

APPENDIX I

TABLE A.1
Traffic Demands of Postal Services in India
(Figures in million nos. in physical unit)

<i>Year</i>	<i>LETR</i>	<i>POCR</i>	<i>LECO</i>	<i>Total RGNP (Single + Bundle)</i>
(1)	(2)	(3)	(4)	(5)
1950-51	305.90	324.10	6.65	46.90
1951-52	299.25	331.45	20.65	55.30
1952-53	316.40	348.60	36.40	60.20
1953-54	322.70	376.25	41.65	64.75
1954-55	318.15	365.40	56.00	66.50
1955-56	364.70	415.10	57.40	66.15
1956-57	390.60	444.85	75.95	68.50
1957-58	399.00	466.90	75.95	68.95
1958-59	412.30	513.80	96.60	69.30
1959-60	424.90	532.70	122.70	77.35
1960-61	447.30	552.65	122.50	88.20
1961-62	466.55	593.60	151.20	93.45
1962-63	521.15	672.00	176.05	98.70
1963-64	577.50	710.15	226.80	113.05
1964-65	606.55	719.25	273.35	129.50
1965-66	659.05	728.70	278.95	128.45
1966-67	650.30	742.00	317.80	130.20
1967-68	655.20	726.60	348.25	127.75
1968-69	655.55	694.05	349.65	119.35
1969-70	712.25	670.95	381.15	127.75
1970-71	731.50	687.75	394.10	133.70

(Cont'd.)

<i>Year</i>	<i>LETR</i>	<i>POCR</i>	<i>LECO</i>	<i>Total RGNP (Single + Bundle)</i>
(1)	(2)	(3)	(4)	(5)
1971-72	746.55	693.00	414.05	135.80
1972-73	745.15	716.45	425.25	137.55
1973-74	798.70	730.10	442.05	153.30
1974-75	823.20	722.05	483.00	155.40
1975-76	716.80	744.80	509.60	61.35
1976-77	910.70	731.15	562.10	166.60
1977-78	745.35	747.60	618.10	168.35
1978-79	1005.20	772.10	620.55	182.70
1979-80	1094.10	799.05	673.40	187.25
1980-81	1155.00	868.00	746.90	218.40
1981-82	1289.40	907.55	826.00	233.10
1982-83	1278.20	952.35	835.10	264.95
1983-84	1398.90	974.05	898.80	61.45

TABLE A.1 (Cont'd.)

<i>Year</i>	<i>OTUN</i>	<i>INSL</i>	<i>INSP</i>
	<i>Total of book patterns, printed books & other periodicals</i>		
	(6)	(7)	(8)
1950-51	82.95	2.84	0.88
1951-52	88.55	2.95	0.89
1952-53	96.60	3.13	0.95
1953-54	94.85	2.97	0.89
1954-55	108.50	2.85	0.89
1955-56	111.30	2.80	1.17

(Cont'd.)

Year	OTUN	INSL	INSP
	<i>Total of book patterns, printed books & other periodicals</i>		
	(6)	(7)	(8)
1956-57	128.80	2.75	1.26
1957-58	129.85	2.66	1.11
1958-59	130.20	2.80	1.10
1959-60	149.80	2.89	1.11
1960-61	158.55	2.97	1.14
1961-62	159.95	3.15	1.23
1962-63	170.80	3.35	1.30
1963-64	207.80	3.34	1.27
1964-65	218.75	3.64	1.32
1965-66	226.45	3.66	1.47
1966-67	241.50	4.09	1.52
1967-68	246.40	4.14	1.57
1968-69	238.70	4.06	1.57
1969-70	240.45	4.32	1.55
1970-71	248.85	4.45	1.53
1971-72	245.35	4.52	1.59
1972-73	247.10	4.74	1.70
1973-74	254.80	4.79	1.80
1974-75	260.75	4.45	1.86
1975-76	260.05	4.68	2.00
1976-77	264.60	4.57	1.87
1977-78	263.20	4.85	1.95
1978-79	274.75	5.00	2.06
1979-80	301.00	5.13	2.18
1980-81	332.85	5.36	2.41
1981-82	372.05	5.76	2.64
1982-83	370.65	5.93	2.71
1983-84	358.40	7.24	2.70

TABLE A.1 (Cont'd.)

Year	Parcel	Registration	Acknowledgement		Total of Money Orders:TMO
			ORDL	ORDA	
	(9)	(10)	(11)	(12)	(13)
1950-51		53.22	8.16		51.32
1951-52		56.72	4.99		53.89
1952-53		62.09	5.03		56.26
1953-54		62.57	5.47		58.01
1954-55		64.57	5.86		61.49
1955-56		69.70	9.93		65.05
1956-57		72.48	9.68		67.39
1957-58		71.12	9.18		66.92
1958-59		75.68	10.31		71.98
1959-60		80.24	11.12		74.98
1960-61		84.62	12.06		75.82
1961-62		93.58	12.88		80.21
1962-63		99.87	13.82		85.53
1963-64		104.97	14.43		94.20
1964-65		110.78	14.24		91.23
1965-66		121.82	15.11		91.33
1966-67		125.48	16.06		94.24
1967-68		131.15	15.20		96.42
1968-69		133.76	16.03		95.54
1969-70		135.97	16.11		94.38
1970-71		138.75	15.64		94.54
1971-72		142.81	15.15		102.38
1972-73		146.10	15.23		99.83
1973-74		150.70	15.78		99.25
1974-75		145.57	14.40		96.19
1975-76		160.92	13.58		103.72
1976-77		170.42	13.84		106.63

(Cont'd.)

Year	Parcel	Registration	Acknowledgement		Total of Money Orders/TMO
			ORDL	ORDA	
	(9)	(10)	(11)	(12)	(13)
1977-78		186.97	14.69		107.87
1978-79		197.87	15.90		108.29
1979-80		199.25	15.83		108.70
1980-81		207.93	16.46		111.77
1981-82	62.1	222.24	17.35	174.2	119.35
1982-83	64.1	236.43	16.74	181.9	122.06
1983-84	58.8	244.67	22.50	194.9	-

Table A.1 (Cont'd.)

Year	IPOs	BRLs	Recorded deliveries	VPL	VPP	POSA
	(14)	(15)	(16)	(17)	(18)	(19)
1950-51				3.82	4.80	4.09
1951-52				7.11	1.41	4.45
1952-53				8.29	1.35	4.83
1953-54				9.16	1.17	5.07
1954-55				10.95	1.13	5.38
1955-56				3.16	3.92	6.00
1956-57				3.68	3.82	6.38
1957-58				3.21	3.27	6.92
1958-59				3.43	3.15	7.72
1959-60				3.46	3.06	8.45
1960-61				3.39	3.05	9.21
1961-62				3.68	3.37	9.48
1962-63				4.08	3.59	10.03

(Cont'd.)

<i>Year</i>	<i>IPOs</i>	<i>BRLs</i>	<i>Recorded deliveries</i>	<i>VPL</i>	<i>VPP</i>	<i>POSA</i>
	(14)	(15)	(16)	(17)	(18)	(19)
1963-64				4.03	3.78	10.49
1964-65				5.26	3.92	12.10
1965-66				5.74	3.52	13.73
1966-67				7.92	3.48	15.19
1967-68				8.48	3.88	16.97
1968-69				7.27	3.36	18.39
1969-70				6.74	3.13	19.72
1970-71				5.41	2.73	20.58
1971-72				5.74	2.25	21.80
1972-73				5.57	2.68	23.11
1973-74				6.56	2.55	24.98
1974-75				6.34	2.62	27.80
1975-76				4.30	2.34	29.50
1976-77				5.00	2.10	25.05
1977-78				7.34	2.35	26.40
1978-79				7.85	2.44	25.09
1979-80				8.17	2.35	28.92
1980-81				8.57	2.58	33.41
1981-82	16.1	11.9				38.05
1982-83	17.1	14.9				39.94
1983-84	20.7	12.1	8.2			-

Abbreviations used in Table A.1

LETR	=	Letter
POCR	=	Post Cards

LECO	=	Letter Cards
RGNP	=	Registered Newspapers
OTUN	=	Other Unregistered Articles
ORDA	=	Ordinary Registered Letters
ORDL	=	Ordinary Registered Articles
MO	=	Money Orders
TMO	=	Telegraphic Money Orders
VPL	=	Value Payable Letters
VPP	=	Value Payable Parcels
POSA	=	Postal Savings
SB	=	Postal Savings Banks (No. of Accounts)
SC	=	Postal Savings Certificates

TABLE A.2
Estimates of Capital Stock and Employment for IPD

<i>Year</i>	<i>Capital Stock Current Prices (Rs. in million)</i>	<i>Capital Stock at Constant Prices (1950-51)</i>	<i>Estimated Total No. of Persons Employed (in actual nos)</i>
1950-51	27.9	27.9	116853
1951-52	29.0	26.31	131826
1952-53	30.7	24.27	141523
1953-54	34.9	27.69	145723
1954-55	41.3	33.29	157799
1955-56	47.7	38.04	170701
1956-57	56.0	43.81	181079
1957-58	61.6	46.66	129970
1958-59	71.9	53.42	201687
1959-60	83.7	60.70	217897
1960-61	93.8	64.90	229219

(Cont'd.)

<i>Year</i>	<i>Capital Stock Current Prices (Rs. in million)</i>	<i>Capital Stock at Constant Prices (1950-51)</i>	<i>Estimated Total No. of Persons Employed (in actual nos)</i>
1961-62	100.1	67.49	237543
1962-63	111.5	72.01	256217
1963-64	130.8	81.54	273996
1964-65	152.9	91.91	286719
1965-66	163.8	94.34	292507
1966-67	175.8	94.77	301435
1967-68	190.3	97.03	309809
1968-69	223.6	112.89	318478
1969-70	272.2	135.45	333560
1970-71	319.4	147.78	358659
1971-72	384.3	206.75	367926
1972-73	456.5	214.28	369892
1973-74	521.7	213.07	382822
1974-75	548.1	171.33	397252
1975-76	608.4	161.45	411348
1976-77	672.7	178.73	422121
1977-78	781.2	207.56	439006
1978-79	920.3	232.28	455161
1979-80	1050.0	229.97	486800
1980-81	1205.3	233.67	510949
1981-82	1395.3	243.88	552665
1982-83	1628.1	268.40	561419
1983-84	1946.2	307.36	573100

TABLE A.3
Index Number of Wages for Postal and Telegraph
Department (Combined)

<i>Year</i>	<i>Wage Bill</i>	<i>Total No. of Persons Employed</i>	<i>Wage Bill per worker</i>	<i>Index of Wage taking 1950-51=100</i>
1950-51	2626	194755	1348.36	100.00
1951-52	2856	219710	1299.90	96.41
1952-53	3114	235871	1320.21	97.91
1953-54	3294	242571	1356.28	100.58
1954-55	3462	262999	1316.35	97.63
1955-56	3681	284501	1293.84	95.96
1956-57	3721	301778	1232.94	91.44
1957-58	4230	316617	1335.99	99.08
1958-59	4473	336145	1330.68	98.69
1959-60	4707	363162	1296.12	96.13
1960-61	5246	382032	1373.18	101.84
1961-62	5586	395906	1410.09	104.58
1962-63	6399	427029	1498.49	111.13
1963-64	6963	456660	1524.77	113.08
1964-65	8313	477865	1739.61	129.02
1965-66	9949	487513	2040.77	151.35
1966-67	11269	502391	2243.07	166.36
1967-68	13935	516349	2692.76	200.15
1968-69	14380	530797	2709.13	200.92
1969-70	15161	555934	2727.12	202.25
1970-71	17109	597765	2862.16	212.27
1971-72	18819	613210	3068.93	227.60
1972-73	20754	616486	3366.49	249.67
1973-74	23852	638036	3738.35	277.25

(Cont'd.)

<i>Year</i>	<i>Wage Bill</i>	<i>Total No. of Persons Employed</i>	<i>Wage Bill per worker</i>	<i>Index of Wage taking 1950-51=100</i>
1974-75	29842	662087	4507.26	334.28
1975-76	36297	685580	5294.34	392.65
1976-77	37750	703535	5265.76	390.53
1977-78	39270	731676	5367.13	398.05
1978-79	44844	758602	5911.04	438.41
1979-80	50954	811334	6280.27	465.77
1980-81	59896	851582	7033.50	521.63
1981-82	70213	921108	7622.67	565.33
1982-83	83309	935698	8903.41	660.31
1983-84	97993	955167	10259.25	760.89

APPENDIX II

Notes on Tables in the Report

Table 4.1 Estimates of total Economic Cost and Gross Revenue at Current Prices of IPD.

This table is presented for the period 1950-51 to 1985-86 under the heads of cost of capital services, other costs, total costs and total revenue. The figures for cost of capital services, other costs and total cost are taken from Annual Reports of Department of Posts and Telegraph (1950-51 to 1983-84) and Department of Posts (1984-85 to 1985-86).

The figures for total revenue are collected from the Appropriation Accounts of Department of Posts and Telegraph (1950-51 to 1983-84) and Department of Posts (1984-85 to 1985-86).

Table 4.2 Index Number of Wage Rate/Capital Cost/Postal Tariff.

For preparing the wage rate index, data on wages, salaries, allowances, etc., were taken from Annual Reports and Appropriation Accounts of IPD. Base year for the calculations is 1950-51.

The index of postal tariffs was prepared from tariff rate figures supplied to us by IPD. We averaged these figures and constructed an index number with 1950-51 as base.

The index of cost of capital services was computed with figures from Annual Reports and Appropriation Accounts.

Table 4.3 Estimates of Economic Cost and Revenue

These estimates are presented under the heads of (i) total economic cost, (ii) total revenue, (iii) post card equivalent of

total revenue, (iv) production efficiency, (v) index of economic efficiency.

The figures in columns (2) and (3) are deflated. The deflator used is general price index with 1950-51 as base.

Post card equivalent of total revenue is calculated by dividing total revenue in column (3) expressed in 1950-51 prices by the 1950-51 price of a post card. Productive efficiency is then defined as

$$\frac{\text{Column (4)}}{\text{Column (2)}}$$

An index of economic efficiency is calculated by constructing an index of productive efficiency with 1950-51 as base.

Table 4.4 Estimates of Average Rate of Return and Rate of Depreciation

Estimates of average rate of return are collected from the *Report on Currency and Finance* published by RBI.

Rate of depreciation is calculated by dividing the amount of depreciation by the value of capital stock of IPD.

Table 5.1 Estimates of total per unit cost of postal services are prepared from the statement showing the cost, revenue per article and profit/loss on each service, prepared by IPD.

Table 5.2 Cross-Subsidy Free Prices.

The source for these computations is the same as the one for Table 5.1.

Per unit total cost of each item has two components: (i) attributable cost and (ii) joint cost.

The following costs are attributable: (a) RMS charges,

(b) printing and stationery charges, and (c) transport charges.

Joint cost components are (a) per day operation charges, (b) per day supervision charges, (c) accommodation, (d) administration, and (e) accounts and audit.

Table 5.3 Average Revenue on Tariff of Postal Services

The source for this Table is the same as that for Tables 5.1 and 5.2.

Table 5.4 Rates of Subsidies for First Class Mail and Registered Newspapers (single) and

Table 5.5 Estimates of Mark-Ups Over Cross-Subsidy-Free Prices for some registered mail services.

These Tables are computed on the basis of figures reported in Tables 5.2 and 5.3.

Table 5.6 Cross-Subsidisation of Postal Services.

Method of Computation

The rate of cross-subsidisation is computed in Tables 5.4 and 5.5 for all the seventeen services, supplied by the IPD for the period 1981-82 to 1985-86. Then each rate is multiplied by its respective traffic figure for each year.

Table 5.7 Estimates of Budgetary Deficit of IPD.

IPD estimates are reported from the Appropriation Accounts of Department of Posts and Telegraph for the period 1981-82 to 1983-84 and Department of Posts for the period 1984-85 and 1985-86.

Our cost estimates are different because they include the cost of capital services and treat recoveries from other agencies (e.g., Ministry of Finance) as mere transfers. Hence our economic cost

corresponds to total resource cost: labour, capital and material inputs.

Table 5.8 Unregistered Mail By Users During 1986-87

This Table is taken from the Report on Postal Traffic Survey, IPD, (Efficiency Bureau).

Table 5.9 Percentage Distribution of Various Categories of Registered Post by Users During 1986-87.

This Table is also taken from the Report on Postal Traffic Survey (IPD) (Efficiency Bureau).

Table 5.10 Percentage Distribution of Various Postal Services by Rural and Urban Sectors in India.

Same as that for Tables 5.8 and 5.9.

Table 5.11 Distributional Weights (b_i) to Postal Tariff Demands for the Three Sectors Under Alternative Scenarios.

Same as that for Tables 5.8 and 5.9.

Table 5.12 Distributional Weights (b_i) to Postal Tariff Demands for the Three Sectors Under Alternative Scenarios.

Distributional weights to consumption of postal services by Household, Business and Government are estimated with the assumption that Government regards household demand for postal services as distributionally more important than the business demand.

Table 5.13 Estimates of Distributional Characteristics of Postal Service under Alternative Scenarios.

Table 5.14 Estimates of Second Best Prices for Various Postal Services under Alternative Scenarios during 1985-86.

Table 6.1 Block Prices Charged by IPD During 1985-86.

These are taken from Postal Tariff Rate List Series 1854 to 1.1.1987 supplied by the Department of Posts (IPD).

Tables 6.2

and 6.3 Estimates and Actual Rates Charged According to Various Slabs for Letter Mail Service and Parcel Services, respectively for the year 1985-86.

Estimated as explained in the text.

Table 6.4 Estimated and Actual Rate of Commission Charged according to Various Slabs on MOs during the Year 1985-86.

Estimated as explained in the text.

Table A.1 Traffic Demand.

Traffic demand figures are collected from Annual Report of Department of P and T (for the period 1950-51 to 1983-84) as well as from the Statistical Digest of IPD.

There are several problems with these figures:

- (i) For unregistered traffic the figures are highly exaggerated.
- (ii) Different statements prepared by IPD give very different estimates of traffic demand for the same year.

We have consistently used the figures in the Annual Reports and Statistical Digests of IPD.

Table A.2 Estimates of Employment.

The reported figures are taken from the Annual Reports.

An estimate of total number of persons employed is made in the following way. We have (separate) estimates of employment

in IPD and Department of Telegraph for 1984-85. We assume that the ratio of employment in the two departments was the same throughout the period. Hence from the figures for P & T for the period 1950-51 to 1983-84 we obtain estimates of employment within IPD alone.

Table A.3 Index Number of Wages for P & T.

Figures under the heading of wage level and total number of persons employed are taken from the Annual Reports of Department of P & T (from 1950-51 to 1983-84) and from the Report of IPD for the remaining years.