

Appendix VI

Table A-VI-1 Labour Cost (KPT)

(Unit: '000 US\$)

Item		Skilled	Unskilled	Total
Cargo Handling/ Cargo Storage Cost	Alongside Berth Total	2,896.2	4,149.1	7,045.3
	General Cargo	2,538.4	3,653.7	6,192.1
	Bulk Cargo	357.8	495.4	853.2
	Barge Total	358.0	515.7	873.7
	General Cargo	215.3	311.5	526.8
	Bulk Cargo	142.7	204.2	346.9
Ship-movement/ Service Cost	Pilot	184.2	265.3	449.5
	Shipping Tugs/ Water Supply/ Sanitation	319.5	461.1	780.6
Total		3,757.9	5,391.2	9,149.1

Table A-VI-2 Operation/Maintenance Cost (KPT)

Item		General Cargo	Bulk Cargo	Total
Cargo Handling/ Cargo Storage Cost	Alongside Berth	3,730.6	1,018.2	4,748.8
	Barge	308.0	270.6	578.6
Ship-movement/ Service Cost	Pilot			285.1
	Shipping Tugs/ Water Supply/ Sanitation			1,552.6

Table A-VI-3 Labour Cost (KDLB)

(Unit: '000 US\$)

	Total	Skilled Labour	Unskilled Labour
Alongside Berth	7,566	3,101	4,465
General Cargo	5,712	2,341	3,371
Bulk Cargo	1,854	760	1,094
Barge	1,940	795	1,145
General Cargo	993	407	586
Bulk Cargo	947	388	559
Total	9,506	3,896	5,610

Table A-VI-4 Operation/Maintenance Cost (KDLB)

Material Cost	Fuel : $(421,000^{\text{Ton}} / 4 \times 100^{\text{Ton}}) \times (2^{\text{km}} / 6^{\text{knot}} + 1 / 6^{\text{hr}} \times 2)$ $\times 80^{\text{¢/hr}} \times 0.35^{\text{US$ / ¢}} = 527.0$ ('000 US\$)	
	Parts : Fuel Cost x 30% = 4.4 ('000 US\$)	
Maintenance Cost	Barge : $250^{\text{unit}} \times 17,600^{\text{US$}} \times 150\% \times 1\% = 66.0$ ('000 US\$)	
	Tug : $24^{\text{unit}} \times 108,600^{\text{US$}} \times 150\% \times 7\% = 273.6$ ('000 US\$)	
Total	358.8 ('000 US\$)	
	General Cargo	183.6 ('000 US\$)
	Bulk Cargo	175.2 ('000 US\$)

Table A-VI-5 Cargo Volume

(Unit: '000 Ton)

	Total	General Cargo	Bulk Cargo
Alongside Berth	6,598 (94%)	3,846 (54.8%)	2,752 (39.2%)
Barge	421 (6%)	175 (2.5%)	246 (3.5%)
Total	7,019(100%)	4,021 (57.3%)	2,998 (42.7%)

Source: KPT Budget 1980/81

Table A-VI-6 Labour Cost (Container Terminal)

- Cargo Handling/Cargo Storage Cost -

Section		No. of Labour	Average Wage (Rs)	Labour Cost ('000 US\$)
Operation Section	Skilled	211	18,000	383.6
	Unskilled	113	9,000	102.7
	Sub-Total	324	-	486.3
CNTR Freight Station Section	Skilled	524	18,000	952.7
	Unskilled	261	9,000	237.3
	Sub-Total	785	-	1,190.0
Total	Skilled	735	18,000	1,336.3
	Unskilled	374	9,000	340.0
	Total	1,109	-	1,676.3

Table A-VI-7 Labour Cost
 – Ship-movement/Service Cost –

	Labour Cost ('000 US\$)		Total
	Skilled	Unskilled	
Pilot	184.2	265.3	449.5
Shipping Tugs/ Water Supply/ Sanitation	319.5	461.1	780.6

Table A-VI-8 Direct Material Cost (Container Terminal)

Item	Description	Cost ('000 US\$)	No. of TEU/ Total NRT/ No. of Ships	Unit Cost (US\$)
Fuel	Tug Boat/Pilot Boat	141.6	376 Ships	376.60/Ship
	CTNR Handling Equipment	409.9	169,284 TEU	2.42/TEU
	Terminal Facility	0.9	Fixed	-
Water	CNTR Ship	15.0	3,940 '000 NRT	0.004/Total NRT
	Terminal Facility	11.7	Fixed	-
Electricity	CNTR Handling Equipment	46.8	169,284 TEU	0.28/TEU
	Refer CNTR	56.5	169,284 TEU	0.33/TEU
	Lighting/Terminal Facility	73.7	Fixed	-

Table A-VI-9 Maintenance Cost (Container Terminal)

Item	Cost ('000 US\$)	No. of TEU/ No. of Ships/ Total NRT	Unit Cost (US\$)
Labour (Skilled, Unskilled)	165.5	169,284 TEU	0.98/TEU
Cargo Handling Equipment	1,222.0	169,284 TEU	7.22/TEU
Gate Operation Equipment/ Terminal Office Equipment	53.8	Fixed	-
Pilot Boat			173.2/Ship
Shipping Tugs/Water Supply/ Water Supply Sanitation			178.8/NRT

Table A-VI-10 Ocean Route (1)

U.S.A.

New York 3,271 Southampton 1,677 Barcelona 189
 Marseille 202 Genova 2,226 Jiddah 2,211 Dubai 732

Karachi

Total Distance: 10,508 miles

No. of Port of Call: 6

San Francisco 4,799 Yokohama 360 Kobe 925 Chi-lung
766 Manila 704 Hong Kong 1,437 Singapore 1,710

Colombo 1,143 Karachi

Total Distance: 11,844 miles

No. of Port of Call: 7

U.K.

Southampton 1,677 Barcelona 189 Marseille 202 Genova
2,226 Jiddah 2,211 Dubai 732 Karachi

Total Distance: 7,237 miles

No. of Port of Call: 5

Italy

Genova 1,131 Trieste 2,363 Jiddah 400 Hodeida 1,811
 Dubai 732 Karachi

Total Distance: 6,437 miles

No. of Port of Call: 4

Table A-VI-10 Ocean Route (2)

Kuwait

Kuwait 237 Dammam 346 Dubai 732 Karachi
 Total Distance: 1,315 miles
 No. of Port of Call: 2

Brazil

Santos 4,954 Barcelona 189 Marseille 202 Genova 2,226
 Jiddah 2,211 Dubai 732 Karachi
 Total Distance: 10,514 miles
 No. of Port of Call: 5

Hong Kong

Hong Kong 1,548 Bangkok 812 Singapore 200 Kelong
200 Penang 1,310 Colombo 1,143 Karachi
 Total Distance: 5,213 miles
 No. of Port of Call: 5

Japan

Yokohama 360 Kobe 925 Chi-lung 766 Manila 704
 Hong Kong 1,437 Singapore 1,710 Colombo 1,143 Karachi
 Total Distance: 7,045 miles
 No. of Port of Call: 6

Australia

Sydney 2,200 Fremantle 2,111 Djakarta 528 Singapore
200 Kelong 200 Penang 1,310 Colombo 1,143 Karachi
 Total Distance: 7,692 miles
 No. of Port of Call: 6

Table A-VI-10 Ocean Route (3)

U.S.S.R.

Leningrad 1,426 Amsterdam 449 Southampton 1,578 Alger

726 Tripoli 1,993 Jiddah 2,211 Dubai 732 Karachi

Total Distance: 9,115 miles

No. of Port of Call: 6

Table A-VI-11 Unit Operating Cost of 8-Ton Truck
 (Speed: 64 km/hr)

(Unit: Rs./1000 km)

	Consumption	Economic Cost
Fuel Consumption (lit)	300	1,062
Engine Oil Consumption (lit)	4.6	37
Tyre Wear (tyre)	0.07	26
Depreciation (%)	0.1	120
Maintenance Labour (hrs)	20	150
Parts % (Veh)	0.09	108
Driver (hrs)	16	160
Assistant (hrs)	16	96
Sub-Total		1,723
Total		2,015

Source: Economic Analysis for Highways

Table A-VI-12 Unit Operating Cost of Truck-Semitrailer for 40' Container :

(Speed: 64 km/hr)

(Unit: Rs./1000 km)

	Consumption	Economic Cost
Fuel Consumption (lit)	500	1,770
Engine Oil Consumption (lit)	8	64
Tyre Wear (Tyre)	0.14	105
Depriciation (%)	0.1	500
Labour (hrs)	23.0	173
Parts % (Veh)	0.09	450
Driver (hrs)	16.0	160
Assistant (hrs)	16.0	96
Sub-Total		3,168
Total		3,985

Source: Economic Analysis for Highways

Table A-VI-13 Unit Price

(Unit: Rs.)

	Economic Price
8-Ton Truck	120,000.00
Truck-Semitrailer	500,000.00
H.S.D. (lit)	3.54
Oil (lit)	8.00
Tyre	750.00
Labour (hrs)	7.50
Driver (hrs)	10.00
Assistant (hrs)	6.00

Table A-VI-14 Yearly FCL Cargo Volume Assumed by Transport Section

Fiscal Year	Transport Section	Port Terminal - Up-Country		Port Terminal - Karachi Region	
		TEU	'000 ton	TEU	'000 ton
1987/88	Import	45,178	406.6	22,007	198.1
	Export	37,461	412.1	16,425	180.7
	Total	82,639	818.7	38,432	378.8
1988/89	Import	52,821	475.4	25,730	231.6
	Export	43,059	473.6	18,879	207.7
	Total	95,880	949.0	44,609	439.3
1989/90	Import	63,891	575.0	31,123	280.1
	Export	48,994	538.9	21,481	236.3
	Total	112,885	1,113.9	52,604	514.6
1990/91	Import	72,590	653.3	35,360	318.2
	Export	55,181	607.0	24,194	266.1
	Total	127,771	1,260.3	59,554	584.3
1991/92	Import	↓	↓	↓	↓
	Export	↓	↓	↓	↓
	Total	↓	↓	↓	↓

Table A-VI-15 Operation/Maintenance Cost at the Inland Terminal

(unit: '000 US\$)

		Operation/Maintenance Cost		
Direct Material Cost	Fuel	$450.6 \text{ KT} \times 426.5 \text{ US\$/KT}$	= 192.2	
	Electricity	Crane	$462,622 \text{ KWH} \times 0.05 \text{ US\$/KWH}$	= 23.1
		Lighting	$150,000 \text{ KWH} \times 0.05 \text{ US\$/KWH}$	= 7.5
		Water	$10,000 \text{ KT} \times 0.5 \text{ US\$/KT}$	= 5.0
	Sub-Total		227.8	
Maintenance Cost	Parts	$12,240 \text{ '000 US\$} \times 4\%$	= 489.6	
	Labour	Skilled	$50 \times 18,000 + 9.9 =$	90.9
		Unskilled	$6 \times 9,000 + 9.9 =$	5.5
	Sub-Total		96.4	
Total			813.8	

Table A-VI-16 Average Container Cargo Value

	Cargo Volume ('000 ton)			Cargo Value ('000 US\$)			Average
	Import	Export	Total	Import	Export	Total	
1987/88	274	285	559	209,062	166,725	375,787	672
1988/89	481	491	972	367,003	287,235	654,238	673
1989/90	776	745	1,521	592,088	435,825	1,027,913	676
1990/91	1,025	975	2,000	782,075	570,375	1,352,450	676

Table A-VI-17(1) Presumption of Number of Working Labour

Item	Required No. of Facilities	Average No. of Labour	Total No. of Labour
Stevedore			
CNTR Operation/ Engineering/CFS Section			740
Pilot			4
Tug			10
Tally			50
Surveyor			50
Line Handling			10
Transport Companies	7	50	350
Warehouse Companies	5	60	300
Bank	1	15	15
Insurance Company	1	15	15
Shipping Agents	40	30	1,200
Consignee/Consigner Agents	20	30	600
Custom House	1	10	10
Quarantine Office	1	10	10
Total			3,364

Table A-VI-17(2)

Construction Cost of New Town for PQA's Staffs and Workers

1) No. of Staffs and Workers

Chairman		1
General Manager		3
Deputy G/M		11
Member		30
Labour	I	1,660
	II	712
Total		2,417

2) Population 2,417 x 5.75 person/family = 13,900 persons

3) Population per hectare 200 persons/hectare

4) Land Use Plan

	(%)	(Hectare)
Residential Area	55	38.2
Amenities	17	11.8
Road	20	13.9
Open Space	8	5.6
Total	100	69.5

5) Housing Costs

Type	No. of Family	Area of a House (m ²)	Unit Cost (US\$/m ²)	Total Cost ('000US\$)
A	1	600	450	270
B	3	500	400	600
C	11	300	300	990
D	30	200	250	1,500
E	1,660	80	120	15,936
F	712	50	100	3,560
Total	2,417			22,856

6) Amenities Cost	Unit	Building Area (m ²)	Unit Cost (US\$/m ²)	Total Cost ('000US\$)
Primary School	2	1,500	150	450
High School	2	1,000	150	300
Nursery	4	150	150	90
Health Center	1	400	300	120
Mosque	1	1,000	200	200
Community Center	1	600	150	90
Shopping Center	1	3,000	250	750
Water Pump House	1	1,000	400	400
Electric Branch	1	1,000	400	400
Gas Branch	1	1,000	400	400
Police Box	2	20	100	4
Total				3,204

7) Utilities Cost

$$8 \text{ US\$/m}^2 \times (38.2 + 11.8) \times 10,000 = 4,000 \text{ US\$}$$

* including Water pump/Electric Facility/ Gas Facility

8) Road $13.9 \times 10,000 \times 30 \text{ US\$/m}^2 = 4,170 \text{ '000US\$}$

9) Open Space (Park)

$$5.6 \times 10,000 \times 10 \text{ US\$/m}^2 = 560 \text{ '000US\$}$$

Total Cost 34,790 '000US\$

Cost Shared for Container Transportation 15,899 '000US\$

(share 45.7%)

Table A-VI-17(3)

Construction Cost of New Town necessary for Container Transportation

1) Population 3,364 x 5.75 person/family = 19,343 persons

2) Population per Hectare 500 persons/hectare

3) Land Use Plan

	(%)	(Area)
Residential Area	42	16.2
Commercial Area	30	11.6
Road	25	9.7
Open Space	3	1.2
Total	100	38.7

4) Housing Cost

Type	No. of Family	Area of a House (m ²)	Unit Cost (US\$/m ²)	Total Cost ('000US\$)
A	76	400	400	12,160
B	228	200	200	9,120
C	893	80	120	8,573
D	2,167	50	100	10,835
Total	3,364			40,688

5) Commercial Area Building Cost

No. of Company/Office	Average Area (m ²)	Unit Cost (US\$/m ²)	Total ('000US\$)
76	800	250	15,200

6) Amenities Cost

	Unit	Building Area (m ²)	Unit Cost (US\$/m ²)	Total Cost ('000US\$)
Primary School	2	1,500	150	450
High School	2	1,000	150	300
Nursery	4	150	150	90
Health Center	1	400	300	120
Mosque	1	1,000	200	200
Community Center	1	600	150	90
Shopping Center	1	3,000	250	750
Water Pump House	1	1,000	400	400
Electric Branch	1	1,000	400	400
Gas Branch	1	1,000	400	400
Police Box	2	20	100	4
Total				3,204

7) Utilities Cost

$$8 \text{ US\$/m}^2 \times (38.2 + 11.8) \times 10.000 = 4,000\text{US\$}$$

including Water pump/Electric Facility/Gas Facility

8) Road $9.7 \times 10,000 \times 30 \text{ US\$/m}^2 = 2,910 \text{ '000 US\$}$

9) Open Space (Park)

$$1.2 \times 10,000 \times 10 \text{ US\$/m}^2 = 120 \text{ '000US\$}$$

Total 66,122 '000US\$

Construction Cost of New Town 82,021 '000US\$

(The land equisition cost is not included)

Table A-VI-18 Unit Operating Cost of Private Car
(Speed: 56 km/hr on Level Paved Road)

(Unit: Rs./1,000 km)

Item	Consumption	Economic Cost
Fuel Consumption (lit)	108.6	272
Engine Oil Consumption (lit)	1.44	12
Tyre Wear (Tyre)	0.04	9
Maintenance Depreciation % (Veh)	0.5	175
Labour (hrs)	1.99	15
Parts % (Veh)	0.0261	9
Driver (hrs)		
Interest % (Veh)	0.37	130
Total		622

Source: Vehicle User Costs Pakistan

Table A-VI-19 Unit Operating Cost of Minibus for Passengers
(Speed: 56 km/hr on Level Paved Road)

(Unit: Rs./1,000 km)

Item	Consumption	Economic Cost
Fuel Consumption (lit)	129.1	457
Engine Oil Consumption (lit)	2.16	17
Tyre Wear (Tyre)	0.05	19
Maintenance Depreciation % (Veh)	0.2	110
Labour (hrs)	16.44	123
Parts (Veh)	0.056	31
Driver (hrs)	8	64
Interest % (Veh)	0.11	61
Sub-Total		882
Overhead	10% of above	88
Total		970

Source: Vehicle User Costs Pakistan

Table A-VI-20 Unit Operating Cost of Bus for Passengers
(Speed: 56 km/hr on Level Paved Road)

(Unit: Rs./1,000 km)

Item	Consumption	Economic Cost
Fuel Consumption (lit)	281.0	995
Engine Oil Consumption (lit)	5.08	41
Tyre Wear (Tyre)	0.15	138
Maintenance Depreciation % (Veh)	0.17	241
Labour (hrs)	18.43	138
Parts % (Veh)	0.056	80
Driver (hrs)	8	64
Interest % (Veh)	0.09	128
Sub-Total		1,825
Overhead	10% of above	183
Total		2,008

Source: Vehicle User Costs Pakistan

Table A-VI-21 Unit Price

(Unit: Rs)

Item	Economic Price
Toyota Car	35,000
Ford Minibus (13 passengers)	55,000
Bedford Bus (52 passengers)	142,000
Petrol (lit)	2.5
Oil (lit)	8.00
Tyre (Toyota car)	220
Labour (hrs)	7.50
Driver (hrs)	8.00

Table A-VI-22 Average Service Life (Karachi Port)

Item	Service Life (Year)	Capital Cost ('000 US\$)	Depreciation per Year ('000 US\$)
Land	∞	15,760	0
Container Berths	50	22,056	441
Access Road & Railway	15	7,736	516
Container Yards			
Pavement a) Surface	20	7,467	373
b) Grade	50	9,777	196
CFSS	35	7,170	205
Buildings	35	3,292	94
Railway	20	733	37
Foundation	50	3,615	72
Utilities	15	4,077	272
Container Cranes	15	13,121	875
Railmounted Transfer Cranes	12	5,048	421
Rubbertyred Transfer Cranes	12	10,092	841
Tractors	7	1,255	179
Weighing Scale	20	131	7
Forklift Trucks 3t	7	739	106
" 6t	7	147	21
" 15t	7	111	16
" 15 t with telescopic side spreader	7	268	38
Chassis 20 footer	7	382	55
40 footer	7	524	75
Pallets	3	168	56
Mobile Crane 30t	7	202	29
" 35t	-	-	
Toplifter	7	329	47
Flat Deck Wagons	-	-	
Shunting Locomotive	-	-	
Navigation Aids	20	150	8
Computer	10	1,010	101
Wireless Telephone VHF	20	112	6
Total		115,472	5,087

Average Life 22.7 (Year)

Table A-VI-23 Average Service Life (Qasim Port)

Item	Service Life (Year)	Capital Cost ('000 US\$)	Depreciation per Year ('000 US\$)
Land	∞	11,088	0
Container Berths	50	20,993	420
Access Road & Railway	15	2,423	162
Container Yards			
Pavement a) Surface	20	7,119	356
b) Grade	50	9,300	186
CFSS	35	7,040	201
Buildings	35	3,241	93
Railway	20	698	35
Foundation	50	3,449	69
Utilities	15	3,878	259
Container Cranes	15	13,121	875
Railmounted Transfer Cranes	12	5,048	421
Rubbertyred Transfer Cranes	12	10,092	841
Tractors	7	1,255	179
Weighing Scale	20	131	7
Forklift Trucks 3 t	7	739	106
" 6 t	7	147	21
" 15 t	7	111	16
" 15 t with telescopic side spreader	7	268	38
Chassis 20 footer	7	382	55
40 footer	7	524	75
Pallets	3	168	56
Mobile Crane 30t	7	202	29
" 35t	-	-	-
Toplifter	7	329	47
Flat Deck Wagons	-	-	-
Shunting Locomotive	-	-	-
Navigation Aids	20	150	8
Computer	10	1,010	101
Wireless Telephone VHF	20	112	6
Total		103,018	4,662

Average Life 22.1 (Year)

Table A-VI-24 Average Service Life (Inland Terminal)

Item	Service Life (Year)	Capital Cost ('000 US\$)	Depreciation per Year ('000 US\$)
Land	∞	4,129	0
Container Berths	-	-	-
Access Road & Railway	15	4,286	286
Container Yards			
Pavement a) Surface	20	3,954	198
b) Grade	50	5,173	103
CFSS	35	5,536	158
Buildings	35	1,859	53
Railway	20	338	17
Foundation	50	1,699	34
Utilities	15	1,969	131
Container Cranes	-	-	-
Railmounted Transfer Cranes	12	5,147	429
Rubbertyred Transfer Cranes	12	6,174	515
Tractors	7	471	67
Weighing Scale	20	66	3
Forklift Trucks 3 t	7	312	45
" 6 t	7	75	11
" 15 t	7	113	16
" 15 t with telescopic side spreader	7	137	20
Chassis 20 footer	7	148	21
40 footer	7	184	26
Pallets	3	124	41
Mobile Crane 30 t	-	-	-
" 35 t	7	204	29
Toplifter	-	-	-
Flat Deck Wagons	50	12,089	242
Shunting Locomotive	20	11,666	583
Navigation Aids	-	-	-
Computer	-	-	-
Wireless Telephone VHF	20	51	3
Total		65,904	3,031

Average Life 21.7 (Year)

Table A-VI-25 Average Service Life (Karachi Port + Inland Terminal)

Item	Service Life (Year)	Capital Cost ('000 US\$)	Depreciation per Year ('000 US\$)
Land	∞	19,889	0
Container Berths	50	22,056	441
Access Road & Railway	15	12,022	801
Container Yards			
Pavement a) Surface	20	11,421	571
b) Grade	50	14,950	299
CFSS	35	12,706	363
Buildings	35	5,151	147
Railway	20	1,071	54
Foundation	50	5,314	106
Utilities	15	6,046	403
Container Cranes	15	13,121	875
Railmounted Transfer Cranes	12	10,195	850
Rubbertyred Transfer Cranes	12	16,266	1,356
Tractors	7	1,726	247
Weighing Scale	20	197	10
Forklift Trucks 3 t	7	1,051	150
" 6 t	7	222	32
" 15 t	7	224	32
" 15 t with telescopic side spreader	7	405	58
Chassis 20 footer	7	530	76
40 footer	7	708	101
Pallets	3	292	97
Mobile Crane 30 t	7	202	29
" 35 t	7	204	29
Toplifter	7	329	47
Flat Deck Wagons	50	12,089	242
Shunting Locomotive	20	11,666	583
Navigation Aids	20	150	8
Computer	10	1,010	101
Wireless Telephone VHF	20	163	8
Total		181,376	8,116

Average Life 22.3 (Year)

Table A-VI-26 Average Service Life (Qasim Port + Inland Terminal)

Item	Service Life (Year)	Capital Cost ('000 US\$)	Depreciation per Year ('000 US\$)
Land	∞	15,217	0
Container Berths	50	20,993	420
Access Road & Railway	15	6,709	447
Container Yards			
Pavement a) Surface	20	11,073	554
b) Grade	50	14,473	289
CFSSs	35	12,576	359
Buildings	35	5,100	146
Railway	20	1,036	52
Foundation	50	5,148	103
Utilities	15	5,847	390
Container Cranes	15	13,121	875
Railmounted Transfer Cranes	12	10,195	850
Rubbertyred Transfer Cranes	12	16,266	1,356
Tractors	7	1,726	247
Weighing Scale	20	197	10
Forklift Trucks 3 t	7	1,051	150
" 6 t	7	222	32
" 15 t	7	224	32
" 15 t with telescopic side spreader	7	405	58
Chassis 20 footer	7	530	76
40 footer	7	708	101
Pallets	3	292	97
Mobile Crane 30 t	7	202	29
Mobile Crane 35 t	7	204	29
Toplifter	7	329	47
Flat Deck Wagons	50	12,089	242
Shunting Locomotive	20	11,666	583
Navigation Aids	20	150	8
Computer	10	1,010	101
Wireless Telephone VHF	20	163	8
Total		168,922	7,691

Average Life 22.0 (Year)

Table A-VI-27 Costs/Benefits and IRR - Shadow Price (Karachi Port - Feedback Ratio 50%)
IRR = 20.0%

(Unit: '000 US\$)

No.	Fiscal Year	Costs				Benefits				Present Value (Discount Rate=20.0%)
		Total	Construction	Equipment	Operation/Maintenance	Total	Reduction in Ships' Staying Cost	Reduction in Cargo Handling Cost	Reduction in Time Cost	
1	'82/'83	1,181	1,181							-1181
2	'83/'84	7,802	7,802							-6501.67
3	'84/'85	22,787	22,787							-15824.31
4	'85/'86	30,973	30,973							-17924.19
5	'86/'87	43,698	14,996	33,702						-23884.76
6	'87/'88	1,280			1,280					3845.16
7	'88/'89	2,161			2,161					4826.88
8	'89/'90	3,419			3,419					8788
9	'90/'91	4,422			4,422					8110.58
10	'91/'92	4,422			4,422					6758.81
11	'92/'93	4,422			4,422					5632.35
12	'93/'94	4,422			4,422					4693.62
13	'94/'95	4,422			4,422					3911.35
14	'95/'96	4,422			4,422					3259.46
15	'96/'97	4,422			4,422					2716.22
16	'97/'98	4,422			4,422					2263.51
17	'98/'99	4,422			4,422					1886.26
18	'99/2000	4,422			4,422					1571.88
19	2000/'01	4,422			4,422					1309.9
20	'01/'02	4,422			4,422					1091.59
21	'02/'03	4,422			4,422					909.66
22	'03/'04	4,422			4,422					758.05
23	'04/'05	4,422			4,422					631.71
24	'05/'06	4,422			4,422					526.42
25	'06/'07	4,422			4,422					438.68
26	'07/'08	4,422			4,422					365.57
27	'08/'09	4,422			4,422					304.64
28	'09/'10	4,422			4,422					253.87
29	'10/'11	4,422			4,422					211.56
Total		211,163	77,739	33,702	99,722	887,546	674,349	113,120	100,077	149.8

Table A-VI-28 Costs/Benefits and IRR - Shadow Price (Qasim Port - Feedback Ratio 50%)
IRR = 18.9%

(Unit: '000 US\$)

No.	Fiscal Year	Costs				Benefits				Present Value (Discount Rate=18.9%)
		Total	Construction	Equipment	Operation/Maintenance	Total	Reduction in Ships' Staying Cost	Reduction in Cargo Handling Cost	Reduction in Time Cost	
1	'82/'83	1,059	1,059							-1059
2	'83/'84	6,340	6,340							-5332.21
3	'84/'85	17,495	17,495							-12375.14
4	'85/'86	26,830	26,830							-15961.55
5	'86/'87	53,624	19,922	33,702						-26830.69
6	'87/'88	3,952			3,952	9,073	478	1,197		2901.94
7	'88/'89	5,386			5,386	11,796	2,544	2,234		3959.69
8	'89/'90	7,329			7,329	27,071	4,447	3,390		8209.29
9	'90/'91	8,906			8,906	39,296	5,031	4,436		7608.09
10	'91/'92	8,906			8,906	39,296	5,031	4,436		6398.73
11	'92/'93	8,906			8,906	29,329	5,031	4,436		5381.61
12	'93/'94	8,906			8,906	29,329	5,031	4,436		4526.16
13	'94/'95	8,906			8,906	29,329	5,031	4,436		3806.7
14	'95/'96	8,906			8,906	29,329	5,031	4,436		3201.6
15	'96/'97	8,906			8,906	29,329	5,031	4,436		2692.68
16	'97/'98	8,906			8,906	29,329	5,031	4,436		2264.66
17	'98/'99	8,906			8,906	29,329	5,031	4,436		1904.68
18	'99/2000	8,906			8,906	29,329	5,031	4,436		1601.91
19	2000/'11	8,906			8,906	29,329	5,031	4,436		1347.28
20	'11/'12	8,906			8,906	29,329	5,031	4,436		1133.12
21	'12/'13	8,906			8,906	29,329	5,031	4,436		953
22	'13/'14	8,906			8,906	29,329	5,031	4,436		801.52
23	'14/'15	8,906			8,906	29,329	5,031	4,436		674.11
24	'15/'16	8,906			8,906	29,329	5,031	4,436		566.95
25	'16/'17	8,906			8,906	29,329	5,031	4,436		476.83
26	'17/'18	8,906			8,906	29,329	5,031	4,436		401.04
27	'18/'19	8,906			8,906	29,329	5,031	4,436		337.29
28	'19/'10	8,906			8,906	29,329	5,031	4,436		283.67
Total		300,135	71,646	33,702	194,787	848,250	108,089	95,641		-126.04

Table A-VI-29 Costs/Benefits and IRR — Shadow Price (Inland Terminal — Railway 36.3%, Road 63.7%)
IRR = 16.3%

No.	Fiscal Year	Costs			Benefits			Present Value (Discount Rate=16.3%)	
		Total	Construction	Equipment	Operation/Maintenance	Total	Reduction in Transport Cost		Reduction in Time Cost
1	1983/84	674	694					-694.	
2	'84/'85	4,127	4,127					-3548.58	
3	'85/'86	14,570	14,570					-10772.09	
4	'86/'87	44,098	7,227	36,871				-28033.66	
5	'87/'88	907			907			5002.62	
6	'88/'89	1,314			1,314			4737.17	
7	'89/'90	1,865			1,865			4518.18	
8	'90/'91	2,319			2,319			4249.8	
9	'91/'92	2,319			2,319			3654.17	
10	'92/'93	2,319			2,319			3142.02	
11	'93/'94	2,319			2,319			2701.65	
12	'94/'95	2,319			2,319			2323.	
13	'95/'96	2,319			2,319			1997.42	
14	'96/'97	2,319			2,319			1717.47	
15	'97/'98	2,319			2,319			1476.76	
16	'98/'99	2,319			2,319			1269.79	
17	'99/'2000	2,319			2,319			1091.82	
18	2000/1	2,319			2,319			938.8	
19	1 / '12	2,319			2,319			807.22	
20	2 / '13	2,319			2,319			694.08	
21	3 / '14	2,319			2,319			596.8	
22	4 / '15	2,319			2,319			513.16	
23	5 / '16	2,319			2,319			442.24	
24	6 / '17	2,319			2,319			379.4	
25	7 / '18	2,319			2,319			326.22	
26	8 / '19	2,319			2,319			280.5	
27	9 / '10	2,319			2,319			241.19	
Total		113,955	26,618	36,871	50,466	325,477	264,657	60,820	52.15

Table A-VI-30 Costs/Benefits and IRR - Shadow Price
 (Karachi Port + Inland Terminal - Feedback Ratio 50%, Railway 36.3%, Road 63.7%)
 IRR = 18.9%

No.	Fiscal Year	Costs				Benefits				Present Value (Discount Rate=18.9%)	
		Total	Construction	Equipment	Operation/Maintenance	Total	Reduction in Ships' Staying Cost	Reduction in Cargo Handling Cost	Reduction in Time Cost		Reduction in Transport Cost
1	1982/'83	1,181	1,181								-1181..
2	'83/'84	8,496	8,496								-7145.5
3	'84/'85	26,914	26,914								-19037.7
4	'85/'86	45,543	45,543								-27094.18
5	'86/'87	92,796	22,223	70,573							-46430.34
6	'87/'88	2,187			2,187						7877.65
7	'88/'89	3,475			3,475						8668.28
8	'89/'90	5,284			5,284						12701.05
9	'90/'91	6,741			6,741						11792.42
10	'91/'92	6,741			6,741						9917.93
11	'92/'93	6,741			6,741						8341.41
12	'93/'94	6,741			6,741						7015.48
13	'94/'95	6,741			6,741						5900.32
14	'95/'96	6,741			6,741						4962.42
15	'96/'97	6,741			6,741						3510.18
16	'97/'98	6,741			6,741						2952.22
17	'98/'99	6,741			6,741						2482.94
18	'99/'2000	6,741			6,741						2088.26
19	2000/'11	6,741			6,741						2756.32
20	'11/'12	6,741			6,741						1477.14
21	'12/'13	6,741			6,741						1242.34
22	'13/'14	6,741			6,741						1044.86
23	'14/'15	6,741			6,741						878.77
24	'15/'16	6,741			6,741						739.08
25	'16/'17	6,741			6,741						621.6
26	'17/'18	6,741			6,741						522.79
27	'18/'19	6,741			6,741						439.69
28	'19/'10	6,741			6,741						
Total		320,696	104,437	70,573	145,766	1,173,727	644,520	108,089	156,461	264,657	218.04

Table A-VI-31 Costs/Benefits and IRR - Shadow Price
(Qasim Port + Inland Terminal - Feedback Ratio 50%, Railway 36.3%, Road 63.7%)
IRR = 18.1%

No.	Fiscal Year	Costs				Benefits					Present Value (Discount Rate=18.1%)	
		Total	Construction	Equipment	Operation/Maintenance	Total	Reduction in Ships' Staying Cost	Reduction in Cargo Handling Cost	Reduction in Time Cost	Reduction in Transport Cost		
1	'82/'83	1,059	1,059									-1059.
2	'83/'84	7,034	7,034									-5955.97
3	'84/'85	21,622	21,611									-15502.3
4	'85/'86	41,400	41,400									-25133.37
5	'86/'87	97,897	27,324	70,573								-50233.42
6	'87/'88	4,859			4,859	20,907	9,073	478	3,070	8,286		6985.08
7	'88/'89	6,700			6,700	27,967	11,796	2,544	4,289	9,338		7838.03
8	'89/'90	9,194			9,194	47,953	27,071	4,447	5,802	10,633		12095.48
9	'90/'91	11,225			11,225	53,845	29,829	5,031	7,165	11,820		11261.97
10	'91/'92	11,225			11,225	53,845	29,829	5,031	7,165	11,820		9535.96
11	'92/'93	11,225			11,225	53,845	29,829	5,031	7,165	11,820		8074.48
12	'93/'94	11,225			11,225	53,845	29,829	5,031	7,165	11,820		6836.98
13	'94/'95	11,225			11,225	53,845	29,829	5,031	7,165	11,820		5789.15
14	'95/'96	11,225			11,225	53,845	29,829	5,031	7,165	11,820		4901.9
15	'96/'97	11,225			11,225	53,845	29,829	5,031	7,165	11,820		4150.64
16	'97/'98	11,225			11,225	53,845	29,829	5,031	7,165	11,820		3514.51
17	'98/'99	11,225			11,225	53,845	29,829	5,031	7,165	11,820		2975.88
18	'99/2000	11,225			11,225	53,845	29,829	5,031	7,165	11,820		2519.79
19	2000/'11	11,225			11,225	53,845	29,829	5,031	7,165	11,820		2133.61
20	'11/'12	11,225			11,225	53,845	29,829	5,031	7,165	11,820		1806.61
21	'12/'13	11,225			11,225	53,845	29,829	5,031	7,165	11,820		1529.73
22	'13/'14	11,225			11,225	53,845	29,829	5,031	7,165	11,820		1295.29
23	'14/'15	11,225			11,225	53,845	29,829	5,031	7,165	11,820		1096.77
24	'15/'16	11,225			11,225	53,845	29,829	5,031	7,165	11,820		928.68
25	'16/'17	11,225			11,225	53,845	29,829	5,031	7,165	11,820		786.35
26	'17/'18	11,225			11,225	53,845	29,829	5,031	7,165	11,820		665.83
27	'18/'19	11,225			11,225	53,845	29,829	5,031	7,165	11,820		563.79
28	'19/'10	11,225			11,225	53,845	29,829	5,031	7,165	11,820		477.38
Total		414,090	98,264	70,573	245,253	1,173,727	644,520	108,089	156,461	264,657		-120.17

(Unit: '000 US\$)

Table A-VI-32 Costs/Benefits and IRR - Market Price (Karachi Port - Feedback Ratio 50%)
IRR = 20.2%

(Unit: '000 US\$)

No.	Fiscal Year	Cost			Benefits				Present Value (Discount Rate=20.2%)	
		Total	Construction	Equipment	Operation/Maintenance	Total	Reduction in Ships' Staying Cost	Reduction in Cargo Handling Cost		Reduction in Time Cost
1	'82/'83	1,227	1,227						-1227.	
2	'83/'84	8,121	8,121						-6756.24	
3	'84/'85	23,768	23,768						-16450.67	
4	'85/'86	33,439	33,439						-19254.84	
5	'86/'87	50,076	16,287	33,789					-23988.98	
6	'87/'88	1,505			1,505			942	3908.53	
7	'88/'89	2,543			2,543			4,214	5205.96	
8	'89/'90	4,030			4,030			6,994	9220.2	
9	'90/'91	5,212			5,212			7,983	8499.4	
10	'91/'92	5,212			5,212			7,983	7071.05	
11	'92/'93	5,212			5,212			7,983	5882.74	
12	'93/'94	5,212			5,212			7,983	4894.12	
13	'94/'95	5,212			5,212			7,983	4071.65	
14	'95/'96	5,212			5,212			7,983	3387.4	
15	'96/'97	5,212			5,212			7,983	2818.13	
16	'97/'98	5,212			5,212			7,983	2344.54	
17	'98/'99	5,212			5,212			7,983	1950.53	
18	'99/2000	5,212			5,212			7,983	1622.74	
19	2000/'1	5,212			5,212			7,983	1350.03	
20	'11/'12	5,212			5,212			7,983	1123.15	
21	'12/'13	5,212			5,212			7,983	934.4	
22	'13/'14	5,212			5,212			7,983	777.37	
23	'14/'15	5,212			5,212			7,983	646.73	
24	'15/'16	5,212			5,212			7,983	538.05	
25	'16/'17	5,212			5,212			7,983	447.63	
26	'17/'18	5,212			5,212			7,983	372.4	
27	'18/'19	5,212			5,212			7,983	309.82	
28	'19/'10	5,212			5,212			7,983	257.75	
29	'10/'11	5,212			5,212			7,983	214.44	
Total		234,161	82,842	33,789	117,530	954,219	179,793	674,349	100,077	171.03

Table A-VI-33 Costs/Benefits and IRR -- Market Price (Qasim Port -- Feedback Ratio 50%)
IRR = 19.0%

(Unit: '000 US\$)

No.	Fiscal Year	Cost				Benefits				Present Value (Discount Rate=19.0%)	
		Total	Construction	Equipment	Operation/Maintenance	Total	Reduction in Ships' Staying Cost	Reduction in Cargo Handling Cost	Reduction in Time Cost		
1	'82/'83	1,099									-1099.
2	'83/'84	6,659	1,099								-5595.8
3	'84/'85	18,382	6,659								-12980.72
4	'85/'86	29,087	18,382								-17260.69
5	'86/'87	55,593	29,087	33,789							-27722.49
6	'87/'88	4,385	21,804		4,385						2902.75
7	'88/'89	6,019			6,019						4304.94
8	'89/'90	8,236			8,236						8646.43
9	'90/'91	10,031			10,031						8011.42
10	'91/'92	10,031			10,031						6732.28
11	'92/'93	10,031			10,031						5657.38
12	'93/'94	10,031			10,031						4754.1
13	'94/'95	10,031			10,031						3995.04
14	'95/'96	10,031			10,031						3357.18
15	'96/'97	10,031			10,031						2821.16
16	'97/'98	10,031			10,031						1992.2
17	'98/'99	10,031			10,031						1674.12
18	'99/2000	10,031			10,031						1406.82
19	2000/'1	10,031			10,031						1182.21
20	'1/'2	10,031			10,031						993.45
21	'2/'3	10,031			10,031						834.83
22	'3/'4	10,031			10,031						701.54
23	'4/'5	10,031			10,031						589.53
24	'5/'6	10,031			10,031						495.4
25	'6/'7	10,031			10,031						416.3
26	'7/'8	10,031			10,031						349.84
27	'8/'9	10,031			10,031						293.98
28	'9/'10	10,031			10,031						
Total		330,080	77,031	33,789	219,260	911,971	644,520	171,810	95,641		-175.08

Table A-VI-34 Costs/Benefits and IRR - Market Price
(Inland Terminal - Railway 36.3%, Road 63.7%)
IRR = 17.7%

(Unit: '000 US\$)

No.	Fiscal Year	Cost				Benefits			Present Value (Discount Rate=17.7%)
		Total	Construction	Equipment	Operation/Maintenance	Total	Reduction in Transport Cost	Reduction in Time Cost	
1	'83/'84	719	719						-719.
2	'84/'85	4,330	4,330						-3678.84
3	'85/'86	15,967	15,967						-11525.78
4	'86/'87	44,888	7,927	36,961					-27529.66
5	'87/'88	1,017			1,017			9,568	5379.5
6	'88/'89	1,473			1,473			10,792	5035.36
7	'89/'90	2,090			2,090			12,299	4747.17
8	'90/'91	2,600			2,600			13,680	4412.93
9	'91/'92	2,600			2,600			16,409	3749.3
10	'92/'93	2,600			2,600			13,680	3185.47
11	'93/'94	2,600			2,600			13,680	2706.44
12	'94/'95	2,600			2,600			13,680	2299.44
13	'95/'96	2,600			2,600			13,680	1953.64
14	'96/'97	2,600			2,600			13,680	1659.85
15	'97/'98	2,600			2,600			13,680	1410.24
16	'98/'99	2,600			2,600			13,680	1198.16
17	'99/2000	2,600			2,600			13,680	1017.98
18	2000/'1	2,600			2,600			13,680	864.89
19	'1/'12	2,600			2,600			13,680	734.83
20	'2/'13	2,600			2,600			13,680	624.32
21	'3/'14	2,600			2,600			13,680	530.44
22	'4/'15	2,600			2,600			13,680	450.67
23	'5/'16	2,600			2,600			13,680	382.9
24	'6/'17	2,600			2,600			13,680	325.31
25	'7/'18	2,600			2,600			13,680	276.39
26	'8/'19	2,600			2,600			13,680	234.83
27	'9/'10	2,600			2,600			13,680	199.51
Total		122,484	28,943	36,961	56,580	367,079	306,259	60,820	-73.71

Table A-VI-35 Costs/Benefits and IRR - Market Price
 (Karachi Port + Inland Terminal - Feedback Ratio 50%, Railway 36.3%, Road 63.7%)
 IRR = 19.5%

(Unit: '000 US\$)

No.	Fiscal Year	Costs				Benefits					Present Value (Discount Rate=19.5%)	
		Total	Construction	Equipment	Operation/Maintenance	Total	Reduction in Ships' Staying Cost	Reduction in Cargo Handling Cost	Reduction in Time Cost	Reduction in Transport Cost		
1	1982/83	1,227	1,227									-1227
2	'83/'84	8,840	8,840									-7397.49
3	'84/'85	28,098	28,098									-19676.13
4	'85/'86	49,406	49,406									-28951.83
5	'86/'87	94,964	24,214	70,750								-46567.98
6	'87/'88	2,522			2,522							8260.87
7	'88/'89	4,016			4,016							9297.39
8	'89/'90	6,120			6,120							13231.73
9	'90/'91	7,812			7,812							12226.58
10	'91/'92	7,812			7,812							10231.45
11	'92/'93	7,812			7,812							8561.88
12	'93/'94	7,812			7,812							7164.75
13	'94/'95	7,812			7,812							5995.61
14	'95/'96	7,812			7,812							5017.25
15	'96/'97	7,812			7,812							4198.53
16	'97/'98	7,812			7,812							3513.42
17	'98/'99	7,812			7,812							2940.1
18	'99/2000	7,812			7,812							2460.33
19	2000/'11	7,812			7,812							2058.86
20	'11/'12	7,812			7,812							1722.89
21	'12/'13	7,812			7,812							1441.75
22	'13/'14	7,812			7,812							1206.49
23	'14/'15	7,812			7,812							1009.61
24	'15/'16	7,812			7,812							844.86
25	'16/'17	7,812			7,812							707
26	'17/'18	7,812			7,812							591.63
27	'18/'19	7,812			7,812							495.09
28	'19/'10	7,812			7,812							414.3
Total		351,433	111,785	70,750	168,898	1,279,050	644,520	171,810	156,461	306,259		-228.06

Table A-VI-36 Costs/Benefits and IRR - Market Price
(Qasim Port + Inland Terminal - Feedback Ratio 50%, Railway 36.3%, Road 63.7%)
IRR = 18.6%

(Unit: '000 US\$)

No	Fiscal Year	Cost			Benefits					Present Value (Discount Rate=18.6%)	
		Total	Construction	Equipment	Operation/Maintenance	Total	Reduction in Ships' Staying Cost	Reduction in Cargo Handling Cost	Reduction in Time Cost		Reduction in Transport Cost
1	'82/'83	1,099	1,099								-1099.
2	'83/'84	7,378	7,378								-6220.31
3	'84/'85	22,712	22,712								-16146.78
4	'85/'86	45,054	45,054								
5	'86/'87	100,481	29,731	70,750							
6	'87/'88	5,402			5,402						
7	'88/'89	7,492			7,492						
8	'89/'90	10,326			10,326						
9	'90/'91	12,631			12,631						
10	'91/'92	12,631			12,631						
11	'92/'93	12,631			12,631						
12	'93/'94	12,631			12,631						
13	'94/'95	12,631			12,631						
14	'95/'96	12,631			12,631						
15	'96/'97	12,631			12,631						
16	'97/'98	12,631			12,631						
17	'98/'99	12,631			12,631						
18	'99/2000	12,631			12,631						
19	2000/'1	12,631			12,631						
20	'1 / '2	12,631			12,631						
21	'2 / '3	12,631			12,631						
22	'3 / '4	12,631			12,631						
23	'4 / '5	12,631			12,631						
24	'5 / '6	12,631			12,631						
25	'6 / '7	12,631			12,631						
26	'7 / '8	12,631			12,631						
27	'8 / '9	12,631			12,631						
28	'9 / '10	12,631			12,631						
Total		452,564	105,974	70,750	275,840	1,279,050	644,520	171,810	156,461	306,259	-253.16

Table A-VI-37 Costs/Benefits and IRR -- Shadow Price
(Karachi Port -- Subtracting Costs Related Railway)
IRR = 16.2%

No.	Fiscal Year	Costs				Benefits				Present Value (Discount Rate = 16.2%)
		Total	Construction	Equipment	Operation/Maintenance	Total	Reduction in Ships' Staying Cost	Reduction in Cargo Handling Cost	Reduction in Time Cost	
1	1982/'83	1,045	1,045							-1045.
2	'83/'84	7,669	7,669							-6399.83
3	'84/'85	22,042	22,042							-16324.46
4	'85/'86	27,242	27,242							-17262.83
5	'86/'87	39,840	11,618	28,322						-21907.03
6	'87/'88	1,080			1,080					2897.79
7	'88/'89	1,822			1,822					4076.03
8	'89/'90	2,877			2,877					7412.32
9	'90/'91	3,716			3,716					7116.52
10	'91/'92	3,716			3,716					6122.65
11	'92/'93	3,716			3,716					5269.06
12	'93/'94	3,716			3,716					4534.47
13	'94/'95	3,716			3,716					3902.3
14	'95/'96	3,716			3,716					3358.26
15	'96/'97	3,716			3,716					2890.07
16	'97/'98	3,716			3,716					2487.15
17	'98/'99	3,716			3,716					2140.41
18	'99/2000	3,716			3,716					1842.00
19	2000/'01	3,716			3,716					1585.20
20	'01/'02	3,716			3,716					1364.20
21	'02/'03	3,716			3,716					1174.01
22	'03/'04	3,716			3,716					1010.34
23	'04/'05	3,716			3,716					869.48
24	'05/'06	3,716			3,716					748.26
25	'06/'07	3,716			3,716					643.94
26	'07/'08	3,716			3,716					554.17
27	'08/'09	3,716			3,716					476.91
28	'09/'10	3,716			3,716					410.42
29	'10/'11	3,716			3,716					353.2
Total		181,753	69,616	28,322	83,815	617,799	404,602	113,120	100,077	-1.99

(Unit: '000 US\$)

Table A-VI-38 Costs/Benefits and IRR - Shadow Price
(Qasim Port - Subtracting Costs Related Railway)

IRR = 13.9%

(Unit: '000 US\$)

No.	Fiscal Year	Costs				Benefits				Present Value (Discount Rate = 13.9%)	
		Total	Construction	Equipment	Operation/Maintenance	Total	Reduction in Ships' Staying Cost	Reduction in Cargo Handling Cost	Reduction in Time Cost		
1	1982/'83	939	939								-939.
2	'83/'84	6,176	6,176								-5422.3
3	'84/'85	17,208	17,208								-13264.26
4	'85/'86	23,807	23,807								-16111.41
5	'86/'87	36,200	17,878	28,322							-27450.30
6	'87/'88	3,765			3,765				5,444	478	1,297
7	'88/'89	5,070			5,070				7,078	2,544	2,234
8	'89/'90	6,822			6,822				16,243	4,447	3,390
9	'90/'91	8,247			8,247				17,897	5,031	4,436
10	'91/'92	8,247			8,247				17,897	5,031	4,436
11	'92/'93	8,247			8,247				17,897	5,031	4,436
12	'93/'94	8,247			8,247				17,897	5,031	4,436
13	'94/'95	8,247			8,247				17,897	5,031	4,436
14	'95/'96	8,247			8,247				17,897	5,031	4,436
15	'96/'97	8,247			8,247				17,897	5,031	4,436
16	'97/'98	8,247			8,247				17,897	5,031	4,436
17	'98/'99	8,247			8,247				17,897	5,031	4,436
18	'99/2000	8,247			8,247				17,897	5,031	4,436
19	2000/'01	8,247			8,247				17,897	5,031	4,436
20	'01/'02	8,247			8,247				17,897	5,031	4,436
21	'02/'03	8,247			8,247				17,897	5,031	4,436
22	'03/'04	8,247			8,247				17,897	5,031	4,436
23	'04/'05	8,247			8,247				17,897	5,031	4,436
24	'05/'06	8,247			8,247				17,897	5,031	4,436
25	'06/'07	8,247			8,247				17,897	5,031	4,436
26	'07/'08	8,247			8,247				17,897	5,031	4,436
27	'08/'09	8,247			8,247				17,897	5,031	4,436
28	'09/'10	8,247			8,247				17,897	5,031	4,436
Total		274,927	66,008	28,322	180,597	590,435	386,705	108,089	95,641		-131.45

Table A-VI-39 Costs/Benefits and IRR - Shadow Price
(Inland Terminal - Adding Costs Related Railway in Karachi Port)
IRR = 10.5%

(Unit: '000 US\$)

No.	Fiscal Year	Costs				Benefits				Present Value (Discount Rate = 10.5%)
		Total	Construction	Equipment	Operation/Maintenance	Total	Reduction in Transport Cost	Reduction in Time Cost		
1	'82/'83	136	136							-136
2	'83/'84	827	827							-748.42
3	'84/'85	4,872	4,872							-3990.09
4	'85/'86	18,301	18,301							-13564.01
5	'86/'87	52,857	10,606	42,251						-35453.03
6	'87/'88	1,107			1,107					4738.85
7	'88/'89	1,653			1,653					4621.44
8	'89/'90	2,408			2,408					4512.88
9	'90/'91	3,025			3,025					4391.78
10	'91/'92	3,025			3,025					3974.46
11	'92/'93	3,025			3,025					3596.80
12	'93/'94	3,025			3,025					3255.02
13	'94/'95	3,025			3,025					2945.72
14	'95/'96	3,025			3,025					2665.81
15	'96/'97	3,025			3,025					2412.50
16	'97/'98	3,025			3,025					2183.26
17	'98/'99	3,025			3,025					1975.80
18	'99/2000	3,025			3,025					1788.05
19	2000/'01	3,025			3,025					1618.15
20	'01/'02	3,025			3,025					1464.39
21	'02/'03	3,025			3,025					1325.24
22	'03/'04	3,025			3,025					1199.31
23	'04/'05	3,025			3,025					1085.35
24	'05/'06	3,025			3,025					982.21
25	'06/'07	3,025			3,025					888.88
26	'07/'08	3,025			3,025					804.42
27	'08/'09	3,025			3,025					727.98
28	'09/'10	3,025			3,025					658.61
Total		142,661	34,742	42,251	65,668	286,206	218,700	67,506		-74.44

Table A-VI-40
 Costs/Benefits and IRR - Shadow Price
 (Inland Terminal - Adding Costs Related Railway in Qasim Port)
 IRR = 11.0%

(Unit: '000 US\$)

No.	Fiscal Year	Costs			Benefits			Present Value (Discount Rate = 11.0 %)
		Total	Construction	Equipment	Operation/Maintenance	Total	Reduction in Transport Cost	
1	1982/83	120	120					-120.
2	'83/'84	838	858					-772.97
3	'84/'85	4,414	4,414					-3582.5
4	'85/'86	17,593	17,593					-12863.85
5	'86/'87	51,522	9,271	42,251				-33939.14
6	'87/'88	1,093			1,093	8,914	6,946	-4641.38
7	'88/'89	1,630			1,630	10,066	7,785	-4510.23
8	'89/'90	2,372			2,372	11,486	8,809	-4389.83
9	'90/'91	2,979			2,979	12,787	9,758	-4255.95
10	'91/'92	2,979			2,979	12,787	9,758	-3834.19
11	'92/'93	2,979			2,979	12,787	9,758	-3454.23
12	'93/'94	2,979			2,979	12,787	9,758	-3111.91
13	'94/'95	2,979			2,979	12,787	9,758	-2803.53
14	'95/'96	2,979			2,979	12,787	9,758	-2525.70
15	'96/'97	2,979			2,979	12,787	9,758	-2275.41
16	'97/'98	2,979			2,979	12,787	9,758	-2049.91
17	'98/'99	2,979			2,979	12,787	9,758	-1846.77
18	'99/2000	2,979			2,979	12,787	9,758	-1663.76
19	2000/'01	2,979			2,979	12,787	9,758	-1498.88
20	'01/'02	2,979			2,979	12,787	9,758	-1350.34
21	'02/'03	2,979			2,979	12,787	9,758	-1216.52
22	'03/'04	2,979			2,979	12,787	9,758	-1095.97
23	'04/'05	2,979			2,979	12,787	9,758	-987.36
24	'05/'06	2,979			2,979	12,787	9,758	-889.51
25	'06/'07	2,979			2,979	12,787	9,758	-801.36
26	'07/'08	2,979			2,979	12,787	9,758	-721.95
27	'08/'09	2,979			2,979	12,787	9,758	-650.40
28	'09/'10	2,979			2,979	12,787	9,758	-585.95
Total		139,182	32,256	42,251	64,675	286,206	218,700	-117.42
							67,506	

Table A-VI-41 Costs/Benefits and IRR - Shadow Price
(Inland Terminal - Excluding Rice/Cotton)

IRR = 4.0%

(Unit: '000 US\$)

No.	Fiscal Year	Costs			Benefits			Present Value (Discount Rate = 4.0%)
		Total	Construction	Equipment	Operation/ Maintenance	Total	Reduction in Transport Cost	
1	1983/'84	694	694					-694.
2	'84/'85	4,127	4,127					-3968.27
3	'85/'86	14,570	14,570					-13470.78
4	'86/'87	44,078	7,227	36,871				-39185.18
5	'87/'88	907			907		3,012	3481.62
6	'88/'89	1,314			1,314		3,219	3440.59
7	'89/'90	1,865			1,865		3,452	3369.90
8	'90/'91	2,319			2,319		3,694	3346.68
9	'91/'92	2,319			2,319		3,694	3217.96
10	'92/'93	2,319			2,319		3,694	3094.19
11	'93/'94	2,319			2,319		3,694	2975.18
12	'94/'95	2,319			2,319		3,694	2860.75
13	'95/'96	2,319			2,319		3,694	2750.73
14	'96/'97	2,319			2,319		3,694	2644.93
15	'97/'98	2,319			2,319		3,694	2445.38
16	'98/'99	2,319			2,319		3,694	2351.33
17	'99/2000	2,319			2,319		3,694	2260.90
18	2000/'1	2,319			2,319		3,694	2173.94
19	'1/'2	2,319			2,319		3,694	2090.33
20	'2/'3	2,319			2,319		3,694	2009.93
21	'3/'4	2,319			2,319		3,694	1932.62
22	'4/'5	2,319			2,319		3,694	1858.29
23	'5/'6	2,319			2,319		3,694	1786.82
24	'6/'7	2,319			2,319		3,694	1718.09
25	'7/'8	2,319			2,319		3,694	1652.01
26	'8/'9	2,319			2,319		3,694	1588.48
27	'9/'10	2,319			2,319		3,694	
Total		113,955	26,618	36,871	50,466	151,069	83,563	275.62

Table A-VI-42 Costs/Benefits and IRR - Shadow Price
(Karachi Port + Inland Terminal - Excluding Rice/Cotton)
IRR = 11.5%

(Unit: '000 US\$)

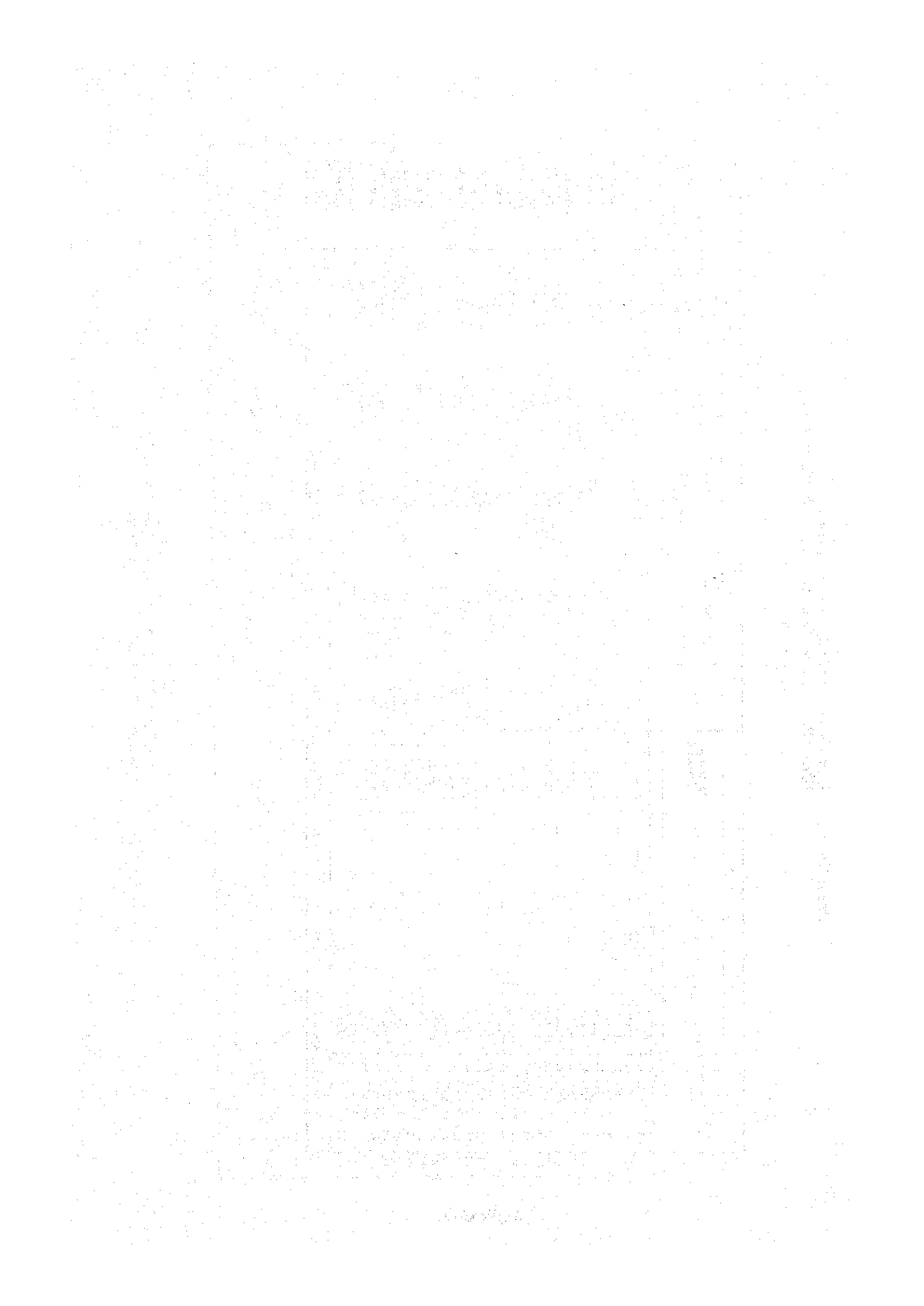
No.	Fiscal Year	Costs				Benefits				Present Value (Discount Rate = 11.5%)	
		Total	Construction	Equipment	Operation/Maintenance	Total	Reduction in Ships' Staying Cost	Reduction in Cargo Handling Cost	Reduction in Time Cost		Reduction in Transport Cost
1	1982/'83	1,181	1,181								-1181.
2	'83/'84	8,496	8,496								-7619.73
3	'84/'85	26,914	26,914								-21548.54
4	'85/'86	45,543	45,543								-32854.66
5	'86/'87	92,796	22,223	70,573							-60038.49
6	'87/'88	2,187			2,187						5809.60
7	'88/'89	3,475			3,475						7223.90
8	'89/'90	5,284			5,284						11633.52
9	'90/'91	6,741			6,741						14447.08
10	'91/'92	6,741			6,741						10266.44
11	'92/'93	6,741			6,741						9207.57
12	'93/'94	6,741			6,741						8257.91
13	'94/'95	6,741			6,741						7406.20
14	'95/'96	6,741			6,741						6642.33
15	'96/'97	6,741			6,741						5957.25
16	'97/'98	6,741			6,741						4791.77
17	'98/'99	6,741			6,741						4297.55
18	'99/2000	6,741			6,741						3854.31
19	2000/'01	6,741			6,741						3456.78
20	'01/'02	6,741			6,741						3100.25
21	'02/'03	6,741			6,741						2780.49
22	'03/'04	6,741			6,741						2493.71
23	'04/'05	6,741			6,741						2236.52
24	'05/'06	6,741			6,741						2005.84
25	'06/'07	6,741			6,741						1798.96
26	'07/'08	6,741			6,741						1613.42
27	'08/'09	6,741			6,741						1447.01
28	'09/'10	6,741			6,741						
Total		320,696	104,357	70,573	145,766	741,504	386,705	108,089	163,147	83,563	-271.19

Table A-VI-43

Costs/Benefits and IRR - Shadow Price
(Qasim Port + Inland Terminal - Excluding Rice/Cotton)
IRR = 9.8%

(Unit: '000 US\$)

No.	Fiscal Year	Costs				Benefits					Present Value (Discount Rate = 9.8%)	
		Total	Construction	Equipment	Operation/ Maintenance	Total	Reduction in Ships Staying Cost	Reduction in Cargo Handling Cost	Reduction in Time Cost	Reduction in Transport Cost		
1	1982/'83	1,059	1,059									-1059.
2	'83/'84	7,034	7,034									-6406.19
3	'84/'85	21,622	21,622									-17934.58
4	'85/'86	41,400	41,400									-31274.71
5	'86/'87	97,897	27,324									-67353.48
6	'87/'88	4,859		70,573	4,859							4655.62
7	'88/'89	6,700			6,700							6081.07
8	'89/'90	9,194			9,194							10922.27
9	'90/'91	11,225			11,225							10821.70
10	'91/'92	11,225			11,225							9855.83
11	'92/'93	11,225			11,225							8976.16
12	'93/'94	11,225			11,225							8175.01
13	'94/'95	11,225			11,225							6780.84
14	'95/'96	11,225			11,225							6175.63
15	'96/'97	11,225			11,225							5624.44
16	'97/'98	11,225			11,225							4665.24
17	'98/'99	11,225			11,225							4248.86
18	'99/2000	11,225			11,225							3869.63
19	2000/'1	11,225			11,225							3524.26
20	'1 / '2	11,225			11,225							3209.70
21	'2 / '3	11,225			11,225							2923.23
22	'3 / '4	11,225			11,225							2662.32
23	'4 / '5	11,225			11,225							2424.70
24	'5 / '6	11,225			11,225							2208.29
25	'6 / '7	11,225			11,225							2011.19
26	'7 / '8	11,225			11,225							1837.69
27	'8 / '9	11,225			11,225							167.52
28	'9 / '10	11,225			11,225							
Total		414,090	98,264	70,573	245,253	741,504	386,705	108,089	163,147	63,563		



Appendix VII-1

Table A-VII-1 Long-term Loan (Summary)

(Unit: Million RS)

	Case 1						Case 2						Case 3						Case 4					
	Existing & New Loan F/C Interest 11.6% L/C Mill						Existing & New Loan F/C Interest 2.75% L/C Mill						Existing & New Loan F/C Interest 11.6% L/C Interest 11.6%						Existing & New Loan F/C Interest 2.75% L/C Interest 11.6%					
	Borrow- ing	Interest	Re- payment	Balance	Borrow- ing	Interest	Re- payment	Balance	Borrow- ing	Interest	Re- payment	Balance	Borrow- ing	Interest	Re- payment	Balance	Borrow- ing	Interest	Re- payment	Balance	Borrow- ing	Interest	Re- payment	Balance
1977 - 78	33			353		33		353		33		353		33		353		33		353		33		353
1978 - 79	121	29	26	448	121	29	26	448	121	29	26	448	121	29	26	448	121	29	26	448	121	29	26	448
1979 - 80	61	36	31	478	61	36	31	478	61	36	31	478	61	36	31	478	61	36	31	478	61	36	31	478
1980 - 81	81	34	27	532	81	34	27	532	81	34	27	532	81	34	27	532	81	34	27	532	81	34	27	532
1981 - 82	9	35	26	515	9	35	26	515	9	35	26	515	9	35	26	515	9	35	26	515	9	35	26	515
1982 - 83	9	34	24	500	9	33	24	500	12	34	24	503	12	34	24	503	12	33	24	503	12	33	24	503
1983 - 84	51	36	28	523	51	33	28	523	84	38	28	559	84	38	28	559	84	35	28	559	84	35	28	559
1984 - 85	139	45	29	633	139	33	29	633	250	56	29	780	250	56	29	780	250	44	29	780	250	44	29	780
1985 - 86	130	58	33	730	130	35	33	730	349	88	33	1,096	349	88	33	1,096	349	65	33	1,096	349	65	33	1,096
1986 - 87	386	86	34	1,082	386	40	34	1,082	632	143	34	1,694	632	143	34	1,694	632	97	34	1,694	632	97	34	1,694
1987 - 88		106	70	1,012		43	34	1,048		177	101	1,593		177	101	1,593		114	65	1,629		114	65	1,629
1988 - 89		100	71	941		41	35	1,013		167	102	1,491		167	102	1,491		108	66	1,563		108	66	1,563
1989 - 90		94	59	882		39	23	990		158	90	1,401		158	90	1,401		103	54	1,509		103	54	1,509
1990 - 91		87	53	829		37	17	973		147	84	1,317		147	84	1,317		97	48	1,461		97	48	1,461
1991 - 92		83	53	776		36	17	956		140	84	1,233		140	84	1,233		93	48	1,413		93	48	1,413
1992 - 93		77	53	723		35	53	903		130	84	1,149		130	84	1,149		88	84	1,329		88	84	1,329
1993 - 94		72	53	670		33	53	850		122	84	1,065		122	84	1,065		83	84	1,245		83	84	1,245
1994 - 95		67	53	617		31	53	797		113	84	981		113	84	981		77	84	1,161		77	84	1,161
1995 - 96		62	53	564		29	53	744		105	84	897		105	84	897		72	84	1,077		72	84	1,077
1996 - 97		56	53	511		27	53	691		95	84	813		95	84	813		66	84	993		66	84	993
1997 - 98		51	53	458		25	53	638		87	84	729		87	84	729		61	84	909		61	84	909
1998 - 99		46	49	409		23	49	589		78	80	649		78	80	649		55	80	829		55	80	829
1999-2000		41	45	364		21	45	544		69	76	573		69	76	573		49	76	753		49	76	753
2000 - 01		37	45	319		20	45	499		62	76	497		62	76	497		45	76	677		45	76	677
2001 - 02		32	45	274		18	45	454		53	76	421		53	76	421		39	76	601		39	76	601

- to be continued -

	Case 1				Case 2				Case 3				Case 4			
	Borrowing	Interest	Re-payment	Balance	Borrowing	Interest	Re-payment	Balance	Borrowing	Interest	Re-payment	Balance	Borrowing	Interest	Re-payment	Balance
2002 - 03		28	45	229		17	45	409		46	76	345		35	76	525
2003 - 04		24	41	188		16	41	368		55	72	273		30	72	453
2004 - 05		18	41	147		14	41	327		52	72	201		25	72	381
2005 - 06		14	41	106		13	41	286		48	72	129		20	72	309
2006 - 07																
2011 - 12																

Table A-VII-2 Long-term Loan

(Unit: Million RS)

	Existing Loan (Foreign Loan)						New Loan (F/C)						New Loan (L/C)							
	Interest 11.6%			Interest 2.75%			Interest 11.6%			Interest 2.75%			Interest 11.6%			Interest rate 11.6%				
	Borrowing	Re-payment	Balance	Borrowing	Interest	Re-payment	Balance	Borrowing	Interest	Re-payment	Balance	Borrowing	Interest	Re-payment	Balance	Borrowing	Interest	Re-payment	Balance	
1977 - 78		33	353																	
1978 - 79	121	29	448																	
1979 - 80	61	31	478																	
1980 - 81	81	34	532																	
1981 - 82	9	35	515																	
1982 - 83		33	491	9	1		9													3
1983 - 84		32	463	51	4		60	51												36
1984 - 85		30	434	139	15		199	139	3											147
1985 - 86		28	401	130	30		329	130	7											366
1986 - 87		25	367	386	61		715	386	15											612
1987 - 88		23	333		83		679		20											581
1988 - 89		21	298		79		643		20											550
1989 - 90		19	275		75		607		20											519
1990 - 91		17	258		70		571		20											488
1991 - 92		16	241		67		535		20											457
1992 - 93		15	224		62		499		20											426
1993 - 94		14	207		58		463		19											395
1994 - 95		13	190		54		427		18											364
1995 - 96		12	173		50		391		17											333
1996 - 97		11	156		45		355		16											302
1997 - 98		10	139		41		319		15											271
1998 - 99		9	126		37		283		14											240
1999-2000		8	117		33		247		13											209
2000 - 01		8	108		29		211		12											178
2001 - 02		7	99		25		175		11											147

- to be continued -

	Existing Loan (Foreign Loan)						New Loan (F/C)						New Loan (L/C)					
	Interest: 11.6%			Interest: 2.75%			Interest: 11.6%			Interest: 2.75%			Interest: 11.6%					
	Borrow- ing	Interest payment	Re- payment	Balance	Borrow- ing	Interest payment	Re- payment	Balance	Borrow- ing	Interest payment	Re- payment	Balance	Borrow- ing	Interest payment	Re- payment	Balance		
2002 - 03		7	9	90		21	36	139		10	36	319		18	31	116		
2003 - 04		7	5	85		17	103	103		9	283	283		14	↓	85		
2004 - 05		6	5	80		12	67	67		8	247	247		11	↓	54		
2005 - 06		6	5	75		8	31	31		7	211	211		7	↓	23		
2006 - 07						4	31	0			31	0			23	0		
2011 - 12											31	0						

Table A-VII-2(1) Foreign Loan

5th UK Credit

Amount of Repayment: £1,029,506 RS23,173,669 @22.5095
 Interest : 6%
 Principal Repayment
 with interest due : - 1981 Re-payable in Pak RS.
 1/2 Yearly Installment June 1, Dec. 1
 (Assumption)

(Unit: '000)

Year	Borrowing		Interest		Principal Repayment		Balance	
	£	RS	£	RS	£	RS	£	RS
1976-77						1,968	309	8,842
1977-78			18	516	69	1,968	240	6,874
1978-79			13	373	69	1,968	171	4,906
1979-80			9	258	69	1,968	102	2,938
1980-81			5	143	69	1,968	33	970
1981-82			1	29	33	970	0	0

Table A-VII-2(2) Foreign Loan

Dutch Suppliers

Amount of Repayment: Dfls. 6,704,326 RS22,728,332 @3.3901
 Interest : 6%
 Principal Repayment: - 1982 Re-payable in Pak RS
 with interest due 1/2 Yearly Installment June 1, Dec. 1
 (Assumption)

(Unit: '000)

	Borrowing		Interest		Principal Repayment		Balance	
	Dfl	RS	Dfl	RS	Dfl	RS	Dfl	RS
1976-77						2,273	3,184	10,796
1977-78			181	614	670	2,273	2,514	8,523
1978-79			141	478	670	2,273	1,844	6,250
1979-80			101	342	670	2,273	1,174	3,977
1980-81			60	203	670	2,273	504	1,704
1981-82			20	68	504	1,704	0	0

Table A-VII-2(3) Foreign Loan

**IBRD Loan
126-Pak**

Amount of Repayment: \$14,700,754 (RS112,497,131) @ 7.6525%
 Interest : 4.75% @10.0801%
 Principal Repayment: 1960.6.1 - 1980.6.1
 with interest due Repayable in Foreign Exchange
 1/2 Yearly installment 41
 June 1, Dec. 1

(Unit: '000)

Year	Borrowing		Interest		Principal Repayment		Balance	
	\$	RS	\$	RS	\$	RS	\$	RS
1955-56								
1975-76							4,070	41,026
1976-77			182	1,835	948	9,546	3,123	31,480
1977-78			137	1,381	992	9,999	2,131	21,481
1978-79			89	897	1,041	10,493	1,090	10,988
1979-80			39	393	1,090	10,988	0	0

Table A-VII-2(4) Foreign Loan

IBRD Loan
376 Pak (2nd Project)

Amount of Repayment: \$15,777,813 (RS152,300,995) @9.6529
@10.0801

Interest : 5.5%

Principal Repayment: 1969.4.1 - 1989.4.1 Repayable in Foreign
with interest due Exchange

1/2 Yearly installment 41 April 1,
Oct. 1

(Unit: '000)

Year	Borrowing		Interest		Principal Repayment		Balance	
	\$	RS	\$	RS	\$	RS	\$	RS
1970-71			525		505		14,568	
1971-72			646		530		14,038	
1972-73			754		560		13,478	
1973-74			895		590		12,888	
1974-75			1,022		625		12,263	
1975-76			928		631		11,632	
1976-77			923	9,304	635	6,401	10,997	110,851
1977-78			859	8,659	671	6,764	10,326	104,087
1978-79			1,389	14,001	707	7,127	9,619	96,960
1979-80			1,622	16,350	743	7,490	8,876	89,470
1980-81			488	4,919	785	7,913	8,091	81,557
1981-82			445	4,486	830	8,366	7,261	73,191
1982-83			399	4,022	875	8,820	6,386	64,371
1983-84			351	3,538	925	9,324	5,461	55,047
1984-85			300	3,024	975	9,828	4,486	45,219
1985-86			247	2,490	1,030	10,383	3,456	34,836
1986-87			190	1,915	1,088	10,967	2,368	23,869
1987-88			130	1,310	1,148	11,572	1,220	12,297
1988-89			67	675	1,220	12,297	-	0

* Calculation by KPT

Table A-VII-2(5) Foreign Loan

IDA Credit 422 Pak (3rd Project)

Amount of Repayment: \$17,686,000 RS178,276,649 @10.0801
 Interest : 7.25%
 Principal Repayment: 1983.12.1 - 2023.6.1 Repayable in Pak RS.
 with interest due 1/2 Yearly Installment 80 June 1, Dec. 1

(Unit: '000)

Year	Borrowing		Interest		Principal Repayment		Balance	
	\$	RS	\$	RS	\$	RS	\$	RS
1973-74	656		23				656	
1974-75	44		50				700	
1975-76	9,143		211				9,843	99,214
1976-77	3,587	36,157	605	6,098			13,430	135,371
1977-78	1,481	14,938	695	7,006			14,911	150,309
1978-79	839	8,457	755	7,610			15,750	158,766
1979-80	1,381	13,921	805	8,114			17,131	172,687
1980-81	555	5,590	1,262	12,721			17,686	178,277
1981-82			1,282	12,923			17,686	178,277
1982-83			1,282	12,923			17,686	178,277
1983-84			1,274	12,842	442	4,455	17,244	173,822
1984-85			1,241	12,509	442	4,455	16,802	169,367
1985-86			1,210	12,197	442	4,455	16,360	164,912
1986-87			1,178	11,874	442	4,455	15,918	160,457
1987-88			1,120	11,290	442	4,455	15,476	156,002
1988-89			1,114	11,229	442	4,455	15,034	151,547
1989-90			1,082	10,907	442	4,455	14,592	147,092
1990-91			1,050	10,584	442	4,455	14,150	142,637
1991-92			1,018	10,262	442	4,455	13,708	138,182
1992-93			986	9,939	442	4,455	13,266	133,727
1993-94			954	9,616	442	4,455	12,824	129,272
1994-95			922	9,294	442	4,455	12,382	124,817
1995-96			890	8,971	442	4,455	11,940	120,362
1996-97			858	8,649	442	4,455	11,498	115,907

- to be continued -

Year	Borrowing		Interest		Principal Repayment		Balance	
	\$	RS	\$	RS	\$	RS	\$	RS
1997-98			826	8,326	442	4,455	11,056	111,452
1998-99			794	8,004	442	4,455	10,614	106,997
1999- 2000			762	7,681	442	4,455	10,172	102,542
2000-01			729	7,348	442	4,455	9,730	98,087
2001-02			697	7,026	442	4,455	9,288	93,632
2002-03			665	6,703	442	4,455	8,846	89,177
2003-04			633	6,381	442	4,455	8,404	84,722
2004-05			601	6,058	442	4,455	7,962	80,267
2005-06			569	5,736	442	4,455	7,520	75,812
2006-07			537	5,413	442	4,455	7,078	71,357
.							448	4,532
2022-23			24	242	448	4,532	0	0

Table A-VII-2(6) Foreign Loan

IDA Credit 492 Pak (4th Project)

Amount of Repayment: \$16,000,000 RS161,282,000 @10.0801
 Interest : 7.25%
 Principal Repayment: 1979.6.1 - 1998.12.1 Repayable in Pak RS.
 with interest due 1/2 Yearly Installment 40 June 1, Dec. 1

(Unit: '000)

Year	Borrowing		Interest		Principal Repayment		Balance	
	\$	RS	\$	RS	\$	RS	\$	RS
1976-77	1,746	17,600	99	998			1,746	17,600
1977-78	4,399	44,342	341	3,437			6,145	61,942
1978-79	7,423	74,825	565	5,695	400	4,032	13,168	132,735
1979-80	-		940	6,492	800	8,064	12,368	124,671
1980-81	1,571	15,836	939	9,465	800	8,064	13,139	132,443
1981-82	861	8,679	969	9,768	800	8,064	13,200	133,058
1982-83			943	9,506	800	8,064	12,400	124,994
1983-84			885	8,921	800	8,064	11,600	116,930
1984-85			827	8,336	800	8,064	10,800	108,866
1985-86			769	7,752	800	8,064	10,000	100,802
1986-87			711	7,167	800	8,064	9,200	92,738
1987-88			653	6,582	800	8,064	8,400	84,674
1988-89			595	5,998	800	8,064	7,600	76,610
1989-90			537	5,413	800	8,064	6,800	68,546
1990-91			479	4,828	800	8,064	6,000	60,482
1991-92			421	4,244	800	8,064	5,200	52,418
1992-93			363	3,659	800	8,064	4,400	44,354
1993-94			305	3,074	800	8,064	3,600	36,290
1994-95			247	2,490	800	8,064	2,800	28,226
1995-96			189	1,905	800	8,064	2,000	20,162
1996-97			131	1,320	800	8,064	1,200	12,098
1997-98			73	736	800	8,064	400	4,034
1998-99			15	151	400	4,034	0	0

Year	Borrowing		Interest		Principal Repayment		Balance	
	Dfl	RS	Dfl	RS	Dfl	RS	Dfl	RS
2002-03			30	145	113	545	1,131	5,465
2003-04			28	135	113	545	1,018	4,920
2004-05			25	121	113	545	905	4,375
2005-06			22	106	113	545	792	3,830
2006-07			19	92	113	545	679	3,285
⋮								
2012-13			4	19	114	560	0	0

Table A-VII-2(8) Foreign Loan

French Credit 1976-77 4th Project

Amount of Repayment: F.F. 57,400,000 RS132,680,100 @2.3115
 State Credit: F.F. 28,700,000 Interest: 3%, grace 7, repayment 18 years
 Bank Credit : F.F. 28,700,000 Interest: 8.80% repayment 10 years
 Yearly Installment Repayable in Pak RS.

(Unit: '000F.F.)

Year	Borrowings			Interest			Principal Repayment			Balance		
	State	Bank	Total	State	Bank	Total	State	Bank	Total	State	Bank	Total
1978 - 79	8,250	8,250	16,500	23	66	89				8,250	8,250	16,500
1979 - 80	10,220	10,220	20,440	401	1,176	1,577				18,470	18,470	36,940
1980 - 81	10,230	10,230	20,460	708	2,075	2,783		2,870	2,870	28,700	25,830	54,530
1981 - 82				861	2,273	3,134		2,870	2,870	28,700	22,960	51,660
1982 - 83				861	2,020	2,881		2,870	2,870	28,700	20,090	48,790
1983 - 84				861	1,768	2,629		2,870	2,870	28,700	17,220	45,920
1984 - 85				861	1,515	2,376		2,870	2,870	28,700	14,350	43,050
1985 - 86				861	1,263	2,124		2,870	2,870	27,106	11,480	38,586
1986 - 87				813	1,010	1,823		2,870	2,870	25,512	8,610	34,122
1987 - 88				765	758	1,523		2,870	2,870	23,918	5,740	29,658
1988 - 89				718	505	1,223		2,870	2,870	22,324	2,870	25,194
1989 - 90				670	253	923		2,870	2,870	20,730	0	20,730
1990 - 91				622		622		1,594	1,594	19,136		19,136
1991 - 92				574		574		1,594	1,594	17,542		17,542
1992 - 93				526		526		1,594	1,594	15,948		15,948
1993 - 94				478		478		1,594	1,594	14,354		14,354
1994 - 95				431		431		1,594	1,594	12,760		12,760

- to be continued -

Year	Borrowings			Interest		Principal Repayment			Balance			
	State	Bank	Total	State	Bank	Total	State	Bank	Total	State	Bank	Total
1995 - 96				383		383	1,594		1,594	11,166		11,166
1996 - 97				335		335	1,594		1,594	9,572		9,572
1997 - 98				287		287	1,594		1,594	7,978		7,978
1998 - 99				239		239	1,594		1,594	6,384		6,384
1999-2000				192		192	1,594		1,594	4,790		4,790
2000 - 01				144		144	1,594		1,594	3,196		3,196
2001 - 02				96		96	1,594		1,594	1,602		1,602
2002 - 03				48		48	1,602		1,602	0		0

- to be continued -

(Unit: '000RS)

Year	Borrowings	Interest	Principal Repayment	Balance
1978 - 79	38,140	206		38,140
1979 - 80	47,247	3,645		85,387
1980 - 81	47,293	6,433	6,634	126,046
1981 - 82		7,244	6,634	119,412
1982 - 83		6,659	6,634	112,778
1983 - 84		6,077	6,634	106,144
1984 - 85		5,492	6,634	99,510
1985 - 86		4,910	10,319	89,191
1986 - 87		4,214	10,319	78,872
1987 - 88		3,520	10,319	68,553
1988 - 89		2,827	10,319	58,234
1989 - 90		2,134	10,319	47,915
1990 - 91		1,438	3,685	44,230
1991 - 92		1,327	3,685	40,545
1992 - 93		1,216	3,685	36,860
1993 - 94		1,105	3,685	33,175
1994 - 95		996	3,685	29,490
1995 - 96		885	3,685	25,805
1996 - 97		774	3,685	22,120
1997 - 98		663	3,685	18,435
1998 - 99		552	3,685	14,750
1999-2000		444	3,685	11,065
2000 - 01		333	3,685	7,380
2001 - 02		222	3,685	3,695
2002 - 03		111	3,695	0

Table A-VII-2(9) Foreign Loan/Container Project

Year	Case 1 (F/C)				Case 2 (F/C)			
	Interest: 11.6% Grace 5 years Repayment 20 years, Annually				Interest: 2.75% Grace 10 years Repayment 20 years			
	(Unit: '000 US\$)				(Unit: '000 US\$)			
	Borrowing	Interest	Repayment	Balance	Borrowing	Interest	Repayment	Balance
1982 - 83	922	53		922	922	13		922
1983 - 84	5,193	408		6,115	5,193	97		6,115
1984 - 85	14,016	1,522		20,131	14,016	361		20,131
1985 - 86	13,082	3,094		33,213	13,082	733		33,213
1986 - 87	38,960	6,112		72,173	38,960	1,449		72,173
1987 - 88		8,372	3,609	68,564		1,985		72,173
1988 - 89		7,953		64,955		1,985		72,173
1989 - 90		7,535		61,346		1,985		72,173
1990 - 91		7,116		57,737		1,985		72,173
1991 - 92		6,697		54,128		1,985		72,173
1992 - 93		6,279		50,519		1,985	3,609	68,564
1993 - 94		5,860		46,910		1,886		64,955
1994 - 95		5,442		43,301		1,786		61,346
1995 - 96		5,023		39,692		1,687		57,737
1996 - 97		4,604		36,083		1,585		54,128
1997 - 98		4,186		32,474		1,489		50,519
1998 - 99		3,767		28,865		1,389		46,910
1999-2000		3,348		25,256		1,290		43,301
2000 - 01		2,930		21,647		1,191		39,692
2001 - 02		2,511		18,038		1,092		36,083
2002 - 03		2,092		14,429		992		32,474
2003 - 04		1,674		10,820		893		28,865
2004 - 05		1,255		7,211		794		25,256
2005 - 06		836		3,602		695		21,647
2006 - 07		418	3,602	0		595		18,038
2007 - 08						496		14,429
2008 - 09						397		10,820
2009 - 10						298		7,211
2010 - 11						198		3,602
2011 - 12						99	3,602	0

Table A-VII-2(10) Local Loan/Container Project

Year	Interest 11.6% Grace 5 years Repayment 20 years, Annually			
	(Unit: '000US\$)			
	Borrowing	Interest	Repayment	Balance
1982 - 83	305	18		305
1983 - 84	3,249	224		3,554
1984 - 85	11,211	1,063		14,765
1985 - 86	22,154	2,998		36,919
1986 - 87	24,906	5,727		61,825
1987 - 88		7,172	3,091	58,734
1988 - 89		6,813		55,643
1989 - 90		6,455		52,552
1990 - 91		6,096		49,461
1991 - 92		5,737		46,370
1992 - 93		5,379		43,279
1993 - 94		5,020		40,188
1994 - 95		4,662		37,097
1995 - 96		4,303		34,006
1996 - 97		3,945		30,915
1997 - 98		3,586		27,824
1998 - 99		3,228		24,733
1999-2000		2,869		21,642
2000 - 01		2,510		18,551
2001 - 02		2,152		15,460
2002 - 03		1,793		12,369
2003 - 04		1,435		9,278
2004 - 05		1,076		6,187
2005 - 06		718		3,096
2006 - 07		359	3,096	0

Table A-VII-3 Capital Expenditure (Existing)

3rd Project

(Unit: '000 RS)

Latest Estimate (1980 - 81)	Expenditure		Estimated Expenditure	
	Up to June 1979	For 1979-80	For 1980-81	For 1981-82
444,621	340,174	91,020	13,000	427

(Foreign Loan IDA Credit 422: 178,277)

4th Project

(Unit: '000 RS)

Latest Estimate (1980 - 81)	Expenditure		Estimated Expenditure	
	Up to June 1979	For 1979-80	For 1980-81	For 1981-82
327,331	163,291	114,517	41,000	8,523

(Foreign Loan IDA Credit 492: 161,282, French Credit 1977-78: 132,680, 15th N.I Bank Loan 12,550 Total 306,512)

Chief Engineer Dept.

(Unit: '000 RS)

Latest Estimate (1980 - 81)	Expenditure Up to June 1979	Estimated Expenditure			
		For 1979-80	For 1980-81	For 1981-82	For 1982-83
177,647	10,116	16,866	26,930	114,428	9,307

Construction Dept.

(Unit: '000 RS)

Latest Estimate (1980 - 81)	Expenditure Up to June 1979	Estimated Expenditure			
		For 1979-80	For 1980-81	For 1981-82	For 1982-83
198,600	-	11,110	33,700	114,100	39,690

(Excluding 3rd, 4th and 5th project)

Mechanical & Electrical Dept.

(Unit: '000 RS)

Latest Estimate		Expenditure		Estiamted Expenditure			
1980 - 81	Up to June 1979	For 1979-80	For 1980-81	For 1981-82	For 1982-83		
163,006	51,469	29,939	44,370	37,228	-		

Table A-VII-4 Finance Schedule

(Unit: 1,000 US\$)

Item	1982-82		1983-83		1984-85		1985-86		1986-87		Total							
	L/C	F/C sub-total	L/C	F/C sub-total	L/C	F/C sub-total	L/C	F/C sub-total	L/C	F/C sub-total	L/C	F/C total						
Container Berth	1,389	1,120	2,509	5,557	4,481	10,038	2,778	2,240	5,018			9,724	7,841	17,565				
Reclamation	308	794	1,102	1,234	3,175	4,409	617	1,588	2,205			2,159	5,557	7,716				
Slope Protection & Retaining Wall				769	345	1,114	1,538	691	2,229			2,307	1,036	3,343				
Access Railway & Road				1,010	612	1,622	2,022	1,225	3,247	1,011	613	1,624	4,043	2,450	6,493			
Container Terminal							5,533	1,383	6,916	4,149	1,038	5,187	9,682	2,421	12,103			
Pavement							2,683	671	3,354	1,341	335	1,676	4,024	1,006	5,030			
CFS							1,234	309	1,543	617	154	771	1,851	463	2,314			
Other Buildings							166	218	384	166	219	385	332	437	769			
Railway							1,042	635	1,677	1,043	635	1,678	2,085	1,270	3,355			
Foundation							1,134	428	1,562	1,134	429	1,563	2,268	857	3,125			
Utilities																		
Sub-total(1)				1,697	1,914	3,611	8,570	8,613	17,183	18,747	9,461	3,423	12,884	38,475	23,338	61,813		
Preliminary&Temporary Works				661	255	916							661	255	916			
Dredging				309	794	1,103	1,235	3,175	4,410	618	1,587	2,205	2,162	5,556	7,718			
Transportation of																		
Constr. Equip.&Craft																		
Sub-total(2)				970	2,002	2,972	1,235	3,175	4,410	618	1,587	2,205	2,823	7,716	10,539			
Total[(1) + (2)]				2,667	3,916	6,583	9,805	11,788	21,593	19,365	10,975	30,340	9,461	4,375	13,836	41,298	31,054	72,352
Equip., etc.																		
Sub-total(3)													14,012	31,875	45,887	14,012	31,875	45,887
Engineering				230	690	920	154	460	614	154	460	614	997	2,992	3,989			
Physical																		
Contingency				352	587	939	1,252	1,768	3,020	2,635	1,647	4,282	1,279	2,250	3,529	5,518	6,252	11,770
Sub-total(5)				3,249	5,193	8,442	11,211	14,016	25,227	22,154	13,082	35,236	24,906	38,960	63,866	61,825	72,173	133,998
Grand Total																		
(1) - (5)																		

Table A-VII-5 Fixed Assets

	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-1990	1990-91	1991-92 1995-96	1996-97 2005-06
Fixed Assets at Beginning Year	1,157	1,321	1,546	1,664	1,894	1,876	1,876	1,876	2,042	2,307	2,855	2,710	2,565	2,420	2,275	1,550
Land	15	15	15	15	15	15	15	15	15	15	15	124	124	124	124	124
Assets to be depreciated	999	1,035	1,066	1,116	1,236	2,148	2,295	2,295	2,295	2,295	2,295	3,513	3,513	3,513	3,513	3,513
Cost	203	242	281	322	367	446	530	614	698	782	782	927	1,072	1,217	1,362	2,087
Depreciation	796	793	785	794	869	1,702	1,765	1,681	1,597	1,513	1,513	2,586	2,441	2,296	2,154	1,426
Written down value	346	513	746	855	1,010	159	96	346	695	1,327	1,327					
Work in Progress	203	264	159	275	61	84	250	349	632							
Investment																
Existing Facilities	203	264	159	275	49	84	250	349	632							
Container Terminal					12	84	250	349	632	109						
Land																
Assets to be depreciated	36	31	50	120	912	147				1,218						
Work in Progress	203	264	159	275	61	84	250	349	632							
Depreciation	39	39	41	45	79	84	84	84	84	84	145	145	145	145	725	1,367
Fixed Assets at End of year	1,157	1,321	1,546	1,664	1,894	1,876	1,876	2,042	2,307	2,855	2,710	2,565	2,420	2,275	1,550	183
Land	15	15	15	15	15	15	15	15	15	15	124	124	124	124	124	124
Assets to be depreciated	999	1,035	1,066	1,116	1,236	2,148	2,295	2,295	2,295	2,295	3,513	3,513	3,513	3,513	3,513	3,513
Cost	203	242	281	322	367	446	530	614	698	782	782	927	1,072	1,217	1,362	2,087
Depreciation	796	793	785	794	869	1,702	1,765	1,681	1,597	1,513	1,513	2,586	2,441	2,296	2,151	1,426
Written down value	346	513	746	855	1,010	159	96	346	695	1,327	1,327					
Work in Progress																

Table A-VII-6 Service Life of Fixed Assets

Items	Service Life (Years)
Container Berth	33
Slope Protection & Retaining Wall	33
Access Railway & Road	33
Container Terminal	
Pavement	33
CFS	33
Other Building	33
Railway	33
Foundation	33
Utilities	20
Container Cranes	15
Rail-mounted Transfer Cranes	12
Rubber-tired Transfer Cranes	12
Tractors	10
Chassis	10
Weighing Scales	20
Fork Lift Trucks	10
Pallets	3
Mobile Cranes	15
Top Lifter	10
Computer	10
VHF	20
Buoy	20

Table A-VII-7 Cargo Forecast

With

(Unit: '000t)

Year	Bulk			General Cargo			CNR	Crude (imp) (exp)	Residual Liquid (imp)	Residual Liquid (exp)	Total						
	Wheat	Fice	Ferti. Phos.	Total		Along-side Berth											
				Cement	Other Cargo												
1981-82	280	1,400	1,490	3,170	2,770	400	300	3,520	3,820	3,537	283	4,398	1,013	260	150	12,811	
1982-83	250	1,500	1,449	3,199	2,874	325	150	3,189	3,339	3,108	231	4,556	1,099	273		12,616	
1983-84	180	1,575	2,078	3,833	3,581	252	150	3,339	3,489	3,310	179	4,746	1,160	288		13,666	
1984-85	-	1,650	570	2,220	2,099	121	150	3,499	3,649	3,563	86	5,029	1,127	212		12,387	
1985-86	-	1,720	570	2,290	2,215	75	-	3,537	3,537	3,483	54	5,358	1,090	335		12,760	
1986-87	-	1,790	570	2,360	2,303	57	-	3,751	3,751	3,710	41	5,687	1,053	357		13,358	
1987-88	-	1,799	570	2,369	2,322	47	-	3,466	3,466	3,433	33	6,015	1,017	380		13,956	
1988-89	-	1,824	570	2,394	2,354	40	-	3,351	3,351	3,323	28	6,344	980	402		14,593	
1989-90	-	1,839	570	2,409	2,373	36	-	3,197	3,197	3,171	26	6,673	943	425		15,318	
1990-91	-	1,860	570	2,430	2,395	35	-	3,060	3,060	3,036	24	6,994	899	454		15,987	
1991-92												7,314	855	438		16,292	
1992-93												7,635	812	512		16,599	
1993-94												7,955	768	541		16,904	
1994-95												8,276	724	570		17,210	
1995-96												8,322	678	607		17,247	
1996-97												8,368	632	644		17,284	
1997-98												8,415	585	681		17,321	
1998-99												8,461	539	718		17,358	
1999-2000												8,507	493	755		17,395	
2000-01																	
2001-02																	
2002-03																	
2003-04																	
2004-05																	
2005-06																	

Table A-VII-8 Cargo Forecast

(Unit: '000t)

Year	Bulk		General Cargo			Crude (imp) (exp)	Residual Liquid (imp)	Residual Liquid (exp)	Total								
	Wheat	Ferti. Phos.	Total	Cement	Other					Total							
	Rice	Along-side Berth	Along-side Berth	Along-side Berth	Barge					Barge							
1981-82	280	1,400	1,490	3,170	2,770	400	300	3,520	3,820	3,537	283	4,398	1,013	260	150	12,811	
1982-83	250	1,500	1,449	3,199	2,874	325	150	3,189	3,339	3,108	231	4,556	1,099	273		12,616	
1983-84	180	1,575	2,078	3,833	3,581	252	150	3,339	3,489	3,310	179	4,746	1,160	288		13,666	
1984-85	-	1,650	570	2,220	2,099	121	150	3,499	3,649	3,563	86	5,029	1,127	212		12,387	
1985-86	-	1,720	570	2,290	2,215	75	-	3,537	3,537	3,483	54	5,358	1,090	335		12,760	
1986-87	-	1,790	570	2,360	2,303	57	-	3,751	3,751	3,710	41	5,687	1,053	357		13,358	
1987-88	-	1,860	570	2,430	2,383	47	-	3,964	3,964	3,931	33	6,015	1,017	380		13,956	
1988-89	-	1,768	522	2,290	2,244	46	-	4,069	4,069	4,036	33	6,344	980	402		14,235	
1989-90	-	1,711	488	2,199	2,153	46	-	4,294	4,294	4,261	33	6,673	943	425		14,684	
1990-91	-	1,769	490	2,259	2,213	46	-	4,597	4,597	4,564	33	6,994	899	454		15,353	
1991-92												7,314	855	483		15,658	
1992-93												7,635	812	512		15,965	
1993-94												7,955	768	541		16,270	
1994-95												8,276	724	570		16,576	
1995-96												8,322	678	607		16,613	
1996-97												8,368	632	644		16,650	
1997-98												8,415	585	681		16,687	
1998-99												8,461	539	718		16,724	
1999-2000												8,507	493	755		16,761	
2000-01																	
2001-02																	
2002-03																	
2003-04																	
2004-05																	
2005-06																	

Table A-VII-9 Container Forecast for New Terminal

	Units														
	TEU						Transshipment						Total		
	FCL		LCL		Empty		FCL		LCL		Empty				
	20'	40'	20'	40'	Sub-total	20'	40'	Sub-total	20'	40'	Sub-total	20'	40'	Sub-total	
1987 - 88															
Imp.	21,480	8,964	1,691	10,740	5,370	16,110	4,482	2,241	6,723	845	423	845	423	1,268	25,369
Exp.	17,256	6,653	1,691	8,628	4,314	12,942	4,327	2,163	6,490	845	423	845	423	1,268	25,369
Total	38,736	15,617	3,382	19,368	9,684	29,052	8,809	4,404	13,213	1,690	846	1,690	846	2,536	50,738
1988 - 89															
Imp.	37,707	15,737	2,969	18,653	9,437	28,280	7,669	3,934	11,603	1,485	742	1,485	742	2,227	44,537
Exp.	29,728	14,908	2,969	14,864	7,432	22,296	7,454	3,727	11,181	1,485	742	1,485	742	2,227	44,537
Total	67,435	30,645	5,938	33,517	16,869	50,576	15,333	7,661	22,984	2,970	1,484	2,970	1,484	4,454	89,074
1989 - 90															
Imp.	40,834	25,388	4,790	30,418	15,208	45,626	12,694	6,347	19,041	2,396	1,197	2,396	1,197	3,593	71,853
Exp.	45,106	22,621	4,790	22,554	11,276	33,830	11,311	5,655	16,966	2,396	1,197	2,396	1,197	3,593	71,853
Total	105,940	48,009	9,580	52,972	26,484	79,456	24,005	12,002	36,007	4,792	2,394	4,792	2,394	7,186	143,706
1990 - 91															
Imp.	60,355	33,534	6,327	40,177	20,089	60,266	16,768	8,383	25,151	3,163	1,582	3,163	1,582	4,745	94,907
Exp.	59,032	29,604	6,327	29,516	14,769	44,274	14,802	7,401	22,203	3,163	1,582	3,163	1,582	4,745	94,907
Total	139,387	63,138	12,654	69,693	34,847	104,540	31,570	15,784	47,354	6,326	3,164	6,326	3,164	9,490	189,814
1991-92 to 2005-06															
Imp.	1,205,325	503,010	94,905	602,655	301,335	903,990	251,520	125,745	377,265	47,445	23,730	47,445	23,730	71,175	1,423,605
Exp.	885,480	444,060	94,905	442,740	221,370	664,110	222,030	111,015	333,045	47,445	23,730	47,445	23,730	71,175	1,423,605
Total	2,090,805	947,070	189,810	1,045,395	522,705	1,568,100	473,550	236,760	710,310	94,890	47,460	94,890	47,460	142,350	2,847,210
G. Total	2,442,303	1,106,479	221,364	1,221,345	610,579	1,831,724	553,257	276,611	829,868	110,668	55,348	110,668	55,348	166,015	3,320,542
Imp.	1,405,701	586,633	110,682	702,643	351,429	1,054,272	293,333	146,650	439,983	55,334	27,674	55,334	27,674	83,008	1,660,271
Exp.	1,036,602	519,846	110,682	518,702	259,150	777,452	259,924	129,961	389,885	55,334	27,674	55,334	27,674	83,008	1,660,271

Table A-VII-10(1) Shipping Parameters

		With						Without												
		G. Cargo	Bulk	CNTR	Oil	Total	G. Cargo	Bulk	Oil	Total										
1981-82	(1) No. of Ship	1,031	349	-	253	1,633	1,031	349	253	1,633	(2) Total NRT	3,505	2,094	3,036	8,635	(3) NRT Ship days	22,399	11,316	4,858	38,573
1982-83	(1) No. of Ship	924	359	-	265	1,548	924	359	265	1,548	(2) Total NRT	3,142	2,154	3,180	8,476	(3) NRT Ship days	20,033	11,490	5,088	36,611
1983-84	(1) No. of Ship	967	414	-	276	1,657	967	414	276	1,657	(2) Total NRT	3,288	2,484	3,312	9,084	(3) NRT Ship days	20,961	14,004	5,299	40,264
1984-85	(1) No. of Ship	1,013	298	-	288	1,599	1,013	298	288	1,599	(2) Total NRT	3,444	1,788	3,456	8,688	(3) NRT Ship days	21,950	8,322	5,530	35,802
1985-86	(1) No. of Ship	1,011	309	-	302	1,622	1,011	309	302	1,622	(2) Total NRT	3,437	1,854	3,624	8,915	(3) NRT Ship days	21,865	8,586	5,798	36,249
1986-87	(1) No. of Ship	1,072	319	-	315	1,706	1,072	319	315	1,706	(2) Total NRT	3,645	1,914	3,780	9,339	(3) NRT Ship days	23,188	8,850	6,048	38,086
1987-88	(1) No. of Ship	990	321	157	329	1,797	990	321	329	1,797	(2) Total NRT	3,366	1,926	3,948	11,281	(3) NRT Ship days	21,427	8,880	6,317	38,318
1988-89	(1) No. of Ship	957	325	267	343	1,892	957	325	343	1,892	(2) Total NRT	3,254	1,950	4,116	12,791	(3) NRT Ship days	20,716	8,976	6,586	39,159
				2,881	6,586	39,159														

Table A-VII-10(2) Shipping Parameters

		With						Without			
		G. Cargo	Bulk	CNTR	Oil	Total	G. Cargo	Bulk	Oil	Total	
1989-90	(1) No. of Ship	913	327	417	357	2,014	1,227	301	357	1,885	
	(2) Total NRT	3,104	1,962	5,421	4,284	14,771	4,172	1,806	4,284	10,262	
	(3) NRT ship days	19,764	9,030	4,499	6,854	40,147	26,547	8,262	6,854	41,663	
1990-91	(1) No. of Ship	874	330	527	370	2,101	1,313	310	370	1,993	
	(2) Total NRT	2,972	1,980	6,851	4,440	16,243	4,464	1,860	4,440	10,764	
	(3) NRT Ship days	18,818	9,114	5,686	7,104	40,822	28,407	8,484	7,104	43,995	
1991-92	(1) No. of Ship				383	2,114			383	2,006	
	(2) Total NRT				4,596	16,399			4,596	10,920	
	(3) NRT Ship days				7,354	41,072			7,354	44,245	
1992-93	(1) No. of Ship				396	2,127			396	2,019	
	(2) Total NRT				4,752	16,555			4,752	11,076	
	(3) NRT Ship days				7,603	41,321			7,603	44,494	
1993-94	(1) No. of Ship				410	2,141			410	2,033	
	(2) Total NRT				4,920	16,723			4,920	11,244	
	(3) NRT Ship days				7,872	41,590			7,872	44,763	
1994-95	(1) No. of Ship				423	2,154			423	2,046	
	(2) Total NRT				5,076	16,879			5,076	11,400	
	(3) NRT Ship days				8,122	41,840			8,122	45,013	
1995-96	(1) No. of Ship				425	2,156			425	2,048	
	(2) Total NRT				5,100	16,903			5,100	11,424	
	(3) NRT Ship days				8,160	41,878			8,160	45,051	
1996-97	(1) No. of Ship				426	2,157			426	2,049	
	(2) Total NRT				5,112	16,915			5,112	11,436	
	(3) NRT Ship days				8,179	41,897			8,179	45,070	

Table A-VII-10(3) Shipping Parameters

	With						Without			
	G. Cargo	Bulk	CNTR	Oil	Total	G. Cargo	Bulk	Oil	Total	
1997-98										
(1) No. of Ship	874	330	527	428	2,159	1,313	310	428	2,051	
(2) Total NRT	2,972	1,980	6,851	5,136	16,939	4,464	1,860	5,136	11,460	
(3) NRT Ship days	18,918	9,114	5,686	8,218	41,936	28,407	8,484	8,218	45,109	
1998-99										
(1) No. of Ship				429	2,160			429	2,052	
(2) Total NRT				5,148	16,951			5,148	11,472	
(3) NRT Ship days				8,237	41,955			8,237	45,128	
1999-2000										
(1) No. of Ship				431	2,162			431	2,054	
(2) Total NRT				5,172	16,975			5,172	11,496	
(3) NRT Ship days				8,275	41,993			8,275	45,166	
2005-06										
(1) No. of Ship										
(2) Total NRT										
(3) NRT Ship days										

Table A-VII-11 Karachi Port Operating Expenses/Existing Facilities

(*000 Rs)

Item	Cost	Cargo Volume ('000t)	Direct Cost									Indirect Cost			Ad- mi- ni- stra- tion	Total						
			Labour			Material E			Maintenance			Labour	Main- tenance	Out- side R&M		F	F	F	F	(V)	RS/ unit	F
			(V)	F	RS/ unit	(V)	F	RS/ unit	(V)	F	RS/ unit											
(1) Cargo handling																						
Dry cargo																						
Along side G. cargo	3,846	25,703	6.68	-	38,883	10.11	-	3,003	0.78	1,440	0.37	9,017	2.34							78,046	20.29	
Bulk	2,752	8,319	3.02	-	12,584	4.57	-	974	0.35	467	0.17	2,926	1.06							25,270	9.18	
Sub-total	6,598	34,022	5.16	-	51,467	7.80	-	3,977	0.60	1,907	0.29	11,943	1.81							103,316	15.66	
Abreast G. cargo																						
Bulk	175	3,596	2.055	-	2,231	12.75	-	148	0.85	74	0.42	1,730	9.89							7,779	44.45	
Sub-total	421	7,028	16.69	-	4,361	10.36	-	290	0.69	145	0.34	3,379	8.03							15,203	36.11	
Oil cargo																						
Along side oil	6,300	838	0.13	-	1,139	0.18	-	-	-	-	-	-	-							1,977	0.31	
Total	13,319	41,888			56,967			4,267	2,052	15,322		25,158	11,967	11,458						120,496	48,583	
Head Office				1,174		187						43,387	5,061	4,340	9,912						64,061	
Grand Total		41,888		1,174	56,967		187	4,267	2,052	15,322		68,545	17,028	15,798	9,912					120,496	112,644	
(2) Cargo Storage																						
G. cargo (im-port)																						
Head Office				597		111						21,731	2,884	1,581	4,412						31,316	
Total	2,437	22,559	9.26	-	2,776	1.14	-	411	0.17	193	0.08	154	0.06	1,030	494	1,004				26,093	10.70	
Head Office				597		111						21,731	2,884	1,581	4,412						31,316	
Total		22,559		597	2,776		111	411	193	154		22,761	3,378	2,585	4,412					26,093	33,844	
(3) Shipmovement & Services																						
Pilotage (ships)																						
Shipping Tugs (T.N.)	8,683.4	6,011	0.69	-	5,100	0.59	-	3,480	0.40	1,734	0.20	3,428	0.39							19,753	2.27	
Water supply (T.N.Kt)	8,683.4	1,149	0.13	-	134	0.02	-	-	-	-	-	-	-							1,283	0.15	
Water supply 2 Sanitation	8,683.4	610	0.07	-	95	0.01	-	594	0.07	712	0.08	112	0.01							2,123	0.24	
Others				22,913		9,158															32,071	
Sub-total		12,220		22,913	5,809	9,158		5,525	3,168	3,710		7,399	3,687	10,591						30,432	53,749	
Head Office				362		67						19,135	2,024	1,120	3,848						26,556	
Total		12,220		23,275	5,809	9,225		5,525	3,168	3,710		26,534	5,711	11,711	3,848					30,432	80,304	
(4) Property Management																						
Estate Dept. etc				122		19						2,766	281	1,492	1,953						6,633	
Heas Office				170		32						6,263	825	426	1,241						8,957	
Total				292		51						9,029	1,106	1,918	3,194						15,590	
Grand Total		76,667		25,338	65,552	9,574		10,203	5,413	19,186		126,869	27,223	32,012	21,366					177,021	242,382	

Table A-VII-12 Estimated Staff and Labour Cost

1. Nos. of Estimated Staff

	Variable	Fixed	Total
Administration Section			
General Affairs	20	15	35
Accounts	0	7	7
Claim	0	3	3
Operating Section			
Planning	24	2	26
Yard Control	263	19	282
Documentation	0	16	16
Engineering Section			
Equipment & Facility	52	2	54
Container Repair	29	1	30
Electricity	0	11	11
CFS			
Operation	294	3	297
Documentation	0	11	11
General Affairs	0	13	13
TOTAL	682	103	785

2. Labour Cost

(Unit: '000RS)

	Wage (per year)	No. of Staff			Labour Cost		
		Total	Variable	Fired	Total	Variable	Fired
Assistant Traffic Manager	44	1	0	1	44		44
Superintendent	34	4	0	4	136		136
Assistant Superintendent	22	12	0	12	264		264
Skilled Labour	18	507	421	86	9,126	7,578	1,548
Unskilled Labour	9	261	261	0	2,349	2,349	0
TOTAL		785	682	103	11,919	9,927	1,992

Variable unit cost: $9927/1398 = \text{RS } 7.10/\text{t}$

Table A-VII-13 Material Consumption and Cost

(Unit: RS)

Material	Item	Consumption	Unit Cost	Cost
Fuel	CNTR Handling equipment	267.4kt		
	Terminal Facility	2.0		
	Sub-total	269.4kt	3631/kt	978,191
Water		23,411 kt	5/kt	117,055
Electri- city	CNTR handling equipment	384,395kwh		
	Lighting	575,522		
	Ref. CNTR	1,129,231		
	Terminal Facility	899,183		
	Sub-total	2,988,331 kwh	0.5/kwh	1,494,166
Total				2,589,412

Variable unit cost: $2,589/1,398 = \text{RS } 1.85/\text{t}$

Table A-VII-14 Ratio of Repair and Maintenance for New Investment

Items	Percentage
Container Berth	1 %
Slope Protection & Retaining Wall	0.5%
Access Railway & Road	1 %
Container Terminal Pavement	1 %
CFS & Other Building	3 %
Railway	1 %
Foundation	1 %
Utilities	3 %
Cargo Handling Equipment	4 %

Repair & Maintenance Cost

(Unit: '000RS)

	Capital Cost	Ratio of Repair & Maintenance	Cost
Cargo Handling Equipment	473,220	4%	18,929
Structure	744,381	1%	7,444
Sub-total			
Dredging 1987 - 88			2,020
1988 - 89			3,356
1989 - 90			4,940
1990 - 91			6,178
↓			
2005 - 06			

Appendix VII-2 Tariff on Container

1. Premises

(1) Two cases were assumed where the investment fund in the foreign currency was raised by foreign loan at the interest rate of 11.6% (case A for 20 years after 5 years grace period), or at 2.75% (case B for 20 years after 10 years grace period). The portion in the local currency was assumed to be financed by KPT.

(2) The container tariff is set on the premises that all the cost such as operating cost, interest and depreciation cost are to be recovered. The cost for land acquisition was set as the cost for land and is to be recovered at 11.6%/year.

2. Number of container handled at Port (Unit) 1987-88 to 2005-06.

	20 ft	40 ft
FCL	1,221,145	610,579
LCL	553,257	276,611
Transshipment	110,668	55,348
Empty	328,619	164,315
Storage	220,207	110,094

3. Cost

(Unit: Million Rs)

Case A	4,581
Case B	3,936

4. Tariff Standard

Container 20 ft = 1 per unit is assumed

	20 ft	40 ft
FCL	1	1.5
LCL	1.5	2.25
Transshipment	0.75	1.13
Empty	1	1.5
Storage	0.06	0.12

5. Tariff on Container 20 ft (per unit)

Case A: $4,581,000,000 \div (1,221,145 \times 1 + 610,579 \times 1.5 + 553,257 \times 1.5 + 276,611 \times 2.25 + 110,668 \times 0.75 + 55,348 \times 1.13 + 328,619 \times 1 + 164,315 \times 1.5 + 220,207 \times 0.06 + 110,094 \times 0.12 = 4,336,333) = 1,056 \approx 1,060$ (Rs)

Case B: $3,936,000,000 \div 4,336.333 = 908 \approx 910$ (Rs)

6. Tariff on Container (per unit)

Unit: Rs

	Case A		Case B	
	20 ft	40 ft	20 ft	40 ft
FCL	1,060	1,590	910	1,370
LCL	1,590	2,390	1,370	2,050
Transshipment	800	1,200	690	1,030
Empty	1,060	1,590	910	1,370
Storage	65	130	55	110

7. Container Tariff on Ports of other countries (per unit)

(Unit: RS)

	Singapore Port		Dubai Port	
	20 ft	40 ft	20 ft	40 ft
FCL	950 (S\$200)	1,350 (S\$285)	900 (DH330)	1,360 (DH500)
LCL	1,420 (300)	1,990 (420)	1,390 (510)	2,180 (800)
Transshipment	480 (100)	690 (145)	1,370 (505)	1,910 (705)
Empty	950 (200)	1,350 (285)	490 (180)	680 (250)
Storage	60 (12)	120 (24)		

8. Current Tariff on General Cargo in KPT (per tonne)

(Unit: Rs)

Wharfage	33
Hire of Equipment	6.82
Special night work, etc.	2.96
Total	42.78

Table A-VII-15(1) Foreign Loan

(Unit: 1000 US\$)

	Case 1				Case 2			
	Interest 11.6% Grace 5 years Repayment 20 years, Annually				Interest 2.75% Grace 10 years Repayment 20 years, Annually			
	Borrowing	Interest	Repayment	Balance	Borrowing	Interest	Repayment	Balance
1983-84	540	31		540	540	7		540
1984-85	1456	147		1996	1456	35		1996
1985-86	4609	499		6605	4609	118		6605
1986-87	38739	3013		45344	38739	714		45344
1987-88		5260		45344		1247		45344
1988-89		5260	2267	43077		1247		45344
1989-90		4997	2267	40810		1247		45344
1990-91		4734	2267	38543		1247		45344
1991-92		4471	2267	36276		1247		45344
1992-93		4208	2267	34009		1247		45344
1993-94		3945	2267	31742		1247	2267	43077
1994-95		3682	2267	29475		1185	2267	40810
1995-96		3419	2267	27208		1122	2267	38543
1996-97		3156	2267	24941		1060	2267	36276
1997-98		893	2267	22674		998	2267	34009
1998-99		2630	2267	20407		935	2267	31742
1999-2000		2367	2267	18140		873	2267	29475
2000-01		2104	2267	15873		811	2267	27208
2001-02		1841	2267	13606		748	2267	24941
2002-03		1578	2267	11339		636	2267	22674
2003-04		1315	2267	9072		624	2267	20407
2004-05		1052	2267	6805		561	2267	18140
2005-06		789	2267	4538		499	2267	15873
2006-07		526	2267	2271		437	2267	13606
2007-08		263	2271	0		374	2267	11339
2008-09						312	2267	9072
2009-10						249	2267	6805
2010-11						187	2267	4538
2011-12						125	2267	2271
2012-13						62	2271	0

(Unit: Million RS)

	Case 1				Case 2			
	Interest 11.6% Grace 5 years Repayment 20 years, Annually				Interest 2.75% Grace 10 years Repayment 20 years, Annually			
	Borrowing	Interest	Repayment	Balance	Borrowing	Interest	Repayment	Balance
1983-84	5	-		5	5	-		5
1984-85	14	2		19	14	1		19
1985-86	46	5		65	46	1		65
1986-87	384	30		449	384	7		449
1987-88		52		449		12		449
1988-89		52	22	427		12		449
1989-90		49		405		12		449
1990-91		47		383		12		449
1991-92		44		361		12		449
1992-93		42		339		12		449
1993-94		39		317		12	22	427
1994-95		36		295		12		405
1995-96		34		273		11		383
1996-97		31		251		11		361
1997-98		29		229		10		339
1998-99		26		207		9		317
1999-2000		23		185		9		295
2000-01		21		163		8		273
2001-02		18		141		7		251
2002-03		16		119		7		229
2003-04		13		97		6		207
2004-05		10		75		6		185
2005-06		8		53		5		163
2006-07		5		31		4		141
2007-08		3		0		4		119
2008-09			31			3		97
2009-10						2		75
2010-11						2		53
2011-12						1		31
2012-13						1	31	0

Table A-VII-15(2) Local Loan

	Interest 11.6% Grace 5 years Repayment 20 years, Annually (Unit: 1000 US\$)				(Unit: Million RS)			
	Borrowing	Interest	Repayment	Balance	Borrowing	Interest	Repayment	Balance
1983-84	179	10		179	2			2
1984-85	2979	194		3158	30	2		32
1985-86	11893	1056		15051	117	10		149
1986-87	20822	2954		35873	206	29		355
1987-88		4161		35873		41		
1988-89		4161	1794	34079		41	18	
1989-90		3953		32285		39		
1990-91		3745		30491		37		
1991-92		3537		28697		35		
1992-93		3329		26903		33		
1993-94		3121		25109		31		
1994-95		2913		23315		29		
1995-96		2705		21521		27		
1996-97		2496		19727		25		
1997-98		2288		17933		23		
1998-99		2080		16139		21		
1999-2000		1872		14345		19		
2000-01		1664		12551		16		
2001-02		1456		10757		14		
2002-03		1248		8963		12		
2003-04		1040		7169		10		
2004-05		832		5375		8		
2005-06		624		3581		6		
2006-07		415		1787		4		
2007-08		207	1787	0		2	13	

Table A-VII-16 Finance Schedule of Inland CFS

(Unit: 1,000 US\$)

Item	Construction Year				1984-85		1985-86		1986-87		Total	
	L/C	F/C	sub-total	L/C	F/C	sub-total	L/C	F/C	sub-total	L/C	F/C	Total
Civil Engineering Facilities	932	550	1,100	734	734	1,468	663	3,315	932	1,284	2,508	932
Land Acquisition Cost	550	379	1,316	1,873	759	2,632	2,652	3,315	1,284	1,138	3,948	1,284
Reclamation	937			3,537	884	4,421	1,252	1,565	6,189	1,547	7,736	6,189
Access Railway & Road				2,503	626	3,129	1,252	1,565	3,755	939	4,694	3,755
Container Terminal				840	210	1,050	420	525	1,260	315	1,575	1,260
Pavement				92	122	214	94	121	186	243	429	186
CFS				536	360	896	537	360	897	1,073	720	1,793
Other Building				664	250	914	662	251	913	1,326	501	1,827
Railway				10,779	3,945	14,724	5,617	1,813	7,430	18,815	6,687	25,502
Foundation				2,419	929	3,348				217	55	272
Utilities				217	55	272				190	190	190
Sub-Total (1)				217	150	367				95	95	462
Equipment etc				2,636	1,079	3,715				95	95	462
Engineering				10,779	3,945	14,724				19,032	6,932	25,964
Physical Contingency										14,574	34,640	49,214
Sub-Total (2)				179	540	719				90	269	359
Sub-Total (3)				253	108	361				541	1,922	2,463
Sub-Total (4)				1,024	395	1,419				1,818	2,425	4,243
Sub-Total (5)				179	540	719				20,822	38,739	59,561
Sub-Total (6)				2,979	1,456	4,435				35,873	45,344	81,217
Sub-Total (7)												
Sub-Total (8)												
Sub-Total (9)												
Sub-Total (10)												
Sub-Total (11)												
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Sub-Total (97)												
Sub-Total (98)												
Sub-Total (99)												
Sub-Total (100)												

Table A-VII-17 Fixed Assets

		(Unit: Million RS)											
		1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1997-98	2002-03
											1996-97	2001-02	2006-07
Fixed Assets at Beginning Year													
Land			7	51	214	804	41	728	690	652	614	424	234
Assets to be depreciated											41	41	41
Cost						763	763	763	763	763	763	763	763
Depreciation						38	38	114	114	152	190	380	570
Written down value						725	687	649	649	611	573	383	193
Work in progress		7	51	214	804								
Investment		7	44	163	590								
Land						41							
Assets to be depreciated						763							
Work in progress		7	44	163	590								
Depreciation						38	38	38	38	38	190	190	190
Fixed Assets at End of Year		7	51	214	804	766	728	590	652	614	424	234	44
Land						41	41	41	41	41	41	41	41
Assets to be depreciated													
Cost						763	763	763	763	763	763	763	763
Depreciation						38	76	114	152	190	380	570	760
Written down value						725	687	649	611	573	383	193	3
Work in progress		7	51	214	804								

Table A-VII-18 Service Life of Fixed Assets

Items	Service Life (Years)
Access Railway & Road	20
Container Terminal	
Pavement	20
CFS	60
Other Building	60
Railway	20
Foundation	50
Utilities	20
Rail-mounted Transfer Cranes	12
Rubber-tired Transfer Cranes	12
Tractors	7
Chassis	7
Weighing Scales	50
Fork Lift Trucks	7
Pallets	3
Mobile Crane	7
VHF	20
Wagons	50
Diesel Electric Locomotives	20
Shunting Electric Locomotives	20

Table A-VII-19 CNTR Forecast

Year	Cargo Volume (t)	TEU						Units						
		Loaded			Empty			Loaded			Empty			
		FCL	LCL	Sub-	FCL	LCL	Sub-	FCL	LCL	Sub-	FCL	LCL	Sub-	
1987-88	406,602	Import			27,107			13,553			6,777			20,330
			Import		18,071			LCL			4,518			13,553
								Sub-						
1988-89	818,673	Export	45,178		45,178			22,588			11,295			33,883
			Export			22,477			FCL		5,619			16,858
						14,984			LCL		3,746			11,238
1989-90	475,389	Import			31,693			10,564			5,282			15,846
			Import		9,762			LCL						
								Sub-						
1990-91	606,991	Export	52,821		52,821			26,411			13,205			39,616
			Export			25,835			FCL		6,459			19,376
						17,224			LCL		4,306			12,918
1987-88	473,649	Import			9,762			9,762						9,762
			Import					Empty						
								Sub-						
1988-89	949,038	Export	43,059		43,059			43,059						43,059
			Export			9,762			Total					
									FCL					
1989-90	575,019	Import	63,891		63,891			63,891						63,891
			Import			38,335			LCL					
						25,556			Sub-					
1990-91	606,991	Export	43,059		43,059			43,059						43,059
			Export			29,396			Total					
						19,598			FCL					
1987-88	1,113,953	Import	48,994		48,994			48,994						48,994
			Import			14,897			LCL					
						14,897			Empty					
1988-89	653,310	Export	72,590		72,590			72,590						72,590
			Export			33,109			Total					
						22,072			FCL					
1989-90	1,260,301	Import	55,181		55,181			55,181						55,181
			Import			17,409			LCL					
						17,409			Empty					
1990-91	1,260,301	Export	127,771		127,771			127,771						127,771
			Export			17,409			Total					
						145,180			FCL					

Table A-VII-20 Unit Cost for Working CNTR Train

	Cargo Volume	Total Cost	Variable Cost		Fixed Cost	
	('000t)	('000 RS)	('000 RS)	RS/t	('000 RS)	RS/t
Terminal Cost	818.7	30,845	18,247	22.29	12,598	
Kilometric Cost	"	121,542	87,360	106.71	34,182	
Sub-Total	"	152,387	105,607	129.00	46,780	
Depreciation	818.7	28,343	14,560	17.78	13,783	
Interest	"	18,680	9,597	11.72	9,083	
Improvement Fund	"	3,865	1,986	2.43	1,879	
Return on Government	"	13,527	6,949	8.49	6,578	
Sub-Total	"	64,415	33,092	40.42	31,323	
Total	"	216,802	138,699		78,103	

Table A-VII-21 Estimated Staff and Labour Cost

(Unit: RS)

Items	Variable Cost			Fixed Cost		
	Nos.	Wage	Cost	Nos.	Wage	Cost
Administration						
D. Traffic Manager				1	27,300	27,300
Assist. Traffic Manager				1	20,700	20,700
Superintendent				4	12,000	48,000
Skilled Labour				19	7,000	133,000
Unskilled Labour	16	4,600	73,600			
Operation						
Assist. Traffic Manager				1	20,700	20,700
Superintendent				3	12,000	36,000
* Skilled Labour	72	7,000	504,000	13	7,000	91,000
* Unskilled Labour	37	4,600	170,200			
Engineering						
Assist. Engineering Maintenance				1	20,700	20,700
Superintendent				3	12,000	36,000
Skilled Labour	46	7,000	322,000			
Unskilled Labour	6	4,600	27,600			
CFS						
Assist. Traffic Manager				1	20,700	20,700
Superintendent				3	12,000	36,000
Skilled Labour	75	7,000	525,000	18	7,000	126,000
Unskilled Labour	50	4,600	230,000			
Total	302		1,852,400	68		616,100

* Variable labour cost of skilled and unskilled labour of Operation Section is supposed to be included in the working expenses to CNTR Train.

Table A-VII-22 Material Consumption and Cost

(Unit: RS)			
Material	Consumption	Unit Cost	Cost
Fuel	450.6 kt	3631/kt	1,636,129
Water	10,000 kt	5/kt	50,000
Electricity	612,622 kwh	0.5/kwh	306,311
Total			1,992,440

Table A-VII-23 Ratio of Repair and Maintenance

Items	percentage
Access Railway & Road	1%
Container Terminal	
Pavement	1%
CFS & Other Building	3%
Railway	1%
Foundation	1%
Utilities	3%
Wagons	1%
Diesel Electric Locomotives	3%
Shunting Electric Locomotives	3%
Other Cargo Handling Equipment	4%

Repair and Maintenance Cost

(Unit: '000 RS)

	Capital Cost	Percentage	Cost
Cargo handling equipment	184,041	4%	7,362
Structure	255,222	2%	5,104
Wagons	164,815	1%	1,648
Diesel Electric Locomotives	138,818	3%	4,165
Shunting Electric Locomotives	20,255	3%	608
Total			18,887

Appendix VII-4 Method of Cost Calculation for Operating Container Train

1. Method of cost calculation for operating train

With the assistance from the World Bank, Pakistan Railways (PR) conducted a study of system for calculating cost-based freight in 1978. The annual costs were divided into the terminal cost and the kilometric cost. For the former, the itemized cost per MT of cargo was computed and multiplied by MT of the subject cargo to estimate and determine the freight. For the latter, the itemized cost per MT-KM was computed, multiplied by MT-KM of the subject cargo to determine the freight.

Above mentioned respective unit costs when 20t cargo per wagon is loaded are set as the references. The reference cost is then amended by the coefficients such as the average load per wagon, the average immobilization of goods wagon for loading and unloading period, the average turn-round time of the wagon, the ratio of empty run of the wagon, etc. to obtain the unit cost of the cargo to be reviewed. If MT and MT-KM are multiplied by these unit costs and estimated, the freight for the subject cargo is computed. If any profit is not considered as the premise for freight calculation, the freight may be identified as the operating cost of the train. Thus, the calculation method for the freight is to be used for computing the operating cost of the train.

The result of the 1978 Study was disclosed in October, 1978 issue of Pakistan Railways: Report on Traffic Costing Pakistan Railways. This study calculated the above mentioned reference unit costs based on the costs assumed for 1979-80, and the upward ratio must be considered if the operating cost of the trains is estimated based on 1980-81.

2. Base Cost

According to PR Budget 1980-81, the cost for 1980-81 is 3,451.6 mil. RS (Table V-1-1). The estimated cost for 1979-80 is 2,500 mil. RS, and the upward ratio is 1.3806.

3. Formula for Calculating Freight

$$T \times \frac{aL}{sL} + (K_1 \times \frac{aL}{sL} + K_2 \times \frac{\frac{sGT}{sL}}{\frac{aGT}{aL}})$$

wherein	T	: terminal cost
	K	: kilometric cost
	$\frac{aL}{sL}$: $\frac{\text{average load for complete wagon traffic period of reference: 20 tons}}{\text{average load for complete wagon traffic case under study}}$
	$\frac{sGT}{sL}$: $\frac{\text{total load for case under study + empty load}}{\text{average load for case under study}}$
	$\frac{aGT}{aL}$: $\frac{\text{total load + empty load}}{\text{average load}}$

4. Definitions of the Coefficients to be Applied

- (1) a : average value of the reference period
 S : average value for the case under study
- (2) aL : average load for complete wagon traffic period of reference: 20 tons
 sL : average load for complete wagon traffic period for case under study:
 10 tons
- (3) al : average immobilization of wagons for loading and unloading period of
 reference: 2 days
 sl : average immobilization of wagons for loading and unloading case under
 study; 0.5 day
- (4) aTR : turn-round time: 14.2 days
 sTR : turn-round time for the case under study; 4 days
- (5) $\frac{aER}{aLR + aER}$: $\frac{\text{empty run of average wagon}}{\text{loaded + empty run of wagon}} = \frac{165,351}{291,199 + 165,351} = 0.362$
- $\frac{sER}{sLR + sER}$: $\frac{\text{empty run of case under study}}{\text{loaded + empty run of case under study}} = \frac{7,738}{82,618 + 7,738} = 0.086$
- (6) $\frac{aLR + aER}{aER}$: $\frac{\text{loaded + empty run of average wagon}}{\text{loaded run of average wagon}}$
 $= \frac{291,199 + 165,351}{291,199} = 1,568 \left(\frac{165,351}{291,199} = 0.568 \right)$
- $\frac{sLR + sER}{sER}$: $\frac{\text{loaded + empty run of wagon-case under study}}{\text{loaded run of wagon- case under study}}$
 $= \frac{82,618 + 7,738}{82,618} = 1,094 \left(\frac{7,738}{82,618} = 0.094 \right)$
- (7) aD : loaded transport distance of complete wagon in average case period of
 reference: (766.5 km)
 sD : loaded transport distance of complete wagon-case under study
 (1,221 km)
- (8) $\frac{aGR}{aL}$: $\frac{\text{gross loaded and empty tonnage}}{\text{average load}}$
 $= \frac{20t + 11t + 11t \times 0.568}{20t} = 1.86$
- $\frac{sGT}{sL}$: $\frac{\text{gross loaded and empty tonnage-case under study}}{\text{average load}}$
 $= \frac{10t + 15t + 15t \times 0.094}{10t} = 2.641$

5.

a. Terminal Cost 1979-80

Terminal Cost/Tonne	Average Formula		General Cost	Variable Cost	General Cost	Variable Cost
	General Cost	Variable Cost				
T0	1.69	0.85	0.38	0.19	0.38	0.19
T1	0.05	0.03	0.10	0.06	0.10	0.06
T2	0.41	0.23	0.82	0.46	0.82	0.46
T3	0.35	0.17	0.70	0.34	0.70	0.34
T4	0.19	-	0.38	-	0.38	-
T5	0.27	0.03	0.54	0.06	0.54	0.06
T6	1.44	0.65	2.88	1.30	2.88	1.30
T7	1.57	0.95	3.14	1.90	3.14	1.90
T8	1.05	0.65	2.10	1.30	2.10	1.30
T9	3.81	2.51	7.62	5.02	7.62	5.02
T10	0.31	0.28	0.62	0.56	0.62	0.56
T11	1.01	-	2.02	-	2.02	-
T12	1.22	0.73	7.32	4.38	7.32	4.38
T13	0.95	0.85	5.70	5.10	5.70	5.10
T14	2.69	1.61	1.51	0.91	1.51	0.91
T15	2.09	1.87	1.18	1.05	1.18	1.05
Total	19.10	11.41	37.01	22.63	37.01	22.63

T9: Marshalling Consumption
 T10: DRF Marshalling
 T11: DRF Others
 T12: OE Fixed share
 T13: DRF Fixed share
 T14: Wagon Variable share
 T15: DRF Variable share

T0: Goods Booking
 T1: Loading & Unloading
 T2: Collection & Delivery
 T3: Goods Area
 T4: Sweeper
 T5: Station offices
 T6: Marshalling operating
 T7: Marshalling Machinal Repairs & Mainte
 T8: Marshalling Running Staff

b. Kilometric Cost 1979-80 (Annex No. 7)

	Average Formula		General Cost	Variable Cost	General Cost	Variable Cost
	General Cost	Variable Cost				
K ¹ 0	0.0004	0.0001		$\frac{aL}{SL}$	0.0008	0.0002
K ¹ 1	0.0006	-		"	0.0012	-
K ¹ 2	0.0030	0.0012		$\frac{aL}{SL} \times \frac{SLR + SER}{aLR + aER}$	0.0042	0.0017
K ¹ 3	0.0012	-		$\frac{20}{10} \times \frac{1.094}{1.568} = 1.395$	0.0017	-
K ¹ 4	0.0006	-		"	0.0008	-
K ¹ 5	0.0024	0.0016		"	0.0033	0.0022
K ¹ 6	0.0028	0.0025		"	0.0039	0.0035
K ¹ 7	0.0020	0.0017		"	0.0028	0.0024
K ¹ 8	0.0071	0.0064		"	0.0099	0.0089
K ¹ 9	0.0007	0.0006		"	0.0010	0.0008
K ¹ 10	0.0020	0.0016		"	0.0028	0.0022
K ¹ 11	0.0013	0.0010		"	0.0018	0.0014
K ¹ 12	0.0055	0.0045		$\frac{aL}{SL} \times \frac{STR \times aD}{aTR \times aSD} \times \frac{20}{10} \times \frac{4}{14.2} \times \frac{766.5}{1221} = 0.354$	0.0019	0.0016
K ¹ 13	0.0048	0.0043		"	0.0017	0.0015
Sub-Total K1	0.0344	0.0255			0.0378	0.0264
K ² 0	0.0073	0.0065		$\frac{SGth}{SL} \times \frac{2.641}{1.86} = 1.42$	0.0104	0.0092
K ² 1	0.0026	0.0022		" aL	0.0037	0.0031
K ² 2	0.0222	0.0202		"	0.0315	0.0287
K ² 3	0.0002	0.0001		"	0.0003	0.0001
K ² 4	0.0057	0.0051		"	0.0081	0.0072
K ² 5	0.0009	0.0003		"	0.0013	0.0004
K ² 6	0.0156	0.0033		"	0.0222	0.0047
K ² 7	0.0085	0.0025		"	0.0121	0.0036
K ² 8	0.011	-		"	0.0016	-
Sub-Total K2	0.0641	0.0402			0.0912	0.0570
Total K ¹ + K ²	0.0985	0.0657			0.1290	0.0834

K¹ 0 Station offices
 K¹ 1 DRF others
 K¹ 2 Movement & Services
 K¹ 3 Signalization
 K¹ 4 DRF signal Crossing
 K¹ 5 Marshalling Operating Expenses
 K¹ 6 Marshalling Repairs & Mainte
 K¹ 7 Marshalling Running Staff
 K¹ 8 Marshalling Consumption
 K¹ 9 Marshalling DRF Engines
 K¹ 10 Examiners
 K¹ 11 Train Staff
 K¹ 12 Goods Wagons Mainte
 K¹ 13 DRF Goods Wagons

K² 0 Line Engine Mainte
 K² 1 Line Running Staff
 K² 2 Line Consumption
 K² 3 Line Electric Traction
 K² 4 Line DRF Engines
 K² 5 Line DRF Electric tr.
 K² 6 Track Mainte
 K² 7 DRF Track
 K² 8 DRF others

6. Depreciation & Financial Charges for 1980-81

	Cost per MT for 1979-80		Cost per MT for 1980-81		Total Cost for 1980-81		
	General Cost	Variable Cost	General Cost	Variable Cost	General Cost	Variable Cost	
Terminal Cost							
T10	0.62	0.56	Depreciation & Financial Charges 1980-81 = 951.5 1979-80 = 710.850 = 1.3385 24.56 (18.35 x 1.3385) (12.00 x 1.3385) 20,107 (24.56 x 818.7) 13,148 (16.06 x 818.7)	16.06			
T11	2.02	-					
T12	7.32	4.38					
T13	5.70	5.10					
T14	1.51	0.91					
T15	1.18	1.05					
Sub-Total	18.35	12.00					
Kilometric Cost							
K1 1	0.0012	-	0.0451 (0.0337 x 1.3385) (0.0152 x 1.3385) 44,308 (0.0451 x 818.7 x 1200) 19,944 (0.0203 x 818.7 x 1200)	0.0203			
K1 2	0.0042	0.0017					
K1 3	0.0017	-					
K1 4	0.0008	-					
K1 9	0.0010	0.0008					
K1 13	0.0017	0.0015					
K2 4	0.0081	0.0072					
K2 5	0.0013	0.0004					
K2 7	0.0121	0.0036					
K2 8	0.0016	-					
Sub-Total	0.0337	0.0152					
Total							
						64,415	33,092

Depreciation & Financial Charges for 1980-81
(Unit: Million RS)

Depreciation	420.0	44%
Interest	276.7	29%
Improvement Fund	56.8	6%
Return on Government	198.0	21%
Total	951.5	100%

General Cost

Terminal Cost $RS37.01/t \times 818,700 \times 1.3806 = 41,832,300$

Kilometric Cost $RS0.129/tkm \times 818,700 \times 1200 \times 1.3806 = 174,970,000$

Total 216,802,310

Variable Cost

Terminal Cost $RS22.63/t \times 818,700 \times 1.3806 = 25,578,626$

Kilometric Cost $RS0.0834/tkm \times 818,700 \times 1200 \times 1.3806 = 113,120,146$

Total 138,698,772

Depreciation & Financial Charges

General Cost

Terminal Cost $RS24.56/t \times 818,700 = 21,107,000$

Kilometric Cost $RS0.0451/tkm \times 818,700 \times 1200 = 44,308,000$

Total 64,415,000

Variable Cost

Terminal Cost $RS16.06/t \times 818,700 = 13,148,000$

Kilometric Cost $RS0.0203/tkm \times 818,700 \times 1200 = 19,944,000$

Total 33,092,000

Appendix VII-5 Tariff on Container

1. Premises

(1) Two cases were assumed where the investment fund in the foreign currency was raised by foreign loans at the interest rate of 11.6% (Case A for 20 years after 5 years grace period), and at 2.75% (Case B for 20 years after 10 years grace period). The portion in the local currency was assumed to be invested by PR or Government at the dividend rate of 6.25%/year.

(2) The container tariff comprises the freight by the container train and the surcharges and storage fees at the terminal. The tariff is set on the premises that all the cost such as operating costs, interest rate, dividends, and depreciation costs are to be recovered. The cost for land acquisition was set as the cost for land and is to be recovered at 11.6%/year.

2. Number of container handled by rail (Unit)

1978-88 to 2006-07

	20 ft	40 ft
Import loaded	697,942	348,989
Export loaded	533,803	266,894
Empty	164,173	82,078
Total	1,395,918	697,961
FCL	739,048	369,533
LCL	492,697	246,350
Empty	164,173	82,078
Storage	376,883	188,457

3. Cost

(Unit: Million RS)

	Case A			Case B		
	Train	Terminal	Total	Train	Terminal	Total
1987-88	295	101	396	251	77	328
1988-89	291	88	379	265	74	329
1989-90	318	89	407	294	76	370
1990-91	342	88	430	319	76	395
1991-92						
2006-07	5235	1291	6526	5077	1205	6292
Total	6481	1657	8138	6206	1508	7714

4. Tariff Standard

Container 20 ft = 1 per unit is assumed.

Freight	Terminal fee		Terminal fee	Terminal fee	
	20 ft	40 ft		20 ft	40 ft
Import loaded	1	2	FCL	1	1.5
empty	0.3	0.6	LCL	1.5	2.25
Export loaded	0.64	1.28	Empty	1	1.5
empty	0.3	0.6	Storage	0.06	0.12

5. Tariff on Container 20 ft (per unit)

Freight

$$\text{Case A: } 6,481,000,000 \div (697,942 \times 1 + 348,989 \times 2 + 533,803 \times 0.64 + 266,894 \times 1.28 + 164,173 \times 0.3 + 82,078 \times 0.6 = 2,177,677) = 2976 \text{ ₹ } 3,000 \text{ (RS)}$$

$$\text{Case B: } 6,206,000,000 \div 2,177,677 = 2,850 = 2,900 \text{ (RS)}$$

Terminal fee

$$\text{Case A: } 1,657,000,000 \div (739,048 \times 1 + 369,533 \times 1.5 + 492,697 \times 1.5 + 246,350 \times 2.25 + 164,173 \times 1 + 82,078 \times 1.5 + 376,883 \times 0.06 + 188,457 \times 0.12 = 2,919,200) = 568 \text{ ₹ } 570 \text{ (RS)}$$

Case B: $1,508,000,000 \div 2,919,200 = 517 \text{ ₹ } 520(\text{RS})$

6. Tariff on Container (per unit)

Freight (unit: RS)

	Case A		Case B	
	20 ft	40 ft	20 ft	40 ft
Import loaded	3,000	6,000	2,900	5,800
Export loaded	1,900	3,800	1,850	3,700
Empty	900	1,800	900	1,800

Terminal fee (unit: RS)

	Case A		Case B	
	20 ft	40 ft	20 ft	40 ft
FCL	570	860	520	780
LCL	860	1,290	780	1,170
Empty	570	860	520	780
Storage	35	70	35	70

