of labour within Jordan leading to the import of Arab and foreign labour.

The plan sought to achieve high economic growth rates and an equitable distribution of development gains in various regions of the country through the participation of both public and private sectors.

During this period the total expenditure of the central government rose from JD 204.9 million in 1975 to JD 517.5 million in 1980 showing an increase of 20.4 percent per annum. Current and capital expenditure increased at annual rates of 21 percent and 19.4 percent. The ratio of domestic revenues to current expenditures rose from 65.7 percent in 1975 to 68.9 percent in 1980. The table (9.8) shows that industry, transport and housing were the sectors which had a major share in total capital expenditure.

Table 9.8 : Capital Expenditure On Various Economic Activities In Jordan - 1976-80 (JD Millions)

Eeconomic sector	Planned Expenditure	% of total Expenditure
Agriculture & irrigation	112.1	6.4
Industry & electricity	271.9	34.1
Tourism	24.4	2.7
Transportation	119.9	20.5
Communication	20.1	1.9
Housing	83.0	21.3
Construction & other Services	133.6	13.1
Total	165.0	100.00

Source : Five year plan 1976-1980.

The policy objectives pertaining to labour market were as follows:

- To raise the ability of human resources through education and training programmes.
- Extension of Primary education to all the villages.

In the academic year 1979-1980, the ratio of student enrollment in primary schools (age group 6-11 years) reached 97 percent as against 83 percent for the academic year 1975-1976. By the end of the Five Year Plan (1976-1980), the ratio of population under 15 years increased. Due to higher enrollment in educational courses at different levels and emigration of the labour force, the rate of participation in the labour force declined from 24 percent in 1961 to 22 percent in 1979 and further to 21 percent in 1981.

During this plan period as a result of the out-migration of the Jordanian workers the influx of foreign labour occurred in the early stages of the Five Year Plan of 1976-1980.

9.3.3. Second Five Year Plan - 1981-85

The five year plan of 1981-85 was framed in the context of experience gained in socio economic development during the Seventies. The plan aimed at attaining further quantitative and qualitative progress.

The sectoral allocation of investment (Table 9.9) reveals that the highest priority was given to manufacturing and mining, followed by transportation and irrigation. This shows that Jordan accorded priority to industrial growth and to agriculture through investment in irrigation. 7.4 percent of total plan investment was expected to be spent on education and culture.

Table 9.9 : Sectoral Investment Pattern - 1981-85 Plan

Sector	Investment JD million	% share to total
Agriculture & cooperatives	234.5	7.11
Water & irrigation	521.7	15.81
Manufacturing & mining	758.8	22.99
Electricity & energy	163.4	4.95
Tourism	65.7	1.99
Trade	37.0	1.12
Transportation	545.5	16.53
Communications	106.8	3.24
Education, Culture	244.0	7.40
Health	100.7	3.05
Labour & social development	24.4	0.74
Housing	308.1	9.34
Municipal rural affairs	175.6	5.32
Science,technology	7.4	0.22
Total	3300	100.00

Source: National planning council, Five year plan 1981- 85 p. 43

Between commodity producing and service producing sectors, the latter received higher investment allocation in this plan as compared to the earlier plan (Table 9.10). As education is part of the service sector, it was expected that due to higher allocation of resources education level would improve and employment opportunities would increase.

Table 9.10 : Percentage Distribution Of Sectoral Investments During 1976-80 And 1981-85 Plans

Sector	1976-80 Plan	1981-85 Plan
Total commodity producing Sectors & tourism	56.71	52.85
Total services sector	43.29	47.10
Total	100.0	100.0

Source : Five Year Plan 1981 - 85

Manpower Planning and Labour Market during the Plan

Some features of the labour market were as follows.

i) The census of November 1979 showed that 53.2 percent of the population were under 15 years of age, as compared to 45.6 percent in 1961. The urban population constituted 62.7 percent of the total population in 1979.

ii) The other characteristic of the Jordanian labour force was the low participation rate which stood around 20 percent. The out-flow of manpower continued at an average rate of 8 to 10 thousand workers a year while increased demand for labour led to the importation of manpower from other Arab and non-Arab countries[4].

iii) In 1980 the estimated manpower was 4,50,000. Majority of them were employed in service sector, industry, public administration and defence. Additional manpower which was required to implement the 1981-85 plan was estimated at 2,54,000.

The occupation wise percentage share was as follows.

Professional, Technical	18.00
Managerial & Administrative	2.00
Clerical	8.20
Sales	10.69
Agricultural sector	6.00
Transport, communication & services	55.03
Total (2,54,000)	100.00

Hence, it can be deduced that additional manpower was required in the professional and service producing occupations like sales and transport etc.

iv) The number of female workers joining the labour force during the period 1981-85, was estimated at 45,000 or about 25 percent of the additional Jordanian labour force. The shortage of manpower was estimated at as 70,000, Which was to be met by immigrant labour plus Jordanian returnees.

v) The Faculty of Engineering was established during the plan period of 1981-1985. Various specialized fields of Engineering, viz. Civil, Mechanical, Architecture, Industrial, Chemical, Geological, Mineral and Nuclear were started in collaboration

with the Western countries. Faculty of Medical Sciences was also established (with specialization's in Medicine, Dentistry, Pharmacy, Nursing, Public Health etc.).

vi) Vocational training centers at Yajouz, Sahab and Zarqa and Vocational Training center for Girls at Naour were established during the plan period for providing training facilities to about 2,000 Students (including 500 Female Students)[5].

During the 1981-1985 plan, the growth rate realized in the Industrial Sector did not exceed 4.9 percent as against the targeted 17.8 percent. The shortfall was ascribed to under utilization of the productive capacity of a number of large new industries, including potash, cement and fertilizers[6]. This had adverse effects on the absorption of educated Jordanians in the domestic labour market.

Achievements of Second Five Year Plan of 1981-1985

i) The plan could streamline the recruitment, and regulate the import of Non-Jordanian workers. The number of permits issued to the Non-Jordanians increased from 93 thousand in 1981 to 153 thousand in 1984. In 1983 the Ministry provided jobs to 9000 Jordanians. The Ministry of Labour supervised 68 collective labour agreements benefiting 25,600 workers. It appointed new labour attaches in Qatar and Saudi Arabia. The number of employees covered by social security rose from 62 thousand at the beginning of the plan period to 337 thousand at the end of it.

ii) The Vocational Training Corporation established seven large training centers with an annual enrollment capacity of 3,000 trainees. The corporation also provided job descriptions for some mechanical and electrical trades and set out to administer performance tests to determine the vocational levels of workers.

Despite these efforts, the plan could not achieve certain objectives. The failures of the plan were as follows:

- Persistence of low participation rate of only 21 percent.
- Relatively slow rate of emigration.
- Increase in the number of non-Jordanian labour force in Jordan.
- General lack of wage and allowance incentives.
- Weakness in co-ordination of various institutions providing vocational training.
- Low efficiency of vocational system which could facilitate the description and classification of occupations.
- Persistent dearth of statistical information and studies pertaining to the labour market.

9.3.4 Third Five Year Plan - 1986-1990

The third five year plan commenced in 1986. The table 9.11 shows that the five year plan of 1981-85 could not achieve most of its targets and therefore the projected growth rates of most of the macro economic indicators turned out to be relatively modest except for investment and export growth.

Table 9.12 provides sectoral allocation for the first three five year plans. It can be seen from the table that the allocation to service sector increased from 27.41 percent in the First to 39.29 percent in the Third five year plan. The major increase was in the housing sector which went up from 9 percent in the second plan to 17 percent in the third plan. There was a slight fall in the infrastructural sector during the third plan. In the case of commodity producing sector one finds a significant decline from 35 to 22 percent. The share of agriculture increased. There was a significant fall in investment in the industrial sector. As far as the investment related to manpower and education is concerned, one finds that the percentage investment allocation was 5.5, 7.14, and 5.03 in the first, second and third plans. It is rather sad that investment allocation declined during the third plan for this sector.

Table 9.11 : Annual Growth Rates During Plan Periods 1981-85 And 1986-90 (%)

	1981-1985 Plan		1986-1990 plan
	Planned	Actual	Planned
1. GDP at factor cost	11.1	4.2	5.1
2. Net indirect taxes	11.0	15.8	9.2
3. GDP (at market prices) (1+2)	11.1	5.3	5.7
4. Imports of goods & services	13.7	2.9	2.7
5. Total available resources (3+4)	12.5	4.2	4.3
6. Consumption	8.0	4.7	3.2
7. Investment	12.2	0.8	5.3
8. Exports of goods & services	21.7	3.4	6.1
9. Total uses (6+7+8)	12.5	3.5	4.3

Source : Ministry of planning Five Year plan 1986-1990

Table 9.12 : Sectoral Investment Pattern Of The First Three Five Year Plans

Sector	1976-1980 planned %	1981-1985 planned %	1986-1990 planned %
i)Comprehensive sectors (Administration, science & Technology & Environment)	0.77	0.22	0.47
ii)Manpower	0.63	0.28	0.13
iii)Education	4.9	6.86	4.9
iv)Higher education	-	-	3.0
v)Housing	10.85	8.8	16.63
vi)Total services & social sectors(i to v and others)	27.78	29.15	39.29
vii)Total infrastructural sectors	37.00	40.53	38.19
viii)Agriculture	5.24	7.11	9.43
ix)Industry	29.96	22.99	12.62
x)Total commodity producing sectors(viii + ix)	35.2	30.1	22.05
xi)Total investment(vi+vii+x)	100.00	100.00	100.00
xii)Overall investment size (JD Million)	675.0	3300.0	3115.5
xiii)Implementation percentage	115.0	79.9	-

Source :Ministry of Planning Five Year Development Plan 1986-1990. Table 11- page 97.

Specific policy prescriptions for the labour market during the plan were as follows.

i) The plan was designed to create new employment opportunities in all the economic sectors. It also aimed at reducing unemployment and disequilibrium in the labour market as there was a surplus of people with certain academic qualifications while at the same time shortage of manpower in certain occupations.

ii) In addition, the plan envisaged availability of 54,000 jobs. (29000 jobs due to death or retirement and 25,000 jobs as a result of out migration of the Jordanian labourers).

iii) The sector wise employment targets (Table 9.13) show that the major sectors were to be agriculture, construction and services employing 80 percent of the total manpower. The additional employment expected to be created was mainly in service sector followed by agriculture and construction.

iv) The plan differs from the previous plans because of its emphasis on employment and wage policies owing to the projected increase in the unemployment of Jordanian manpower as a result of recession in the Gulf Countries and an increased output in the educational system.

Table 9.13 : Expected New Jobs And Manpower Employment During 1986-1990

Sector	New jobs % share	% Share in Total manpower employment by 1990
Agriculture	17.16	14.50
Mining	1.64	1.34
Manufacturing	11.30	9.02
Electricity and water	1.54	1.14
Construction	12.64	15.30
Services	55.70	58.69
Total	100.00	100.00

Source : Ministry of Planning Five Year Plan 1986-1990

The policy related to labour market was as follows.

- To plan and co-ordinate labour policy with neighbouring Arab countries which absorb Jordanian labour so as to encourage the out migration of labour which is in excess of domestic demand.
- To review the education and training policy and examine academic curriculum and fields of specialization to ensure compatibility with the needs of the country. To expand the scope of vocational training and re training of workers. To grant scholarships and incentives to motivate students to obtain desired specialization according to the demand of Jordanian labour market.
- To re-assess the scarce skills allowances.
- To compile Jordanian occupation manual by the Ministry of Labour so as to do the appropriate placement.

- To adopt a wage and incentives policy which would influence the occupation and regional distribution of manpower in the light of development needs.

9.3.5 Five Year Plan of 1991-1996 and Revised Plan of 1993-1997

The main objectives of the plans are as follows:-

i) To create economic liberalization and improve the investment environment through a contraction in the government sector and an expansion in the private sector.

ii) To develop money and capital markets.

iii) To encourage domestic employment, output and income.

iv) To develop services and commodity producing sectors in order to generate employment opportunities.

v) To develop the unused natural resources like water, power, mineral and fertilizers such as phosphate, potash, sands and salts from Dead Sea.

vi) To develop export sector.

vii) To improve the balance between human resources and economy through development of education system and vocational training programmes.

viii) To increase the job opportunities in productive sectors and to reduce unemployment rates to rational levels.

ix) To encourage self-employment, small scale industries, business, service sector, out migration of Jordanian labour by bilateral agreements with neighbouring oil-rich countries.

x) To finance labour - intensive projects.

The plan aims at dissolving serious problems of poverty and unemployment by promoting labour intensive and income generating projects. The plan intends to reduce the disequilibrium in the supply and demand conditions of labour market and regional imbalances of income and employment through jobs. The plan aims at creating new job opportunities of 2,24,100 (Table 9.14) jobs in different economic sectors, out of which 67 percent jobs are to be generated in agriculture, industry, trade and other sectors, 8 percent of jobs in infrastructural sectors, and 25 percent in social services. This is expected to reduce unemployment rate from 15 percent in 1992 to 9.6 percent in 1997. Thus, the number of unemployed workers will reduce from 1,22,000 in 1992 to 99,700 in 1997. It is expected that by the end of the plan, the share of investment sector and social services in the total employment will be around 43 percent. Infrastructure sector will employ 13.4 percent of the total labour force. The sub sectors where the percentage share is expected to decline are agriculture, construction and government services. More employment is expected to be generated in trade and others, storage, transport and communication and personal services. In sectors other than agriculture and construction there would be more employment. The share of manufacturing sector is expected to remain at 25 percent. Jordan is yet to do more on industrial front to absorb additional labour force.

Table 9.14 : Sectoral Distribution Of Employed Labour Force In 1992-1997

(in '000)

Sector	1992	% share to the sector	1997	% share to the sector	Increase in Employment(93-97)	% share to the increase
Investment sectors						
Agriculture	52,1	17.4	64,9	14.4	12,8	
Mining	9,4	3.1	12,7	2.8	3,3	
Manufacture	75,8	25.4	115,3	25.7	39,5	
Wholesale&retail trade,Restaurants and Hotels	37,9	46.1	223,0	49.7	85,1	
Finance,Insurance & Business ser.	23,8	7.9	33,0	7.4	9,2	
Total Inv.Sectors	299,0	36.8	448,9	43.3	149,9	
Infrastructure sectors						
Electricity & water	5,7	4.7	8,0	5.7	2,3	
Construction	61,3	51.1	57,2	41.2	-4,1	
Storage,Transport&communication	52,9	44.1	73,6	53.0	20,7	
Total Inf.Sec.	119,9	14.8	138,8	13.4	18,9	8.44
Social services						
Production of Govt.services	342,8	87.3	383,5	85.6	40,7	
Personal ser.	49,9	12.7	64,5	14.4	14,6	
Total Social ser.	392,7	48.4	448,0	43.3	55,3	24.68
Grand Total	811,6		1035,7		224,1	

Source:Five Year Development Plan 1993-97, Ministry of planning.

Table 9.15 shows the projections of the plan. Accordingly 86.7 percent of the total labour force will consist of the Jordanians in 1992. This percentage would increase to 91.3 by 1997. Only 10 percent of the labour force would be of non Jordanians. Unemployment would go down from 15 percent to 9.6 percent between 1992 and 1997. The plan is optimistic about the unemployment problem in Jordan. The projections reveal that more and more Jordanians would be absorbed in the labour market.

In order to achieve the targets set for the plan the following is aimed for the labour market.

- To have training programme for nursery schools.
- To develop elementary and preparatory education by covering 100 percent student population of the concerned age group.
- To develop secondary education in all the branches.
- To lay a special stress on the development of technical and vocational training schools.
- To have teacher's training programme for improvement in the quality of teaching.
- To provide modern equipments of educational aids.
- To revolutionize the university level education by developing new facilities of research in Science, Technology, Engineering, Medicine, Agriculture, etc.
- To start job oriented courses to satisfy the needs of industries, services and productive sectors.
- To start training and refresher courses for workers for raising productivity and efficiency.

During the last 10-15 years the most serious economic problem of Jordan is related to a disequilibrium in the labour market in the form of unemployment and a shortages of manpower in required skills. The latest two plans of 1986-1990 and 1993-1997 have given due weightage to these issues by emphasizing the growth of agriculture and industrial sectors. However, additional employment generation is to come from service sector.

Table 9.15 : Jordanian Labour Force And Employment During 1992-1997

(in '000)

Year	1992	1993	1994	1995	1996	1997
Labour Force	939,9	979,7	1019,9	1061,2	1103,0	1140,2
Jordanians	814,9	856,7	901,4	948,2	995,5	1041,2
% to labour force	86.7	87.4	88.4	89.4	90.3	91.3
Non-Jordanians	125,0	123,0	118,5	113,0	106,5	99,0
Employed	811,6	857,7	897,7	940,1	986,5	1035,7
% to labour force	86.3	87.5	88.0	88.6	89.4	90.8
Jordanians	692,7	740,8	785,1	832,7	885,3	941,5
Non-Jordanians	118,8	116,9	112,6	107,4	101,2	94,1
% to total employed	14.6	13.6	12.5	11.4	10.3	9.1
Unemployed Jordanians	122,3	115,9	116,3	115,5	110,2	99,7
% to total Jordanians labour force	15.0	13.9	12.9	12.2	11.1	9.6

Source: Five Year Development Plan 1993-97, Ministry of Planning.

The aims of almost all the plans may be summarized as follows:

i) To increase the overall demand for labour in the country through higher economic growth and more labour intensive production.

ii) To substitute national with the expatriate labour

iii) To stimulate out migration.

iv) The primary objectives at the supply side policy in the overall Jordanian Planning period are to establish education and training systems so as to generate the human resources needed to sustain an industrial development strategy and to reduce dependence on foreign labour.

The success of Jordanian employment policy depends on the structural transformation of the economy based on development of agriculture and industrial sectors. Jordan's inadequate agricultural potential, and limited possibilities for potential growth of public services, have encouraged out migration of the labour force. The government policy to absorb the surplus in the labour force through industrial development strategy by encouraging phosphate, potash, phosphate fertilizer and cement industries did not have much impact as the bulk of the labour force continues to be dependent on the service sector. If adequate measures are taken, such as irrigation programmes in the Jordan valley, land reforms and wage incentives the agricultural employment may become some what attractive again for the Jordanians. However, a considerable attention is required to develop this sector so that internal migration is reduced. A well developed agricultural sector will also sustain industrial growth of the country.

The analysis of the labour market of Jordan contained in the present work emphasises that the solution to the problem of unemployment should originate from the strength of the Jordanian economy rather than by encouraging out migration. The dependence on the service sector and that too on public administration and defense to create employment opportunities would not solve the problem in the long run. A sound commodity producing sector is the need of the hour which should be accompanied by a network of various institutions to train the manpower. A rational emigration and immigration policy to streamline the movement of labour force is also needed to solve this problem. The unexpected movement of people due to political crises should be made an integral part of this policy, so that the adverse impacts of such shocks are absorbed.

The theories of economics available to us unfortunately do not take in to account the political exigencies of a particular national economy. These models evolved in a politically stable conditions are applicable to most national economies in the world. However in the case of Jordan, the movement of people in the form of out and inmigration due to political upheavals in the region makes it imperative to take into account the political factor while examining the labour market. It is therefore suggested that a new model with the political imperative be developed in the field of Economics of Development alongwith other recent developments to incorporate institutional features, which can also be applied to a country like Jordan. Unless this is done manpower planning will not prove to be meaningful and effective.

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