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...ON AGENCY (JICA)
NATIONAL TRANSPORT RESEARCH CENTRE (NTRC)
MINISTRY OF COMMUNICATIONS, GOVERNMENT OF PAKISTAN

THE STUDY ON NATIONAL TRANSPORT PLAN IN THE ISLAMIC REPUBLIC OF PAKISTAN

Final Report / Volume I
Economic Analysis and Demand Forecast

February 1995

ALMEC CORPORATION
...SULTANTS INTERNATIONAL

THE STUDY ON NATIONAL TRANSPORT PLAN IN THE ISLAMIC REPUBLIC OF PAKISTAN
Final Report Volume I
February 1995

The exchange rates used in the Study are:

US $1.00 = Pakistan Rupees 25.960
J.Yen 1.00 = Pakistan Rupees 0.218
Rs. 1.00 = ¥4.59
(Average during 1992-93)
Source: Economic Survey 1993-94

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
NATIONAL TRANSPORT RESEARCH CENTRE (NTRC)
MINISTRY OF COMMUNICATIONS, GOVERNMENT OF PAKISTAN

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PACIFIC CONSULTANTS INTERNATIONAL

PREFACE

In response to a request from the Government of the Islamic Republic of Pakistan, the Government of Japan decided to conduct a master plan study on the National Transport Plan and entrusted the study to the Japan International Cooperation Agency (JICA).

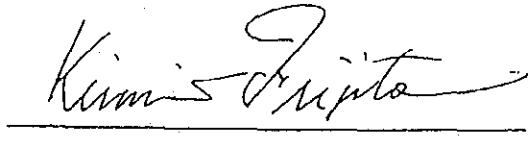
JICA sent to Pakistan a study team headed by Mr. Osamu Ohtsu, ALMEC Corporation, three times between January and November, 1994.

The team held discussions with the officials concerned of the Government of Pakistan, further studies were made and the present report was prepared.

I hope that this report will contribute to the promotion of the project and to the enhancement of friendly relations between our two countries.

I wish to express my sincere appreciation to the officials concerned of the Government of the Islamic Republic of Pakistan for their close cooperation extended to the team.

February 1995



Kimio Fujita
President
Japan International Cooperation Agency

February 1995

Mr. Kimio Fujita

President
Japan International Cooperation Agency
Tokyo, Japan

Letter of Transmittal

Dear Sirs:

We are pleased to formally submit herewith the final report of "The Study on National Transport Plan in the Islamic Republic of Pakistan".

This Report compiles the results of the Study which was undertaken both in Pakistan and Japan, from January 1994 to February 1995 by Study Team, organized jointly by ALMEC Corporation & Pacific Consultants International.

We owed a lot to many people for the accomplishment of this report. First, we would like to express our deep appreciation and sincere gratitude to all those who extended their kind assistance and cooperation to the Study Team, in particular, Ministry of Communications, National Transport Research Centre and Planning & Development Division.

We also acknowledge the officials of your agency, the JICA Advisory Committee and the Embassy of Japan in Pakistan.

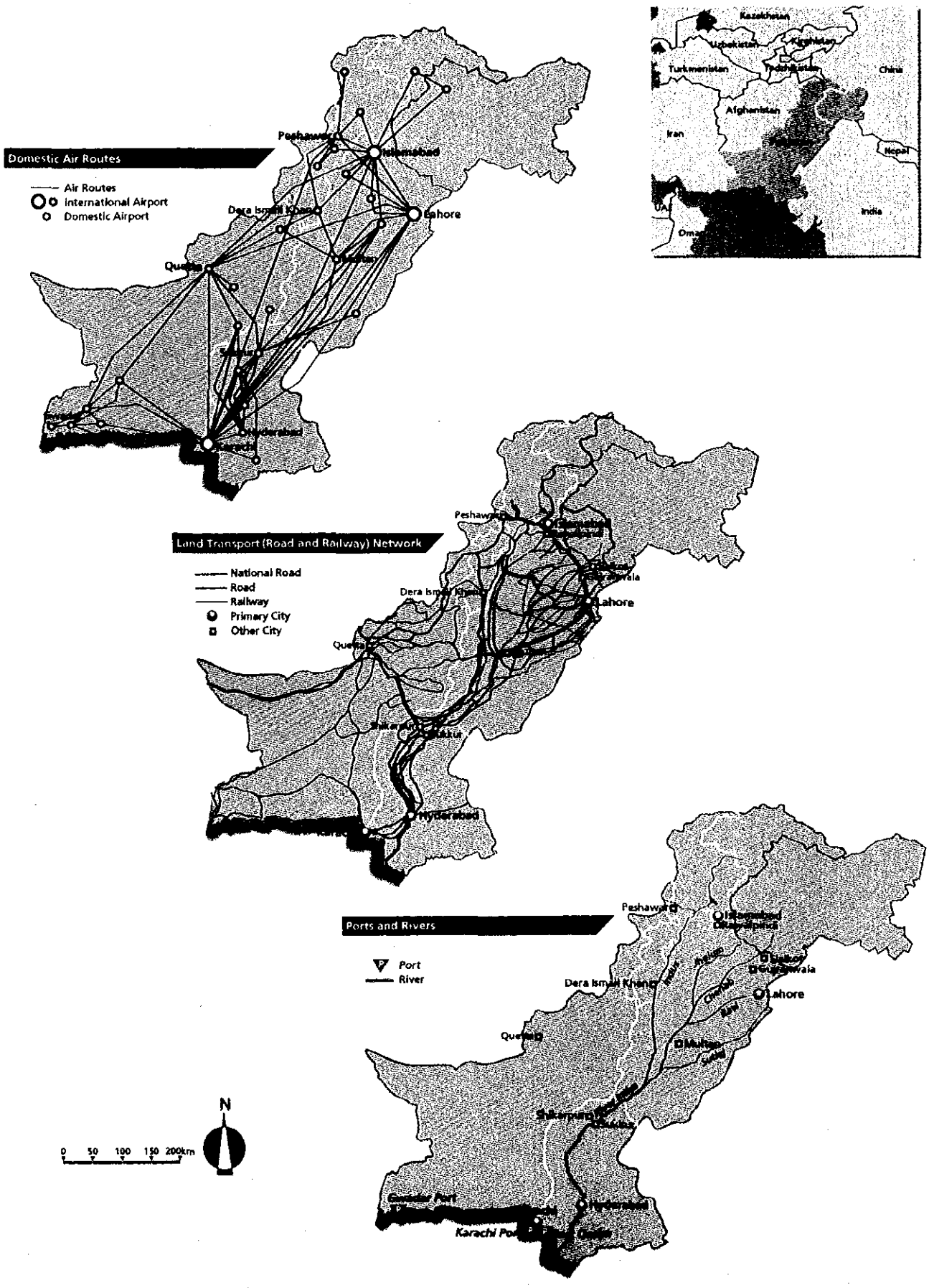
We wish the report would be able to contribute really to Pakistan's transport development in the future.

Very truly yours,

Osamu Ohtsu

Osamu Ohtsu
Team Leader
The Study Team for
National Transport Plan Study in
Pakistan

Maps of the Study Area



Abbreviations / Acronyms

AAGR	Average Annual Growth Rate
AC&C	Aeronautical Communication and Control
ACC	Area Control Center
ADP	Annual Development Programme
AFTN	Aeronautical Fixed Telecommunication Network
AIP	Aeronautical Information Publication
ALS	Standard Approach Lighting System
AMSS	Automatic Message Switching System
APL	American President Lines
ASF	Airport Security Force
ATIS	Automatic Terminal Information Service
ATS	Air Traffic System
BOT	Build, Operate and Transfer
C&F	Cost and Freight
C&W	Communications and Works Department
CAA	Civil Aviation Authority
CAS	Central Asian States
CAT	Category
CATI	Civil Aviation Training Institute
CDEP	Central Development Working Committee
CFS	Container Freight Station
CIS	Confederation of Independent States
DEL	Diesel Electric Locomotive
DME	Distance Measuring Equipment
DRF	Depreciation Reserve Fund
DVOR	Doppler VHF Omnidirectional Radio Range
DWT	Dead Weight Ton
ECC	Economic Coordination Committee of the cabinet
ECNEC	Executive Committee of National Economic Council
ECO	Economic Cooperation Organization
EIRR	Economic Internal Rate of Return
EL	Electric Locomotive
FAA	Federal Aviation Agency, USA
FATA	Federal Administrated Tribal Area
FIR	Flight Information Region
FOB	Free on Board
FYP	Five Year Plan
GDP	Gross Domestic Products
GNP	Gross National Products
HAT	Highest Astronomic Tide
HP	Horse Power
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IFR	Instrument Flight Rules
ILS	Instrument Landing System
IOC	Iron Ore and Coal
IRNS	Indus River Navigation Study
ISB	Islamabad
IWT	Inland Water Transport
JCAB	Japan Civil Aviation Bureau
JICA	Japan International Cooperation Agency
KHI	Karachi
KKH	Karakhoram Highway
KPT	Karachi Port Trust
LDP	Lahore Dry Port
MEAV	Modern Equivalent Asset Value
MHHW	Mean Higher High Water

MHLW	Mean Higher Low Water
MLHW	Mean Lower High Water
MLLW	Mean Lower Low Water
MLS	Microwave Landing System
MOC	Ministry of Communications
MOD	Ministry of Defense
MOR	Ministry of Railway
MSC	Milwa Shipping Company
MSL	Mean Sea Level
NDB	Non-Directional Radio Beacon
NHA	National Highway Authority
NLC	National Logistic Cell
NM	Nautical Mile
NSC	National Shipping Corporation
NTC	National Tanker Company
NTPS	National Transport Plan Study
NTRC	National Transport Research Center
NWFP	North-West Frontier Province
OD	Origin and Destination
OP	Oil Pier
ORE	Other Revenue Expenditure
PAF	Pakistan Air Force
PAPI	Precision Approach Path Indicator
PCWD	Provincial Communications and Works Department
PDD	Planning and Development Division
PERAC	Petroleum Refining and Petrochemical Corporation Ltd.
PIA	Pakistan International Airlines
PISC	Pan Islamic Steamship Corporation
PMC	Pakistan Mercantile Services Ltd.
PMD	Pakistan Meteorological Department
PNSC	Pakistan National Shipping Corporation
POL	Petroleum Products
PPSC	Pakistan Postal Services Corporation
PQA	Port Qasim Authority
PR	Pakistan Railway
PSN	Pakistan Shipping Corporation
PSO	Public Service Obligation
PSR	Primary Surveillance Radars
PSW	Ports and Shipping Wing, MOC
PTA	Provincial Transport Authority
RCD	Regional Cooperation for Development
RCLL	Runway Center Line Lights
REDL	Runway Edge Lights
RENL	Runway End Lights
RFTKs	Revenue Freight Ton-Kilometers
RIV	Rapid Intervention Vehicle
RPKs	Revenue Passenger-Kilometers
RSE	Ray Shipping Enterprises Ltd.
RTA	Regional Transport Authority
RTHL	Runway Threshold Lights
RVR	Runway Visual Range
SAARC	South Asian Association for Regional Cooperation
SALS	Simple Approach Lighting System
SAP	Social Action Programme
SCO	Special Communication Organization
SL	Steam Locomotive
SSR	Secondary Surveillance Radars
TACAN	Tactical Air Navigation System
TCLL	Taxiway Center Line Lights
TEDL	Taxiway Edge Lights

TEU	Twenty-foot Equivalent Unit
TRB	Transport Research Board, USA
TSL	Tristar Shipping Lines Ltd.
UK	United Kingdom
UNCTAD	United Nations Conference for Trade and Development
UNDP	United Nations Development Programme
VOR	VHF Omnidirectional Radio Range
VORTAC	VOR and TACAN
WAPDA	Water and Power Development Authority

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CHAPTER 1 INTRODUCTION

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CHAPTER 1 INTRODUCTION

1.1 Outline of the Study

1.1.1 Background

Pakistan, consisting of four provinces; Punjab, Sindh, Balochistan and NWFP, has a population of 120.8 million (estimated in 1993) with an area of 804,000 square kilometres.

The Government has developed its economy in accordance with the seven consecutive national development plans since 1955. During the Seventh Five Year Plan period (1988-89 to 1992-93), the annual growth of GDP exhibited 5.0 to 7.0 percent, but declined to a low rate of 3.0 percent in the 1992-93 period, attributed to severe flood damage in the agriculture sector coupled with unfavourable world-wide economic stagnation.

The above economic development has resulted in increasing the transportation demand along the major transport corridors of various modes of transport. The transport system in Pakistan, however, has not been adequately maintained nor improved to cope with changes in demand due to certain failures in the system despite the Government efforts to improve the situation.

Japan International Cooperation Agency (JICA) had conducted 'the Study on National Transport Plan in the Islamic Republic of Pakistan', as a technical cooperation between Pakistan and Japan, during the periods from 1981 to 1983 and from 1987 to 1988. The recommendations as the results of the studies were successfully utilized by the transportation sector in both Sixth and Seventh FYP and were highly appreciated by the Government of Pakistan.

Recognizing the crucial importance of a comprehensive national transport plan encompassing all modes of transport as a basis for FYP, the Government of Pakistan again required technical assistance for reviewing and updating the National Transport Study and formulating the Investment Programmes for the Eighth Five Year Plan (1993-94 to 1997-98). JICA dispatched the preliminary study team to discuss on the scope of work of the study, in April 1993.

1.1.2 Objectives, Study Area and Overall Study Flow

The objectives of the Study and the study area are:

- to propose a short term investment plan for incorporation in the Rolling Plan and Annual Development Programmes of the Eighth Five Year Plan, keeping in view a long term perspective;
- to focus mainly on national and international trunk routes and inter-regional transport networks connected with the trunk routes, covering all modes of transport for the whole of Pakistan.

The study area and the overall study flow are illustrated in Figure 1.1.1 and 1.1.2.

Figure 1.1.1 Overall Study Flowchart of National Transport Study

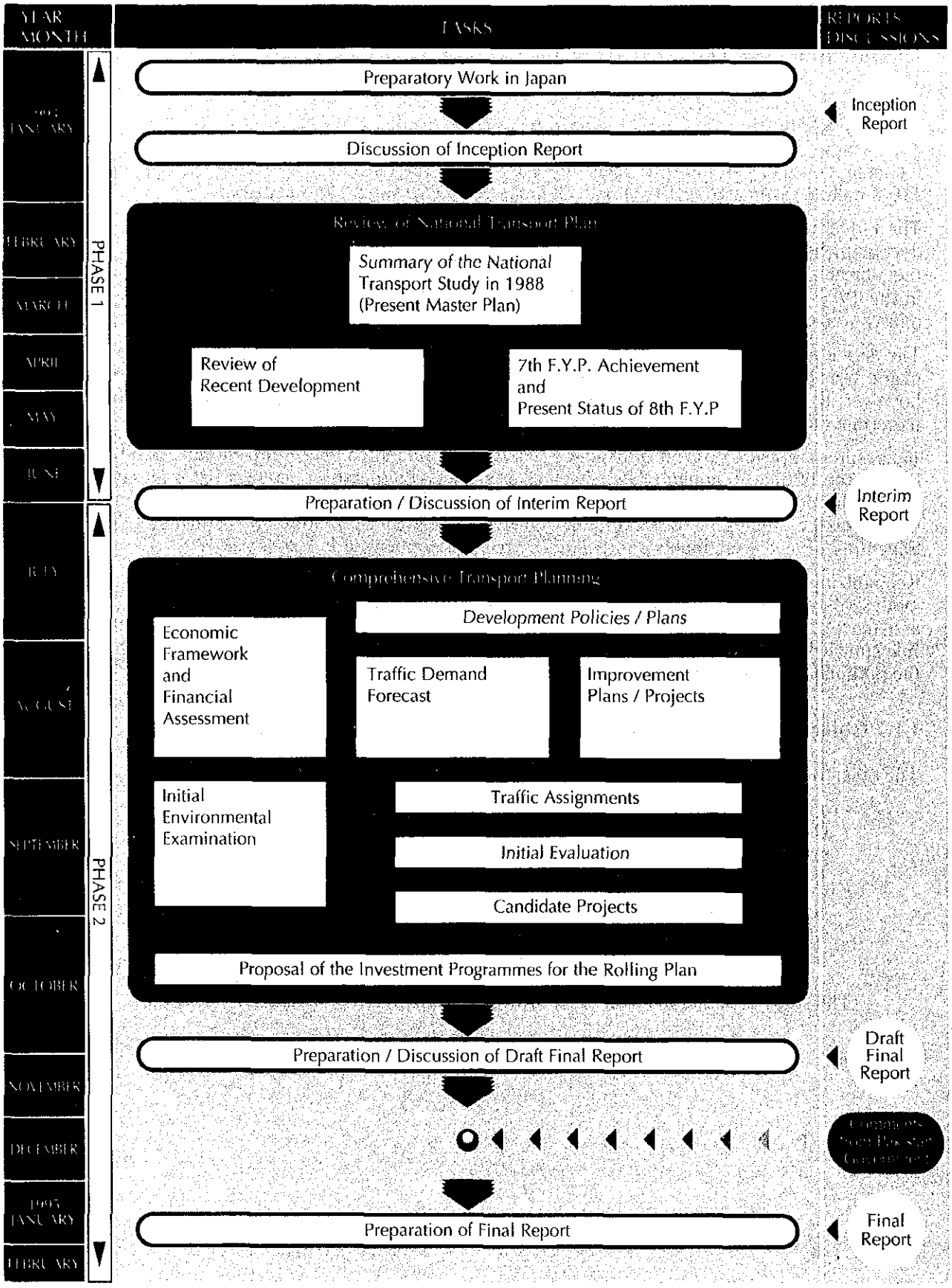
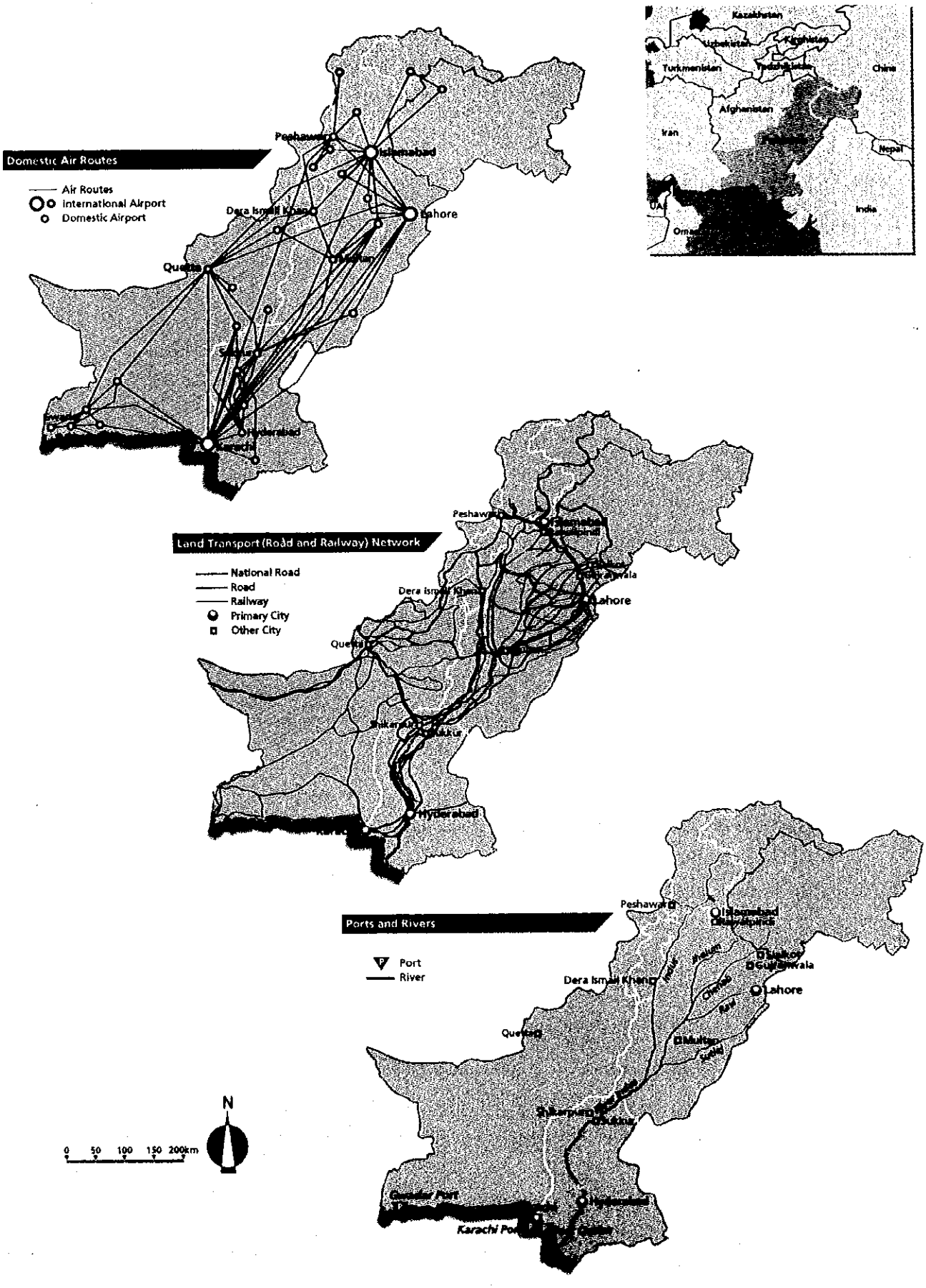


Figure 1.1.2 Maps of the Study Area



1.2 Study Implementation

JICA dispatched the Study Team, headed by Mr. O. Ohtsu of ALMEC Corporation, to Pakistan on 20th January, and the Study commenced the work in accordance with the contents of the Inception Report.

1.2.1 Progress of the Study

The Study was conducted according to the following steps;

(1) Preparatory Work in Japan: middle of January, 1994
- Preparation of the Inception Report, and
- Review of the data collected by the preliminary study team.

(2) Phase 1 Study in Pakistan: from middle of January to beginning of March, 1994
- Explanation/discussion of the Inception report,
- Visits and interviews to relevant government agencies,
- Observation of the present transport condition and facilities,
- Collection of various data to review the economic growth and transport development,
- Preliminary discussion on the draft of the 8th FYP, and
- Introduction of the transport planning software package.

(3) Phase 1 Study in Japan: from beginning of March to beginning of July, 1994
- Analysis of the present situation of national economy and transport system,
- Review of the implementation of the 7th FYP,
- Identification of the problems of national transport system,
- Updating the transport demand forecast,
- Revision of the Master Plan for 2005-06, and
- Preparation of the Interim Report.

(4) Phase 2 Study in Pakistan: from beginning of July to middle of September, 1994
- Discussion of the Interim Report,
- Review of the 8th FYP approved by the Government in June 1994,
- Correction/revision of the Interim Report in accordance with the 8th FYP,
- Initial environmental examination,
- Discussion and agreement on the revised contents, and
- Technology transfer through the use of transport planning software.

(5) Phase 2 Study in Japan: from end of September to beginning of November, 1994
- Further analysis on the present problems in transport sector,
- Overall recommendations of transport planning directions,
- Mid-term proposals for 2005-06,
- Short-term proposals for 1997-98, and
- Preparation of the Draft Final Report.

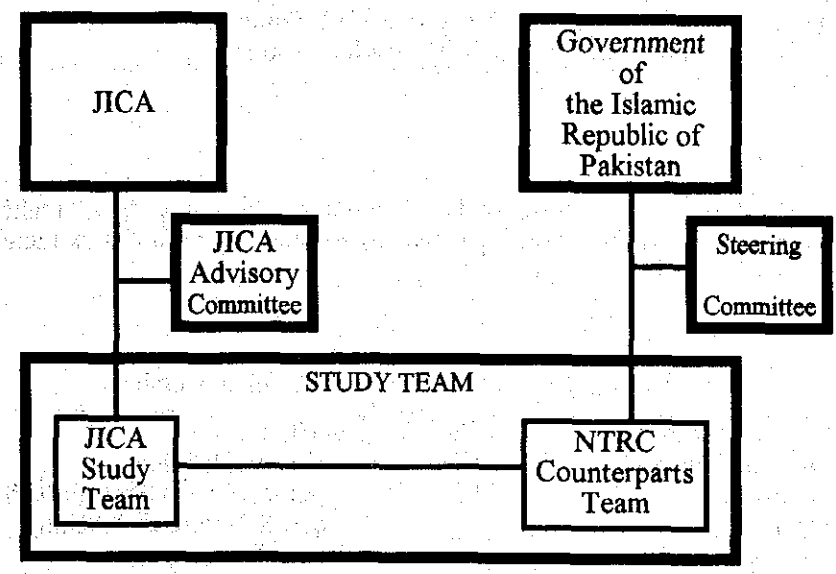
(6) Explanation / discussion of the Draft Final Report : in the middle of November, 1994.

(7) Preparation of the Final Report : in February, 1995.

1.2.2 Organization

The Study was implemented by JICA Study Team in close cooperation with the authorities of Pakistan Government as shown in Figure 1.2.1.

Figure 1.2.1 Study Implementing Organization



(1) JICA Study Team

The members of the Study Team are listed in Table 1.2.1.

Table 1.2.1 List of the JICA Study Team Members

1. Team Leader / Comprehensive Transport Planning (1)	Mr. OHTSU Osamu
2. Comprehensive Transport Planning (2) / Project Evaluation	Mr. SHOYAMA Takashi
3. Economic / Financial Planning	Mr. KOIKE Isamu
4. Demand Forecast / Systems Analysis	Mr. McBride James M.
5. Road Transport Planning	Mr. HORIE Teruhiko
6. Road Planning	Mr. KITAYAMA Akihiko
7. Port & Inland Water Transport Planning	Mr. FUJIKI Masayuki
8. Marine Transport Planning	Mr. UETANI Kazuyuki
9. Railway Planning	Mr. IKOMA Minema
10. Airport & Aviation Planning	Mr. TANAKA Tokuji
11. Transport Policy / Institution	Mr. Alan Peakall J.
12. Environment	Mr. David Lees G.

(2) JICA Advisory Committee

JICA set up the Advisory Committee for the Study to provide advice and guidance during the course of the Study. The members are as follows:

Table 1.2.2 List of the Advisory Committee Members

Assignment	Name
Chairman	Dr. KASIMA Shigeru
Member (Railway Planning)	Mr.KATO Yuji
Member (Road Planning)	Mr.HIRAI Setuo
Member (Road Planning)	Mr.KISHIMA Takashi
Member (Port / Marine Transport)	Mr.SHIMADA Tomoaki
Member (Airport / Aviation)	Mr.IBARAKI Yasuo

(3) Counterpart Team

National Transport Research Centre (NTRC) acted as the counterpart agency to the JICA Study Team and organized the Counterpart Team consisting of the eleven members from each specific field, as listed in Table 1.2.3.

Table 1.2.3 List of the Counterpart Team Members

1 . Mr.Aslam Farooq	Chief	in Chair
2 . Mr.Sajjad Hundal	DC	Railways Planning
3 . Mr. Kasim Idrees	DC	Comprehensive Transport Planning
4 . Mr. Bashir Ahmad	DC	Road Safety & E. Planning
5 . Mr. Tahir Sharif	DC	Road Planning
6 . Mr. Sajid Mansoor	DC	Road Transport Planning
7 . Mr. M.S.Qureshi	DC	System Analyst
8 . Dr. Ghiasul Haq	DC	Macro Economics
9 . Mr. Ahsan Ghias	AC	Ports and Shipping
10 .Mr. Hassan Syed	AC	Civil Aviation
11 .Mr. Haider Raza	AC	Roads
12 . Mr. Muhammad Naeem	AC	Roads

1.3 Reporting

The Inception Report, which presented the study plan in line with the agreed scope of work, was submitted at the commencement of the Study in the middle of January 1994. Phase 1 study was conducted both in Pakistan and in Japan, from January to June.

At the end of the phase 1 study, in the middle of July 1994, the Interim Report was prepared for the overall discussion on the basic planning directions for the proposal of the new investment programmes.

The main contents of the Interim Report were:

- General view of economy and transport,
- Present status and problems by mode,
- Future economic framework,
- Transport demand forecast,
- Revision of Master Plan, and

- Preliminary environmental study.

After the Team's presentation and discussion of the Interim Report in July, Phase 2 study was continuously carried out to revise the contents of the report and to finalize our proposals/recommendations, to be consistent with the 8th Five Year Plan by the Pakistan Government in June 1994.

The Draft Final Report, which consists of the following aspects, was prepared as the result of Phase 2 study both in Pakistan and in Japan, from July to October 1994.

Summary:

Main Report, Volume I:
- Socioeconomic Framework
- Transport Demand Projections
- Transport Planning Directions

Main Report, Volume II:
- Road Planning
- Road Transport Planning
- Railway Planning

Main Report, Volume III:
- Port Planning
- Shipping
- Planning of Airports and Aviation
- Inland Water Transport
- Initial Environmental Examination
- Technology Transfer through Transport Planning Software

This Final Report has been prepared with necessary revisions in consideration of the comments from the Pakistan Government as well as the comments given at the Steering Committee held in the course of the study. This report consists of 4 volumes, i.e.;

1 Summary

2 Volume I - Economic Analysis and Demand -
- Introduction
- Socioeconomic Framework
- Transport Demand Projections

3 Volume II - Studies by Sub-Sector -
- Road Planning
- Road Transport Planning
- Railway Planning
- Port Planning
- Shipping
- Airports and Aviation Planning
- Inland Water Transport
- Transport Planning Directions
- Initial Environmental Examination
- Technology Transfer through Transport Planning Software

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CHAPTER 2 Socio-Economic Framework

CHAPTER 2 SOCIO-ECONOMIC FRAMEWORK

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CHAPTER 2 SOCIO-ECONOMIC FRAMEWORK

2.1 Population Projection

2.1.1 Current Situation

(1) Past Trends

According to the latest census of 1981, the population of entire Pakistan was 84,254,000 as in Table 2.1.1.1 with the past trend. The figures for the years; 1991, 1992 and 1993 figures are estimates based on assumed annual growth rates. Recent district population, which are available with Provincial Development Statistics, were estimated in the same manner.

(2) Review of the Previous NTPS (JICA, 1988) Forecasts

The forecasts in previous NTPS were reviewed for possible use as present data, since reliable data for recent years was not available.

As shown in Table 2.1.1.2, the figures from the previous NTPS (1988, JICA) forecast are very close to the figures actually surveyed, especially, JICA's population forecast for 1992-93 at 120.96 million, which is almost the same as the official estimate of Pakistan Government at 120.84 million for the same period. Thus, the JICA projected population for 1992-93 were taken as the baseline data, summarized in Table 2.1.1.3.

2.1.2 Future Population

Considering that the present population figures were taken from the previous JICA study, the forecasting methodology shall be the same as discussed below:

(1) Entire Pakistan

Population growth rate at the national level is defined as follows:

Population growth rate = crude birth rate - crude death rate - net emigrant rate ;
Crude birth rate = specific birth rate in the 15-39 year age group of female x ratio of 15-39 year age group of female to the total population.

Owing to the fact that these factors are mainly influenced by social rather than economic factors, simple regression was not used for projections. Some factors for consideration include:

1) Specific Birth Rate for 15-39 Year Female Group

Due to the extension of family planning and the increase in household income level, birth rates are expected to decline gradually. There was a shift to younger age group of the female population between 1972 and 1981 census years increasing ratio of females of this age group in the study period.

2) Death Rate

The death rate is projected to decline gradually, resulting in possible increase in population. The declines of infant mortality rate and death rate of young girls are the contributing factors to be noted for the possible population growth.

Table 2.1.1.1 Past Trends of Pakistan Population (Official Statistics)

Census Years	Population (min) (f)	Labour Force Participation Rate(%)	Civilian Labour Force (min)	Employed Total (min)	Crude Birth Rate (per 1,000 persons)	Crude Death Rate (per 1,000 persons)	Infant Mortality Rate (per 1,000 persons)	Life expectansy At birth (yaers) male	Female	Compound growth rate (%)
1901	16.576 a	34.80	5.77	..	46.00	44.40	..	..	..	
1911	19.382 b	34.10	6.61	..	48.00	42.60	..	..	..	1.58
1921	21.109	33.30	7.02	..	49.00	48.6036.	..	..	..	0.86
1931	23.542	31.80	7.49	..	46.00	30	..	..	..	1.10
1941	28.282	31.30	8.85	..	45.00	31.20	..	..	..	1.85
1951	33.817 c	30.70	10.37	..	..	..	..	33.80	..	1.79
1961	42.978 d	32.36	13.88	14.67	..	..	131.00	38.70	..	2.43 e
1972-73	65.321	32.66	19.52	18.55	..	..	..	..	..	3.69 e
1981	84.254	27.57	25.78	24.70	43.30	11.80	..	..	..	3.06
1991	113.781	28.83	31.82	29.82	..	..	107.70	59.30	60.70	3.10
1992	117.32	28.83	32.81	30.75	..	..	108.00	59.30	60.70	3.10
1993	120.84	27.97	33.80	31.68	41.00	11.00	104.70	59.30	60.70	3.10

.. not available Source: (1) Population: Population Census Organization

(2) Crude Birth Rate and Crude Death Rate: Kingsley Davis, The population of India and Pakistan, Princeton, Princeton, New Jersey: Princeton University Press, 1951 pages 36, 69, for the years 1901-41. Pakistan Demographic Surveys.

(3) Infant Mortality Rate/ Life expectancy at birth: Pakistan Demographic Surveys, Federal Bureau of Statistics

(a) Excluding population of frontier regions.

(b) Based on population excluding 1,622 thousand person of Frontier regions in 1911

(c) Including 13 thousand persons (estimated) of Gawadar, not part of Pakistan in 1951 and 24 thousand persons (estimated) in Frontier regions who were not included in 1951 census data

(d) The Planning Commission has estimated that there was under-enumeration in the 1961 census to the tune of 7.50 percent. As such the 1961 population figures used for various economic indicators is taken to be 46,200 million

(e) The intercensal population growth rate between 1951-1961 and 1961-1972 is 3.21 percent and 3.02 percent respectively after adjustment for 7.5 percent under-enumeration in the 1961 census.

(f) Population censuses were held around the month of February upto 1951. Since 1961 the Census date is March 1 except 1972 Census) (Oct. 1, 1972). The last population census was conducted in 1981. Population figures of 1991, 1992 and 1993 are estimated by Federal Bureau of Statistics, Planning Division and Manpower Division as on January 1, each tear.

Source : Economic Survey 1992-93

Table 2.1.1.2 Comparison of Population Growth Rates between Previous NTPS(1988, JICA)and Pakistan Demographic Surveys

	Previous JICA Study (NTPS)	Pakistan Demographic Survey, 1989
Crude Birth Rate, 1989		4.09%
Crude Death Rate, 1989		1.01%
Population Growth Rate, 1989	3.10*	3.08%

Note:* Average for 1987/88 - 1992/93

Table 2.1.1.3 Population of Pakistan at Present

	Population (000)
1981 (Census)	85,254
1992/93	120,955
Annual Growth Rate (%)	3.1

3) Net Emigrant Rate to Foreign Countries

Reliable migration information is not available, but decline in net factor income in the national accout suggests slight decline in net-migration, which also is a contributing factor of growth in population.

Considering the above factors, future population of Pakistan was estimated and presented in Table 2.1.2.1.

Table 2.1.2.1 Future Population of Pakistan

Year	Population (000)	Annual Growth Rate (%)
1981 (census)	84,254	
1992/93	120,955	3.1
1997/98	139,975	3.0
2005/06	172,485	2.6

(2) Population by Province

For the breakdown of estimated national population to provincial level, the following points were taken into account:

a. Migration will continue from rural areas of Punjab and NWFP to urban areas due to social reasons.

b. Ratio of emigration from rural areas of Sind and Baluchistan will be less than those of Punjab and NWFP.

c. Excess rural population, that lacks means of going abroad, has tendency to migrate to urban areas. This pressure contributes to the urban population growth.

d. Even thoiught population growth in Baluchistan is expected to decline during the study period, the growth rate is higher than that of other provinces.

e. The impact of population influx from rural to urban areas will gradually decrease due to the decline of natural population growth in rural areas. Rural to urban migration

continues; however, the decline would ease the pressure of urban growth to some extent.

The results are presented in Table 2.1.2.2.

Table 2.1.2.2 Future Population by Province

Province	Population (000)				Annual Growth Rate (%)		
	1981	1992-93	1997-98	2005-06	81-92/93	92/93-97/98	97/98-05/06
Punjab	47,633	65,944	75,537	91,880	2.8	2.8	2.5
Sind	19,029	28,493	33,377	41,744	3.5	3.2	2.8
NWFP	11,061	16,102	18,647	22,787	3.2	3.0	2.5
Baluchistan	4,332	8,499	10,544	14,204	5.8	4.4	3.8
FATA	2,199	1,917	1,870	1,870	-1.1	-0.5	0.0
Pakistan Total	84,254	120,955	139,975	172,485	3.1	3.0	2.6

(3) Population by District

Future, district population was estimated by dividing the projected population by province into districts using the following equation:

$$Pd_t = PD_{81} * R * \frac{PP_t}{\Sigma (PD_{81} * R^{t-81})}$$

where, t : year

PD : district population

PD_{81}: district population of 1981 Census

PP : province population

R : annual population growth rate by district, 1972-1981

For some districts in Baluchistan, however, population growth rates were extremely high during the period 1972-1981, and growth rates exceeding 4% per annum were adjusted by district. The result is shown in Table 2.1.2.3.

Table 2.1.2.3 Projected Population by District

District Name	1981 (Census)	1992/93	1997/98	2005/06
Attok/Talagang	1,144	1,415	1,548	1,746
Rawalpindi	2,121	2,778	3,110	3,647
Islamabad	340	582	751	1,151
Jhelum/Chakwal	1,167	1,350	1,434	1,546
Gujrat	2,255	2,866	3,168	3,640
Mianwadi/Bhakkar	1,378	1,888	2,152	2,593
Sargodha/Khushad	2,553	3,340	3,732	4,353
Faisalabad/T. T. Singh	4,689	5,372	5,676	6,053
Jhang	1,978	2,741	3,139	3,806
Sialkot/Narowal	2,712	3,299	3,557	3,957
Gujranwala	2,676	3,832	4,426	5,497
Sheikhupura	2,110	2,936	3,350	4,081
Lahore	3,545	5,461	6,506	8,491
Kasur	1,528	2,160	2,482	3,056
D. G. Khan/Rajanpur	1,583	2,484	2,990	3,852
Muzaffagarh/Latteh	2,164	3,387	4,072	5,240
Multan/Khanewal/Lodhran	4,080	5,868	6,807	8,274
Vehari	1,329	1,894	2,188	2,644
Sahiwal/Okara/Pakpattan	3,612	5,445	6,442	8,082
Bahawalpur	1,454	2,219	2,639	3,442
Bahawalhagan	1,374	1,932	2,219	2,738
Rahim Yar Khan	1,841	2,695	3,149	3,991
Punjab	47,633	65,944	75,537	91,880
Jacobadad	1,012	1,640	1,983	2,591
Sukkur	1,098	1,580	1,814	2,186
Shikarpur	620	729	768	807
Larkana	1,139	1,511	1,675	1,910
Khairpur	1,647	2,136	2,349	2,638
Nawabsha	981	1,477	1,730	2,149
Dadu	1,077	1,587	1,840	2,247
Hyderabad	2,054	2,729	3,029	3,450
Badin	777	1,077	1,215	1,423
Sanghar	923	1,353	1,564	1,902
Tharparkar	1,502	2,548	3,136	4,213
Thatta	761	883	925	961
Karachi	5,438	9,243	11,349	15,267
SIND	19,029	28,493	33,377	41,744

District Name	1981 (Census)	1992/93	1997/98	2005/06
Chitaral	209	296	333	394
Dir	767	1,251	1,497	1,956
Swat/Bunner	1,233	1,887	2,198	2,748
Malakand	258	395	460	575
Kohistan	465	1,305	1,911	3,141
Mansehra	1,067	1,229	1,234	1,112
Abbottabad/Haripur	1,169	1,339	1,341	1,203
Mardan/Swabi	1,507	2,053	2,316	2,702
Peshawar/Nowshera/Charsadda	2,281	3,340	3,887	4,762
Kohat/Karak	759	1,095	1,268	1,539
Bannu	711	964	1,088	1,271
D. I. Khan	635	948	1,114	1,386
NWFP	11,061	16,102	18,647	22,787
Quetta	381	646	750	921
Pishin	379	642	748	919
Loralai	388	819	1,046	1,492
Zhob	362	773	992	1,425
Chagai	120	233	287	388
Sibi	131	166	168	166
Nasirabad	394	704	826	1,029
Kachhi	305	456	495	546
Kohlu/Dera Budti	175	294	337	403
Kalat	341	803	1,065	1,547
Khuzdar	387	804	1,011	1,349
Kharan	128	238	285	353
Lasbla	188	324	377	445
Turbat	380	987	1,352	2,043
Gwadar	112	160	170	171
Parigur	161	450	635	1,007
BALUCHISTAN	4.332	8,499	10,544	14,204
Bajour Ag.	291	190	161	121
Mohamand Ag.	284	174	140	102
Khyber Ag.	294	286	284	281
Khurram Ag.	164	45	26	12
Orakzai Ag.	239	203	189	171
North Waziristan Ag.	359	454	500	592
South Waziristan Ag.	309	284	273	259
T. A. ad. Peshawar	79	97	106	123
T. A. ad. Kohat	86	92	95	100
T. A. ad. Bannu	57	75	84	102
T. A. ad. D. I. Khan	37	17	12	7
FATA	2,199	1,917	1,870	1,870
PAKISTAN	84,254	120,955	139,975	172,485

2.1.3 Employment

Employment, a working population, is used as parameter to estimate various indicators including traffic demand.

Equations used to estimate employment by district and by major industrial group are:

$$EMP = R \times POP$$

where, EMP : total employment by district

R : ratio of employment to population by district

$$EMP(i) = R(i) \times EMP$$

where, i : major industrial group

R(i) : ratio of employment of i industrial group to total

In this calculation, the ratio of employment to population and the percentage distribution of employment by major industrial group as of 1981 were assumed to be constant over the study period. With regard to FATA, however, the following assumptions were used in the absence of 1981 data:

a. Ratio of employment to population is the same as that of the nearest NWFP district.

b. Share of each industrial group is one half of that of the nearest NWFP district except for agriculture.

The result is presented in Table 2.1.3.1. For details by district, see Appendix 2.1.3.1.

Table 2.1.3.1 Employment Projections by Province

Province	1981(census)	1992-93	1997-98	2005/06
Punjab	12,836	17,803	20,414	24,853
Sind	5,093	7,588	8,868	11,058
NWFP	2,839	4,201	4,908	6,084
Baluchistan	1,159	2,273	2,821	3,799
FATA	563	493	480	480
Pakistan Total	22,489	32,360	37,492	46,274

Note: Totals may not sum up due to rounding.

2.2 Projection of National Economy

2.2.1 Present Feature of National Economy

GNP of Pakistan in 1992-93 was Rs. 1,356,893 million at market price or US$ 52.2 billion at Rs.26 per US$. Per capita income was Rs. 11,218 or US$ 431 shown in Table 2.2.1.1 "GNP at Current Factor Cost".

Pakistan's GDP grew at an annual average compound rate of 6.8 % during the 6th Five Year Plan (hereinafter referred to as the FYP) period covering the years 1983-84 - 1987-88, and 5.0 % in the 7th FYP period or 1988-89 - 1992-93 as shown in Table 2.2.1.2 "GNP at Constant Price of 1980-81". GNP growth rates were 5.3 % and 4.4 % during these periods. The growth of GNP lagged behind that of GDP was due to a much slower inflow of net factor income from abroad.

The average compound annual growth rates of Pakistan's economy and of various economic sectors comprising GDP and GNP during 1983-84 - 1992-93 or the 6th and 7th FYP periods are shown in Table 2.2.1.3. There was a marked improvement of the national economy in the middle of the 7th FYP period. After a down trend due to a mixture of natural hazard, political instability, changing of various regulations concerned to economic systems, world recession, and decreased workers' remittance from abroad, etc.

Significant change of economic systems started during this period such as the deregulation of centralized control economy, enhancement of privatization movement, the promotion of market oriented economy and emphasis on drawing foreign investments to develop comparative advantages of Pakistan, and all these structural changes are expected to yield positive results in the future, the 9th FYP period after the gearing up of the economy in the 8th FYP period.

Pakistan's economy suffers from three major structural weaknesses: the high growth rate of population; the low rate of savings; and the adverse external sector balance. These three key points were discussed below.

(1) Population

1) Population Density:

Pakistan's population was estimated at 121 million in 1992. If the high growth rate of population continues, it is projected that population would reach 152 million by the end of the century. Pakistan's exploitable resources would become inadequate to support such a high population level.

Indications of high growth rate of population relate to employment and pressure on land. In regard to pressure on land, during the intercensal period of 1972 - 81, the population density rose from 82 to 100 per square kilometer and it was estimated to stand at 126 per square kilometer in 1987. Area available for cultivation has declined from 0.988 acre per person in 1971-72 to only 0.741 acre in 1986-87.

2) Unemployment:

An important problem arises from a high population growth as to the availability of employment opportunities in the economy. Based on current estimates, unemployment rate of 5.85 %, known as open unemployment. The 1983-84 Economic Survey states, "In addition to open unemployment, under-employment is quite high. Using the time utilization criterion - defining those who work less than 35 hours per week as under-employment - under-employment accounts for one-fourth of the employed persons."

The employment creation targeted during the 7th FYP period was at 3.3 million jobs; during the period of plan operation 1.9 million jobs were created representing only a 58 % achievement of target. As such, pressure on the employment opportunities are bound to aggravate for coming years as bulk of Pakistanis employed in the Middle East now return to the country of their origin as a consequence of slow down in the economic activities of the Middle East countries.

Table 2.2.1.1 Gross National Product (At Current Factor Cost / Market Prices, million Rs.)

	Fiscal Years	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93
1.0	Agriculture	99,380	104,550	120,293	128,801	135,308	156,375	184,074	197,441	233,130	282,916	297,816
1.1	Major Crops	50,147	44,903	53,797	58,102	59,199	64,934	75,804	82,929	94,570	125,535	116,014
1.2	Minor Crops	18,410	23,742	26,329	24,723	24,162	27,864	35,938	32,136	43,562	46,525	51,434
1.3	Livestock	26,740	31,396	36,391	40,858	46,450	57,438	65,038	74,237	86,219	100,726	117,792
1.4	Fishery	3,111	3,347	2,524	3,793	3,960	4,492	5,442	5,792	6,072	6,851	9,536
1.5	Forestry	972	1,162	1,252	1,325	1,537	1,647	1,852	2,347	2,707	3,279	3,040
2.0	Industry	72,492	84,983	95,516	108,853	123,828	146,527	163,248	191,254	234,033	275,752	303,568
2.1	Mining & Quarrying	1,342	1,599	2,064	3,281	3,681	4,811	4,932	5,403	6,437	7,180	7,403
2.2	Manufacturing	50,200	60,398	67,596	75,881	85,850	100,917	113,517	132,329	158,840	187,184	207,568
2.3	Large Scale	37,357	45,518	49,856	54,823	61,826	73,248	80,745	93,729	112,204	130,604	142,301
2.4	Small Scale	12,843	14,880	17,740	21,058	24,024	27,669	32,772	38,600	46,636	56,580	65,207
2.5	Construction	13,666	14,716	17,116	19,052	22,508	25,109	27,706	32,052	38,172	43,812	49,807
2.6	Electricity & Gas	7,284	8,270	8,740	10,639	11,789	15,690	17,093	21,470	30,584	37,576	38,790
3.0	Services	156,540	184,816	208,255	228,665	286,295	298,123	515,816	371,156	441,211	519,135	599,071
3.1	Transport & Communicatior	31,092	35,199	38,219	41,196	44,624	51,047	54,316	60,487	77,709	100,155	126,883
3.2	Commerce	49,957	58,221	67,632	72,742	80,886	100,585	115,810	129,135	152,017	176,766	195,532
3.3	Banking & Insurance	9,383	12,079	13,370	14,855	16,334	18,496	200,060	21,434	26,966	30,603	35,688
3.4	Housing	15,734	18,836	21,535	23,462	25,472	27,776	30,243	34,126	39,624	46,235	53,652
3.5	Piblic Adm. & Defence	26,467	33,133	36,714	42,053	51,018	57,309	65,179	69,115	76,519	85,472	94,560
3.6	Other Services	23,907	27,348	30,785	34,357	67,961	42,910	50,208	56,859	68,376	79,904	92,756
4.0	GDP at Factor Cost	328,412	374,349	424,064	466,319	545,431	601,025	863,138	759,851	908,374	1,077,803	1,200,455
5.0	Indirect Taxes	43,487	53,557	56,396	58,205	64,422	84,494	99,361	108,641	123,437	144,815	151,300
6.0	Subsidies	7,512	8,104	9,309	9,992	7,374	10,130	12,754	12,549	11,211	11,373	9,800
7.0	GDP (market price)	364,387	419,802	472,157	514,532	572,479	675,389	769,745	855,943	1,020,600	1,211,245	1,341,955
8.0	Net Factor In from abroad	39,395	39,395	38,311	41,359	36,378	29,095	28,005	36,900	23,908	12,535	14,938
9.0	GNP at Factor Cost	367,807	413,944	463,375	507,678	551,809	630,120	711,143	796,751	932,282	1,090,338	1,215,393
10.0	GNP at Market Price	403,782	459,397	510,468	555,891	608,857	704,484	797,750	892,843	1,044,508	1,223,780	1,356,893
11.0	Population (,000)	89,120	91,880	94,730	97,670	10,070	103,820	107,040	110,360	113,780	117,320	120,955
12.0	Per Capita Income (Rs. fc)	4,127	4,505	4,892	5,198	5,480	6,069	6,644	7,220	8,194	9,295	10,048
13.0	Per Capita Income (Rs. mp)	4,531	5,000	5,389	5,692	6,046	6,786	7,453	8,090	9,180	10,432	11,218

Note: Population in 1992/93 is adjusted.

Source: Economic Survey 1993-94, Economic Advisor's Wing, Finance Division

Table 2.2.1.2 Gross National Product (At Constant Factor Cost of 1980-81, in million Rs.)

	Fiscal Years	1983/84	1984/85	1985/86	1986/87	1987/88	Growth Rate 6th FYP	1988/89	1989/90	1990/91	1991/92	1992/93	Growth Rate 7th FYP
1.0	Agriculture	79,502	88,187	93,433	96,473	99,108	5.7	105,917	109,127	114,542	125,668	118,802	2.9
1.1	Major Crops	36,710	43,390	46,212	46,965	48,452	7.2	51,842	51,795	54,741	63,165	53,277	0.7
1.2	Minor Crops	15,668	16,109	16,742	17,317	16,756	1.7	18,205	19,147	19,820	20,290	21,063	3.7
1.3	Livestock	22,956	24,356	25,865	27,351	28,909	5.9	30,614	32,481	34,105	36,133	38,308	5.8
1.4	Fishery	3,130	3,293	3,544	3,650	3,776	4.8	3,999	4,325	4,430	4,600	4,909	5.3
1.5	Forestry	1,038	1,039	1,070	1,190	1,218	4.1	1,257	1,379	1,446	1,480	1,245	-0.2
2.0	Industry	69,688	75,147	81,234	88,257	96,925	8.6	101,433	107,954	115,359	124,504	131,264	6.7
2.1	Mining & Quarrying	1,181	1,340	1,657	1,782	2,029	14.5	2,071	2,269	2,504	2,580	2,642	6.3
2.2	Manufacturing	49,187	53,166	57,180	61,484	67,622	8.3	70,300	74,323	78,969	85,489	89,916	6.3
2.3	Large Scale	36,455	39,365	42,220	45,267	50,043	8.2	51,244	53,667	56,577	61,216	63,604	5.6
2.4	Small Scale	12,732	13,801	14,960	16,217	17,579	8.4	19,056	20,657	22,392	24,273	26,312	8.4
2.5	Construction	12,025	13,155	14,035	15,784	16,563	8.3	16,937	17,466	18,462	19,566	20,701	5.1
2.6	Electricity & Gas	7,295	7,486	8,362	9,207	10,711	10.1	12,125	13,896	15,424	16,869	18,005	10.4
3.0	Services	146,787	158,417	167,557	177,380	189,383	6.6	196,598	205,402	216,104	230,062	241,279	5.3
3.1	Transport & Communicatior	30,283	32,688	34,305	36,785	39,293	6.7	37,716	40,184	42,719	46,407	50,148	7.4
3.2	Commerce	46,440	51,876	55,361	58,661	63,932	8.3	67,305	69,655	73,380	78,914	81,016	4.7
3.3	Banking & Insurance	8,767	8,752	9,057	9,111	9,452	1.9	9,743	9,793	9,913	10,323	11,173	3.5
3.4	Housing	16,200	17,849	18,791	19,784	20,828	6.5	21,928	23,086	24,305	25,588	26,939	5.3
3.5	Public Adm. & Defence	23,192	23,916	25,183	26,556	27,666	4.5	29,852	30,667	31,679	32,495	33,295	2.8
3.6	Other Services	21,905	23,336	24,860	26,483	28,212	6.5	30,054	32,017	34,108	36,335	38,708	6.5
4.0	GDP at Factor Cost	295,977	321,751	342,224	362,110	385,416	6.8	403,948	422,284	446,005	480,234	491,345	5.0
5.0	Indirect Taxes	43,038	43,103	42,501	44,800	53,406	5.5	57,269	58,359	59,345	63,722	62,155	2.1
6.0	Subsidies	6,512	7,107	7,296	5,128	6,403	-0.4	7,351	6,741	5,390	5,004	4,029	-14.0
7.0	GDP (market price)	332,503	357,747	377,429	401,782	432,419	6.8	453,866	474,102	499,960	538,952	549,471	4.9
8.0	Net Factor In from abroad	31,630	28,814	31,282	26,575	17,100	-14.3	14,933	17,163	9,457	4,948	5,601	-21.7
9.0	GNP at Factor Cost	327,609	350,565	373,506	388,685	402,516	5.3	418,881	439,647	455,462	485,182	496,946	4.4
10.0	GNP at Market Price	364,133	386,561	408,711	428,357	449,519	5.4	468,799	491,265	509,417	543,900	555,072	4.3
11.0	Population (,000)	91,880	94,730	97,670	10,070	103,820	3.1	107,040	110,360	113,780	117,320	120,955	3.1
12.0	Per Capita Income (Rs. fc)	3,566	3,701	3,824	3,860	3,877	2.1	3,913	3,984	4,003	4,136	4,109	1.2
13.0	Per Capita Income (Rs. mp)	3,963	4,081	4,185	4,254	4,320	2.2	4,380	4,451	4,477	4,636	4,589	1.2

Note: Population in 1992/93 is adjusted.
Source; Economic Survey 1993-94, Economic Advisor's Wing, Finance Divsion

Table 2.2.1.3 Annual / Periodic Growth Rate of GDP by Sector

	Fiscal Years	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93
1.0	Agriculture	-4.82	10.92	5.95	3.25	2.73	6.87	3.03	4.96	9.50	-5.28
1.1	Major Crops	-14.30	18.20	6.50	1.63	3.17	7.00	-0.09	5.69	15.48	-15.72
1.2	Minor Crops	3.38	2.81	3.93	3.43	-3.24	8.65	5.17	3.51	2.37	3.81
1.3	Livestock	5.96	6.10	6.20	5.75	5.69	5.91	6.10	5.00	5.95	6.02
1.4	Fishery	5.64	5.21	7.62	2.99	3.45	5.91	8.15	2.43	4.97	5.57
1.5	Forestry	13.82	0.10	2.98	11.21	2.35	3.20	9.70	4.86	-21.23	9.31
2.0	Industry	0.38	9.48	6.94	5.76	6.12	5.77	4.69	5.91	8.61	0.14
2.1	Mining & Quarrying	1.46	13.46	23.66	7.54	13.86	2.07	9.56	10.36	2.44	3.00
2.2	Manufacturing	7.89	8.09	7.55	7.53	9.98	3.96	5.72	6.25	8.05	5.38
2.3	Large Scale	7.71	7.98	7.25	7.22	10.55	2.40	4.73	5.42	7.91	4.18
2.4	Small Scale	8.30	8.70	8.00	8.60	8.50	8.40	8.40	8.40	8.40	8.40
2.5	Construction	0.94	9.40	6.69	12.46	4.94	2.26	3.12	5.70	5.98	5.80
2.6	Electricity & Gas	13.54	2.62	11.70	10.11	16.34	13.20	14.61	11.00	9.07	7.03
3.0	Services Sector	7.61	8.21	5.77	5.86	6.77	3.81	4.48	5.21	6.76	4.58
3.1	Transport & Communication	8.27	7.94	4.95	7.23	6.82	-4.01	6.54	6.31	10.46	6.27
3.2	Commerce	4.60	11.71	6.72	5.96	8.99	5.28	3.49	5.35	7.33	2.86
3.3	Banking & Insurance	16.92	-0.17	3.48	0.60	3.74	3.08	0.51	1.23	4.34	8.02
3.4	Housing	14.69	10.18	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28
3.5	Public Adm. & Defence	7.92	3.12	5.30	5.45	4.18	7.90	2.73	3.30	2.58	2.45
3.6	Other Services	4.60	8.49	6.53	6.53	6.53	6.53	6.53	6.53	6.53	6.53
4.0	GDP at Factor Cost	3.97	8.71	6.36	8.81	6.44	4.81	4.58	5.57	7.71	2.28
5.0	Net Factor In from abroad	-4.15	-8.90	8.57	-15.05	-35.65	-12.67	14.93	-44.90	-47.68	13.17
9.0	GNP at Factor Cost	3.13	7.01	6.54	4.06	3.56	4.07	4.96	3.60	6.56	2.39

Source: Economic Survey 1993-94, Economic Advisor's Wing, Finance Division

Privatization and deregulation policies have encouraged the private sector to expand its activities. This is expected to create more jobs. More foreign investment in different fields of the economy would expand the capacity of the economy to absorb labour force. It is estimated that 7.38 million jobs will be needed during the 8th FYP period to attain full employment. With a GDP growth of 7.0 %, 5.7 million new jobs are likely to be generated internally and the rest may be created externally.

3) Social Sector Development:

High growth rate of population has adverse implications the social sectors like education, housing and health care. Pakistan's level of literacy at only 26.2 % under the 1981 Census was the lowest in the sub-continent. During the 8th FYP, enrollment in the primary education is planned to increase from 12.4 to 17.9 million children and participation rate to be raised from 68.9 per cent in 1992-93 to 87.7 % in 1997-98.

With regard to the housing sector, it is estimated that there is a shortage of at least 3 million units. In regard to health sector, although some improvement has taken place over a period of time, even now safe potable water supply is available to only 44 % of the population. These high growth rate of population is leading to high unemployment and low social sector facilities.

Based on the above, a Social Action Programme (SAP) was launched in 1992-93 to address the imbalance and the neglect of social development in a more coordinated manner. The programme is designed to improve basic social services in Pakistan through improvement in planning, budgeting, implementation and monitoring mechanism.

4) Pressure on Land:

The high growth rate of population has created pressure on land. Firstly, population density has increased at the national level from 82 persons per square kilometer in 1972 to 100 persons per square kilometer, according to the census of 1981. The density would be somewhat higher in 1992-93. The area of cultivable land declined from 0.4 hectares per capita in 1971 - 72 to 0.3 hectares per capita in 1984-85 and further down in 1992-93. As a result, on a per capita basis, cultivated area has declined by 23 % and cropped area by 15 per cent. This declining trend of cultivable land shall restrict economic growth of agriculture sector--the key sector of Pakistan economy.

(2) Saving and Investment

The second structural problem is the low saving and investment rate in economy. In order to sustain a growth rate of about 7 %, the rate per annum in the 1980's, investment at a rate of 20 % of GDP was required in the 7th FYP period and in the subsequent FYP periods. However, the rate of investment in terms of share in GDP has not reached to this level and recorded as 16.1 % - 17.0 % at respective years during the 7th FYP period. So far the capital output ratio has tended to be less than 3:1. It may increase to 5:1 since most of the investment will have to be made in the provision of infrastructure facilities whose capital output ratio is higher industries.

Given the current savings rate of about 14 %, almost one-third of the required investment will have to be financed through foreign capital. If this was done, the debt servicing liability of Pakistan would go beyond manageable proportions.

The level of national savings, which includes foreign remittances received from Pakistanis working abroad, is fair as a portion of GNP. The share of net factor income from abroad have decreased constantly from 10.4 % in 1983-84 to 1.2 % in 1992-93 or at an average of 7.9 % during the 6th FYP to 2.3 % in the 7th FYP period. Compound rates of the net factor income from abroad decreased to 14.3 % and 20.7 % in the 6th and 7th FYP, respectively, as slow-down in economic activities in the Middle East region from where the bulk of foreign remittances originate. There is a need to take appropriate measures to raise the level of domestic savings to sustain the economy's growth rate experienced in the 5th and 6th FYP periods.

(3) Fiscal Developments:

The continuous fiscal deficit growth is a structural weakness of Pakistan's economy. Current expenditures from the first 1976-77 to 1986-87 has increased about seven times, and doubled during the first 10 years from 1983 to 1992; both the gross and net revenue receipts of the Federal Government increased by only five times each of the above period. Thus the expenditures grew faster than the revenue receipts. The fastest growth, an eight-fold increase, was experienced in expenditures on debt servicing during the same period 1977 - 87 followed by a five-fold increase on defense. As shown in Table 2.2.1.4 "Debt Servicing", the debt service payments have increased almost 2.3 times as US$ 727 million in 1983 to US$ 1,648 in 1992.

The foreign capital assistance has been playing important role to fill the country's shortage in development expenditures. The rapid growth of the economy in the 1980's occurred in the Middle East oil producing countries or Islamic countries assisted the economy of Pakistan in the form of government to government financial assistance either by long-term loan or grants. Because of international political conflict between the two super powers, the assistance on both military and finance by the Western countries and by the international financial institutions supported Pakistan financially as well. However, as international geopolitics changed drastically and affected finance of Pakistan. As Table 2.2.1.5 "Loans and Grants" shows the aggregate amount of loan, and grant to Pakistan from external source has continuously declined over the years. Adjustment of Pakistan's national economic structure internally as well as externally became imperative to reform the economic management system to secure the development and uplift the living standard of people as a whole.

During the 7th FYP period total revenues almost approximate the projected levels, but reductions in expenditure to GDP fell short of the target. Nonetheless, expenditure reduction was the principal means of reducing fiscal deficit, accounting for almost 1.5 % of GDP. Mainly because of higher subsidies, however, recurrent expenditures did not decline relative to GDP. Therefore, the expenditure reduction fell on development expenditure. During the 7th FYP, there was a marked shift in the sources of deficit financing from domestic bank to domestic non-bank financing, which imply a higher expenditure for interest payments.

Table 2.2.1.4 Debt Servicing (million US$)

Year	Debt out-standing	Service Payment			Share in debt outstanding	Debt Servicing as % of			Exports	NFS	Forex Earning	GNP	Debt Outstanding per GNP
		Principal	Interest	Total		Exports	Forex Earning	GNP					
	(Growth Rate)	(Share in %)	(Share in %)	(Share in %)	(Share in %)							(US mil $)	(%)
1983/84	9,469	453	274	727	7.7	26.3	10.9	2.1	2,669	3,044	5,144	33,694	28.1
1984/85	9,732	513	275	788	8.1	31.6	12.9	2.3	2,457	2,687	5,764	34,442	28.3
1985/86	11,108	603	303	906	8.2	29.5	13.5	2.6	2,942	2,822	6,055	35,440	31.3
1986/87	12,023	723	378	1,101	9.2	29.9	15.6	3.1	3,498	2,557	6,618	40,028	30.0
1987/88	12,913	691	426	1,117	8.7	25.1	14.7	2.8	4,362	2,256	6,618	41,528	31.1
6th FYP	8.1	5.4	3.0	8.4	8.3	17.5	7.5	1.4	13.1	-7.2	6.5	5.4	29.8
1988/89	14,190	685	440	1,125	7.9	24.1	14.4	2.7	4,634	2,100	7,136	41,624	34.1
1989/90	15,094	741	491	1,232	8.2	24.9	13.7	3.0	4,926	2,210	8,004	46,588	32.4
1990/91	15,471	782	534	1,316	8.5	21.5	13.2	2.8	5,902	2,102	9,723	49,264	31.4
1991/92	17,361	921	592	1,513	8.7	21.9	15.3	3.1	6,762	2,961	9,723	53,033	32.7
1992/93	19,004	999	649	1,648	8.7	24.1	16.4	3.1	7,550	3,957	11,507	53,161	35.7
7th FYP	7.6	5.1	3.3	8.4	8.4	28.6	15.8	3.2	13.0	17.2	12.7	6.3	33.3
8th FYP	6.5	5.5	3.3	8.8	8.8	19.7	13.7	3.1	10.8	8.5	10.1	6.9	35.3
1993/94	20,239	1,113	668	1,781	8.8	21.3	14.5	3.1	8,365	3,877	12,242	56,829	35.6
1994/95	21,555	1,186	711	1,897	8.8	20.5	14.2	3.1	9,269	4,118	13,387	60,750	35.5
1995/96	22,956	1,263	758	2,020	8.8	19.7	13.8	3.1	10,270	4,385	14,655	64,942	35.3
1996/97	24,448	1,345	807	2,151	8.8	18.9	13.4	3.1	11,379	4,681	16,060	69,423	35.2
1997/98	26,037	1,432	859	2,291	8.8	18.2	12.7	3.1	12,608	5,373	17,981	74,213	35.1
9th FYP	6.0	6.0	4.0	10.0	10.0	22.4	14.5	3.1	8.0	7.0	7.6	6.3	30.7
1998/99	24,333	1,460	973	2,433	10.0	23.2	15.0	3.1	10,484	5,749	16,233	78,889	30.8
1999/00	25,793	1,548	1,032	2,579	10.0	22.8	14.8	3.1	11,323	6,152	17,475	83,859	30.8
2000=01	27,341	1,640	1,094	2,734	10.0	22.4	14.5	3.1	12,229	6,582	18,811	89,142	30.7
2001=02	28,981	1,739	1,159	2,898	10.0	21.9	14.3	3.1	13,207	7,043	20,250	94,758	30.6
2002=03	30,720	1,843	1,229	3,072	10.0	21.5	14.1	3.0	14,264	7,536	21,800	100,727	30.5
10th FYP	4.0	6.0	4.0	10.0	10.0	18.3	12.4	2.9	10.0	6.0	8.7	6.2	28.7
2003=04	31,949	1,917	1,278	3,195	10.0	20.4	13.5	3.0	15,690	7,988	23,678	106,973	29.9
2004=05	33,227	1,994	1,329	3,323	10.0	19.3	12.9	2.9	17,259	8,467	25,726	113,605	29.2
2005=06	34,556	2,073	1,382	3,456	10.0	18.2	12.4	2.9	18,985	8,975	27,960	120,648	28.6
2006=07	35,938	2,156	1,438	3,594	10.0	17.2	11.8	2.8	20,884	9,514	30,398	128,129	28.0
2007=08	37,376	2,243	1,495	3,738	10.0	16.3	11.3	2.7	22,972	10,085	33,057	136,073	27.5

Source:
(1) Economic Survey 1993/94, Economic Advisor's Wing, Finance Division
(2) 8th Five Year Plan
(3) JICA Study Team

Table 2.2.1.5 Loans, Grant and Interest Rate (million US$)

LOANS

	Consortium	Multilateral	Non-Consortium	Islamic Countries	Total Amount Per Year	Interest Rate (%)
1982-83	478.9	579.7	59.2	108.0	1,225.8	3.53
1983-84	529.0	666.8	280.1	3.9	1,479.8	4.33
1984-85	644.6	1,112.9	5.2	44.1	1,806.8	5.74
1985-86	530.0	1,236.7	0.4	25.6	1,792.7	1.95
1986-87	567.6	775.1	244.0	79.0	1,665.7	2.98
1987-88	653.0	1,249.1	96.1	24.9	2,023.1	3.14
1988-89	1,126.5	1,425.4	6.5	8.0	2,566.4	4.05
1989-90	911.0	1,515.9	117.6	17.7	2,562.2	4.79
1990-91	703.0	1,408.9	75.6	62.8	2,250.3	3.90
1991-92	984.0	1,087.2	212.5	12.9	2,296.6	3.67
1992-93	751.6	771.6	129.9	15.5	1,668.6	3.55
					Average	3.78

GRANTS (Excluding Relief Assistance for Afgan Refugees)

Source	Consortium	Multilateral	Non-consortium	Islamic Countries	Total Amount per Year	Interest Rate (%)	Share of Grants (%)
1982-83	222.9	0.0	0.0	0.0	222.9	0.00	18.18
1983-84	351.3	0.0	0.0	0.0	351.3	0.00	23.74
1984-85	361.7	0.0	0.0	0.0	361.7	0.00	20.02
1985-86	366.5	0.0	0.0	0.0	366.5	0.00	20.44
1986-87	432.3	0.0	0.0	0.0	432.3	0.00	25.95
1987-88	499.1	0.0	0.0	0.0	499.1	0.00	24.67
1988-89	462.5	0.0	4.7	0.0	467.2	0.00	18.20
1989-90	504.5	0.0	0.0	1.0	505.5	0.00	19.73
1990-91	89.1	0.0	0.0	125.0	214.1	0.00	9.51
1991-92	273.3	0.0	0.0	0.0	273.3	0.00	11.90
1992-93	172.1	0.0	0.0	0.0	172.1	0.00	10.31
						Average	18.42

Source: Economic Survey 1993/94, Economic Advisor's Wing, Finance Division

1) Revenues:

Total revenues accounted for around 18.0 % - 19.0 % of GDP during the 7th FYP period. Tax revenues, accounting for about 75 % of total revenues or 13.5 % - 14.3 % of GDP, are low in terms of GDP compared to other countries in South Asia. The tax system has been inequitable and inelastic due to the limited base of income and sales taxes; the preponderance of specific rather than ad valorem rates on excise taxes and custom duties; and numerous tax exemptions. Weaknesses in tax administration also contributed to the low buoyancy. Only 13.5 % of GDP comes from income taxes which is paid by around 1 million of Pakistan's 120 million people. The Government emphasizes on reformof tax system, introduction of new taxes as well as increasing prices of essential commodities such as tariff of power and gas to curve the fiscal deficit as much as and as soon as possible. However, increases in power and gas prices will lead quickly an inflation and stagnation of economy as a whole.

2) Expenditures:

Recurrent expenditures had been growing as a share of GDP throughout the 6th and 7th FYP periods. In 1981-82, they accounted for less than 15 % of GDP; by 1988-89, they reached to 19.8 % of GDP; and to 20.0 % in 1992. Since rising interest payments could not be curtailed,

the reduction of recurrent expenditure as a share of GDP had to come mainly from reducing subsidies, defense expenditures and provincial recurrent expenditure. Transfers to the provinces were not increased in real terms as the Federal Government stood firm on not increasing budgetary transfers in case of provincial spending overruns. However, subsidies has increased slightly resulted from unexpectedly large wheat imports, during the 7th FYP period, which were sold at subsidized prices, the clearance of arrears for the fertilizer subsidy account, and greater demand and higher international prices for several other price-controlled commodities. However, in general, the average share of subsidies in GNP at each year has been decreasing at -0.9 % in the 6th FYP and -17.2 % in 7th FYP peered. At the same time, the authorities strengthened the expenditure control and monitoring procedures. All spending units were notified that any allocations in excess of budgeted amounts would be systematically reviewed.

3) Development Expenditure:

Development expenditures relative to GDP fell. In the 7th FYP period, an average annual decrease rate of the same was - 1.7 %. The decline in development spending was accompanied by a lengthening of pipeline of projects and non-project assistance. Under utilization of budgetary allocations were observed in various development projects mainly due to the lack of well defined projects and close monitoring of on-going projects. A political disruption during the middle of the 7th FYP period which left the administration without spending authority for a certain period, and the lack of local counterpart funds due to insufficient revenue raising efforts and/or spending priorities, and efforts to contain the budget deficit by construing the release of funds were major reason of non-utilization of budgetary allocation.

(4) External Sector

In regard to the third structural problem related to Pakistan's external sector, a considerable improvement was started in 1986 as shown in Table 2.2.1.6 "Export, Import and Trade Balance (in US Dollar)" and Table 2.2.1.7 "Export, Import and Trade Balance (at Current Market Price)". Although the trade balance has been negative, its share in GDP has improved from 9.8 % in the 6th FYP to 5.6 % in the 7th FYP. The trade balance is considerably improved as shown in Table 2.2.1.7.

1) International Payments:

Workers' remittance has been continuously declining from US$2,886 million in 1982-83 to US$1,562 million in 1992-93, almost 50 % fall in last 10 years. Such a decreasing trend would continue in the future; however, at a certain point the workers' remittance will be maintained. The current account deficit has fluctuated between -US$517 million in 1982-83 to -US$3,316 in 1992-93 and it has shown no improvement since 1987-88 to 1993.

The total outstanding disbursed debt and debt servicing continued to remain as burden to the economy. Debt servicing is expected to be in excess of $1,709 million in 1993. However, due to substantial increase of foreign exchange earning mainly by an increased exports, the debt servicing rate per export earning would be within in an acceptable range of 20.0 % to 22.0 %.

The government emphasizes a promotion of non-traditional exports and encouraging foreign investments for export oriented industries by providing favourable conditions and regulations to potential foreign investors. This movement may create a solid base for increased exports year by year through the 8th to 10th FYP periods. In fact, during the last 5 years, 1988 - 1992, the trade balance has improved by over 42 % aided by an expansion of 67 % in export sectors.

Table 2.2.1.6 Export, Import And Trade Balance In US$ (With Annual Growth Rate Per FYP Period)

Year	Export (US$ mil)	Import (US$ mil)	Balance (US$ mil)	GDP (Rs. mil)	Exchange Rate	GDP (US$ mil)	Imports/ GDP (%)	Exports/ GDP (%)	Balance/ GDP(%)
1978/79	1,644	3,816	-2,172	178,031	9.9	17,983	21.2	9.1	-12.1
1979/80	2,341	4,857	-2,516	214,593	9.9	21,676	22.4	10.8	-11.6
1980/81	2,799	5,563	-2,764	247,831	9.9	25,033	22.2	11.2	-11.0
1981/82	2,319	5,769	-3,450	292,153	9.9	29,510	19.5	7.9	-11.7
1982/83	2,627	5,616	-2,989	328,412	12.7	25,859	21.7	10.2	-11.6
5th FYP	12.4	10.1	8.3			Ave.	**21.4**	**9.8**	**-11.6**
1983/84	2,669	5,993	-3,324	374,349	13.5	27,771	21.6	9.6	-12.0
1984/85	2,457	6,009	-3,552	425,064	15.2	28,057	21.4	8.8	-12.7
1985/86	2,942	5,984	-3,042	466,319	16.1	28,892	20.7	10.2	-10.5
1986/87	3,498	5,792	-2,294	515,431	17.2	30,002	19.3	11.7	-7.6
1987/88	4,362	6,919	-2,557	601,025	17.6	40,028	17.3	10.9	-6.4
6th FYP	13.1	3.7	-6.3			Ave.	**20.1**	**10.2**	**-9.8**
1988/89	4,634	7,207	-2,573	683,138	19.2	41,528	17.4	11.2	-6.2
1989/90	4,926	7,411	-2,485	759,854	21.5	41,624	17.8	11.8	-6.0
1990/91	5,902	8,385	-2,483	908,374	22.4	46,588	18.0	12.7	-5.3
1991/92	6,762	8,998	-2,236	1,077,803	24.8	49,267	18.3	13.7	-4.5
1992/93	6,782	10,049	-3,267	1,215,393	26.0	53,033	18.9	12.8	-6.2
7th FYP	10.0	8.7	6.2			Ave.	**18.1**	**12.4**	**-5.6**
8th FYP	12.5	7.5	-8.7	7.0		7.0	**21.8**	**16.9**	**-4.9**
1993/94	7,630	10,803	-3,173	1,300,471	26.0	50,018	21.6	15.3	-6.3
1994/95	8,583	11,613	-3,029	1,391,503	26.0	53,519	21.7	16.0	-5.7
1995/96	9,656	12,484	-2,827	1,488,909	26.0	57,266	21.8	16.9	-4.9
1996/97	10,863	13,420	-2,557	1,593,132	26.0	61,274	21.9	17.7	-4.2
1997/98	12,221	14,427	-2,205	1,704,652	26.0	65,564	22.0	18.6	-3.4
9th FYP	10.0	8.0	-8.2	6.3		6.3	**23.1**	**20.7**	**-2.4**
1998/99	13,444	15,581	-2,137	1,812,045	26.0	69,694	22.4	19.3	-3.1
1999/2000	14,788	16,827	-2,039	1,926,203	26.0	74,085	22.7	20.0	-2.8
2000=01	16,267	18,173	-1,907	2,047,554	26.0	78,752	23.1	20.7	-2.4
2002=02	17,893	19,627	-1,734	2,176,550	26.0	83,713	23.4	21.4	-2.1
2002=03	19,683	21,197	-1,515	2,313,673	26.0	88,987	23.8	22.1	-1.7
10th FYP	8.0	7.0	-13.1	6.2		6.2	**24.4**	**23.3**	**-1.1**
2003=04	21,257	22,681	-1,424	2,457,121	26.0	94,505	24.0	22.5	-1.5
2004=05	22,958	24,269	-1,311	2,609,462	26.0	100,364	24.2	22.9	-1.3
2005=06	24,794	25,968	-1,173	2,771,249	26.0	106,586	24.4	23.3	-1.1
2006=07	26,778	27,786	-1,008	2,943,066	26.0	113,195	24.5	23.7	-0.9
2007=08	28,920	29,731	-810	3,125,536	26.0	120,213	24.7	24.1	-0.7

Source:
(1) Economic Survey 1993-94, Economic Advisor's Wing, Finance Division
(2) 8th Five Year Plan
(3) JICA Study Team

Table 2.2.1.7 Share of Export, Import and Trade Balance (at Current Market Price)

Year	Export (Rs. mil)	Import (Rs. mil)	Balance (Rs. mil)	GNP (Market Price)	Imports/ GNP (%)	Exports/ GNP (%)	Balance/ GNP(%)
1978/79	16,925	36,388	-19,463	209,448	17.4	8.1	-9.3
1979/80	23,410	46,929	-23,519	252,463	18.6	9.3	-9.3
1980/81	29,280	53,544	-24,264	300,888	17.8	9.7	-8.1
1981/82	26,270	59,482	-33,212	349,508	17.0	7.5	-9.5
1982/83	34,442	68,151	-33,709	403,782	16.9	8.5	-8.3
5th FYP	19.4	17.0	14.7		**17.5**	**8.6**	**-8.9**
1983/84	37,339	76,707	-39,368	459,397	16.7	8.1	-8.6
1984/85	37,979	89,778	-51,799	510,468	17.6	7.4	-10.1
1985/86	49,592	90,946	-41,354	555,891	16.4	8.9	-7.4
1986/87	63,355	92,431	-29,076	608,857	15.2	10.4	-4.8
1987/88	78,445	112,551	-34,106	704,484	16.0	11.1	-4.8
6th FYP	20.4	10.1	-3.5		**16.4**	**9.2**	**-7.2**
1988/89	90,183	135,841	-45,658	797,750	17.0	11.3	-5.7
1989/90	106,469	148,853	-42,384	892,843	16.7	11.9	-4.7
1990/91	138,280	171,114	-32,834	1,044,508	16.4	13.2	-3.1
1991/92	171,728	229,889	-58,161	1,223,780	18.8	14.0	-4.8
1992/93	177,028	258,643	-81,615	1,356,893	19.1	13.0	-6.0
7th FYP	18.4	17.5	15.6		**17.6**	**12.7**	**-4.9**
8th FYP	12.5	7.5	-9.8	7.0	**19.3**	**15.2**	**-4.1**
1993/94	199,157	278,041	-78,885	1,451,876	19.2	13.7	-5.4
1994/95	224,051	298,894	-74,843	1,553,507	19.2	14.4	-4.8
1995/96	252,057	321,311	-69,254	1,662,252	19.3	15.2	-4.2
1996/97	283,565	345,410	-61,845	1,778,610	19.4	15.9	-3.5
1997/98	319,010	371,315	-52,305	1,903,113	19.5	16.8	-2.7
9th FYP	10.0	8.0	-10.7	6.3	**20.5**	**18.6**	**-1.9**
1998/99	350,911	401,021	-50,109	2,023,009	19.8	17.3	-2.5
1999/2000	386,002	433,102	-47,100	2,150,458	20.1	17.9	-2.2
2000=01	424,603	467,751	-43,148	2,285,937	20.5	18.6	-1.9
2002=02	467,063	505,171	-38,108	2,429,951	20.8	19.2	-1.6
2002=03	513,769	545,584	-31,815	2,583,038	21.1	19.9	-1.2
10th FYP	8.0	7.0	-22.7	6.2	**21.6**	**20.9**	**-0.7**
2003=04	554,871	583,775	-28,904	2,743,186	21.3	20.2	-1.1
2004=05	599,260	624,639	-25,379	2,913,264	21.4	20.6	-0.9
2005=06	647,201	668,364	-21,163	3,093,886	21.6	20.9	-0.7
2006=07	698,977	715,150	-16,172	3,285,707	21.8	21.3	-0.5
2007=08	754,895	765,210	-10,315	3,489,421	21.9	21.6	-0.3

Source:
(1) Economic Survey 1993-94, Economic Advisor's Wing, Finance Division
(2) 8th Five Year Plan
(3) JICA Study Team

2) Debt Liability:

A dicholomy exists within the external sector: trade sector has been showing considerable improvement; the debt liability continues to remain disturbing. As shown in Table 2.2.1.4 "Debt Servicing" Pakistan's external outstanding debt as a proportion of GNP has increased from 28.1 % in 1983-84 to 35.7 % in 1992-93. Generally, this is considered to be a very high exposure of a country's total GNP to external creditors. Debt servicing liability both as a proportion of export earnings and foreign exchange earning is fairly high at 24.1% and 16.4 % respectively in 1992-93, although once in 1988-89 they decreased from 24.1 % and 14.4% at the highest level in the 7th FYP period. In 1983-84, these were from 26.3 % and 10.9 % of export earnings and foreign exchange earnings respectively.

(5) Overall Analysis of the economy for the 7th FYP period:

The overall analysis of the economy for the 7th FYP shows that while positive gains were achieved by the economy, some of the structural problems facing it are intensifying.

Pakistan's economy has sustained a remarkable growth rate averaging 6.95 % per annum during the 5th and 6th FYP period, between 1978-79 - 1987-88. Such high growth rate was achieved despite unfavorable conditions in environment. These extermal influences comprising of the oil crisis of 1979, the high interest rates that swept through the world economy after 1980 which, inter alia, induced the recession in 1981-82. The slump in commodity prices in 1983-84 when prices of major commodities fell to their lowest levels of the preceding decade adversely affected Pakistan's export earnings. The annual compound growth rate per year in the 7th FYP period was 5.0 %.

Pakistan's growth rate achieved during the past FYP periods was accompanied by a low inflation rate considered as achievement of unparalleled significance. This resulted in the availability of goods and services within the domestic economy at reasonable prices and the various government policies in this regard were generally timely and appropriate.

The rate of inflation, as measured by the consumer price index, went down to 3.9 % in 1986-87 as the lowest in the 7th FYP, the lowest level since 1969 - 70. In 1991-1993, inflation rates were recorded at 9.6 % and 9.3 %. The annual average inflation rate of 7.7 % during the eighties compared favorably with the annual average of 12.4 % during the seventies, although it was significantly higher than the average of 4.0 % annual rate of inflation during the sixties.

2.2.2 Projection of Economic Growth

(1) General

The methodology of the projection of the Pakistan economy in this report is discussed in the following sub-chapters. The growth rate of various economic sectors and products were projected in terms of both value and volume based on production and growth targets indicated in the 8th FYP prepared by the Planning Commission of the Government of Pakistan in 1994.

As mentioned elsewhere in this report, the structural changes of economy has commenced to take shape since the middle of the 7th FYP period. These are represented by deregulation of somewhat centralized economic control, adoption of fairly opened economy to the international investors, rapid privatization process of the government owned or controlled public entities, adoption of various measures to industrialize the country in order to match the move of international market, reformation of tax collection system, change of custom duties, etc.

Under such circumstances it is not easy task to present the concrete projections or planning of economy as a whole or a part on long-term time span bases, therefore, the figures appeared in this report delineated through certain depth of analyses are required to be treated as benchmarks or indicative points to evaluate changes and movement of actual economy at the various points in time and sub-sectors constituting a national economy.

Trough the analyses of past trend of production, consumption and trade for each identical and selected commodity or service in the periods of the 5th, 6th and 7th FYP, the future prospects of national economy are projected as previous 1988 Master Plan Study.

The differentials and evaluation of the previous 1988 Master Plan Study as well as an overall review on economic activities of the 7th FYP period were discussed in the following sub-chapters.

(2) Trend and Projection of Economic Growth

1) Review of the 7th FYP

a. General:

The two major objectives of the 7th FYP were to achieve efficient growth of output and to improve the quality of life. They had to be achieved within an overall economic framework which encourages the private sector and maximized employment generation. The quality of life during the 7th FYP was intended to be improved by providing infrastructure in the rural areas; public services, like education and health to all section of society, and employment opportunities; and special provisions for the weakest groups of the population.

b. Macroeconomics Framework for the 7th FYP

The focus of the 7th FYP was to be on achieving a high rate of economic growth within an overall policy framework of a better distribution of the benefits of growth. A rural development programme will be complemented by emphases on employment and poverty alleviation.

At the same time, the 7th FYP gave special attention to concrete measures for the mobilization of domestic resources in order to restore the viability of domestic and external finances. Monetary policy would be used both to direct credit to priority sectors and to keep inflation moderate.

The basic aims of the 7th FYP were as follows:

- movement towards full employment, specially for the educated;
- provision of adequate nutrition, shelter, health, education, transport and other public services;
- development of human resources, with emphasis on education and training;
- progressive achievement of self-reliance in all sphere of life, including the gradual reduction of dependence on foreign loans, technology and know-how;
- promotion of private sector activity through further deregulation of the economy in order to transfer the bulk of financial burden of investment and growth from the government's budgetary resources to the private sector's resources;
- restoration of equilibrium in public finances by a concrete programme of balancing the revenue budget, and eliminating the imbalance between the government's expenditure requirements and its revenue raising capacity;
- strengthening the balance of payments through aggressive export promotion by providing industrial, commercial and exchange rate policies, and achieving balanced imports and exports; and
- pursuit of a restrained monetary policy to ensure continued price stability.

The economy of Pakistan was shifted from centrally controlled economy to market economy during the 7th FYP by pursuing the above objectives to drive the economy forward. Most significant achievement was the rapid deregulation and privatization. This trend shall continue in the 8th FYP. However, relatively higher unemployment rate has not been curved downward. This problem will be tackled by the government and massive investment by the private sector economy in the 8th FYP period.

c. Social Framework of the 7th FYP

The 7th FYP sought to improve the quality of life and raise the living standards of the majority of the population. By the end of the 7th FYP period, the benefit of electricity was planned to cover 55 % of the total villages containing nearly 75 per cent of the total rural population. The lengths of the network of rural road was projected to increase to 69,457 km compared to 60,957 km during the 6th FYP period. The percentage of rural population served with potable water was projected to increase from 40 % to about 75 %, and those with sewerage facilities, from 10 % to 30 %. The proportion of the primary school-age children enrolled in rural schools was projected increase from the previous 56 % to 80 %.

d. Economic Framework of the 7th Plan

With annual increases of 6.5 % in GDP and around 3.1 % in population, the average income per family (in 1980-81 price) which increased by Rs. 336 during the 6th FYP period, was projected increase by about Rs. 632 during the 7th FYP. However, as shown in Table 2.2.2.1, these targets were not achieved satisfactorily.

Table 2.2.2.1 Change of GDP at Constant 1980-81 Price

(Unit:Rs.billion)

Year	1982-83	1987-88	1992-93 Projection	1992-93 Actual
Agriculture	83.5	99.1	124.9	118.8
Industry	110.7	96.9	242.9	131.3
Others	136.0	189.4	279.6	241.7
GDP	330.3	385.4	677.9	491.8
No. of Families	14.6	17.8	19.8	19.8
Family Income (Rs.)	1,885/mo.	1,889/mo.	2,853/mo.	2,069/mo.
Increase (Rs.)	-	4.0	964.0	180.0
Rate of Increase (%)	-	-	51.0	9.5
GDP Growth Rate	6.8	6.4	6.5	5.0

As shown in the above table, the targeted family income was not achieved due to low growth rate attained in the 7th FYP, and it is evident that the projection target in the 7th FYP are thought to be very optimistic.

While deciding on the composition of growth, particular attention was given to four main considerations:

- self-sufficiency in a large number of agriculture and industrial products;
- the promotion and diversification of exports;
- generation of maximum employment opportunities; and
- price stability.

Toward these ends, the share of the commodity producing sectors in GDP was projected at 52.1 % as compared to 47.9 % for services.

Self-sufficiency in agricultural products, however, could not achieved since the importation of wheat, major staple food of Pakistan, has increased constantly year by year during the 7th FYP period. The promotion and diversification of exports have been emphasized by the government, however, actual results of such efforts were not realized during the 7th FYP period. This could be materialized during the 8th FYP period because of increased investment to export oriented manufacturing sectors by foreign investors. Generation of employment opportunities also could not be achieved satisfactorily, however, this would be able to be realized during the 8th FYP period because of acceleration of both local and foreign investments in the manufacturing and service sectors. As a share of GDP by the

commodity producing sector was 51.5 % and 48.5 % for the service sector.

The strategy for achieving economic growth in the 7th FYP emphasized the following:

- to increase yield per hectare through more efficient use of fertilizer, improvement in on-farm water management and development of appropriate farm technology;
- to develop high-yielding crop varieties, with high tolerance to heat, salinity and draught;
- to develop improved varieties of fruits and vegetables in size, seasonality and longevity for exports;
- to regain self-sufficiency in sugar production;
- to establish a foothold in the export markets for high value crops;
- to expand industrial base through the development of steel-based, electronic and high-technology industries;
- to expedite the implementation of import substitution programmes so as to reduce dependence on imported components and technology;
- to provide export credit to developing countries for the import of engineering goods from Pakistan;
- to provide protection to the local engineering industry through supportive tariff and trade policies;
- to encourage investment in labor -intensive technologies; and
- to explore new markets for manpower exports.

The strategy set out for the 8th FYP is quite similar to the strategy adopted in the 7th FYP summarized above, and implies that the strategy would apply on a long-term basis.

e. Projected Economic Framework by Sector

I) Agriculture Sector

The 7th FYP projected an overall growth rate of 4.7 % for the agriculture sector. These growth targets took into account the prospects of future demand, both domestic and abroad, and the possibility of import substitution. To meet the domestic demand, production of sugar cane, fruits, vegetables, milk and meat were given priority during the plan period.

Pakistan needed a minimum increase of about 15 % in agricultural output during the 7th FYP period in order to meet the growing demand for food for the increasing population. Since the cultivable land is limited to 6.0 %, because of the constrained availability of land and water, higher production would have to be achieved through substantial increases in yield, both by developing high-yielding new varieties and securing a more efficient use of available inputs and extension services. The relative share of agriculture in total GDP was projected to drop from 25.7 % in 1987-88 to 21.4 % in 1992-93. The agriculture sector was expected to account for 16.4 % of the proposed increase in GDP to be achieved under the 7th FYP. However, it was not achieved as production of major crops in 1992-93 decreased in comparison of previous year chiefly due to natural hazard.

Comparison of production targets and actual record of major and minor crops are shown in Table 2.2.2.2.

Table 2.2.2.2 Agriculture Sector Performance and Projection

(Unit: per cent)

	Sixth Plan		Seventh Plan		Eighth Plan
	Target	Actual	Target	Actual	Target
Major Crops	3.6	7.2	4	0.7	4.3
Miner Crops	7	1.7	5.5	3.7	4
Livestock	5.9	5.9	5.3	5.8	6
Fishery	7.5	4.8	4.9	5.3	2.9
Forestry	5	4.1	2.6	-0.2	2.8
Total	4.9	5.7	4.7	2.9	4.7

i) Overall agricultural production

The overall annual growth rate of agriculture sector in value was 2.9 % which fell about 1.8 % from the target growth rate during the 7th FYP period. As shown in Table 2.2.3.2 "Growth Trend and Projection of Agricultural Production (in volume)", none of the agricultural products exceeded minimum growth requirement of 3.0 % per year due mainly to low rate of increase in land utilization, water availability and fertilizer off-take and bad weather. Due to the constraints of low utilization of land and water, constant growth of wheat and gram production is difficult to foreseen during the 8th FYP period. The target for the 8th FYP is thought to be moderate and within attainable range.

a) Wheat

The growth rate of wheat production, the major staple food grain of Pakistan during the 7th FYP, is recorded only 2.9 % which is substantially lower than that of population growth rate 3.1 %. Although 5.7 % growth was recorded during the 5th FYP and 3.9 % in the 6th FYP period, the average annual growth rate of wheat production was projected to be 2.5 % in the 8th FYP period taking into declining trend through the past three plan periods. However, increase of growth rate to 3.0 %, by employment of higher yield seeds and application of more fertilizer to agriculture production, was projected in the 9th and 10th Plan periods.

b) Rice

The growth rate of rice production in terms of volume has been declining since the 6th FYP period and become stagnated in the 7th FYP period. Although there was increase in paddy during the 7th FYP period, its production did not increase significantly. It predicts a trend of production decline for coming years. However, rice production is projected to grow at 6.4 % per year in the 8th FYP period to boost foreign exchange earning as much as possible to compensate the increased importation of wheat by exportation of rice to earn foreign exchange. It would gradually decrease to 3.8 % and 3.0 % in successive plan periods.

c) Gram

The production of gram has increased considerably to substitute a declining of wheat production. The growth rate of gram production is projected to be 3.5 % in the 8th FYP period and 3.0 % for the successive plan periods.

d) Maize

The production of maize and its land utilization have been decreasing, and such trend is foreseen to continue for the coming years. The growth rate of maize production is projected to be 6.0 % in the 8th FYP period and in successive plan periods to meet with the growth of livestock sub-sector.

e) Cotton

The production of cotton has recorded 31.3 % and 1.5 % per year during the 6th and the 7th Plan period respectively. Although a problem of disease infection become significant in 1992-93, its production will grow at the rate of 6.5 % per cent as the demand increased for industrial use. As a rapid industrialization oriented to exports is emphasized to

increase foreign exchange earning, and bringing about structural changes in economy, an increased production of cotton is emphasized for coming years.

f) Sugar Cane

The production of sugar cane has increased at the growth rate of 0.7 % per year during the 7th Plan period. Sugar cane production is emphasized to meet with growing demand of refined sugar of which import dependence is 15 % of total consumption. A high yield sugar cane is planned to be introduced to compensate slow growth of land utilization for sugar cane production which was only 0.7 % growth during the 7th FYP period. The growth rate of sugar cane production is projected to be 3.9 % in the 8th FYP period and 4.0 % for successive plan periods.

g) Livestock Production

The livestock production registered favorable growth and achieved self-sufficiency, resulting to a forward linkage to the production of milk and meat products. Although the poultry production in the 7th FYP decreased since the 6th FYP period, the production satisfied the increased domestic demand. Overall, livestock production is project to grow at 6.0 % in the 8th FYP period, 4.6 % and 4.4 % in succeeding periods. Livestock production would grow steadily from 5.0 % in the 7th FYP period, and would become an important agricultural product for export.

h) Fishery Production

Fishery production became self-sufficiency; the production of inland fishery has recorded 3.0 % during the 7th FYP period. The projected growth rate of 2.9 % of fishery in the 8th FYP period would gradually increase to 3.4 % and 3.7 % in successive plan periods.

II) Mining and Quarrying Sector

Although the mineral sector in Pakistan has considerable potential, its contribution to GDP has been only 0.5 % in the 6th and 7th FYP periods . This is largely because of the complex, heterogeneous and non renewable character of mineral resources that are found in Pakistan, their remote and uncertain occurrences, the complicated and lengthy nature of operation, and the heavy cost and high risks of commercial exploitation.

Besides the extraction of natural gas and crude oil, the other important projects likely to be implemented include Lakhra (coal), Saindak (copper) and Hazara (phosphate). For the development of minerals, geological investigations and exploration efforts were expected to be extended to stepped up further; necessary infrastructure was expected to be extended to promising mineral zones, testing laboratories was planned to be modernized and strengthened; and mineral-based industries were planned to be encouraged.

Value added in this sector was projected to increase by 8.0 % per year with major contribution expected from natural gas, crude oil, coal, rock phosphate, limestone and gypsum during the 7th FYP period. The actual growth was 6.3 % in the 7th FYP periods. The growth rate of mining and quarrying sector in the 8th FYP period is projected to be 11.4 %, and it would decrease gradually to 8.1 % and 7.0 % in successive plan periods. Such a drastic increase of production in mining sector can be expected because of rapid exploitation of crude oil and natural gas by foreign investors.

The extraction of crude oil was projected to reach 123,300 barrels a day (6.0 million tonnes per year) and that of gas production to 2,500 million cubic feet per day (MMCFD) (or 912 billion MMCF) by 1997-98.

i) Crude Oil

a) Demand

The demand for petroleum products depends on the fuel utilization policy. The policy adopted for the 7th FYP was to:

- replace the base year requirement of high speed diesel in power generation with natural gas;
- substitute kerosene in the domestic sector with natural gas and liquefied petroleum gas (LPG); and
- use furnace oil for thermal generation until coal-fired, hydel and nuclear generation projects can be implemented.

With this policy, the demand for POL products was projected at 14.3 million tonnes in 1992, compared to 9.4 million tonnes in 1987-88. This means an annual growth rate of 9.7 % during the 7th FYP. However, with energy conservation, POL demand was expected to be reduced to 13.7 million tonnes instead of 14.3 million tonnes. This implied an annual growth rate of 9.1 per cent instead of 9.7 % without conservation. The actual production of POL in 1992 was 12.7 million tonnes and growth rate was 7.1 %. This implies the energy conservation policy had affected to certain extent. It is foreseen that the demand on crude oil will increase due to completion of new refineries and expansion of refinery designed to meet with ever increasing local demand of petroleum products. Although the production of both crude oil and petroleum products will increase, it will not catch-up the increase of demand; thus, importation of either crude oil and petroleum products will continue at higher pace in the 8th FYP period.

b) Supply

The production of indigenous crude oil in 1987-88 was expected to reach an annual average of 44,600 bpd (2.2 million tonnes). In addition, there was a potential to produce an additional 5,000 bpd which was not being harnessed due to refinery constraint. However, production from existing producing field was likely to decline to 37,300 bpd during the 7th FYP period. Additional production of 38,700 bpd was estimated from new discoveries and the non-utilized potential from already discovered field (5,000 bpd) would bring total production at the end of the plan to 76,000 bpd. However, the crude oil production reached to 60,000 bpd in 1992. Indigenous production was expected to meet 26 % of oil demand (with conservation) as compared to about 23 % at the beginning of the 7th FYP. The actual indigenous production was 23 per cent in 1992. The growth rate of crude oil production is projected as 15.5 % in the 8th FYP period and it would decrease to 10.0 % and 8.0 % in successive plan periods.

c) Oil imports

Production of petroleum products was expected to reach 7.4 million tonnes per year leaving a deficit of 6.9 million tonnes by 1992-93 without conservation and 6.3 million tonnes with conservation. The expenditure on imported crude oil and products net of exports was expected to rise to about US$1.8 billion from about US$1 billion in 1987-88, assuming imported crude oil prices rise broadly in line with world inflation and that conservation targets are met. Production of petroleum products reached to 6.2 million tonnes per year and import of the same reached to 6.6 million tonnes in 1992. A substantial expansion of oil refining capacity is envisaged at the terminal year of the 8th FYP period and onward from 7 million tonnes per year to 9.5 million tonnes in 1997-98 and 22.2 million tonnes in 2005-06. This would reduce importation of petroleum products, however, as consumption of petroleum products would increase constantly. This means the importation of petroleum product would slow down in the 9th FYP period but will increase again in the 10th Plan period.

ii) Natural Gas

a) Supply

Sixteen wells had been drilled so far by 1987-88, and thirty additional wells were planned to be drilled. And associated surface facilities were planned to be provided during the 7th FYP period to increase from 1,200 MMCFD of 1987-88's production level to 2,095 MMCFD by 1992-93.

The following priority for the allocations of gas was adopted:

- feed stock for fertilizer industry;
- replacement of high-speed diesel (HSD) in power generation;
- replacement of kerosene in the domestic sector;
- replacement of furnace oil in the industrial sector;
- substitution of furnace oil in power generation.

The expected availability of additional gas was 837 MMCFD of which 414 MMCFD was expected from the pipeline system and 423 MMCFD from isolated gas fields which would be used mainly for power generation and fertilizer production.

The natural gas production reached to 1,598 MMCFD in 1992 at an annual growth of 6.7 % per year during the 7th FYP period. This means that the target was not met but the growth of production has been steadily continued. The growth rate of natural gas production is projected to be 9.4 % in the 8th FYP period and it would decrease to 7.4 % and 6.2 % in successive years taking into consideration that most of natural gas production would associate with crude oil production.

iii) Coal

a) Demand

The total demand for coal was estimated at about 7 million tonnes in 1992-93. Substantial new demand was expected come from the power sector in addition to use in 1987-88, primarily in brick kilns. Small increments in demand may also come from the cement industry and briquetting plants. The following measures have been adopted during the 7th FYP period to create new demand for coal:

- establishment of large-scale coal-fired power plant at or near the major coal fields;
- introduction of coal in cement and other energy-intensive industries to replace furnace oil;
- promotion of coal briquettes as a substitute for kerosene oil and firewood; and
- rationalization of energy prices to promote the use and development of coal.

b) Coal based power generation

The share of coal in power generation was negligible (0.7 %) at 1987-88. However, the share of coal was expected to be increased when a total of 280 MW of coal-based generation capacity would come on line during the 7th FYP; 150 MW of this will be contributed by the public sector; the remaining would come from the private sector. The measured reserves were expected to reach 500 million tonnes by 1992-93 through the aggressive coal exploration programme in the priority area assigned to Sonda-Thatta and unexplored parts of Lakhra area.

The production of coal, however, did not increase as projected for the 7th FYP period since the implementation of coal fired thermal power plant has delayed beyond the 7th FYP period. However, this new demand will need substantial increase of coal production in the 8th FYP period. The coal production in 1992 was 3.3 million tonnes, but it is projected to be 6.7 million tonnes in the terminal year of the 8th FYP period. The growth rate of coal production is projected as 15.5 per cent in the 8th FYP period and it would decrease to 10.0 % and 7.5 % in successive plan periods.

iv) Projection of Oil, Gas and Coal

Table 2.2.2.3, "Projection of oil, gas and coal production" shows the summary of projected production of oil, gas and coal: their actual result during the 7th FYP period and the projection for the 8th FYP period.

Table 2.2.2.3 Projection of oil, gas and coal production

	Seventh Plan		Eighth Plan	
	Actual 1987-88	Target 1991-92	Actual 1991-92	Target 1997-98
Crude Oil (bpd)	4,300	65,000	61,559	123,300
Gas (mmcfd)	1,200	1,901	1,520	2,500
Coal (million tons)	2.7	7.0	3.6	6.7
Petroleum Products (million tons)	5.6	7.4	6.4	7.3

III) Manufacturing Sector

i) Policy Initiatives and Target

The industrial growth strategy for the 7th FYP emphasized the establishment of more efficient and sophisticated industries with a strong export orientation. This is expected to be accomplished by the implementation of appropriate exchange rate policies, tariff rationalization, and fiscal incentives designed to promote greater allocation and competitive efficiency as well as introduction of export credit scheme. As a result of these policies, manufactured exports are expected to increase by 11.5 per cent per year in real terms.

ii) Share and growth rate

The share of the manufacturing sector in GDP was projected to rise from 17.5 per cent in 1987-88 to almost 19 per cent in 1992-93, the last year of the 7th FYP period, and the manufacturing sector was expected to contribute about 22.5 per cent of the increment in GDP. The record of production shows that the target was almost achieved in the 7th FYP period. The share of manufacturing sector in GDP was projected to rise from 17.5 % in 1992-93 to almost 21 % in 1997-98 at the terminal year of the 8th FYP period.

During the 7th FYP period, it was proposed to further strengthen and deepen the process of economic reforms. A primary role would be assigned to disinvestment of public sector units. Deregulation measures were expected to be taken in the financial sector. One of the key problems faced by Pakistan in the process of industrial development was assumed to be of access to markets, technology, capital, and in some cases, management skills. To overcome these problems, direct foreign investments were encouraged during the 7th FYP period, specially in projects involving advanced technical know-how and managerial and marketing skills, and the role of multi-nationals in the use of local materials and the development of indigenous technology were emphasized.

During the 7th FYP period various reformation process have proceeded to realize the objectives mentioned above, however; actual outcome of these process was not able to be materialized during the plan period. The result and outcome of these reformation process would take shape in the 8th FYP period.

IV) Electricity and Gas Distribution

The output arising from the generation of electricity and distribution of gas was projected to increase by 8.5 % per year. On the basis of elasticity of demand with respect to GDP of 1.2 , the projected growth rate 8.5 % in the output of electricity and gas was consistent with the GDP growth target of 6.5 % per year. During the 7th FYP period, the growth rate of electricity and gas distribution surpassed its growth target and reached to 10.8 % which is the highest growth recorded among all sub-sectors consisting GDP. During the 8th FYP period the growth rate is projected to be 8.2 % to correspond to the growth of power demand in the market.

V) Services

The share of the services sector in the GDP was foreseen to fall marginally from 49.1 per cent in 1987-88 to 47.9 per cent in 1992-93. Growth rate of 6.3 per cent per year had been foreseen for the service sector as a whole. Value added in the public administration and defense sub-sectors was projected grow by 5.8 % per year, taking into account the employment effect alone with productivity assumed to be constant. The growth target of 6.8 % per year for the transport and communication sub-sector was based on the traffic forecast for all modes of transportation while the growth rate of 6.7 % per year in the trade sub-sector was consistent with the level and composition of output in the agriculture and manufacturing sectors. In the ownership of dwelling sub-sector, a growth rate of 5.3 % per year has been foreseen against the 6th FYP period average growth rate of 8.1 % per year.

(3) Review of Previous Master Plan's Framework

The review of 1988 Master Plan's framework is summarized in Table 2.2.2.4 "Comparison Table for Projections and Actual Records". As appeared therein, the projected productions were, in general, higher than the actually recorded productions, and actual trade volume of various commodities were higher than that of projections during the 7th FYP period.

Basic approach toward the projection of GDP in the previous master plan was to maintain a relatively higher growth rate of GDP which has been experienced in the past 15 years by the expectations of (1) maintain the growth rate of agriculture sector which has played a key role of economic development traditionally so as to secure a self-sufficiency of staple foods, (2) strengthen the industrial base aiming at increased exports of value added products and (3) develop locally available natural resources as much as possible to curve a necessity of importation of energy related products, etc. However, as experienced in the 7th FYP period the development of agriculture sector has been reaching to a certain limitation in view of economical exploitation and a lack of infrastructure to form a foundation of real industrialization.

In this study, the following approach was taken to prepare a projection of economy as whole for coming the 8th, 9th and 10th FYP. The required economic activities of Pakistan might increase the foreign exchange earnings as much as possible by exportation of value added products aiming at to curve the pressure from the debt liability which can be realized by means of rapid and massive investments, to generate employment opportunities to absolve ever increasing population as well as work force returning from abroad, to achieve self-sufficiency of staple food.

During the 8th FYP period, various type of investments are planned to be realized in the form of public, private of both local and foreign enterprises. However, this period might be regarded as a preparatory phase to commence a real production of commodities and services as it take some years to plan, design and construct production facilities much needed for economic development in the 9th FYP period. Various infrastructures also needed to be constructed and commissioned in this FYP period. Reformation of existing organizations and creation of fresh organizations in the form of companies, management entities, joint ventures with foreign participants, et al will take place in this FYP period as well. The 9th FYP is expected to form an expected economic structure and start real production of commodities and services. The 10th FYP is expected to expand its activities and act as a key country within the regional economy. These are the basic plan and forecast of Pakistan's economic developments toward 2005-06.

The differences appeared for various projections and actual record in the 7th FYP period and revised projections of this report prepared taking into consideration of the above mentioned approach of the economic development planning are tabulated in Table 2.2.2.5 "Growth Rate of Productions" and in Table 2.2.2.6 "Growth Rate of GNP".

Table 2.2.2.4 Comparison Between Previous Study and This Study Projection and Actual GDP with Their Growth Rate

	Sector		Fiscal Year 1985-86	1987-88	1992-93	1997-98	2005=6	Average Annual Growth Rates 7th FYP	8th FYP	9th FYP	Distribution Shar 1987/88	Average Annual Grow 1992/93	1997/98	2005=6
1	Agriculture	Previous Projection	118,670	130,714	158,913	191,822	253,561	4.0	3.8	3.5	23.7	21.2	19.1	16.1
		Actual & Revised Projection	93,433	99,108	118,802	149,744	209,407	2.9	4.7	4.4	27.3	25.7	24.2	21.8
		Adjusted in 1985-86 Price	118,670	125,878	156,689	200,302	268,250							
		Deviation		3.8%	1.4%	-4.2%	-5.5%	37.9%	-19.1%	-20.5%	-13.2%	-17.6%	-21.0%	-26.0%
2	Mining and quarrying	Previous Projection	11,448	13,321	21,454	31,523	52,170	10.0	8.0	6.5	2.4	2.9	3.1	3.3
		Actual & Revised Projection	1,657	2,029	2,642	4,533	8,197	6.3	11.4	8.1	0.5	0.5	0.5	0.7
		Adjusted in 1985-86 Price	11,448	14,018	17,346	36,810	57,003							
		Deviation		-5.0%	23.7%	-14.4%	-8.5%	58.7%	-29.8%	-19.8%	395.7%	450.9%	476.5%	400.9%
3	Manufacturing	Previous Projection	83,670	97,121	144,934	207,909	345,607	6.7	6.0	5.7	17.6	19.3	20.7	22.0
		Actual & Revised Projection	57,180	67,622	89,916	143,499	250,269	5.6	9.8	7.2	16.7	17.5	18.3	20.9
		Adjusted in 1985-86 Price	83,670	98,950	129,140	231,303	362,603							
		Deviation		-1.8%	12.2%	-10.1%	-4.7%	19.6%	-38.8%	-20.8%	5.3%	10.0%	13.1%	5.5%
4	Construction	Previous Projection	30,421	36,387	51,274	71,245	120,594	7.1	6.8	6.8	6.6	6.8	7.1	7.1
		Actual & Revised Projection	14,035	16,563	20,701	30,136	48,032	5.1	7.8	6.0	4.1	4.3	4.4	4.3
		Adjusted in 1985-86 Price	30,421	35,900	45,478	74,643	113,553							
		Deviation		1.4%	12.7%	-4.6%	6.2%	39.2%	-12.8%	13.3%	60.9%	58.2%	62.1%	65.5%
5	Electricity and gas distribution	Previous Projection	11,136	13,226	19,523	28,686	51,161	8.1	8.0	7.5	2.4	2.6	2.9	3.3
		Actual & Revised Projection	8,362	10,711	18,005	26,701	45,237	10.4	8.2	7.0	2.4	2.8	3.9	4.0
		Adjusted in 1985-86 Price	11,136	14,264	22,233	28,952	48,600							
		Deviation		-7.3%	-12.2%	-0.9%	5.3%	-22.1%	-2.4%	7.1%	-1.8%	-6.4%	-25.3%	-18.3%
6	Transport, storage and communication	Previous Projection	39,429	44,855	63,206	87,005	145,078	7.1	6.6	6.6	8.1	8.4	8.6	9.2
		Actual & Revised Projection	34,305	39,293	50,148	66,479	110,022	7.4	5.8	6.5	10.0	10.2	9.7	9.8
		Adjusted in 1985-86 Price	39,429	45,162	57,247	83,789	143,992							
		Deviation		-0.7%	10.4%	3.8%	0.8%	-4.1%	13.8%	1.5%	-19.2%	-17.6%	-11.0%	-6.4%
7	Whole sale and retail trade	Previous Projection	81,045	92,796	129,544	176,655	283,693	6.9	6.4	6.1	16.8	17.2	17.6	18.1
		Actual & Revised Projection	55,361	63,932	81,016	120,702	223,410	4.7	8.3	8.0	16.2	16.6	17.5	20.0
		Adjusted in 1985-86 Price	81,045	93,592	117,593	193,002	326,975							
		Deviation		-0.9%	10.2%	-8.5%	-13.2%	46.8%	-22.9%	-23.8%	3.9%	3.7%	0.3%	-9.3%
8	Banking and insurance	Previous Projection	14,855	16,272	23,036	31,710	52,987	7.2	6.6	6.4	3.0	3.1	3.2	3.3
		Actual & Revised Projection	9,057	9,452	11,173	14,811	26,416	3.5	5.8	7.5	2.6	2.5	2.2	2.4
		Adjusted in 1985-86 Price	14,855	15,503	19,235	30,537	56,556							
		Deviation		5.0%	19.8%	3.8%	-6.3%	105.7%	13.8%	-14.7%	13.4%	26.4%	48.7%	39.9%
9	Ownership of dwellings	Previous Projection	13,623	14,620	17,617	21,025	27,901	3.8	3.6	3.6	2.7	2.3	2.1	1.8
		Actual & Revised Projection	18,791	20,828	26,939	43,515	54,325	5.3	5.3	6.0	5.5	5.4	6.3	4.9
		Adjusted in 1985-86 Price	13,623	15,100	18,910	28,457	26,248							
		Deviation		-3.2%	-6.8%	-26.1%	6.3%	-28.0%	-32.1%	-40.0%	-50.8%	-57.4%	-66.8%	-62.9%
10	Public administration and defence	Previous Projection	42,503	48,240	64,556	84,377	127,534	6.0	5.5	5.3	8.8	8.6	8.4	8.1
		Actual & Revised Projection	25,183	27,666	33,295	43,515	54,325	2.8	5.5	3.0	7.4	7.2	6.3	4.9
		Adjusted in 1985-86 Price	42,503	46,694	58,055	84,372	105,338							
		Deviation		3.3%	11.2%	0.0%	21.1%	114.3%	0.0%	76.7%	19.6%	19.8%	32.8%	66.9%
11	Other Services	Previous Projection	38,860	43,414	57,280	74,509	111,772	5.7	5.4	5.2	7.9	7.6	7.4	7.1
		Actual & Revised Projection	24,860	28,212	38,708	53,033	88,590	6.5	6.5	7.0	7.3	7.3	7.7	7.9
		Adjusted in 1985-86 Price	38,860	44,100	59,566	78,478	124,465							
		Deviation		-1.6%	-3.8%	-5.1%	-10.2%	-12.7%	-16.9%	-25.7%	8.8%	3.8%	-4.0%	-10.3%
12	Gross Domestic Product at factor cost	Previous Projection	485,210	550,966	751,337	1,006,461	1,571,158	6.4	6.0	5.7	100	100	100	100
		Actual & Revised Projection	342,224	385,416	491,345	688,028	1,119,492	5.0	7.0	6.3	100	100	100	100
		Adjusted in 1985-86 Price	485,210	546,448	702,395	1,052,094	1,637,615							
		Deviation		0.8%	7.0%	-4.3%	-4.1%	28.0%	-14.3%	-9.5%	0.0%	0.0%	0.0%	0.0%

Note:
(1) Actual and Revised Projection in 1980-81 price.

Source:
(1) Economic Survey 1993-94, Economic Advisor's Wing, Finance Division
(2) JICA Study Team

Table 2.2.2.5 Growth Rate of Productions

(unit: percent)

Items	Periods	5th FYP	6th FYP	7th FYP	8th FYP	9th FYP	10th FYP
GDP Total	Actual	6.4	6.8	5.0			
	Previous		6.4	6.0	5.7	5.7	
	Projection				7.0	6.3	6.2
Agriculture Sector	Actual	5.9	5.7	2.9			
	Previous		4.0	3.5	3.5	3.5	
	Projection				4.7	4.4	4.0
Major Crops	Actual	-	7.2	0.7			
	Previous		4.0	3.5	3.5	3.5	
	Projection				4.3	4.3	4.2
Minor Crops	Actual	-	1.7	3.7			
	Previous		4.1	4.6	3.7	3.7	
	Projection				4.0	3.9	3.7
Livestock	Actual	-	5.9	5.8			
	Previous		5.0	4.5	4.4	4.4	
	Projection				6.0	5.0	4.1
Fishery	Actual	-	4.8	5.3			
	Previous		4.5	3.8	3.3	3.3	
	Projection				2.9	3.4	3.7
Forestry	Actual	-	4.1	-0.2			
	Previous		2.0	1.0	1.0	1.0	
	Projection				2.8	2.3	2.0
Mining and Quarrying Sector	Actual	-	14.5	6.3			
	Previous			10.0	8.0	6.5	6.5
	Projection				11.4	8.1	7.0
Manufacturing Sector	Actual	-	8.3	6.3			
	Previous			8.3	7.5	6.6	6.6
	Projection				9.8	7.2	7.2
Transport and Communication Sector	Actual	-	6.7	7.4			
	Previous			7.1	6.6	6.6	6.6
	Projection				5.8	6.5	6.5

Table 2.2.2.6 Growth Rate of GNP

(unit: percent)

Items	Periods	5th FYP	6th FYP	7th FYP	8th FYP	9th FYP	10th FYP
GNP Total	Actual	-	5.3	4.4			
	Previous		5.9	5.8	5.6	5.6	
	Projection				6.9	6.3	6.2
Export + NFS	Actual	12.4	13.1	10.0			
	Previous			9.8	8.5	6.7	6.7
	Projection				12.5	10.0	8.0
Import + NFS	Actual	10.1	3.7	8.7			
	Previous		7.6	6.5	5.5	5.5	
	Projection				7.5	8.0	7.0

Note: "Previous" means the Projections made by previous Master Plan Study in 1988.

Note: "Previous" means the projections made by previous Master Plan Study in 1988.

The productions, consumption and trade of selected commodities were analyzed so as to revise the projection and to form a basis of the transport plan study in this report. The result of revision on productions, consumption and trade of selected commodities are tabulated in Table 2.2.2.7 "Summary of Productions, Consumption and Trade of Selected Commodities in Volume". The

comparison of these between the previous 1988 Master Plan Study and this study are shown in Table 2.2.2.8 (a) and (b) "Comparison of Previous and Present Projections on Production, Consumption, and Trade Volume". As appeared therein the actual total volume of production of selected commodities in the 7th FYP was about 15 %, lower than the projected volume in 1988. Total consumption was 8 % lower as well. Total trade volume in terms of balance between import and export was 1.28 times higher than the projected volume. This overall trend would continue to the 10th FYP. However, the projected production and consumption of commodities in volume for the 10th FYP will be only 8 % and 4 % lower than the projection of the same made in 1988. The volume of import is, however, projected 16 % higher than the previous projection for the same target year.

As shown therein the most significant differences between two studies appeared to be the following:

1) Wheat

Revised projection on the wheat production is lower than that of the previous projections and as its consumption is estimated almost same; therefore, the revised projection for the necessity of imports of wheat is much higher than the previous projection.

2) Rice

Revised projection on the production of rice is somewhat lower than the previous projection; however, value of exportation is estimated higher than that of the previous projection.

3) Cotton

Revised projection on cotton production is higher than the previous projections due to efficient process of cotton-based industrial developments aiming at increasing export earnings and generating employment opportunities.

4) Edible Oil

Revised projection on the production of edible oil is lower than the previous projections taking into account of international competitiveness in the open market as well as difficulties to produce raw materials for edible oil in Pakistan. However, as consumption of edible oil is estimated somewhat lower than the previous projection, the revised projection on necessity to import this product does not correspond to the decreased projection on production.

5) Fertilizer

Revised projection of production of fertilizer is lower than the previous projection taking into account of rate of growth of agriculture production as a whole.

6) Cement

Revised projection of production of cement is quite similar to the previous projection.

7) Coal

Revised projection of production of coal is much higher than the previous projection because of new discovery of coal mine and rapid increase of power generating capacity using coal as a burning material. Most of coal to be imported from abroad is assumed to be used by steel production process.

8) Crude Oil

Revised projection of crude oil production is lower than the previous projection. However, it depends on a possibility of finding commercially exploitable deposit by intensive exploration of oil field. It is expected that the natural gas production is much more promising and developments in the expansion of gas distribution system will proceed taking into account its economic competitiveness against crude oil production.

9) Petroleum Products

Revised projection on the production of petroleum product is lower than the previous

projection corresponding to the projection of crude oil production and expansion programme of refineries which is based on assumed increase in consumption according to the growth of economy as a whole. However, it depends on a commissioning of refinery designed to use either local or imported crude oil.

10) Iron and Steel

Revised projection of iron and steel is lower than the previous projection taking into account of capacity utilization progress of Pakistan Steel Mill whose past production shares most of iron and steel production.

As shown in Table 2.2.2.8 "Comparison of Previous and Present Projections on Production, Consumption and Trade Volume", the previous projection for production of selected commodities excluding equipment, but mechanical consumer products was lower than projected by around 16 per cent. The previous projection for consumption of the selected commodities was a little higher than the actual consumption, therefore, the volume of commodities imported in total was 28 per cent higher than that of the previous projection. The new projections of production for 1997-98 and 2005-06 are lower than the previous projections at a rate of 8 to 10 per cent, and volume of import is projected to be higher than the previous projection at a rate of 24 to 16 per cent as shown in the prescribed table. The volume of production in 1997-98 and 2005-06 are projected to be 70.7 million tonnes and 116.3 million tonnes respectively. The volume of bulk cargo importation is projected to be 8.6 million tonnes and 9.8 million tonnes. The volume of liquid cargo importation is projected to be 16.2 million tonnes and 23.1 million tonnes. Whereas, the volume of bulk cargo exportation is projected to be 3.0 million tonnes and 3.6 million tonnes.

Table 2.2.2.7 Summary of Production, Consumption and Trade of Selected Commodities in Volume (000 tons)

Sectors	Commodities	Years / Categolies	1992-93	1997-98	2005-06
Agriculture	Wheat	Production	16,157	18,280	23,157
		Consumption	17,409	19,304	24,497
		I/E	-2,868	-2,852	-3,656
Agriculture	Rice	Production	3,116	4,249	5,595
		Consumption	1,772	2,269	2,880
		I/E	1,032	1,555	2,156
Agriculture	Cotton	Production	1,540	2,110	3,443
		Consumption	1,277	1,589	2,097
		I/E	263	521	1,346
Industry	Edible Oil	Production	672	858	1,285
		Consumption	1,902	2,837	2,804
		I/E	-1,230	-1,980	-1,519
Industry	Sugar	Production	2,070	2,770	4,251
		Consumption	2,137	2,837	4,293
		I/E	-67	-67	-22
Industry	Fertilizer	Production	3,204	4,089	5,596
		Consumption	4,357	5,749	6,902
		I/E	-1,153	-1,659	-1,306
Mining	Rock Phosphate	Production	0	0	0
		Consumption	280	309	309
		I/E	-280	-309	-309
Mining	Cement	Production	8,551	12,917	20,001
		Consumption	8,595	13,224	19,907
		I/E	-44	-307	94
Mining	Coal	Production	3,266	6,713	13,431
		Consumption	4,311	7,514	14,049
		I/E	-1,045	-801	-618
Mining	Crude Oil	Production	2,936	6,038	12,249
		Consumption	6,882	8,193	21,954
		I/E	-3,945	-2,155	-9,705
Industry	Petroleum products	Production	6,180	7,305	19,574
		Consumption	12,792	19,351	31,439
		I/E	-6,612	-12,047	-11,866
Industry	Iron and Steel	Production	2,382	2,974	4,590
		Consumption	3,134	3,906	6,524
		I/E	-752	-857	-1,934
Mining	Iron Ore	Production	1,922	2,453	3,107
		Consumption	3,623	4,621	6,059
		I/E	-1,701	-2,168	-2,952
Total		**Production**	51,996	70,756	116,279
		Consumption	68,471	91,703	143,714
		I/E	-18,402	-23,126	-30,291

Note:
(1) I/E means Import or Export where import is shown by figure with minus.

Source:
(1) 8th Five Year Plan
(2) JICA Study Team

Table 2.2.2.8 (a) Comparison of Previous and Present Projections on Production, Comsumption and Trade Volume (000 tons)

Sectors	Commodities		Years / Categolies	1992-93 (Actutal)	1997-98 (Projection)	2005-06 (Projection)
Agriculture	Wheat	Revised	Production	16,157	18,280	23,157
		Previous	Production	18,274	21,703	28,027
		Deviation		0.88	0.84	0.83
		Revised	Consumption	17,409	19,304	24,497
		Previous	Consumption	15,615	18,575	24,096
		Deviation		1.11	1.04	1.02
		Revised	I/E	-2,868	-2,852	-3,656
		Previous	I/E	832	958	1,128
		Deviation		-3.45	-2.98	-3.24
Agriculture	Rice	Revised	Production	3,116	4,249	5,595
		Previous	Production	4,169	4,694	5,708
		Deviation		0.75	0.91	0.98
		Revised	Consumption	1,277	1,589	2,097
		Previous	Consumption	2,721	3,219	4,105
		Deviation		0.47	0.49	0.51
		Revised	I/E	1,032	1,555	2,156
		Previous	I/E	1,031	1,006	1,032
		Deviation		1.00	1.55	2.09
Agriculture	Cotton	Revised	Production	1,540	2,110	3,443
		Previous	Production	1,508	1,731	2,160
		Deviation		1.02	1.22	1.59
		Revised	Consumption	1,277	1,589	2,097
		Previous	Consumption	900	1,192	1,735
		Deviation		1.42	1.33	1.21
		Revised	I/E	263	521	1,346
		Previous	I/E	608	539	425
		Deviation		0.43	0.97	3.17
Industry	Edible Oil	Revised	Production	672	858	1,285
		Previous	Production	955	1,308	2,007
		Deviation		0.70	0.66	0.64
		Revised	Consumption	1,902	2,837	2,804
		Previous	Consumption	2,051	2,426	3,013
		Deviation		0.93	1.17	0.93
		Revised	I/E	-1,230	-1,980	-1,519
		Previous	I/E	-1,096	-1,118	-1,006
		Deviation		1.12	1.77	1.51
Industry	Sugar	Revised	Production	2,070	2,770	4,251
		Previous	Production	1,727	2,366	3,631
		Deviation		1.20	1.17	1.17
		Revised	Consumption	2,137	2,837	4,293
		Previous	Consumption	1,941	2,426	3,215
		Deviation		1.10	1.17	1.34
		Revised	I/E	-67	-67	-22
		Previous	I/E	-214	-60	416
		Deviation		0.31	1.12	-0.05
Industry	Fertilizer	Revised	Production	3,204	4,089	5,596
		Previous	Production	4,727	6,711	11,531
		Deviation		0.68	0.61	0.49
		Revised	Consumption	4,357	5,749	6,902
		Previous	Consumption	5,905	7,681	10,877
		Deviation		0.74	0.75	0.63
		Revised	I/E	-1,153	-1,659	-1,306
		Previous	I/E	-1,178	-970	654
		Deviation		0.98	1.71	-2.00
Mining	Rock Phosphate	Revised	Production	0	0	0
		Previous	Production	0	500	1,000
		Deviation		0.00	0.00	0.00
		Revised	Consumption	280	309	309
		Previous	Consumption	391	555	953
		Deviaiton		0.72	0.56	0.32
		Revised	I/E	-280	-309	-309
		Previous	I/E	-391	-55	47
		Deviaiton		0.72	5.62	-6.57

Source:
(1) JICA, National Transport Study 1988
(2) JICA Study Team

Table 2.2.2.8 (b) Comparison of Previous and Present Projections on Production, Comsumption and Trade Volume (000 tons)

Sectors	Commodities		Years Categolies	1992-93 (Actutal)	1997-98 (Projection)	2005-06 (Projection)
Mining	Cement	Revised	Production	8,551	12,917	20,001
		Previous	Production	9,688	13,259	22,086
		Deviaiton		0.88	0.97	0.91
		Revised	Consumption	8,595	13,224	19,907
		Previous	Consumption	9,674	13,223	21,992
		Deviaiton		0.89	1.00	0.91
		Revised	I/E	-44	-307	94
		Previous	I/E	14	36	94
		Deviaiton		-3.14	-8.53	1.00
Mining	Coal	Revised	Production	3,266	6,713	13,431
		Previous	Production	3,413	4,241	8,384
		Deviaiton		0.96	1.58	1.60
		Revised	Consumption	4,311	7,514	14,049
		Previous	Consumption	6,176	8,578	14,793
		Deviaiton		0.70	0.88	0.95
		Revised	I/E	-1,045	-801	-618
		Previous	I/E	-2,763	-4,337	-6,409
		Deviaiton		0.38	0.18	0.10
Mining	Crude Oil	Revised	Production	2,936	6,038	12,249
		Previous	Production	3,948	6,712	13,874
		Deviaiton		0.74	0.90	0.88
		Revised	Consumption	6,882	8,193	21,954
		Previous	Consumption	8,233	11,017	18,234
		Deviaiton		0.84	0.74	1.20
		Revised	I/E	-3,945	-2,155	-9,705
		Previous	I/E	-4,285	-4,305	-4,360
		Deviaiton		0.92	0.50	2.23
Industry	Petroleum produ	Revised	Production	6,180	7,305	19,574
		Previous	Production	7,574	10,136	16,775
		Deviaiton		0.82	0.72	1.17
		Revised	Consumption	12,792	19,351	31,439
		Previous	Consumption	12,234	16,812	26,944
		Deviaiton		1.05	1.15	1.17
		Revised	I/E	-6,612	-12,047	-11,866
		Previous	I/E	-4,660	-6,676	-10,169
		Deviaiton		1.42	1.80	1.17
Industry	Iron and Steel	Revised	Production	2,382	2,974	4,590
		Previous	Production	2,904	3,718	5,905
		Deviaiton		0.82	0.80	0.78
		Revised	Consumption	3,134	3,906	6,524
		Previous	Consumption	2,968	4,282	7,154
		Deviaiton		1.06	0.91	0.91
		Revised	I/E	-752	-857	-1,934
		Previous	I/E	-64	-564	-1,249
		Deviaiton		11.75	1.52	1.55
Mining	Ore	Revised	Production	1,922	2,453	3,107
		Previous	Production	2,975	3,833	5,246
		Deviaiton		0.65	0.64	0.59
		Revised	Consumption	3,623	4,621	6,059
		Previous	Consumption	5,215	6,993	11,902
		Deviaiton		0.69	0.66	0.51
		Revised	I/E	-1,701	-2,168	-2,952
		Previous	I/E	-2,240	-3,160	-6,656
		Deviaiton		0.76	0.69	0.44
	Total	Revised	Production	51,996	70,756	116,279
		Previous	Production	61,862	80,912	126,334
		Deviaiton		0.84	0.87	0.92
		Revised	Consumption	67,976	91,023	142,931
		Previous	Consumption	74,024	96,979	149,013
		Deviaiton		0.92	0.94	0.96
		Revised	I/E	-18,402	-23,126	-30,291
		Previous	I/E	-14,406	-18,706	-26,053
		Deviaiton		1.28	1.24	1.16

Source:
(1) JICA, National Transport Study 1988
(2) JICA Study Team