

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

POSTS AND TELECOMMUNICATIONS CORPORATION LTD.  
THE REPUBLIC OF ZAMBIA

THE STUDY  
ON  
LONG TERM PLAN FOR  
DEVELOPMENT OF TELECOMMUNICATIONS NETWORK  
IN  
THE REPUBLIC OF ZAMBIA

DATA BOOK

AUGUST 1993

NIPPON TELECOMMUNICATIONS CONSULTING CO., LTD.  
TOKYO, JAPAN

SSS

JR

93-086

Nominal basis in the first planning year is applied for this analysis. This means estimated prices and costs as of January 1, 1993, are used and they are assumed constant during the whole project period.  
Exchange rate: US\$1 = Zambian Kwacha 360 (January 1, 1993)

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TOKYO, JAPAN**

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**DATA 1**

**SOCIO-ECONOMY AND FINANCIAL**



## **DATA 1. SOCIO-ECONOMY AND FINANCIAL**

### **1. SOCIO-ECONOMIC ENVIRONMENTS**

#### **1.1 Social Aspect**

##### **1.1.1 General**

###### **(1) Landscape**

Zambia is situated in the area eight degrees to eighteen degrees of south latitude and twenty-two degrees to thirty-four of east longitude, with a maximum length of 1,480 km and a width of 820 km. The total area of Zambia is 752,620 sq.km.

The central plateau extending diagonally northeast to south west forms the main watershed. The highest point is at Manda (2,147 m) near the Nyika Plateau and the lowest is the confluence of the Zambezi and Luangwa Rivers at Luangwa.

It borders with Zaire and Tanzania to the North, Malawi and Mozambique to the East, Zimbabwe and Botswana to the South, Namibia in the South-West and Angola to the West.

###### **(2) Climate**

Zambia is located in a temperate region where climate is drier and cooler than in the other tropics in general, owing to its elevation and inland position. The average day temperature is between 14 and 30 centigrade (57°F and 86°F). During the evening the temperature drops substantially.

Rainfall is highest in the north and north-western highlands and on the plateau, amounting to 1,400 mm a year, while the rainfall in the South and Eastern region is often below 600 mm a year.

###### **(3) Drought**

Drought is a chronic calamity observed in Zambia, and it has been part of a cyclical pattern that the Government has to deal with. In the last decade, Zambia has suffered from a number of serious droughts. Droughts experienced in these three years give rise to severe losses to agriculture, resulting in decline of exports.

###### **(4) Main Centers**

The capital is at LUSAKA. The main population centers are at Ndola, Mufulia, Luanshya, Kitwe, Kabwe, Chingola, Livingstone. The main sightseeing spots are Victoria falls, Mongu, and several national parks.

(5) Language

English is used not only as an official language of Zambia.

(6) Demographic Parameters

Demographic Parameters are summarized in the following Table 1-1-1.

Table 1-1-1 Demographic Parameter

Parameter	1990
Crude Birth Rate per 1000	49.7
Crude Death Rate per 1000	13.2
Ratio of males per 100 females	97.0
Gross Reproduction Rate (GRR)	3.4
Total Fertility Rate (TFR)	7.0
(As already defined)	
Infant Mortality Rate (IMR)	90.0
Average household size total	5.0
Life Expectancy at Birth	
Total	54.0
Male	53.0
Female	55.0

(7) Education

English is the official language in learning institutions. School were basically free since independence under the **Zambian Education Policy**. The formal education begins with 7 year primary school divided into the lower grades (Grade 1 and 4) and the upper grades (Grade 5 to 7).

The secondary school system provides of a 5-year program. At tertiary level the university of Zambia offers 4 and 5 year degree courses, plus postgraduate diplomas masters and doctorate degrees in a number of academic specialties.

The economic difficulties of the past decade have deteriorated education services, with major cutbacks in capital development as well as shortages of books and facilities.

Table 1-1-2 Number of Schools

Items	Primary schools		Secondary schools	
	1979	1988	1979	1988
No. of schools	2,786	3,392	125	357
No. of teachers	22,494	32,348	3,878	5,714
Pupil/Teachers Ratio	44.3	44.1	23.7	28.3
Literate rate	Male		76%	
	Female		54%	

(Source: Country Profile, 1989/90)

### 1.1.2 Population

The population of Zambia as of August 1990, was reported to be 7,818,447 in the 1990 census. The annual growth rate of the total population has increased from 3.0% per year during the period 1969-1980 to 3.2% in 1980-1990.

#### (1) Population by Province, 1990 Census

Table 1-1-3 Population by Province, 1990 Census

Province	Population	%
Central	725,611	9.3
Copperbelt	1,579,542	20.2
Eastern	973,818	12.5
Luapula	526,705	6.7
Lusaka	1,207,980	15.5
Northern	867,795	11.1
North-Western	383,146	4.9
Southern	946,353	12.1
Western	607,497	7.7
Zambia	7,818,447	100.0

(Source: 1990 CENSUS Preliminary Report)

The employment opportunities and relatively high wages offered in the post-independence period in the copper mines and associated industries led to strong rural-urban migration. The result has been to make Zambia one of the most urbanised countries in Africa. According to the 1990 census, more than half of the population of Zambia, 58.0%, live in rural areas while 42.0% live in urban areas. The two largest provinces, Lusaka and Copperbelt, include over 70% of the population in the urban areas.

(3) Population by Age-Structure, 1980

Table 1-1-4 Population by Age-Structure, 1980

(,000)

Age	Males		Females		Total	
	Count	%	Count	%	Count	%
0-14	1,388	50.1%	1,408	48.7%	2,796	49.4%
15-64	1,310	47.3%	1,420	49.1%	2,730	48.2%
65+	72	2.6%	64	2.2%	136	2.4%
Total	2,770	100.0%	2,892	100.0%	5,662	100.0%

(Source: Demographic Projections 1985 - 2000, CSO)

(4) Population Density

The population density increased from 7.5 persons per km<sup>2</sup> in 1980 to 10.4 per km<sup>2</sup> in 1990. Two provinces, Copperbelt and Lusaka had population density above 50 persons per km<sup>2</sup>. It is because the normal pattern of rural habitation is in the form of small settlements and hamlets without any large well-nucleated villages. Its uneven population distribution creates serious problems in the provision of social services.

Table 1-1-5 Population Density

(persons per km<sup>2</sup>)

Province	1980	1990
Zambia (Average)	7.5	10.4
Central	5.4	7.7
Copperbelt	40.4	50.9
Eastern	9.4	14.1
Luapula	8.3	10.3
Lusaka	31.4	54.9
Northern	4.6	5.9
North-Western	2.4	3.1
Southern	7.9	11.1
Western	3.9	4.8

## 1.2 Economic Aspect

### 1.2.1 Consumer Price Index

Table 1-1-6 Consumer Price Index

(lower income urban families)

Year	1986	1987	1988	1989	1990	1991
Consumer Price Index	154.8	227.6	350.6	800.3	1,677.1	3,243.0
Price Inflation (%)	54.8	47.0	54.0	128.3	109.6	93.4

(1985 = 100; Annual averages; net of sales tax and excise duty)

Source: Selected Socio-Economic Indicators, 1992

The low income consumer price inflations rose by 93.4% in the year of 1991, following 109.6% rise in 1990, and clearly it is still rising. The above Table coupled with the low rate of real growth rate assumed suggests that the economy of Zambian people, especially urban families with lower income is going bankrupt.

Added to a general shortages of consumer goods due to recession and import cuts, price decontrol led to a rapid acceleration in the inflation rate, especially with low income earners being hit worst. According to the 1991 Economic Report, Average wages for unionized workers in all sectors rose from ZK 2,566 in 1983 to ZK 23,442 in 1990, although in real terms average formal sector wages were double compared with those in the agricultural sector; expatriate earnings were almost three times more.

The price situation between 1990 and 1991 was quite unstable. The Consumer Price Indexes (CPI) as presented in Table 1-1-6, shows rising trends in the prices of the representative baskets of consumer goods for the low income groups throughout 1990. In 1991 Consumer Price continued on an upward trend, though increasing at reduced rates.

### 1.2.2 Inflation

Inflation in 1990 is expected to fall below the rate 128.3% which was the rate reached in 1989. Table 1-1-7 indicates that the year-on inflation rate declined from 128.3%, 1989 to 109.6%, 1990, which signifies that inflation was subsiding.

Table 1-1-7 Inflation Rates

Year	Income Group		Composite Group
	Low	High	
1986	54.0	60.0	54.8
1987	45.6	56.4	47.0
1988	54.7	50.2	54.0
1989	128.7	125.4	128.3
1990	111.0	100.2	109.6

### 1.2.3 Trade

#### (1) Imports

Imports primarily consist of fuels and other intermediate goods, machinery and transport equipment. The value of imports at CIF rose from ZK 12,817,000,000 in 1989 to ZK 37,628,000,000 in 1990 and this is the highest amount since Independence. UK had been the largest source of Zambia's imports since pre-independence days, but now the position has changed. In 1990, the imports from South Africa in terms of value accounted for about 15.9% of the total imports followed by German with 11.27%, USA with 10.6% and Japan with 6.0%.

#### (2) Exports

Exports consist of the three main productive sectors, Mining, Agriculture, and Manufacturing. The value of exports at FOB price rose from ZK 9,791,000,000 to ZK 39,143,000,000 in 1990. Zambia's major exports are minerals, namely, COPPER, ZINC, LEAD and COBALT with copper being the largest foreign exchange earner. In 1990, COPPER accounted for 84.6% of the total exports in terms of value, while ZINC and COBALT accounted for 1.1% and 6.4% respectively. The heavy dependence on COPPER for Zambia's foreign exchange earnings has resulted in volatile performance of the economy due to fluctuations of COPPER prices on the world market.

Table 1-1-8 Trend of Trade (Z\$ MN)

Year	1985	1986	1987	1988	1989	1990
Exports (FOB)	2,451	3,743	8,058	9,791	18,434	39,143
Imports (CIF)	1,933	4,828	6,687	6,810	12,817	37,628
Balance	518	-1,085	1,371	2,981	5,617	1,515

Source: IMF, International Financial Statistics



(3) Currency

The Zambian currency is the Zambia Kwacha (ZK). Its exchange rate is shown in Table 1-1-8. The exchange rate in end of October, 1992 was US\$1 = ZK310.

Table 1-1-9 Average Exchange Rate

Year	Exchange Rate (ZK/US\$)
1982	0.928
1983	1.251
1984	1.794
1985	2.714
1986	7.305
1987	8.889
1988	8.224
1989	12.903
1990	28.989
1991	61.728

1.2.4 Labor Situation

(1) The Labor Force

The adult population of Zambia totals about 3.8 million people (in 1986, 2.0 million female and 1.8 million male). About 65% of this adult population were in rural area. The labor force amounts to 2.7 million people, which represented 71% of the adult population of Zambia. The rural component of the labor force accounted for 71.9% whereas the urban component stood at 28.1%. The 1986 labor force survey estimates revealed that about 2.36 million people in the labor force were employed and 0.36 million (13%) were unemployed.

Table 1-1-10 The Labor Force Amounts

Item	('000) Population	Economical Active	
		Working	Not Working
Total	3,811.9	2,364.2	353.4
Male	1,825.5	1,302.4	123.0
Female	1,986.4	1,061.8	230.4
Rural	2,469.2	1,747.3	206.8
Urban	1,342.7	616.9	146.6

Source: CSO (Central Statistical Office)

(2) Employment by Sector

About 60% of the total employees were engaged in the agricultural sector, indicating that Zambia depends primarily on an agriculture economically. It is considerably important to point out that the agricultural field is the only sector in which females were the majority. Table 1-1-11 indicates an employment number by sector.

Table 1-1-11 Employment by Sector

Sector	1980	1989	Percent
Agriculture	681,454	1,555,567	61.8
Mining	64,788	106,375	4.2
Manufacturing	64,540	125,255	5.0
Electricity	9,100	18,177	0.7
Construction	36,804	39,716	1.6
Wholesale	85,691	162,573	6.5
Transport	48,616	70,378	2.8
Finance	22,137	37,619	1.5
Community & Social	220,472	252,444	10.0
Not stated	69,338	145,356	5.9
Total	1,302,940	2,513,460	100.0

Source: Main Results of The Labor Force Survey 1986 - 1987

(3) Unemployment

The unemployment rate for females was 17.8% while that of males was 8.6%. The unemployment rate for urban areas was 19.2% while that for rural areas was 10.6%. The problem of unemployment has been exacerbated by both the contraction in employment opportunities and the growth in the labor force. It should be noted that the prevalence of hidden unemployment rate might be drastically higher due to the jobless situation of small scale farmers in dry season. Most of the small scale farmers turn into unemployed persons in the dry season, because it is impossible to get farm products during the dry season, and rural communities have quite limited formal employment opportunities.

(4) Shortage of Skilled Labor

Shortages of skilled labor has been exacerbated by brain drain because of the inability of the economy to offer attractive salaries and other benefits. Thus, many professionals have left to look for employment outside the country.

## **2. FINANCIAL ENVIRONMENTS**

### **2.1 Current Billing Conditions and Counter Measurements**

#### **2.1.1 Introduction**

- (1) The Posts and Telecommunications Corporation Limited (Telecommunications Division) provides telecommunication services which include among other things such as telephone and telex services. These services are provided to customers on credit. Settlement of accounts are only done after customers have received either the International Direct Dialling (IDD) invoiced accounts or the main monthly bills which are produced at the end of each period.
- (2) The corporation has experienced great difficulties in recovering the amount owed to it in terms of unsettled bills from a considerable number of customers. As the case may be some customers owe the company substantial amounts which have accumulated over a long period. It should be observed that more than 50% of the outstanding accounts are owed by customers in the ordinary accounts category.

#### **2.1.2 Type of Accounts**

- (1) There are four (4) types of accounts which are produced by the corporation. These include the following;
  - a) Government (GRZ) composite accounts
  - b) Private and parastatals composite accounts
  - c) Ordinary accounts and
  - d) Disconnected financial accounts
- (2) The first two composite accounts (GRZ, Private and parastatal) accounts cater for big users or customers renting more than three lines. These accounts as stated are mostly common to government ministries and departments, large private business firms including parastatal companies.
- (3) In the ordinary accounts category, PTC has private individual or domestic user as well as small business entrepreneurs. However, this category provides more than 50% of the national dept. Settlements of accounts in this category has been inconsistent as a result, most customers are behind in settling their outstanding bills. Various ways and means have been attempted by the division in order to try and recover the unpaid accounts.

### 2.1.3 Approach Used

- (1) Ever since a ministerial directive was issued to cease mass disconnections for non settlement of accounts by defaulting customers the division has moved away from the intimidatory approach to the follow up of unpaid telecommunication services bills. The new approach has been to create a new business environment where customers would be made to feel duty bound to pay for the services rendered to them promptly. Personal contact through telephones as well as visits have been envisaged in order to personalize the services.
- (2) At the moment the procedures followed are as shown below.
  - a) Two weeks after despatch of bills a request for an updated age analysis is made by the offices of the Customer Services Manager.
  - b) The age analysis is updated to the current week ending Friday. A letter of demand should be delivered or posted depending on the size of the debt. The cut off point is K500.0 and K5000.0 for residential and business connections respectively. The letter of demand should specify the amount owed, and give a period of seven (7) days in which to settle the amount.
  - c) If the bills remain unpaid after seven (7) days of the reminder a list of the lines should be produced for authorization of the barring of outgoing calls.
  - d) The barring of outgoing calls will be allowed to subsist for three (3) weeks after which a final notice (TA 2) should be sent to notify the customer that service will be summarily withdrawn if the debt is not settled within fourteen (14) days.
  - e) At the expiry of fourteen (14) days and the debt remains unpaid a notification of an unpaid account, (Form TA 56) should be completed and forwarded to the sales offices to issue cessation advice note to recover the line and apparatus.

#### 2.1.4 Methods of Disconnection of Services

- (1) In order to encourage customers with large outstanding amounts to settle their accounts before telecommunication services are recovered completely from their premises, there are two methods used to temporarily disconnect services for non payment of accounts. These are;
  - a) Total disconnection of service that is to bar both incoming and outgoing calls on the services or
  - b) Partially disconnect service that is to bar outgoing calls only.

The method under item 2.1.4 (a) above is used mostly on defaulting customers who despite all measures taken to reduce the debt have yielded no positive results. The method under item 2.1.4 (b) is used on services on which customers are either willing to settle the outstanding amounts by way of installments or as a way to press for settlement of accounts on customers considered to be revenue generators. This type of action is mainly done to heavy users like customers on composite accounts.

#### 2.1.5 Age Analysis

- (1) The age analysis document is produced on a monthly basis. This document is ideal for the purpose of controlling debts more especially on the accounts in the ordinary category. The printout assists in the quick identification of large debtors at the earliest time possible.
- (2) Other efforts which has been made by the Corporation has been through constant reminders through the press and TV. Customers have been reminded on several occasions about their need to fulfill their obligation of settling telecommunication services accounts promptly.
- (3) Sales and accounts officers including credit controllers officers have visited customers premises who owe the Corporation substantial amounts. This approach has been very effective in some cases whereas in some the response has not been encouraging. However, such customers have also been contacted by telephone so that their outstanding amounts are settled.

Table 1-2-1 Summary of Billing vs Receipts for National Calls

(K'000)

MONTH 1992	CATEGORY	GRZ COMPOSITES	PARASTATAL PRIVATE COMPOSITES	PRIVATE NON COMPOSITES	DISCONNECT- ED ACCOUNTS	TOTAL
JANUARY 1992	BILLING	53.761	172.953	209.035	0.000	435.949
	RECEIPTS	286.492	154.155	171.774	0.070	612.491
	BALANCE	-232.731	18.798	37.261	-0.070	-176.542
FEBRUARY 1992	BILLING	51.547	149.848	326.984	0.000	528.379
	RECEIPTS	0.939	95.443	177.988	0.202	274.572
	BALANCE	50.608	54.405	148.996	-0.202	253.807
MARCH 1992	BILLING	79.087	357.392	409.071	0.000	845.550
	RECEIPTS	21.783	140.742	206.044	1.589	370.158
	BALANCE	57.304	216.650	203.027	-1.589	475.392
APRIL 1992	BILLING	75.453	309.172	597.381	0.000	982.006
	RECEIPTS	17.209	142.221	213.758	0.877	374.065
	BALANCE	58.244	166.951	383.623	-0.877	607.941
MAY 1992	BILLING	85.586	341.303	579.364	0.000	1,006.148
	RECEIPTS	141.868	258.919	338.668	0.814	740.269
	BALANCE	-56.282	82.384	240.696	-0.814	265.879
JUNE 1992	BILLING	86.542	387.762	615.844	0.000	1,090.148
	RECEIPTS	16.650	189.592	257.833	1.275	465.350
	BALANCE	69.892	198.170	358.011	-1.275	624.798
TOTAL OF BILLING		431.976	1,718.430	2,737.679	0.000	4,888.180
TOTAL OF RECEIPTS		484.941	1,981.072	1,366.065	4.827	2,836.905
TOTAL OF BALANCE		-52.965	737.358	1,371.614	-4.827	2,051.275
						(JAN 92--JUN 92)

Table 1-2-2 Accumulated Unpaid International Billing (1/2)  
From August 1990 to October 1992

AREA NAME	AREA CODE	INT. CODE	EXCHANGE NAME	NUMBER OF TELE. NO.	NO. OF CALLS	AMOUNT (US \$)	No. OF TEL No. SUSPENDED		
							GOVERNMENT	PARASTATAL	PRIVATE
LUSAKA METRO	0101	050	LUSAKA MAIN	928	105,301	2,390,050.77	62	173	693
	0102	012	CHELSTON	54	3,222	83,546.32		8	46
	0103	014	CHINIKRA	69	18,080	323,834.86		60	
	0104	022	AMMASDALE	65	23,808	462,384.63		17	48
	0105	026	INTER. AIRPORT	10	788	11,980.38		10	
	0106	057	MAKENI	81	18,487	376,784.78	4	6	71
	0107	080	RIDGEWAY	200	9,720	286,693.58	28	7	164
	0108	081	ROMA	126	44,809	1,448,487.66			126
	0109	085	WOODLAND	218	9,781	230,604.49	10	3	205
	0100		SUB-TOTAL	1,751	234,007	5,615,477.48	105	283	1353
		% OF SUB-TOTAL/TOTAL	59.80%	79.80%	74.30%				
LUSAKA AREA	0201	013	CHILANGA	16	745	13,060.23		2	14
	0202	016	CHIRUNDU						
	0203	017	CHISAMBA	2	13	115.23		2	
	0204	019	CHONGWE						
	0205	033	KAFUE	15	130	1,780.72		3	12
	0206	047	LUANGWA						
	0207	064	MUMBWA						
	0208	072	NAMALUNDU G						
	0209	073	NAMPUNDWE	3	20	345.48		1	2
	0210	086	SIAVONGA	1	26	210.01			1
0200		SUB-TOTAL	37	934	15,531.67	0	8	28	
		% OF SUB-TOTAL/TOTAL	1.26%	0.32%	0.21%				
KITWE AREA	0301	137	KITWE	341	15,589	512,934.27	2	129	210
	0302	102	CHAMBISHI	8	762	12,538.11		4	5
	0303	106	CHILILABOMBWE						
	0304	108	CHINGOLA	24	1,200	27,453.01		7	17
	0305	120	ITIMPI	8	42	533.13		4	4
	0306	127	KALULUSHI	20	188	3,687.80		5	15
	0307	143	LUANSHYA	54	442	10,810.01		23	31
	0308	154	MASAITI	1	3	96.41			1
	0309	157	MUFULIRA	22	176	8,234.26		2	20
	0300		SUB-TOTAL	479	18,412	576,387.10	2	174	303
		% OF SUB-TOTAL/TOTAL	16.36%	6.29%	7.63%				
NSORA AREA	0401	170	NDOLA	198	24,818	810,004.81	3	87	108
	0402	171	NDOLA NORTH	28	247	3,895.76		28	
	0403	172	NDOLA SOUTH	5	38	346.42		5	
	0404	125	KABUSHI	14	748	24,166.96		1	13
	0405	128	KANSENSHI	31	4,656	177,345.84			31
	0406	174	KDORTHRISE	29	1,821	82,987.56			29
	0407	177	PAMODZI	2	8	836.01			2
	0400		SUB-TOTAL	307	32,436	1,199,583.36	3	121	183
		% OF SUB-TOTAL/TOTAL	10.48%	11.08%	15.87%				
MANSIA AREA	0501	149	MANSIA	12	318	5,796.33		5	7
	0502	134	KAWAMBWA	1	19	617.22			1
	0503	162	MWENSE						
	0504	169	NCHELENGE						
	0505	182	SAMFYA	1	3	17.67			1
0500		SUB-TOTAL	14	340	6,431.22	0	5	9	
		% OF SUB-TOTAL/TOTAL	0.48%	0.12%	0.09%				
CHOMA AREA	0601	018	CHOMA	27	277	4,596.70	2	7	18
	0602	024	GWEMBE						
	0603	027	ITEZHI-TEZHI	1	1	3.30			1
	0604	035	KALOMO						
	0605	055	MAAMBA	7	121	3,977.66			7
	0606	059	MAZABUKA	8	84	2,824.06		3	5
	0607	062	MONZE	5	1,326	15,665.95		2	3
	0608	074	NAMWALA	2	2	9.59			2
	0609	077	PENBA						
	0610	046	LIVINGSTONE	58	1,870	51,179.05	2	9	47
	0611	088	ZIMBA						
0600		SUB-TOTAL	108	3,681	78,356.31	4	21	83	
		% OF SUB-TOTAL/TOTAL	3.69%	1.26%	1.04%				
KASAMA AREA	0701	132	KASAMA	4	13	440.00		1	3
	0702	109	CHINSARI						
	0703	119	ISOKA	1	1	3.57			1
	0704	144	LUWINGU						
	0705	150	MRALA	6	62	987.24	1	1	4
	0706	153	MPIKA	11	103	4,166.77		5	6
	0707	155	MPOROKOSO	2	6	44.06			2
	0708		MPULUNGU						
	0708	158	MUNCWI						
	0710	168	NAKONDE	1	2	3.91			1
0700		SUB-TOTAL	25	187	5,645.55	1	7	17	
		% OF SUB-TOTAL/TOTAL	0.85%	0.06%	0.07%				

Table 1-2-2 Accumulated Unpaid International Billing (2/2)  
From August 1990 to October 1992

KABWE AREA	0801	126	KABWE	31	312	8,704.82	1	8	22
	0802	104	CHIBOMBO	1	1	3.02			1
	0803	130	KAPIRI MPOSHI	6	93	3,348.65		1	5
	0804	152	MKUSHI	1	3	52.70			1
	0805	164	MUPEPETWE	84	1,374	32,607.00		84	
	0806	184	SERENJE	3	6	131.88		1	2
	0807	101	CHARATA						
	0808	129	KANONA						
	0800		SUB-TOTAL	126	1,788	44,848.17	1	94	31
		% OF SUB-TOTAL/TOTAL	4.30%	0.61%	0.59%				
CHIPATA AREA	0901	015	CHIPATA	20	372	4,652.05	2	5	13
	0902	010	CHADIZA						
	0903	011	CHAMA	6	43	536.55			6
	0904	037	KATETE	1	1	2.78			1
	0905	049	LUNDAZI	6	27	374.68			4
	0906	060	MFUNE	1	1	11.01		2	
	0907	076	NYIMBA					1	
	0908	078	PETAUKE						
	0909	089	SINDA						
0900		SUB-TOTAL	34	444	5,577.07	2	8	24	
		% OF SUB-TOTAL/TOTAL	1.16%	0.15%	0.07%				
MONGU AREA	1001	061	MONGU	25	218	2,555.34	5	3	17
	1002	034	KALABO	1	122	2,516.97		1	
	1003	036	KAOMA	1	6	248.99			1
	1004	048	LUKULU						
	1005	084	SENANGA	3	23	123.32			3
	1006	044	LIMULUNGA						
	1007	085	SESHEKE						
	1000		SUB-TOTAL	30	368	5,444.62	5	4	21
		% OF SUB-TOTAL/TOTAL	1.02%	0.13%	0.07%				
SOLWEZI AREA	1101	186	SOLWEZI	10	125	2,457.86	1	3	6
	1102	124	KABONPO						
	1103	133	KASEMPA						
	1104	111	MUFUMBWE						
	1105	163	MWINILUNGA	1	2	115.86			1
	1106	192	ZAMBEZI						
1100		SUB-TOTAL	11	127	2,573.72	1	3	7	
		% OF SUB-TOTAL/TOTAL	0.38%	0.04%	0.03%				
OTHERS		151	MINDOLO	2	2	7.24			2
		156	MULUNGU	4	139	2,052.46			4
			SUB-TOTAL	6	141	2,059.70			6
		% OF SUB-TOTAL/TOTAL	0.20%	0.05%	0.03%				
ZAMBIA		TOTAL	2,928	292,867	7,557,925.97	124	738	2066	



**DATA 2**

**ORGANIZATION**



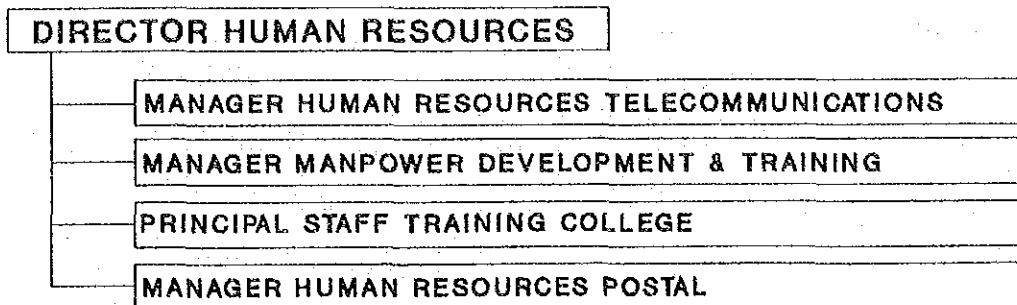


Figure 2-1 Organization/Human Resources

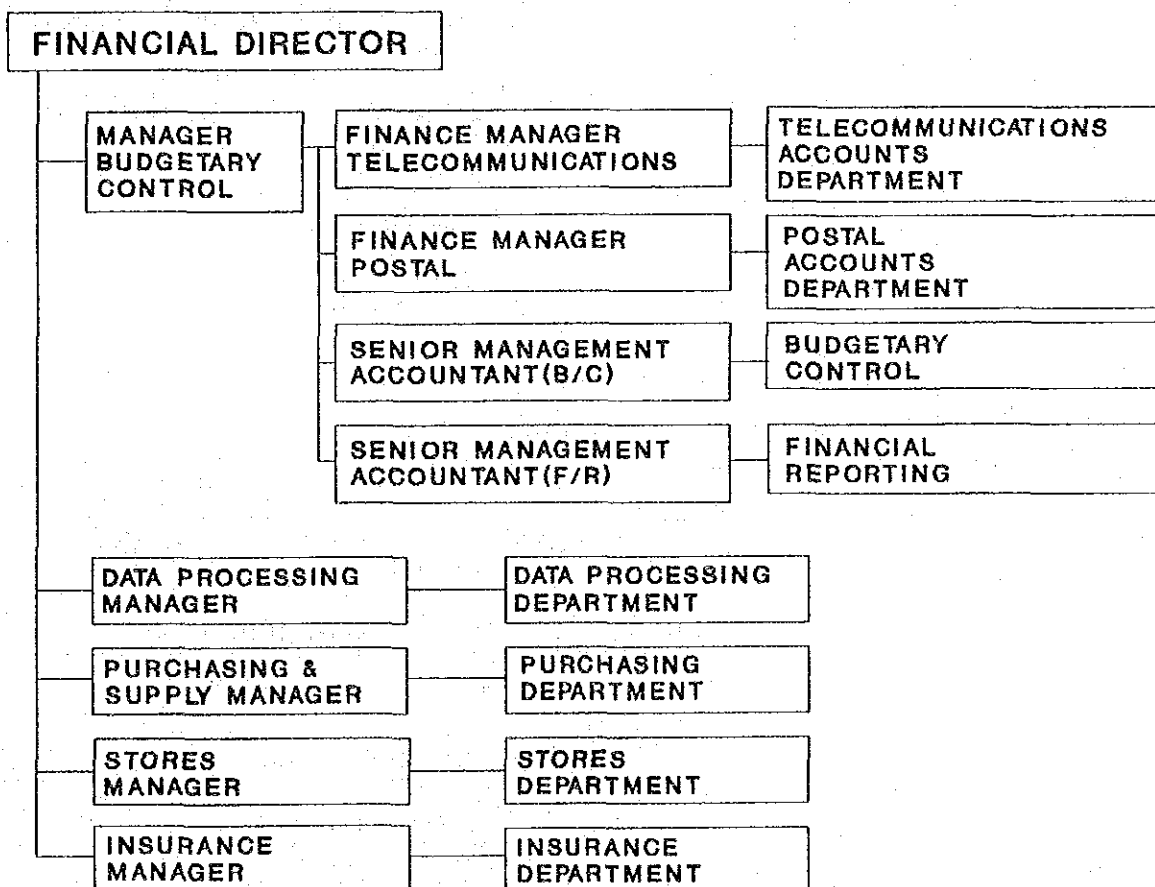


Figure 2-2 Organization/Financial Director

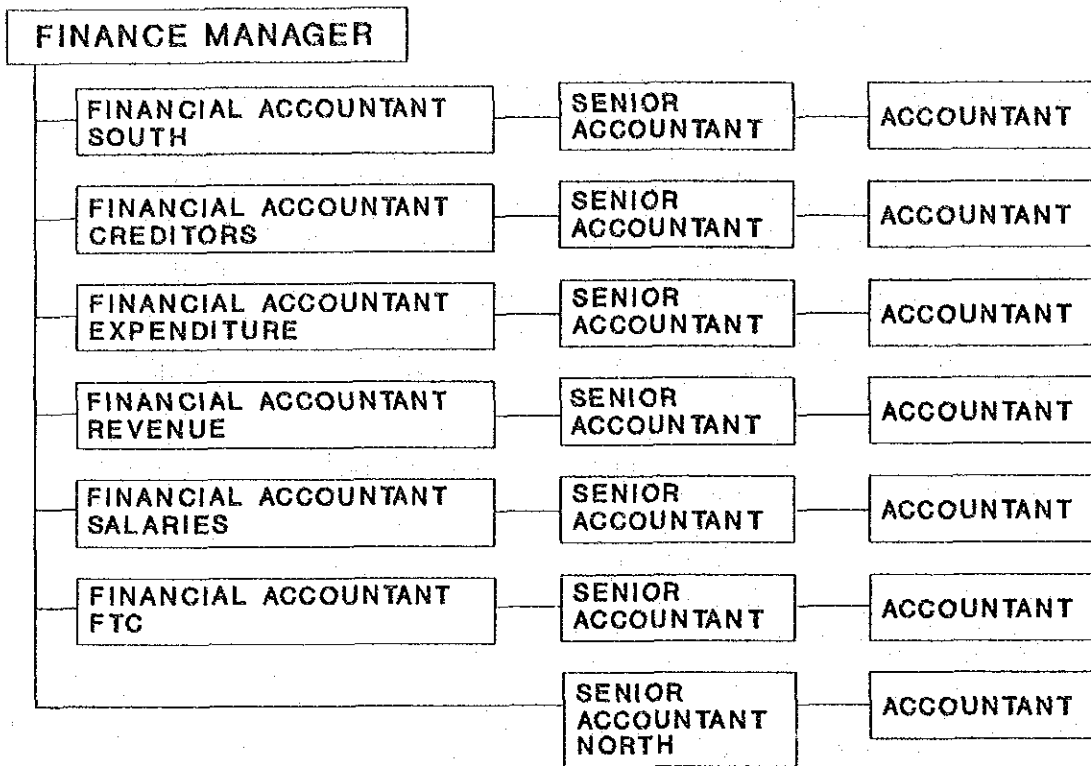


Figure 2-3 Organization/Finance Manager

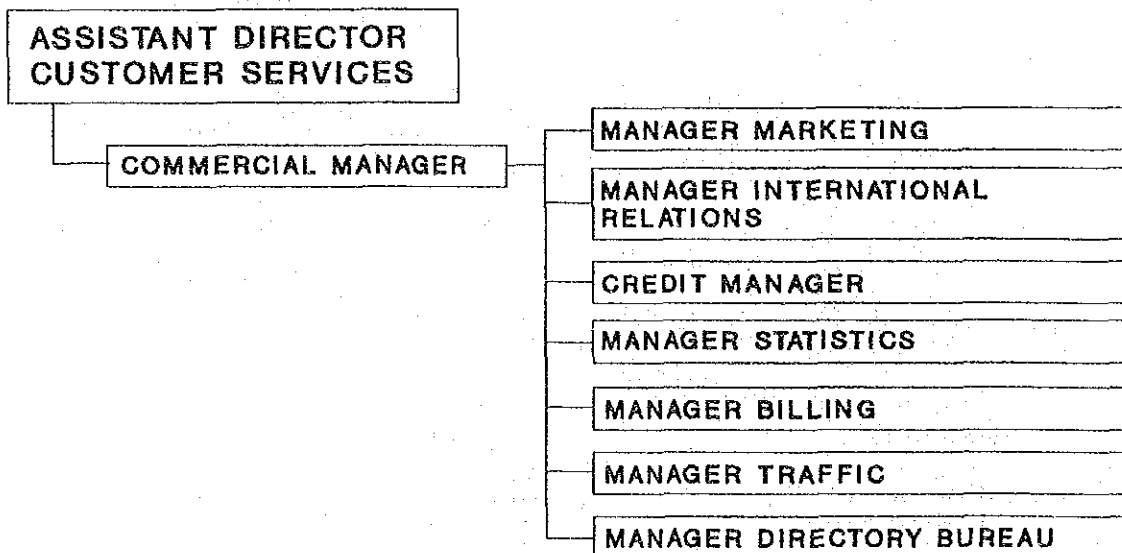


Figure 2-4 Organization/Assistant Director (Customer Services)

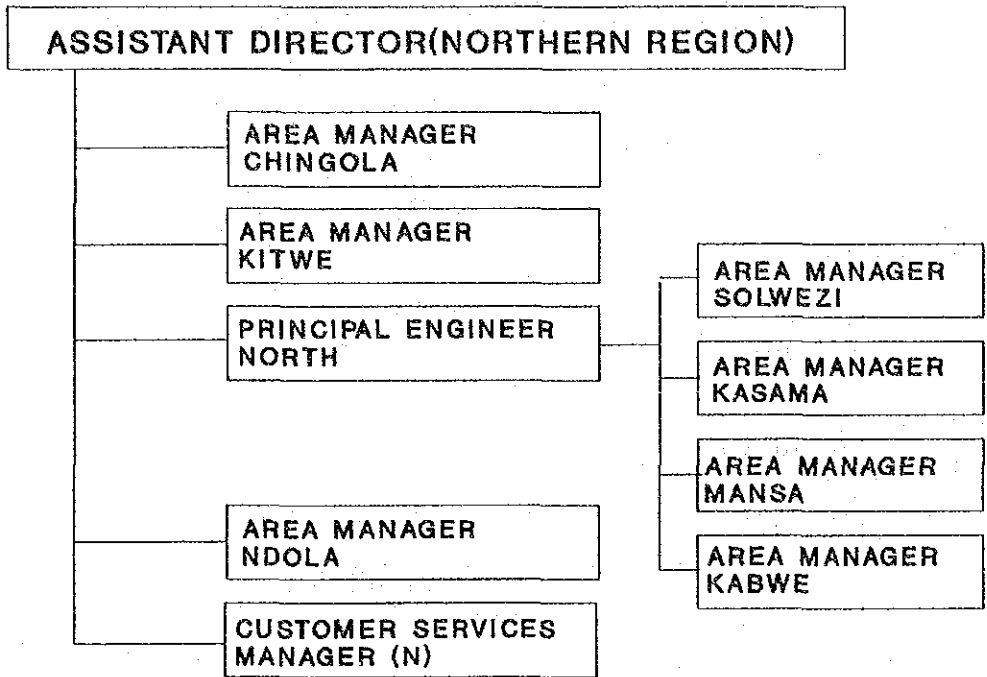


Figure 2-5 Organization/Assistant Director (Northern Region)

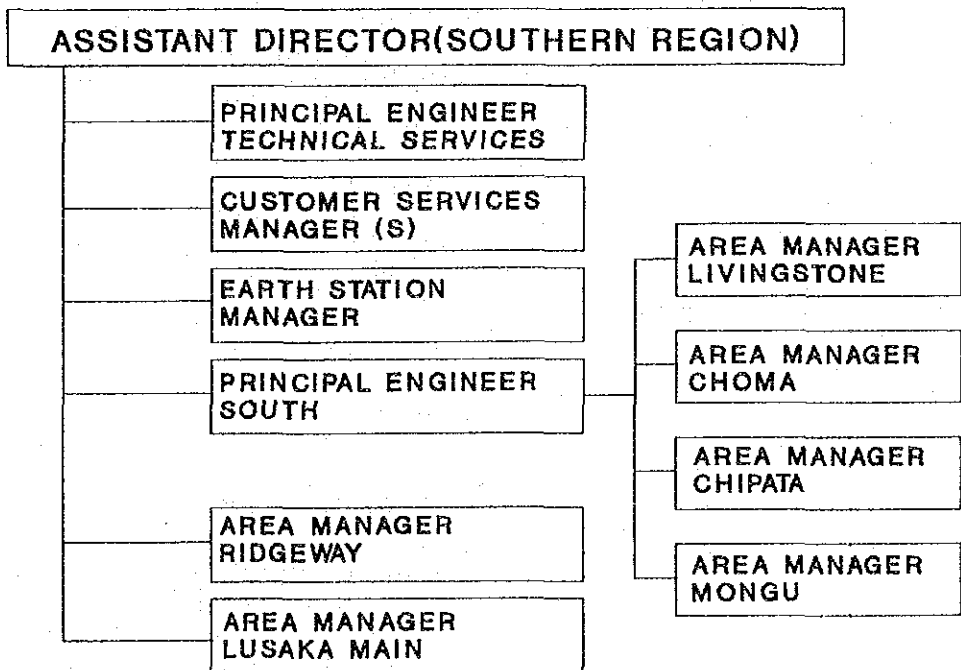


Figure 2-6 Organization/Assistant Director (Southern Region)

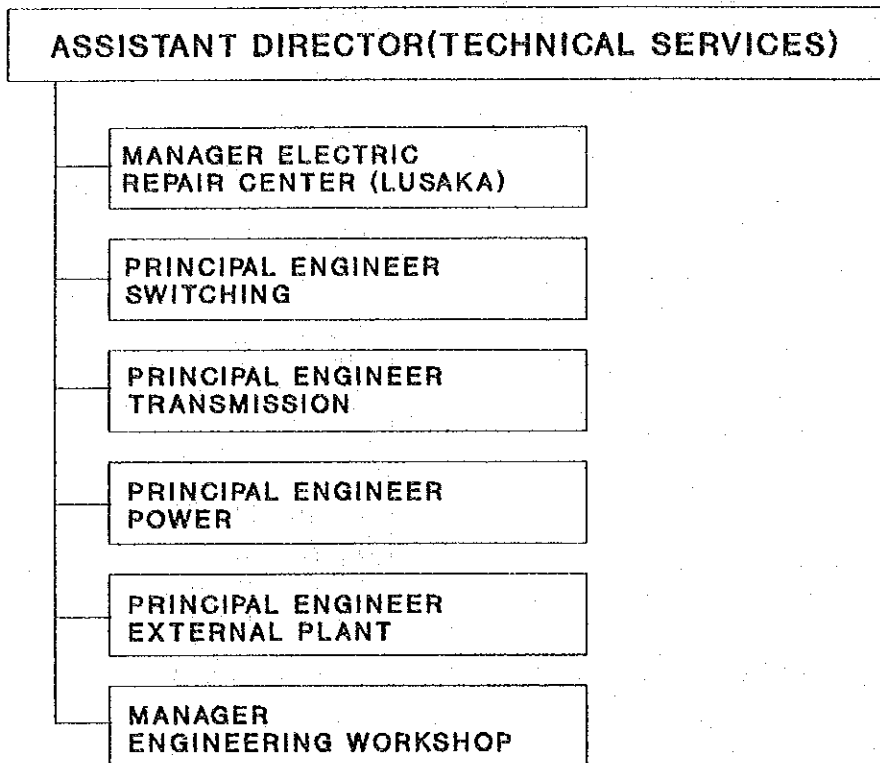


Figure 2-7 Organization/Assistant Director (Technical Services)

**DATA 3**

**DEMAND FORECASTS**





Table 3-1 Telecommunications Data of Countries in Southern Africa (1/3)

NO.	COUNTRY	YEAR	T E L E P H O N E					DELS per 100
			TELEPHONE STATIONS	MAIN LINE	% OF ML AUTOMATIC	% OF ML RESIDENT	WAITING LISTS	
1	ANGOLA	1985						
		1986						
		1987	77,000	62,000	48.0%	15.0%	200	0.69
		1988						
		1989						
		1990						
2	BOTSWANA	1985	20,263	18,576	95.8%		5,993	0.97
		1986	21,409	18,955	96.0%	38.0%	4,062	0.94
		1987	26,653	14,591	98.0%		2,951	1.25
		1988	34,318	18,215	99.0%	49.0%	2,798	1.52
		1989	41,255	22,195	99.0%	49.0%	4,585	1.79
		1990	47,917	25,321	99.3%	48.0%	6,594	2.04
3	LESOTHO	1985	13,730	7,358			3,773	0.54
		1986	16,195				5,759	0.64
		1987	18,252				5,647	
		1988	19,161	11,456	59.1%	25.0%	5,330	0.73
		1989						
		1990						
4	MALAWI	1985	40,578	18,632	92.4%		3,379	0.26
		1986	44,694	21,228	94.1%		4,085	0.29
		1987	46,879	22,466	94.2%	54.6%	5,593	0.28
		1988						0.30
		1989	50,256	25,960	98.3%	45.0%	10,482	0.32
		1990	50,100	26,170	93.3%	47.5%	110,016	0.32
5	MOZAMBIQUE	1985	60,232	38,332	89.4%		26,427	0.27
		1986	61,847	39,840	89.7%		28,395	0.28
		1987	62,615	40,174	98.0%		29,214	0.28
		1988	63,349	40,706	90.0%		29,311	0.27
		1989	64,113	41,278	93.0%		32,576	0.27
		1990	66,000	47,439	92.2%		32,872	0.30
6	SWAZILAND	1985	17,795	8,197	94.1%	48.0%	739	1.23
		1986	20,134	9,440	98.7%	47.8%	1,810	1.48
		1987	20,667	9,643	98.0%	42.0%	2,562	1.36
		1988	22,415	10,529	98.0%	47.0%		1.38
		1989	23,905	12,175	99.0%	46.8%	5,771	1.50
		1990	25,293	13,524	99.0%	42.0%	7,872	1.76
7	TANZANIA	1985	113,902	52,064	77.9%		59,064	0.24
		1986	117,301	54,460	80.8%		66,718	0.24
		1987	122,600	58,800	83.3%		64,600	0.25
		1988	130,504	66,058	79.4%		75,960	0.23
		1989	136,818	68,155	80.0%		74,200	0.29
		1990	140,313	73,011	79.7%		76,539	0.30
8	ZAIRE	1985	38,845	23,810	89.7%			0.89
		1986						0.89
		1987						0.98
		1988	32,116	29,186	68.0%			0.98
		1989						
		1990						
9	ZAMBIA	1985	74,574	43,406	99.4%	58.6%	23,623	0.58
		1986	85,305	46,647	99.3%	51.6%	27,593	0.61
		1987	80,865	50,919	100.0%	49.9%	28,807	0.71
		1988	91,501	58,492	99.9%	52.3%	29,105	0.75
		1989	95,201	60,750	99.8%	51.7%	32,464	0.78
		1990	99,840	65,057	99.9%	52.2%	52,546	0.83
10	ZIMBABWE	1985	248,124	106,721	98.2%	66.6%	20,842	1.37
		1986	256,369	111,567	98.6%	85.3%	26,357	1.33
		1987	277,511	112,854	99.0%	78.0%	27,514	1.31
		1988	286,600	118,433	99.0%	82.0%	31,992	1.33
		1989						
		1990	300,955	125,747	99.5%	61.0%	72,828	1.34
TOTAL		1985	628,051	314,296	833.6%	165.2%	143,840	5.55
		1986	623,334	294,137	656.4%	222.7%	164,779	5.82
		1987	733,042	371,447	662.5%	216.5%	167,088	6.21
		1988	680,044	353,155	692.4%	255.3%	174,496	6.64
		1989	411,628	230,513	569.1%	192.5%	160,004	4.95
		1990	730,498	376,269	662.9%	250.7%	359,259	6.89
AVERAGE		1985	69,783	34,922	92.6%	55.1%	17,900	0.62
		1986	77,917	42,020	93.8%	55.7%	20,597	0.65
		1987	81,449	46,431	82.8%	43.3%	20,886	0.78
		1988	85,006	44,144	86.6%	42.6%	29,003	0.74
		1989	68,605	38,419	94.9%	48.1%	26,681	0.83
		1990	104,357	53,753	94.7%	50.1%	51,323	0.98
REF.	SOUTH AFRICA	1985	3,889,773	2,297,773	92.6%	67.3%	223,236	8.42
		1986	4,057,683	2,403,446	93.6%	67.7%	195,411	8.36
		1987	4,235,922	2,532,680	94.5%	68.1%	187,538	8.53
		1988	4,461,907	2,668,589	95.0%	67.9%	141,670	8.71
		1989	4,744,353	2,866,024	95.6%	67.3%	120,906	9.03
		1990	5,077,229	3,250,246	96.4%	66.4%	115,232	9.74

SOURCE: YEARBOOK OF COMMON CARRIER TELECOMMUNICATIONS (19TH EDITION)

Table 3-1 Telecommunications Data of Countries in Southern Africa (2/3)

NO.	COUNTRY	YEAR	OTHER SERVICES				MANPOWER & PRODUCTIVITY				
			NO. OF TELEGRAM	NO. OF SUBS. TELEX	NO. OF SUBS. DATA	NO. OF PRVY LEASE CIRCUIT	TOTAL STAFF	OPERATING STAFF	TECHNICAL STAFF	OTHER STAFF	NO. OF STAFF per 1000 ML
1	ANGOLA	1985									
		1986									
		1987	3,333,889	1,088			1,828	600	1,200	28	29.4
		1988									
		1989									
2	BOTSWANA	1985	40,100	545			911				
		1986	31,400	651	60	11	896	107	276	513	31.8
		1987	23,400	741			893				
		1988	20,953	729			916	68	629	219	50.3
		1989		684			961	59	665	237	23.1
3	LESOTHO	1985		219	17	31	532	196	210	126	72.3
		1986									
		1987									
		1988	13,915	286		34	632	117	332	183	55.2
		1989									
4	MALAWI	1985		482	35	333	1,283	175	873	155	64.6
		1986	199,674	549	52	362	1,248	285	878	165	58.8
		1987	145,815	592	46	245	1,214	286	734	194	54.0
		1988		691	115	50	1,630	244	545		62.3
		1989		715	176	72	4,001	284	1,747	1,978	152.9
5	MOZAMBIQUE	1985		680			2,483		729	1,674	62.7
		1986		722			2,416		1,333	1,083	60.6
		1987		783			2,373		1,308	1,065	59.1
		1988	2,493	824			2,997		1,855	1,142	73.5
		1989		855			2,932		1,933	999	71.8
6	SWAZILAND	1985	2,710	308	2	12	292	42	195	55	35.6
		1986		351	2	13	471	78	231	170	49.9
		1987	32,973	353	12		532	66	236	230	55.2
		1988	11,912	353		52	478	51	269	150	44.6
		1989	5,757	335		253	394	48	219	135	32.4
7	TANZANIA	1985	1,103,338	1,195	7	656	4,122	1,223	1,592	1,307	79.2
		1986	1,199,300	1,231	2	716	5,819	1,339	1,367	3,113	186.8
		1987	1,200,000	1,327		715	5,872	1,373	1,363	3,136	99.9
		1988	1,387,181	1,384		715	4,907	1,495	1,833	2,379	74.3
		1989	1,298,244	1,715			4,860	1,214	1,107	2,539	71.3
8	ZAIRE	1985	42,738	1,697		45					
		1986									
		1987									
		1988	30,334	1,697		7	6,569	1,543	3,611	1,415	225.1
		1989									
9	ZAMBIA	1985	22,988,228	1,476	168	252	2,542	852	1,391	299	58.6
		1986	23,212,484	1,478	155	277	2,655	863	1,506	286	56.9
		1987	18,881,927	1,708	141	296	2,736	869	1,523	344	52.9
		1988	19,375,293	2,520			3,401	905	1,168	1,328	58.1
		1989	20,429,990	2,770		25	3,585	954	1,626	1,805	59.0
10	ZIMBABWE	1985	24,548,264	2,875		24	3,737	938	1,258	1,557	57.4
		1986	529,734	2,065	806	312	5,217	932	2,335	1,950	48.9
		1987	792,862	2,102	962	644	7,169	757	3,001	3,411	64.3
		1988	513,855	2,480	71	589	4,819	731	718	3,370	42.7
		1989	508,455	2,635	105	816	5,171	739	1,136	3,296	43.7
TOTAL		1985	24,626,900	8,667	1,935	1,691	17,222	3,428	7,325	5,566	421.9
		1986	25,435,720	7,834	1,233	2,823	20,674	3,341	8,592	8,741	479.1
		1987	24,130,970	8,984	270	1,845	20,259	3,925	7,082	8,359	393.2
		1988	21,350,536	10,428	105	1,624	25,063	4,918	10,833	10,112	624.8
		1989	21,733,991	7,850	115	328	14,362	2,511	6,895	4,915	319.6
AVERAGE		1985	2,956,121	9,376	322	2,312	18,763	3,674	9,370	5,782	368.9
		1986	4,104,483	963	173	242	2,153	570	1,046	795	60.3
		1987	5,087,144	1,012	286	337	2,953	557	1,227	1,249	68.4
		1988	3,447,281	1,123	68	461	2,532	654	1,012	1,194	56.2
		1989	2,668,817	1,304	105	325	3,133	703	1,254	1,264	78.1
REF. SOUTH AFRICA		1985	7,244,664	1,175	115	189	2,394	502	1,016	983	53.3
		1986	5,790,024	1,339	81	385	3,127	612	1,562	964	61.5
		1987	8,827,984	32,014		45,917	94,402	5,146	46,534		41.1
		1988	7,908,174	32,542		52,582	95,761	4,842	48,268		39.8
		1989	7,748,464	33,537		57,997	97,932	4,562	50,466		38.7
TOTAL		1985	7,050,076	31,604		62,521	95,531	4,428	48,881		35.8
		1986	6,784,828	22,685		75,312	95,387	4,198	48,781		34.3
		1987	6,432,714	17,476		76,184	93,856	3,955	51,972	37,929	28.8
		1988									
		1989									

SOURCE: YEARBOOK OF COMMON CARRIER TELECOMMUNICATIONS (19TH EDITION)

Table 3-1 Telecommunications Data of Countries in Southern Africa (3/3)

NO.	COUNTRY	YEAR	T E L E C O M M U N I C A T I O N S (Million US\$)				
			TOTAL INCOME	TOTAL EXPENDITURE	BALANCE	TELECOMM. INVESTMENT	INVESTMENT % OF GDP
1	ANGOLA	1985					
		1986					
		1987	1387.05	1318.00	69.05		
		1988					
		1989					
		1990					
2	BOTSWANA	1985				6.65	0.38%
		1986	27.65	30.15	-2.50	98.94	7.50%
		1987				42.49	
		1988	61.00			28.21	2.35%
		1989	103.50	58.97	44.53	52.30	
		1990					
3	LESOTHO	1985	8.30	8.31	-0.01	4.59	0.84%
		1986					
		1987					
		1988	25.68	17.99	7.69	8.37	0.86%
		1989					
		1990					
4	MALAWI	1985	23.01	45.85	-22.84	18.19	0.99%
		1986	27.26	29.88	-2.62	22.65	1.00%
		1987	43.47	42.21	1.26	31.60	1.20%
		1988					0.88%
		1989	84.49	76.88	7.61	34.16	0.75%
		1990	88.29	77.89	10.40	34.25	
5	MOZAMBIQUE	1985	1117.04	749.03	368.01	1.45	0.40%
		1986	1190.99	1003.54	187.45	1.76	
		1987	5065.25	3458.39	1606.86	14.71	
		1988	10698.62	12828.83	-2130.21	9.72	
		1989	22088.83	25919.54	-3830.71		
		1990		49025.98			
6	SWAZILAND	1985	13.91	12.29	1.62	2.64	0.36%
		1986	17.98	14.01	3.97	30.01	3.14%
		1987	23.27	17.30	5.97	2.51	0.22%
		1988	33.34	23.70	9.64	36.04	2.72%
		1989	38.59	26.71	11.88	62.57	4.72%
		1990	59.23	41.06	18.17	46.05	
7	TANZANIA	1985	1352.70	953.60	399.10	11.10	0.81%
		1986	1705.98	1051.30	654.68		
		1987	2784.24	2671.51	112.73	98.57	0.85%
		1988	5373.40	4778.90	594.50	983.00	0.36%
		1989	7396.76			124.76	0.84%
		1990	10356.59	5372.71	5483.88	1047.02	0.26%
8	ZAIRE	1985					
		1986					
		1987					
		1988					
		1989					
		1990					
9	ZAMBIA	1985	171.80	155.23	16.57	158.00	2.24%
		1986	293.95	260.14	33.81	299.74	3.18%
		1987	432.45	346.42	86.03	283.69	1.43%
		1988	591.14	512.67	78.47	1.47	0.01%
		1989	1559.26	1238.46	320.80	276.24	1.23%
		1990	2931.27	2641.33	289.94	817.33	0.78%
10	ZIMBABWE	1985	90.40	90.31	0.09	84.76	0.16%
		1986	129.72	131.09	-1.37	51.67	0.62%
		1987	169.32	142.43	26.89	47.10	0.51%
		1988	223.65	158.70	64.95	48.00	0.37%
		1989					
		1990	264.77	344.85	-80.08	177.51	1.37%
TOTAL		1985	2777.16	2014.62	762.54	287.38	5.21%
		1986	3393.53	2520.11	873.42	504.77	15.44%
		1987	9905.05	7996.26	1908.79	520.67	3.41%
		1988	16998.83	18328.79	-1329.96	1106.89	7.55%
		1989	31271.43	27320.56	-3445.89	550.03	6.74%
		1990	14191.15	57503.74	5713.31	2122.16	2.33%
AVERAGE		1985	396.74	287.80	108.93	35.92	0.65%
		1986	484.79	360.02	124.77	84.13	3.09%
		1987	1415.01	1142.32	272.68	74.38	0.88%
		1988	2428.40	3053.47	-230.49	158.13	1.08%
		1989	5211.91	5464.11	-689.18	110.01	1.69%
		1990	2838.23	9583.96	1142.66	530.54	0.78%
REF.	SOUTH AFRICA	1985	2,191.26	1,909.49	281.77	1,074.66	0.98%
		1986	2,583.59	2,322.55	268.95	1,376.30	1.07%
		1987	3,382.79	2,797.70	585.09	1,595.65	1.06%
		1988	3,981.91	3,089.44	892.47	1,426.77	0.80%
		1989	4,716.52	3,654.51	1062.01	1,453.16	0.69%
		1990	5,327.32	4,434.55	892.77	1,473.81	0.63%

SOURCE: YEARBOOK OF COMMON CARRIER TELECOMMUNICATIONS (19TH EDITION)

Table 3-2 World of Nations Country Data

NO.	COUNTRY	LAND (sq. 1000km)	POPULATION (x1000)	GDP per Capita (US\$)	No. of Telephone	No. of DELS	DELS Density /100inhab.	Expressed Demand	Target for the year 2000		
									No. of Telephone	No. of DELS	DELS Density
1	ANGOLA	1,246.7	8,481.0	503	70,000	62,000	0.65	70,000	184,000	162,917	1.33
2	BOTSWANA	582.0	1,300.0	2,509	47,917	25,921	1.95	32,000	270,000	180,000	10.00
3	LESOTHO	30.4	1,678.0	183	19,421	9,000	0.54				
4	MALAWI	118.5	8,773.0	211	55,068	26,929	0.31	37,053	129,847	74,676	0.60
5	MOZAMBIQUE	799.4	15,937.9	100	66,000	47,430	0.30	32,872		122,000	0.58
6	SWAZILAND	17.4	780.0	544	23,905	12,175	1.56		78,873	33,997	3.08
7	TANZANIA	945.1	24,000.0	101	140,131	73,011	0.30		960,000	834,198	2.57
8	ZAIRE	2,345.4	33,458.0	108	50,000	30,000	0.01	39,881	164,245	176,772	0.39
9	ZAMBIA	752.6	7,818.4	282	97,457	62,358	0.81	108,132	128,400	85,600	0.80
10	ZIMBABWE	390.6	9,433.9	634	284,541	125,086	1.33	198,333	485,820	257,128	2.08
	TOTAL	7,228.1	112,661.2	5,275	884,440	473,910	7.76	518,281	2,401,185	1,927,288	21.45
	AVERAGE	722.8	11,266.1	528	86,444	47,391	0.78	74,010	300,148	214,143	2.38

Source: TELECOM 91 - ITU, October 1991

Table 3-3 Existing Local Network and Subscriber's Situation (1/3)

SEPTEMBER 30, 1992

NO.	EXCHANGE NAME	LOCAL NETWORK				NUMBER OF SUBSCRIBER				REASONS OF WAITING MARKETING				TOTAL
		SWITCHING CAPACITY	EQUIPPED	PAIRS ON PLANT	PAIRS ON LINES	WORKING LINES	WAITING INSTALL	WAITING MARKETING	TOTAL DEMAND	NO SWITCHING EQUIPMENT	DP MAIN	CABLE FULL	AREA NOT SERVICED	
8181	Lusaka	15,800	16,055	15,170	9,944	172	2,912	13,828	1,832	1,828	1,828	52	1,828	2,912
8182	Chelsoon	3,000	2,100	2,828	1,865	74	2,185	3,544	385	385	385	912	388	2,185
8183	Chirika	1,500	895	895	22	22	594	1,521	594	594	620	279	620	1,065
8184	Emwasdale	4,000	2,950	2,950	1,895	43	1,865	2,583	166	166	166	5	166	28
8185	Inter. Airport	512	395	395	395	19	612	1,171	458	458	458	3	458	1,175
8186	Makeni	1,800	600	600	548	142	1,175	2,765	371	371	371	185	371	546
8187	Ridgeway	5,800	3,700	3,130	2,157	174	2,498	3,858	558	558	558	195	558	2,498
8188	Roma	2,500	3,700	3,130	2,157	174	2,498	3,858	558	558	558	195	558	2,498
8189	Woodlands	5,800	3,700	3,130	2,157	174	2,498	3,858	558	558	558	195	558	2,498
8190	SUB-TOTAL	37,512	38,758	35,978	22,858	890	11,727	35,475	2,978	2,978	2,978	1,631	2,978	11,727
	% of Capacity/Demand	105.7%	101.4%	101.4%	64.4%	2.5%	33.3%	100.0%	25.3%	25.3%	25.3%	13.9%	25.3%	100.0%
8281	Chilanga	768	1,118	1,893	374	4	242	528	33	33	33	64	145	242
8282	Chirundu	96	250	120	44	25	25	63	7	7	7	11	7	25
8283	Chisamba	256	300	160	131	80	211	300	36	36	36	36	36	300
8284	Chonwe	96	400	320	73	400	57	130	36	36	36	17	48	57
8285	Kafue	2,000	1,400	900	649	649	1,898	2,547	1,158	1,158	1,158	282	418	1,898
8286	Luanshya	96	120	114	89	41	138	351	5	5	5	3	16	41
8287	Numbwa	200	310	300	194	217	217	351	181	181	181	28	8	217
8288	Namalandu G	56	450	400	76	77	77	153	9	9	9	10	59	77
8289	Nampundwe	96	200	180	79	8	5	92	2	2	2	3	3	5
8210	Siavonga	512	340	295	218	3	113	334	32	32	32	48	24	113
8290	SUB-TOTAL	4,216	4,888	3,797	1,887	15	2,755	4,637	1,322	1,322	1,322	463	747	2,755
	% of Capacity/Demand	98.9%	105.2%	81.9%	42.3%	3.9%	59.4%	100.0%	48.8%	48.8%	48.8%	16.8%	27.1%	100.0%
8381	Kitwe	17,800	13,950	15,922	8,643	1,868	9,231	18,942	5,432	5,432	5,432	564	248	9,231
8382	Chambeshi	300	400	290	256	35	244	535	46	46	46	58	94	244
8383	Chililabombwe	1,800	1,377	996	923	80	755	1,758	162	162	162	29	17	755
8384	Chinsale	3,000	5,920	5,772	2,733	146	3,925	6,784	1,579	1,579	1,579	214	1,588	3,925
8385	Itimpi	500	450	410	245	114	138	378	133	133	133	17	4	133
8386	Kululushi	1,800	1,200	1,195	887	114	348	1,349	212	212	212	17	4	348
8387	Luanshya	3,000	4,800	2,151	1,688	266	1,465	3,429	791	791	791	438	236	1,465
8388	Mufuilira	3,000	3,600	3,780	2,151	214	1,677	4,861	923	923	923	482	214	1,677
8390	SUB-TOTAL	29,800	31,657	30,545	17,555	1,923	17,778	37,256	9,142	9,142	9,142	1,714	2,481	17,778
	% of Capacity/Demand	77.8%	85.1%	82.8%	47.1%	5.2%	47.7%	100.0%	51.4%	51.4%	51.4%	9.6%	13.5%	100.0%
8481	Ndola Main	6,000	8,250	9,013	5,411	204	2,397	8,812	1,579	1,579	1,579	5	770	2,397
8482	Ndola Ind North	1,800	1,200	1,447	711	9	658	1,879	208	208	208	374	374	658
8483	Ndola Ind South	1,800	1,200	855	282	33	291	616	285	285	285	86	86	291
8484	Ndola Kabushi	1,800	1,800	3,345	865	3	2,413	3,281	532	532	532	468	468	2,413
8485	Ndola Kansenshi	2,000	1,700	2,240	1,245	34	1,843	2,322	578	578	578	455	455	1,843
8486	Ndola Northrise	1,800	1,800	1,250	769	38	1,685	1,685	589	589	589	217	217	800
8487	Ndola Pamodzi	1,800	900	730	448	59	1,128	1,635	973	973	973	155	155	1,128
8488	Pasati	96	300	260	73	41	15	129	15	15	15	15	15	15
8490	SUB-TOTAL	13,896	16,250	19,146	9,814	413	8,752	18,979	4,756	4,756	4,756	5	2,550	8,752
	% of Capacity/Demand	69.8%	85.6%	100.9%	51.7%	2.2%	46.1%	100.0%	54.3%	54.3%	54.3%	9.1%	29.1%	100.0%

Table 3-3 Existing Local Network and Subscriber's Situation (2/3)

NO.	EXCHANGE NAME	LOCAL NETWORK				NUMBER OF SUBSCRIBERS				REASONS OF WAITING MARKETING				TOTAL
		SWITCHING CAPACITY	OUTSIDE PLANT PAIRS ON MDF	PAIRS ON DPS	WORKING LINES	WAITING INSTALL	MARKETING	TOTAL DEMAND	NO SWITCHING EQUIPMENT	CABLE FULL SERVICED	ABER NOT SERVICED	UNDER SURVEY		
0881	Mansa	1,000	1,300	1,815	799	22	885	1,766	16	762	23	84	885	
0882	Kwabawa	256	488	308	154	4	162	328	73	29	45	15	162	
0883	Mwense	128	135	94	33	3	53	198	48	23	12	18	93	
0884	Nchelenge	128	258	256	97	5	348	448	279	23	20	24	348	
0885	Sawya	256	358	414	195	9	414	298	191	45	15	49	218	
0880	SUB-TOTAL	1,768	2,935	1,990	1,339	43	1,696	3,078	599	882	115	198	1,696	
	% of Capacity/Demand	57.4%	95.4%	64.7%	48.5%	1.4%	55.1%	100.0%	30.8%	52.8%	6.8%	11.2%	100.0%	
0881	Choma	1,800	1,788	1,685	1,227	76	917	2,228	541	541	29	376	917	
0882	Gwenbe	200	200	138	79	7	37	133	22	8	8	8	37	
0883	Itzhi-Tezhi	96	200	200	89	3	22	114	22	8	8	8	22	
0884	Kalomo	400	490	470	365	26	470	568	8	97	8	62	175	
0885	Maamba	128	380	220	111	5	277	398	189	48	68	8	277	
0886	Mazabuka	888	1,488	1,858	786	18	744	1,548	74	568	4	72	744	
0887	Mozze	688	748	759	568	21	616	1,295	112	489	15	11	616	
0888	Naowala	128	285	165	111	5	82	188	25	47	3	7	82	
0889	Peaba	308	288	288	172	9	281	281	281	47	3	7	281	
0810	Livingstone	5000	7410	3595	2881	354	1574	4729	853	653	921	9	1574	
0811	Zimba	50	88	78	49	8	21	78	12	12	9	9	21	
0880	SUB-TOTAL	9,502	13,065	8,535	6,358	532	4,485	11,375	488	2,575	127	1,375	4,485	
	% of Capacity/Demand	83.5%	114.9%	75.9%	55.9%	4.7%	39.4%	100.0%	9.1%	57.4%	2.2%	38.7%	100.0%	
0781	Kasaba	1,500	1,800	1,388	1,172	100	889	2,111	78	494	15	200	839	
0782	Chimsali	192	208	165	134	20	196	358	25	78	25	93	196	
0783	Isoka	256	258	258	195	17	156	388	12	48	8	96	156	
0784	Luwingu	256	380	178	131	32	38	183	32	21	9	9	38	
0785	Mbala	648	600	588	464	40	397	981	56	327	14	14	397	
0786	Epika	768	800	560	438	32	638	1,189	44	584	22	22	638	
0787	Mporokoso	256	280	190	142	26	129	287	38	38	61	61	129	
0788	Mpolungu	192	200	180	120	4	154	278	42	104	8	8	154	
0789	Mundwi	192	288	148	98	22	138	389	99	58	4	6	188	
0710	Nakonde	128	180	108	97	18	194	389	378	1,728	15	45	194	
0780	SUB-TOTAL	4,380	4,450	3,715	2,991	311	2,735	6,837	378	1,728	8.5%	614	2,735	
	% of Capacity/Demand	72.0%	73.7%	61.5%	49.5%	5.2%	45.3%	100.0%	18.8%	63.2%	8.5%	22.4%	100.0%	
0801	Kabwe	4,000	7,388	6,105	2,745	92	2,169	5,866	571	1,183	124	371	2,169	
0802	Chibombo	128	288	198	72	1	35	188	117	28	2	35	35	
0803	Kapiri-Mposhi	384	1378	500	221	4	139	354	91	96	11	8	139	
0804	Mukushi	384	688	288	177	13	286	396	91	96	11	8	286	
0805	Mpetwe	1,888	488	250	182	2	34	54	8	34	7	34	54	
0806	Serenje	384	408	300	222	14	222	458	8	281	7	6	222	
0807	Chalata	20	18	18	18	12	12	22	12	3	1	5	12	
0808	Kanona	10	7	7	7	9	9	15	787	1,423	145	471	2,826	
0800	SUB-TOTAL	6,310	9,580	7,625	3,472	126	2,826	6,424	27.8%	58.4%	5.1%	16.7%	2,826	
	% of Capacity/Demand	98.2%	149.4%	118.7%	54.8%	2.8%	44.8%	100.0%	27.8%	58.4%	5.1%	16.7%	100.0%	

Table 3-3 Existing Local Network and Subscriber's Situation (3/3)

SEPTEMBER 30, 1982

NO.	EXCHANGE NAME	LOCAL NETWORK										SITUATION OF SUBSCRIBER										REASONS OF WAITING MARKETING				TOTAL
		SWITCHING CAPACITY	OUTSIDE PLANT PAIRS ON MDF	PAIRS ON DPS	ON PAIRS ON	WORKING LINES	WAITING INSTALL	MARKETING	TOTAL DEMAND	NO SWITCHING EQUIPMENT	DP MAIN CABLE FULL	AREA NOT SERVICED	UNDER SURVEY	TOTAL	NO SWITCHING EQUIPMENT	DP MAIN CABLE FULL	AREA NOT SERVICED	UNDER SURVEY	TOTAL							
8981	Chibata	1,880	1,550	1,870	1,215	96	1,886	2,397	1,982	29	55	1,886														
8982	Chadiza	208	150	130	95	13	186	214	63	15	28	186														
8983	Chama	128	508	112	345	13	18	18			18															
8984	Katete	308	308	288	191	26	149	366	81	17	51															
8985	Lundazi	384	980	698	235	41	50	332	11	11	34															
8986	Muwe	96	200	170	81	8	75	164	15	38	11															
8987	Nyimba	288	288	288	57	6	47	110	12	11	47															
8988	Petabuke	488	350	350	225	44	144	413	24	24	44															
8989	Sinda	208	388	110	46	2	26	74	78	5	44															
8988	SUB-TOTAL	3,708	4,530	4,995	2,227	249	1,787	4,183	1,601	91	278	1,787	85	1,601	7	18	28	1,787	1,787							
	% of Capacity/Demand	88.6%	192.3%	57.7%	53.2%	6.8%	48.8%	189.8%	78.9%	5.3%	15.8%	188.8%	122	78.9%	0.8%	8.6%	285	188.8%	188.8%							
1001	Monzu	1,880	2,488	1,285	587	29	796	1,412	383	86	285															
1002	Kalabo	128	288	168	105	6	124	235			34															
1003	Kaosa	256	288	288	139	23	161	323	46	5	41															
1004	Lukulu	64	288	120	48	10	108	158	13	32	188															
1005	Senanga	256	388	255	145	14	13	172	4	4	13															
1006	Limulunga	20			14		68	80			8															
1007	Ssheke	50			12		68	80			8															
1008	SUB-TOTAL	1,774	3,380	2,020	1,850	82	1,262	2,394	366	95	488	1,262	341	366	7	18	26	1,262	1,262							
	% of Capacity/Demand	74.1%	137.8%	84.4%	43.9%	3.4%	52.7%	189.0%	29.0%	7.5%	26.5%	188.0%	27.9%	29.0%	0.8%	8.6%	26.5%	188.0%	188.0%							
1101	Solwezi	1,880	1,570	1,750	767	20	673	1,468	432	85	149															
1102	Kabompo	128	200	170	96	4	170	266	8	3	34															
1103	Kasempa	128	200	148	96	4	201	381	8	5	67															
1104	Mutumbwe	96	488	348	74		31	185	18	18	11															
1105	Mwihilanga	128	388	258	96		247	343	41	1	23															
1106	Zambezi	128	388	268	96		215	311	27	49	215															
1108	SUB-TOTAL	1,088	2,970	2,910	1,225	24	1,537	2,786	588	104	383	1,537	592	588	6.8%	21.7%	21.7%	1,537	1,537							
	% of Capacity/Demand	57.7%	186.6%	104.5%	44.8%	0.9%	55.2%	189.0%	33.1%	6.8%	21.7%	188.8%	38.5%	33.1%	6.8%	21.7%	21.7%	188.8%	188.8%							
	Grant Total	112,874	182,437	128,356	78,756	4,608	57,268	132,624	26,933	4,585	15,517	57,268	9,385	26,933	4,585	15,517	15,517	57,268	57,268							
	% of Capacity/Demand	85.1%	99.9%	98.7%	53.4%	3.5%	43.2%	189.8%	47.8%	7.9%	28.8%	188.8%	16.3%	47.8%	7.9%	28.8%	28.8%	188.8%	188.8%							

SOURCE: THE RESULT OF FIELD SURVEY BY JICA STUDY TEAM. (DATA AT THE END OF SEPTEMBER 1982)

Table 3-4 Existing Subscriber's Category and Rural Area Subscribers (1/3)

MARCH 31, 1992

NO.	EXCHANGE NAME	C A T E G O R Y				R U R A L A R E A			
		NUMBER OF SUBSCRIBER		Private		BUSINESS RESIDENCE		BUSINESS RESIDENCE	
		TOTAL SUBS	Government Sub	Parastatal Sub	Subs	Subs	Subs	Subs	TOTAL
0181	Lusaka	9,692	1,457	2,169	6,066	6	316	0	322
0182	Cheiston	1,267	75	74	1,118	0	0	0	0
0183	Chinika	754	0	6	748	0	0	0	0
0184	Ewasdale	1,382	14	285	1,003	0	0	0	0
0185	Inter. Airport	273	52	191	30	0	0	0	0
0186	Makeni	473	31	17	425	0	0	0	0
0187	Ridgeway	2,396	914	916	565	0	0	0	0
0188	Roma	2,850	326	530	1,194	0	0	0	0
0189	Woodlands	3,545	371	332	2,942	0	0	0	0
0188	SUB-TOTAL	21,852	3,240	4,520	14,092	6	316	0	322
	% of Category	188.8%	16.8%	20.7%	64.5%				
0201	Chilanga	387	71	52	204	0	0	0	0
0202	Chirundu	44	16	7	21	0	0	0	0
0203	Chisamba	128	14	34	80	13	32	0	45
0204	Chongwe	65	9	22	34	0	0	0	0
0205	Ksive	643	69	240	334	0	0	0	0
0206	Luangwa	98	50	26	14	0	0	0	0
0207	Mwabwa	135	28	42	65	0	0	0	0
0208	Kaualundu G	77	13	32	32	0	0	0	0
0209	Nampundwe	73	1	36	36	0	0	0	0
0210	Siavonga	218	39	55	116	0	0	0	0
0208	SUB-TOTAL	1,832	318	586	936	13	32	0	45
	% of Category	188.0%	16.9%	32.0%	51.1%				
0301	Kitwe	8,582	335	1,760	6,487	3	0	0	3
0302	Chebezi	230	9	78	143	0	0	0	0
0303	Chilibababwe	917	65	324	528	0	0	0	0
0304	Chingola	2,712	169	812	1,731	27	0	0	30
0305	Itimpi	229	12	20	197	0	0	0	0
0306	Kalulushi	841	53	291	497	0	0	0	0
0307	Luenshya	1,698	184	466	1,128	30	8	0	38
0308	Mufulira	2,185	149	771	1,265	5	3	0	8
0300	SUB-TOTAL	17,314	896	4,522	11,896	38	41	0	79
	% of Category	188.8%	5.2%	25.1%	68.7%				
0401	Ndola Main	5,411	544	1,877	3,190	15	27	1	71
0402	Ndola Ind North	711	3	185	523	0	0	0	0
0403	Ndola Ind South	292	17	207	68	0	0	0	0
0404	Ndola Kabushi	865	25	22	818	0	0	0	0
0405	Ndola Kansashi	1,245	118	298	829	0	0	0	0
0406	Ndola Northrise	472	50	144	578	0	0	0	0
0407	Ndola Pamodzi	448	11	7	438	0	0	0	0
0408	Messiti	73	23	23	27	0	0	0	0
0400	SUB-TOTAL	9,817	791	2,563	6,463	15	27	1	71
	% of Category	188.3%	8.1%	26.1%	65.8%				



Table 3-4 Existing Subscriber's Category and Rural Area Subscribers (2/3)

MARCH 31, 1992

NO.	EXCHANGE NAME	C A T E G O R Y						R U R A L			A B E A		TOTAL
		NUMBER OF SUBSCRIBER		Private		OPEN WIRE BUSINESS RESIDENCE Subs	BUSINESS RESIDENCE Subs	R. S. (PARTS) Subs	BUSINESS RESIDENCE Subs	TOTAL			
		Government Subs	Parastatal Subs	Private Subs	Subs								
8581	Mansa	796	226	236	238							8	
8582	Kawambwa	149	49	12	38							8	
8583	Mweuse	90	33	13	44							8	
8584	Acheleenge	99	34	15	58						6	21	
8585	Samuya	195	66	25	104					15	6	21	
8588	SUB-TOTAL	1,329	488	355	566					15	6	21	
	% of Category	188.8%	39.7%	26.7%	42.6%								
8681	Choesa	1,151	121	126	94					48		85	
8682	Gwembe	85	41	14	38							8	
8683	Itezhi-Tezhi	683	28	16	56							8	
8684	Kalomo	357	53	33	271					33		59	
8685	Naamba	126	18	52	64							8	
8686	Mezabuka	783	135	129	519					92		144	
8687	Nonze	592	89	124	379					27		58	
8688	Namwala	114	57	17	48							8	
8689	Pemba	169	21	48	183					14		24	
8618	Livingstone	2,596	564	482	1,638					25		56	
8611	Zimba	48	12	13	23					18		28	
8698	SUB-TOTAL	6,113	1,123	966	4,024					249		445	
	% of Category	188.8%	18.4%	15.8%	65.8%								
8781	Kasama	1,162	346	621	195							8	
8782	Chinsali	132	39	21	72							8	
8783	Isoka	195	88	93	22							8	
8784	Luwingu	134	45	67	22							8	
8785	Mbala	464	119	54	251					2		4	
8786	Mpika	487	79	51	277							4	
8787	Mporokoso	139	36	12	91							8	
8788	Mpulungu	121	25	12	84							8	
8789	Mungwi	92	14	72	6							8	
8718	Nakonde	97	19	22	56							8	
8788	SUB-TOTAL	2,943	882	1,025	1,116					2		4	
	% of Category	188.8%	27.3%	34.8%	37.9%								
8881	Kabwe	2,825	481	329	2,835							74	
8882	Chibombo	55	18	4	41					22		8	
8883	Kapiri-Mposhi	224	15	65	144							8	
8884	Mukushi	258	38	31	181					5	64	69	
8885	Mpetetwe	8										8	
8886	Serenje	224	57	21	146							8	
8887	Chalata	18	1	9	9							8	
8888	Kanona	7	3	1	3							8	
8888	SUB-TOTAL	3,595	525	451	2,619					27	116	142	
	% of Category	188.8%	14.6%	12.5%	72.9%								

Table 3-4 Existing Subscriber's Category and Rural Area Subscribers (3/3)

MARCH 31, 1992

NO.	EXCHANGE NAME	C A T E G O R Y										R U R A L			A R E A			TOTAL
		TOTAL SUBS		GOVERNMENT		PARASTATAL		PRIVATE		OPEN WIRE BUSINESS RESIDENCE		BUSINESS RESIDENCE		R.S.S (PARIS)		TOTAL		
		Subs	%	Subs	%	Subs	%	Subs	%	Subs	%	Subs	%	Subs	%			
0981	Chipata	1,853		246		282		605		17		19					36	
0982	Chadiza	183		40		20		43									0	
0983	Chama	84		41		11		32									0	
0984	Katete	198		52		29		109		4		3					7	
0985	Lundazi	228		58		47		115									8	
0986	Mfuwe	81		41		11		29						32		0	40	
0987	Nyabba	66		23		15		28		4		4					0	
0988	Petauke	233		61		51		121		2		9					11	
0989	Sinda	47		4		15		28									0	
0988	SUB-TOTAL	2,077		566		481		1,110		27		35		32		0	102	
	% of Category	180.8%		27.3%		19.3%		53.4%										
1081	Mongu	565		187		178		208		12		8		9		5	34	
1082	Kalabo	183		42		25		36									0	
1083	Kaoma	134		56		37		41									0	
1084	Lukulu	49		16		22		11									2	
1085	Senanga	136		68		26		42									0	
1086	Lisulungu	15		6		5		4									0	
1087	Sesheke	14		8		6		6		5		3					0	
1088	SUB-TOTAL	1,816		383		293		334		17		11		9		5	42	
	% of Category	188.8%		37.7%		29.4%		32.9%										
1181	Solwezi	616		193		86		337									0	
1182	Kabompo	93		35		19		39									0	
1183	Kasempa	91		42		22		27									0	
1184	Mufumbwe	68		27		9		32									0	
1185	Mwinilanga	91		39		14		38									0	
1186	Zambezi	88		33		13		42									0	
1188	SUB-TOTAL	1,847		369		163		515		8		0		0		0	0	
	% of Category	188.8%		35.2%		15.6%		49.2%										
	Grand Total	68,935		9,413		15,851		43,871		389		484		426		136	1,275	
	% of Category	188.8%		13.7%		23.8%		63.4%										

SOURCE: BI-ANNUAL TELEPHONE AND TELEX EXCHANGES UTILISATION STATISTICS REPORT, March 31 1992

Table 3-5 Existing Telephone Switching Facilities (1/2)

(As of September, 1992)

CODE NO	EXCHANGE NAME	STAGE	TYPE	SERVICE YEAR	CAPACITY	SUBSCRIBER	PUBLIC TELEPHONE	TRUNKS			LOCAL CABLE
								BW	IC	OG	
0101	MAIN(1)	TL5	D(N61)	1989	10,000	6,737	23		248	230	16,055
0101	MAIN(2)	LS	A(NX1E)	1980	15,000	3,207	0		63	44	
0102	CHELSTON	LS	A(NX1E)	1984	3,000	1,365	5		54	58	2,100
0103	CHINIKA	LS	D(N61)	1990	1,500	805	0		74	114	
0104	EMNASDALE	LS	D(N61)	1989	4,000	1,395	1		138	160	2,600
0105	I. AIRPORT	LS	A(MCR)	1981	512	354	5		20	30	305
0106	MAKEMI	LS	D(N61)	1990	1,000	548	0		56	61	600
0107	RIDGEWAY	LS	X(ARF)	1967	5,000	2,448	0		118	171	5,600
0108	ROMA	LS	D(N61)	1988	2,500	2,157	5		118	130	3,700
0109	WOODLANDS	LS	D(E10)	1987	5,000	3,850	35		130	135	7,800
LUSAKA URBAN					47,512	22,858	74	0	1,019	1,133	38,760
0201	CHILANGA	LS	A(MCR)	1980	768	374	5		24	18	1,110
0202	CHIRUNDU	LS	A(MCR)	1987	96	44	0		5	6	250
0203	CHISAMBA	LS	A(MCR)	1987	250	131	0		8	12	300
0204	CHONGWE	LS	A(MCR)	1988	96	73	0		5	5	400
0205	KAFUE	LS	A(NX1E)	1982	2,000	649	7		55	45	1,400
0206	LUANGWA	LS	A(MCR)	1984	96	89	0		5	6	120
0207	MUMBWA	LS	X(ARF)	1980	200	134	4		12	12	310
0208	NAMALUNDUGLS	LS	A(MCR)	1987	96	76	3		5	6	450
0209	NAMPUNDWE	LS	A(MCR)	1988	96	79	0		6	6	200
0210	SIYONGA	LS	A(MCR)	1987	512	218	7		14	16	340
LUSAKA ZONE					4,216	1,867	26	0	139	132	4,880
0301	KITWE	TS	X(ARM)	1978	(1200)						
0301	KITWE	TL5	X(ARF)	1978	9,000	3,208	6		96	97	13,950
0301	KITWE	TL5	D(N61)	1991	8,000	5,435	29		558	768	
0302	CHAMBISHI	LS	D(N61)	1991	500	256	1	120			400
0303	CHILILABOMLS	LS	X(C23)	1982	1,000	923	4		24	30	1,377
0304	CHINGOLA	LS	X(ARF)	1981	3,000	2,713	14		84	102	5,920
0305	ITIMPI	LS	D(N61)	1991	500	245	0	120			450
0306	KALULUSHI	LS	X(C23)	1980	1,000	887	5		28	30	1,200
0307	LUANSHYA	LS	X(ARF)	1978	3,000	1,698	13		96	96	4,800
0308	MUFULIRA	LS	X(ARF)	1980	3,000	2,190	15		100	100	3,600
04TOTAL	NDOLAURBAN	TL5,LS			13,096	9,814	52		244	281	16,250
COPPER BELT ZONE					42,096	27,369	139	248	1,222	1,504	47,947
0401	MAIN	TL5	D(E10)	1987	6,000	5,411	35		239	275	8,250
0402	IND. NORTH	LS	D(E10)	1987	1,000	711	2	8PCM			1,200
0403	IND. SOUTH	LS	D(E10)	1987	1,000	292	1	4PCM			1,200
0404	KABUSHI	LS	D(E10)	1987	1,000	865	0	4PCM			1,800
0405	KANSENSHI	LS	D(E10)	1987	2,000	1,245	10	8PCM			1,700
0406	NORTHRISE	LS	D(E10)	1987	1,000	769	4	8PCM			1,000
0407	PANODZI	LS	D(E10)	1987	1,000	448	0	4PCM			800
0408	MASAITI	LS	A(MCR)	1989	96	73	0		5	6	300
NDOLA ZONE					13,096	9,814	52	36PCM	244	281	16,250
0501	MANSA	TL5	D(N61)	1990	1,000	799	9		87	91	1,800
0502	KAWAMBWA	LS	A(MCR)	1983	256	154	1		9	11	400
0503	MWENSE	LS	A(MCR)	1983	128	94	3		6	7	135
0504	NCHELENGE	LS	A(MCR)	1983	128	97	3		6	7	250
0505	SAMFYA	LS	A(MCR)	1983	256	195	3		8	11	350
LUAPULA ZONE					1,768	1,339	15	0	116	127	2,935
0601	CHOMA	TS	X(ARM)	1979	(400)						
0601	CHOMA	LS	X(ARF)	1979	800	492	29		32	42	1,700
0601	CHOMA	LS	X(C23)	1993	1,000	735			45	45	
0602	GWEMBE	LS	X(ARK)	1980	200	79	1	12			200
0603	ITEZHITZHL	LS	A(MCR)	1987	96	89	2		5	6	260
0604	KALOMO	LS	X(ARK)	1979	400	365	3	27			490
0605	MAAMBA	LS	A(MCR)	1987	128	111	3		5	8	300
0606	MAZABUKA	LS	X(ARF)	1980	800	786	7		24	24	1,480
0607	MONZE	LS	X(ARF)	1980	600	568	5		16	16	740
0608	NAMWALA	LS	A(MCR)	1987	128	111	0		5	6	205
0609	PEMBA	LS	X(ARK)	1981	300	172	2	10			200
0610	LIVINGSTON	TL5	D(E10)	1987	5,000	2,801	25		124	127	7,410
0611	ZIMBA	LS	MANUAL	1972	50	49	1	2			80
SOUTHERN ZONE					9,502	6,358	78	51	256	274	13,065

Table 3-5 Existing Telephone Switching Facilities (2/2)

(As of September, 1982)

CODE NO	EXCHANGE NAME	STAGE	TYPE	SERVICE YEAR	CAPACITY	SUBSCRIBER	PUBLIC TELEPHONE	TRUNKS			LOCAL CABLE
								BW	IC	OG	
0701	KASAMA	LS	A(NX1E)	1983	1,500	1,172	12		107	110	1,800
0702	CHINSALI	LS	A(MCR)	1983	192	134	2		7	8	200
0703	ISOKA	LS	A(MCR)	1983	256	195	2		8	10	250
0704	LUNINGU	LS	A(MCR)	1984	256	131	3		8	9	300
0705	MBALA	LS	A(MCR)	1983	640	464	3		10	12	600
0706	MPIKA	LS	A(MCR)	1983	768	438	3		17	18	600
0707	MPOROKOSO	LS	A(MCR)	1983	256	142	1		8	10	200
0708	MPULUNGU	LS	A(MCR)	1983	192	120	2		4	5	200
0709	MUNGWI	LS	A(MCR)	1983	192	98	3		5	5	200
0710	NAKONDE	LS	A(MCR)	1983	128	97	3		6	6	100
NORTHERN ZONE					4,380	2,991	34	0	190	193	4,450
0801	KABWE	LS	A(NX1E)	1982	4,000	2,745	23		192	178	7,300
0802	CHIBOMBO	LS	A(MCR)	1988	128	72	3		5	8	200
0803	KAPIRIMPOS	LS	A(MCR)	1982	384	221	5		19	24	700
0804	MKUSHI	LS	A(MCR)	1982	384	177	6		17	19	600
0805	MUPEPETWE	LS	X(C23)	~1991	1,000	18	0		6	6	400
0806	SERENJE	LS	A(MCR)	1982	384	222	5		11	12	400
0807	CHALATA	LS	MANUAL		20	10	0				
0808	KANONA	LS	MANUAL		10	7	0				
CENTRAL ZONE					6,310	3,472	42	0	250	247	9,600
0901	CHIPATA	LS	X(ARK)	1979	(400)						
0901	CHIPATA	LS	X(ARF)	1981	800	670	13		45	45	1,550
0901	CHIPATA	LS	X(C23)	~1989	1,000	545	0		30	30	
0902	CHADIZA	LS	X(ARK)	1981	200	95	0	10			150
0903	CHAMA	LS	A(MCR)	1987	128	82	2		5	8	500
0904	KATETE	LS	X(ARK)	1981	300	191	1	22			300
0905	LUNDAZI	LS	A(MCR)	1987	384	235	3		11	17	980
0906	MFUNE	LS	A(MCR)	1987	96	81	2		5	6	200
0907	NYIMBA	LS	X(ARK)	1980	200	57	1	10			200
0908	PETAUKE	LS	X(ARK)	1980	400	225	2	22			350
0909	SINDA	LS	X(ARK)	1981	200	46	1	10			300
EASTERN ZONE					3,708	2,227	25	74	96	106	4,530
1001	MONGU	LS	D(N61)	1990	1,000	587	6		60	60	2,400
1002	KALABO	LS	A(MCR)	1983	128	105	1		6	7	200
1003	KAOMA	LS	A(MCR)	1983	256	139	2		6	8	200
1004	LUKULU	LS	A(MCR)	1983	64	48	1		5	7	200
1005	SENANGA	LS	A(MCR)	1983	256	145	2		8	8	300
1006	LIHULUNGA	LS	MANUAL	1976	20	14	1	1			
1007	SESHEKE	LS	MANUAL		50	12	0				
WESTERN ZONE					1,774	1,050	13	1	85	90	3,300
1101	SOLWEZI	LS	D(N61)	1990	1,000	767	7		66	74	1,570
1102	KABOMPO	LS	A(MCR)	1985	128	96	1		6	7	200
1103	KASEMPA	LS	A(MCR)	1985	128	96	1		6	7	200
1104	MUFUMBWE	LS	A(MCR)	1985	96	74	1		5	6	400
1105	MWINILUNGA	LS	A(MCR)	1985	128	96	1		6	7	300
1106	ZAMBEZI	LS	A(MCR)	1985	128	96	1		6	7	300
NORTHWESTERN ZONE					1,608	1,225	12	0	95	103	2,970
ZAMBIA TOTAL					122,874	79,756	462	366	3,458	3,914	132,437

Table 3-6 Telephone Exchange Equipment in Service

(As of Sept., 1992)

STAGE	TYPE OF SWITCH	MODEL	SUPPLYER		CAPACITY	NO. OF UNIT	INSTALL YEAR	
			MAKER	COUNTRY				
LS (TLS)	DIGITAL	E10B	ALCATEL	FRANCE	23,000	(2) *	9	1987
		NEAX61E	NEC	JAPAN	31,000	(5) *	11	1988-1991
	ANALOG	NX-1E	ITT NORTH	USA	25,500	(1) *	5	1980-1984
		MCR	ITT NORTH	USA	9,824		42	1980-1989
	CROSS BAR	ARF	ERICSSON	SWEDEN	26,200		10	1967-1981
		ARK	ERICSSON	SWEDEN	2,200		8	1979-1981
		G23	HITACHI	JAPAN	5,000		5	1980-1991
	MANUAL	PLESSY	ERICSSON	SWEDEN	150		5	
TOTAL				122,874		95		
TS	ANALOG	ARM	ERICSSON	SWEDEN	2,000		3	1978-1981
INTS	DIGITAL	AXE10	ERICSSON	SWEDEN	560		1	1985
	CROSS BAR	ARM	ERICSSON	SWEDEN	800		1	1980
	TOTAL				1,360		2	

\*; Units of TLS

**DATA 4**

**DEMAND FORECASTS**

Table 4-1 World Telephone Service in 1985 - 1989 (1/5)

NO.	COUNTRY	YEAR	POPULATION (#) (X 10 <sup>3</sup> )	GDP US\$ (#) (X 10 <sup>3</sup> )	GDP/CAPITA (US\$1989)	NO. OF MAIN LINES (**)	NO. OF WAITERS (**)
1	AUSTRALIA	1985	15,780	160,644,384	10,174	6,361,422	7,577
		1986	16,020	164,155,392	10,247	6,668,006	5,689
		1987	16,260	171,639,936	10,556	6,964,661	73,478
		1988	16,540	177,813,984	10,751	7,267,618	88,143
		1989	16,830	185,354,592	11,013	7,602,572	4,326
2	AUSTRIA	1985	7,560	65,171,580	8,621	2,729,389	40,151
		1986	7,560	65,944,901	8,723	2,818,437	40,371
		1987	7,570	67,037,216	8,856	2,906,736	37,035
		1988	7,600	69,714,838	9,173	3,001,319	30,227
		1989	7,620	72,315,128	9,490	3,102,814	35,454
3	BAHRAIN	1985	420	3,704,557	8,820	69,486	297
		1986	440	3,728,759	8,474	73,522	260
		1987	460	3,695,780	8,034	76,792	249
		1988	470	3,943,655	8,391	82,996	233
		1989	490	4,140,997	8,451	87,737	213
4	BELGIUM	1985	9,860	80,720,132	8,187	3,060,663	7,186
		1986	9,860	82,320,051	8,349	3,257,390	19,073
		1987	9,870	84,374,684	8,549	3,401,788	11,803
		1988	9,880	88,500,792	8,958	3,559,158	14,730
		1989	9,850	92,071,137	9,347	3,747,913	22,272
5	BOTSWANA	1985	1,080	3,136,329	2,904	10,079	3,821
		1986	1,120	949,573	848	10,576	5,993
		1987	1,170	1,045,960	894	10,955	4,062
		1988	1,210	1,140,229	942	14,591	2,951
		1989	1,260	1,294,342	1,027	18,215	2,798
6	BRAZIL	1985	135,560	138,300,000	1,020	6,927,918	41,460
		1986	138,490	148,700,000	1,074	7,249,741	55,000
		1987	141,450	154,100,000	1,089	7,892,383	40,160
		1988	144,430	154,000,000	1,066	9,081,649	30,380
		1989	147,400	159,100,000	1,079	8,852,540	66,960
7	CYPRUS	1985	670	902,663	1,347	144,944	46,505
		1986	670	2,521,756	3,764	164,861	43,773
		1987	680	2,698,952	3,969	189,058	32,253
		1988	690	2,930,290	4,247	211,184	28,186
		1989	680	3,140,300	4,551	232,057	25,956
8	DENMARK	1985	5,110	58,050,208	11,360	2,543,000	0
		1986	5,120	60,164,213	11,751	2,683,000	0
		1987	5,130	60,343,526	11,763	2,711,000	0
		1988	5,130	61,041,903	11,899	2,792,000	0
		1989	5,130	61,542,091	11,997	2,848,000	0
9	ECUADOR	1985	9,380	15,956,009	1,701	282,538	5,651
		1986	9,650	16,450,546	1,705	305,988	6,120
		1987	9,920	15,467,223	1,559	437,185	8,744
		1988	10,200	17,088,844	1,675	484,540	9,690
		1989	10,490	17,196,665	1,639	531,895	10,637
10	FINLAND	1985	4,900	54,048,952	11,030	2,190,000	1,600
		1986	4,920	55,183,207	11,216	2,272,000	1,500
		1987	4,930	57,383,953	11,640	2,365,000	1,500
		1988	4,950	60,501,137	12,222	2,470,000	0
		1989	4,960	63,742,558	12,851	2,582,000	0

Table 4-1 World Telephone Service in 1985 - 1989 (2/5)

NO. COUNTRY	YEAR	POPULATION (*) (X 10 <sup>3</sup> )	GDP US\$ (*) (X 10 <sup>3</sup> )	GDP/CAPITA (US\$1989)	NO. OF MAIN LINES (**)	NO. OF WAITERS (**)
11 FRANCE	1985	55,170	523,093,532	9,481	23,030,564	37,741
	1986	55,390	536,259,627	9,682	23,911,097	28,025
	1987	55,630	548,323,910	9,857	24,803,609	19,477
	1988	55,880	571,250,501	10,223	25,827,282	13,536
	1989	56,160	593,709,656	10,572	26,942,452	9,408
12 GHANA	1985	12,720	6,308,626	496	37,367	6,538
	1986	13,050	6,637,852	509	38,472	28,036
	1987	13,390	6,956,042	519	39,610	27,936
	1988	14,130	7,388,266	523	40,442	29,644
	1989	14,570	7,757,679	532	43,021	114,426
13 GREECE	1985	9,930	33,433,246	3,367	3,116,798	970,256
	1986	9,970	33,974,805	3,408	3,291,971	1,015,309
	1987	9,980	33,750,362	3,382	3,465,815	1,051,160
	1988	10,000	35,124,529	3,512	3,615,526	1,053,718
	1989	10,030	36,340,139	3,623	3,786,429	1,089,863
14 GUATEMALA	1985	7,960	11,180,000	1,405	128,179	15,821
	1986	8,190	11,196,000	1,367	131,527	60,473
	1987	8,430	11,593,000	1,375	134,875	90,125
	1988	8,680	12,044,000	1,388	138,222	180,744
	1989	8,940	12,520,000	1,400	158,840	261,200
15 ICELAND	1985	240	2,734,581	11,394	102,657	0
	1986	240	2,940,301	12,251	110,373	0
	1987	250	3,206,635	12,827	113,134	0
	1988	250	3,166,811	12,667	117,337	0
	1989	250	3,116,676	12,467	121,374	0
16 INDONESIA	1985	164,630	87,337,475	531	602,356	380,906
	1986	168,350	92,468,936	549	677,279	413,561
	1987	172,010	102,156,492	594	759,127	416,296
	1988	175,590	102,631,010	584	828,812	549,084
	1989	179,140	110,373,672	616	863,814	498,079
17 IRELAND	1985	3,540	18,957,024	5,355	703,000	27,726
	1986	3,540	18,868,579	5,330	750,805	20,933
	1987	3,540	19,730,650	5,574	796,204	15,125
	1988	3,540	20,609,770	5,822	842,677	13,460
	1989	3,510	21,926,851	6,247	903,000	6,098
18 ISRAEL	1985	4,230	24,088,904	5,695	1,208,000	149,000
	1986	4,300	24,976,247	5,808	1,313,000	108,000
	1987	4,370	26,443,841	6,051	1,392,000	88,000
	1988	4,440	27,147,947	6,114	1,471,900	62,200
	1989	4,520	27,583,135	6,102	1,533,584	40,404
19 ITALY	1985	57,140	424,520,792	7,429	17,396,113	330,064
	1986	57,250	436,822,593	7,632	18,252,973	265,475
	1987	57,340	450,623,232	7,859	19,104,828	201,086
	1988	57,440	468,943,123	8,164	20,091,533	118,940
	1989	57,520	483,167,487	8,400	21,265,518	17,734
20 JAPAN	1985	120,840	1,343,250,608	11,116	45,370,000	76
	1986	121,490	1,379,155,119	11,352	44,861,000	66
	1987	122,090	1,434,954,901	11,753	46,325,000	0
	1988	122,610	1,525,024,776	12,438	48,014,000	0
	1989	123,120	1,594,745,196	12,853	49,946,000	0



Table 4-1 World Telephone Service in 1985 - 1989 (3/5)

NO.	COUNTRY	YEAR	POPULATION (*) (X 10 <sup>3</sup> )	GDP US\$ (*) (X 10 <sup>3</sup> )	GDP/CAPITA (US\$1989)	NO. OF MAIN LINES (**)	NO. OF WAITERS (**)
21	JORDAN	1985	3,410	4,816,934	1,413	234,636	3,993
		1986	3,520	5,258,529	1,494	235,550	4,000
		1987	3,630	5,441,258	1,499	236,464	87,341
		1988	3,750	5,507,243	1,469	237,378	68,062
		1989	3,880	5,195,081	1,339	238,292	58,489
22	KENYA	1985	20,330	6,126,035	301	118,400	64,500
		1986	21,160	6,565,725	310	129,500	48,500
		1987	22,940	6,955,514	303	145,270	54,587
		1988	23,880	7,374,574	309	157,356	63,892
		1989	24,870	7,710,686	310	168,683	75,284
23	KOREA REP	1985	40,810	92,925,450	2,277	6,517,395	279,988
		1986	41,180	104,443,576	2,536	7,659,000	160,000
		1987	41,570	117,013,402	2,815	8,625,000	105,438
		1988	41,970	130,447,576	3,108	10,486,193	50,876
		1989	42,380	138,476,127	3,267	12,003,839	1,601
24	MALAYSIA	1985	15,680	31,231,172	1,992	958,598	182,641
		1986	16,110	31,559,001	1,959	1,042,827	127,855
		1987	16,530	33,260,169	2,012	1,131,719	84,639
		1988	16,940	36,276,681	2,141	1,247,687	69,460
		1989	17,350	39,389,448	2,270	1,375,538	41,266
25	MALTA	1985	340	1,017,926	2,994	84,665	27,132
		1986	340	1,057,488	3,110	107,523	18,965
		1987	340	1,100,900	3,238	112,097	17,443
		1988	350	1,193,497	3,410	116,672	15,922
		1989	350	1,291,226	3,689	122,043	18,467
26	MAURITIUS	1985	990	1,076,156	1,087	39,936	24,962
		1986	990	1,181,000	1,193	43,406	27,556
		1987	1,000	1,300,997	1,301	45,987	35,100
		1988	1,020	1,389,134	1,362	49,674	41,601
		1989	1,030	1,450,525	1,408	52,595	53,670
27	NEPAL	1985	16,690	2,434,342	146	20,691	40,330
		1986	17,130	2,538,913	148	25,547	40,832
		1987	17,560	2,639,044	150	30,404	41,335
		1988	17,990	2,830,429	157	37,930	49,315
		1989	18,440	2,939,768	159	45,457	57,296
28	NEW ZEALAND	1985	3,250	22,238,110	6,842	1,259,761	2,937
		1986	3,250	22,784,854	7,011	1,295,022	3,850
		1987	3,280	22,909,953	6,985	1,327,766	2,803
		1988	3,290	22,604,932	6,871	1,376,781	1,489
		1989	3,310	22,908,458	6,921	1,451,743	6,655
29	NORWAY	1985	4,150	58,181,734	14,020	1,757,656	13,863
		1986	4,170	60,613,921	14,536	1,861,412	0
		1987	4,190	61,821,291	14,754	1,948,680	0
		1988	4,210	61,508,398	14,610	2,016,213	0
		1989	4,230	61,734,053	14,594	2,070,249	0
30	PHILIPPINE	1985	54,670	29,875,853	546	477,963	172,978
		1986	56,000	31,111,947	556	515,725	209,271
		1987	57,360	32,718,869	570	553,486	245,564
		1988	58,720	35,072,822	597	591,248	281,949
		1989	60,100	37,034,449	616	570,643	452,569

Table 4-1 World Telephone Service in 1985 - 1989 (4/5)

NO.	COUNTRY	YEAR	POPULATION (*) (X 10 <sup>3</sup> )	GDP US\$ (*) (X 10 <sup>3</sup> )	GDP/CAPITA (US\$1989)	NO. OF MAIN LINES (**)	NO. OF WAITERS (**)
31	PORTUGAL	1985	10,160	20,681,378	2,036	14,400,418	44,239
		1986	10,210	21,571,102	2,113	1,510,599	81,763
		1987	10,250	22,669,758	2,212	1,656,306	140,120
		1988	10,290	23,575,914	2,291	1,849,247	178,332
		1989	10,470	24,872,939	2,376	1,967,846	141,098
32	SINGAPORE	1985	2,560	17,691,119	6,911	796,842	52
		1986	2,590	18,036,088	6,964	830,497	108
		1987	2,610	19,740,478	7,563	875,672	126
		1988	2,650	21,940,278	8,279	924,022	71
		1989	2,680	23,964,185	8,942	981,723	300
33	SOUTH AFRIC	1985	31,570	56,193,475	1,780	2,297,773	223,236
		1986	32,280	56,203,516	1,741	2,403,446	185,411
		1987	33,010	57,327,148	1,737	2,532,680	167,538
		1988	33,750	59,798,956	1,772	2,668,589	141,670
		1989	34,510	61,167,670	1,772	2,866,024	120,906
34	SPAIN	1985	38,470	165,849,212	4,311	9,340,458	252,762
		1986	38,600	171,283,227	4,437	9,801,009	292,567
		1987	38,720	180,839,802	4,670	10,236,408	365,459
		1988	38,810	190,302,282	4,903	10,971,635	578,082
		1989	38,890	199,476,594	5,129	11,797,159	349,590
35	SRI LANKA	1985	15,840	5,977,801	377	87,686	49,195
		1986	16,120	6,234,878	387	92,065	16,739
		1987	16,360	6,328,425	387	97,333	22,089
		1988	16,590	6,498,840	392	103,521	51,039
		1989	16,810	6,648,345	395	105,483	48,417
36	SWEDEN	1985	8,350	100,627,622	12,051	5,242,497	791,012
		1986	8,360	102,828,950	12,300	5,373,000	815,000
		1987	8,400	105,351,062	12,542	5,480,500	784,600
		1988	8,440	96,609,677	11,447	5,601,000	805,000
		1989	8,490	110,535,920	13,020	5,716,000	828,000
37	SWITZERLAND	1985	6,470	92,792,316	14,342	3,277,026	4,235
		1986	6,500	95,437,711	14,683	3,381,492	4,444
		1987	6,550	97,350,535	14,863	3,499,609	4,969
		1988	6,590	100,199,422	15,205	3,632,765	7,931
		1989	6,650	104,065,769	15,649	3,784,506	10,106
38	THAILAND	1985	51,680	37,350,418	723	626,498	359,923
		1986	52,650	39,187,746	744	878,339	287,287
		1987	53,600	42,899,223	800	901,622	288,953
		1988	54,540	48,565,853	890	1,005,872	376,756
		1989	55,450	54,416,584	981	1,158,014	560,054
39	TURKEY	1985	50,230	53,250,958	1,060	2,247,884	1,818,619
		1986	51,680	57,563,218	1,114	2,779,615	2,115,391
		1987	53,250	61,164,751	1,161	4,077,184	2,106,801
		1988	54,180	64,164,751	1,184	4,920,757	1,337,229
		1989	56,740	65,402,299	1,153	5,877,123	1,457,577
40	U. S. A.	1985	238,470	4,014,900,000	16,836	111,545,000	0
		1986	240,660	4,129,200,000	17,158	115,214,000	0
		1987	242,820	4,268,100,000	17,577	119,090,000	0
		1988	245,050	4,456,600,000	18,186	122,275,000	0
		1989	247,350	4,568,500,000	18,470	125,835,921	0

Table 4-1 World Telephone Service in 1985 - 1989 (5/5)

NO. COUNTRY	YEAR	POPULATION (*) (X 10 <sup>3</sup> )	GDP US\$ (*) (X 10 <sup>3</sup> )	GDP/CAPITA (US\$1989)	NO. OF MAIN LINES (**)	NO. OF WAITERS (**)
41 URUGUAY	1985	3,010	4,719,921	1,568	288,029	53,416
	1986	3,030	5,138,067	1,696	306,926	64,653
	1987	3,040	5,545,365	1,824	311,984	80,711
	1988	3,060	5,545,365	1,812	345,390	93,307
	1989	3,080	5,571,992	1,809	375,830	97,331
42 ZAMBIA	1985	6,730	2,606,032	387	43,406	23,623
	1986	7,280	2,621,141	360	46,647	27,593
	1987	7,560	2,615,245	346	51,758	28,807
	1988	7,530	2,745,694	365	58,492	29,105
	1989	7,800	2,883,144	370	60,750	32,464

NOTE (\*) : INTERNATIONAL FINANCIAL STATISTICS (INTERNATIONAL MONETARY FUND:MARCH 1992)  
 (\*\*): ITU YEARBOOK OF COMMON CARRIER TELECOMMUNICATION STATISTICS (18TH EDITION)

Table 4-2 Economical Active Population in Zambia (1/4)

		1991	1992	1993	1994	1995	1996
CENTRAL	RURAL	116,881	119,998	124,184	128,328	132,649	136,822
	URBAN	16,378	16,877	17,387	17,988	18,448	18,947
	TOTAL	132,379	136,875	141,491	146,228	151,889	155,769
COPPERBELT	RURAL	87,159	89,378	91,632	93,928	96,242	98,886
	URBAN	242,568	247,529	252,533	257,577	262,668	269,876
	TOTAL	329,727	336,987	344,164	351,496	358,982	368,762
EASTERN	RURAL	94,266	98,888	102,824	106,183	110,318	114,458
	URBAN	7,876	7,362	7,658	7,965	8,281	8,591
	TOTAL	101,342	106,443	109,682	114,068	118,599	123,041
LUAPULA	RURAL	95,157	97,183	99,866	101,845	103,839	104,842
	URBAN	8,813	8,994	9,175	9,359	9,543	9,758
	TOTAL	103,971	106,097	108,242	110,404	112,582	114,608
LUSAKA	RURAL	57,615	68,522	63,562	66,738	78,857	73,379
	URBAN	149,857	157,325	166,813	175,139	184,724	194,485
	TOTAL	206,672	217,847	229,575	241,877	254,781	267,784
NORTHERN	RURAL	68,687	78,584	72,352	74,231	76,141	78,881
	URBAN	6,982	7,167	7,355	7,546	7,748	7,937
	TOTAL	75,669	77,678	79,787	81,777	83,881	86,818
NORTH-WESTERN	RURAL	41,948	43,815	44,188	45,281	46,319	47,592
	URBAN	9,413	9,652	9,896	10,143	10,394	10,718
	TOTAL	51,361	52,667	53,996	55,344	56,713	58,382
SOUTHERN	RURAL	159,838	164,828	170,798	176,942	183,264	189,396
	URBAN	26,419	27,488	28,594	29,737	30,918	32,076
	TOTAL	185,458	192,317	199,392	206,679	214,183	221,472
WESTERN	RURAL	42,538	43,488	44,278	45,162	46,053	46,829
	URBAN	8,766	8,928	9,091	9,254	9,418	9,583
	TOTAL	51,297	52,329	53,368	54,416	55,471	56,212
TOTAL	RURAL	762,393	786,829	811,915	837,662	864,884	898,877
	URBAN	475,474	491,322	507,781	524,626	542,118	561,884
	TOTAL	1,237,866	1,278,151	1,319,616	1,362,289	1,406,282	1,451,961

Table 4-2 Economical Active Population in Zambia (2/4)

		1997	1998	1999	2000	2001	2002
CENTRAL	RURAL	141,878	145,391	149,798	154,276	158,899	163,633
	URBAN	19,459	19,978	20,584	21,035	21,624	22,225
	TOTAL	160,538	165,369	170,382	175,311	180,523	185,858
COPPERBELT	RURAL	181,562	184,268	187,813	189,785	192,638	195,545
	URBAN	277,178	284,563	292,854	299,622	307,487	315,348
	TOTAL	378,740	388,831	399,868	409,407	420,845	430,885
EASTERN	RURAL	118,688	123,833	127,498	132,871	136,818	141,712
	URBAN	8,989	9,235	9,571	9,914	10,320	10,749
	TOTAL	127,597	132,268	137,869	141,985	147,138	152,452
LUAPULA	RURAL	106,633	108,412	110,185	111,943	114,851	117,816
	URBAN	9,973	10,189	10,407	10,625	10,848	11,074
	TOTAL	116,607	118,601	120,592	122,567	125,699	128,889
LUSAKA	RURAL	76,828	80,487	84,126	87,981	91,143	94,483
	URBAN	204,512	215,857	226,875	237,563	248,468	259,829
	TOTAL	281,348	295,463	310,281	325,543	339,611	354,232
NORTHERN	RURAL	88,838	82,811	84,887	86,816	88,888	90,177
	URBAN	8,136	8,336	8,539	8,744	8,953	9,167
	TOTAL	88,174	90,348	92,546	94,768	97,833	99,344
NORTH-WESTERN	RURAL	48,888	50,182	51,583	52,838	54,473	56,151
	URBAN	11,832	11,359	11,692	12,838	12,482	12,784
	TOTAL	59,912	61,541	63,195	64,867	66,876	68,935
SOUTHERN	RURAL	195,654	202,836	208,563	215,214	221,663	228,266
	URBAN	32,264	34,482	35,733	37,815	38,272	39,564
	TOTAL	228,918	236,518	244,296	252,229	259,935	267,831
WESTERN	RURAL	47,194	47,745	48,289	48,818	49,357	49,894
	URBAN	9,747	9,989	10,872	10,232	10,396	10,561
	TOTAL	56,948	57,655	58,368	59,051	59,753	60,455
TOTAL	RURAL	916,546	943,485	970,982	998,942	1,027,924	1,057,596
	URBAN	582,211	603,189	624,647	646,778	668,689	691,283
	TOTAL	1,498,757	1,546,593	1,595,629	1,645,720	1,696,612	1,748,879

Table 4-2 Economical Active Population in Zambia (3/4)

		2003	2004	2005	2006	2007	2008
CENTRAL	RURAL	168,462	173,405	178,462	183,635	188,785	194,036
	URBAN	22,836	23,461	24,098	24,749	25,443	26,151
	TOTAL	191,299	196,866	202,560	208,384	214,228	220,187
COPPERBELT	RURAL	118,495	121,499	124,559	127,673	131,636	135,691
	URBAN	323,391	331,591	339,941	348,441	357,528	366,751
	TOTAL	441,886	453,090	464,500	476,114	489,164	502,442
EASTERN	RURAL	146,741	151,922	157,268	162,757	168,620	174,653
	URBAN	11,175	11,625	12,091	12,574	13,098	13,623
	TOTAL	157,915	163,547	169,359	175,331	181,718	188,276
LUAPULA	RURAL	120,824	123,987	127,006	130,182	133,575	137,023
	URBAN	11,301	11,532	11,764	12,000	12,253	12,508
	TOTAL	132,125	135,519	138,771	142,182	145,828	149,532
LUSAKA	RURAL	97,753	101,205	104,761	108,423	112,328	116,348
	URBAN	271,637	283,933	296,735	310,060	321,228	332,722
	TOTAL	369,390	385,138	401,496	418,484	433,556	449,070
NORTHERN	RURAL	92,308	94,457	96,647	98,871	101,143	104,674
	URBAN	9,382	9,601	9,824	10,050	10,312	10,578
	TOTAL	101,690	104,058	106,471	108,921	111,455	115,253
NORTH-WESTERN	RURAL	57,864	59,619	61,417	63,258	65,222	67,230
	URBAN	13,174	13,574	13,983	14,402	14,921	15,455
	TOTAL	71,038	73,193	75,400	77,661	80,143	82,686
SOUTHERN	RURAL	235,883	241,898	248,952	256,168	263,864	271,728
	URBAN	48,890	42,252	43,652	45,091	46,626	48,201
	TOTAL	275,893	284,150	292,604	301,260	310,490	319,929
WESTERN	RURAL	58,423	58,948	51,478	51,989	52,567	53,139
	URBAN	10,725	10,891	11,956	11,223	11,493	11,584
	TOTAL	61,148	61,839	62,527	63,212	63,978	64,723
TOTAL	RURAL	1,087,865	1,118,841	1,150,535	1,182,958	1,218,340	1,254,521
	URBAN	714,512	738,459	763,146	788,591	812,796	837,574
	TOTAL	1,802,377	1,857,300	1,913,681	1,971,549	2,031,136	2,092,095

Table 4-2 Economical Active Population in Zambia (4/4)

		2009	2010	2011	2012
CENTRAL	RURAL	199,367	204,778	210,266	215,831
	URBAN	26,869	27,598	28,338	29,088
	TOTAL	226,236	232,376	238,604	244,920
COPPERBELT	RURAL	139,824	144,037	148,327	152,695
	URBAN	376,097	385,556	395,122	404,794
	TOTAL	515,921	529,592	543,449	557,489
EASTERN	RURAL	180,842	187,198	193,697	200,365
	URBAN	14,174	14,742	15,328	15,931
	TOTAL	195,016	201,940	209,025	216,297
LUAPULA	RURAL	140,515	144,049	147,623	151,237
	URBAN	12,765	13,022	13,281	13,540
	TOTAL	153,280	157,071	160,904	164,777
LUSAKA	RURAL	120,471	124,099	129,834	133,476
	URBAN	344,513	356,686	369,003	381,786
	TOTAL	464,984	481,385	498,837	515,182
NORTHERN	RURAL	107,654	118,683	113,760	116,884
	URBAN	10,848	11,121	11,397	11,676
	TOTAL	118,502	121,804	125,157	128,560
NORTH-WESTERN	RURAL	69,278	71,365	73,491	75,656
	URBAN	16,803	16,564	17,140	17,730
	TOTAL	85,281	87,929	90,632	93,386
SOUTHERN	RURAL	279,735	287,884	296,173	304,600
	URBAN	49,813	51,463	53,140	54,873
	TOTAL	329,548	339,346	349,322	359,474
WESTERN	RURAL	53,699	54,248	54,785	55,388
	URBAN	11,764	11,943	12,120	12,297
	TOTAL	65,464	66,191	66,905	67,685
TOTAL	RURAL	1,291,386	1,328,932	1,367,156	1,406,853
	URBAN	862,847	883,016	914,879	941,635
	TOTAL	2,154,233	2,217,548	2,282,035	2,347,688

Table 4-3 Exchange Area Demand (1/3)

CENTRAL PROVINCE					
EX\YEAR	1992	1997	2002	2007	2012
KABWE	4,825	6,099	8,218	11,131	15,050
CHIBOMBO	88	111	150	203	274
CHISAMBA	208	263	354	480	649
CHALATA	22	28	37	51	69
SERENJE	381	482	649	879	1,188
MKUSHI	408	516	695	941	1,273
MUNBUWA	352	445	600	812	1,098
MUPEPETWE	54	68	92	125	168
KANONA	19	24	32	44	59
KAPIRIMPOSHI	365	461	622	842	1,138
NAMPUNDWE	81	102	138	187	253
COPPERBELT PROVINCE					
EX\YEAR	1992	1997	2002	2007	2012
NDOLA MAIN	8,012	8,454	11,274	15,034	19,999
IND.SOUTH	616	650	867	1,156	1,538
IND.NORTH	1,379	1,455	1,940	2,588	3,442
KABUSHI	3,281	3,462	4,617	6,157	8,190
KANSENSHI	2,322	2,450	3,267	4,357	5,796
LUANSHYA	3,429	3,618	4,825	6,434	8,559
MASAITI	129	136	182	242	322
NORTH RICE	1,608	1,697	2,263	3,017	4,014
PAMOZI	1,635	1,725	2,301	3,068	4,081
KITWE	15,601	16,462	21,953	29,274	38,942
MINDOLO	3,200	3,377	4,503	6,005	7,988
MUFULIRA	5,358	5,654	7,540	10,054	13,374
KALULUSHI	1,188	1,254	1,672	2,229	2,965
ITIMPI	362	382	509	679	904
CHAMBISHI	509	537	716	955	1,271
CHINGOLA	6,783	7,157	9,545	12,728	16,931
CHILILABOMBWE	2,123	2,240	2,987	3,984	5,299
EASTERN PROVINCE					
EX\YEAR	1992	1997	2002	2007	2012
CHIPATA	2,101	4,134	6,862	11,522	19,398
CHAMA	133	262	434	729	1,228
CHADIZA	201	395	656	1,102	1,856
KATETE	263	517	859	1,442	2,428
LUNDAZI	260	512	849	1,426	2,400
NYIMBA	120	236	392	658	1,108
PETAUKE	333	655	1,088	1,826	3,074
SINDA	84	165	274	461	776

Table 4-3 Exchange Area Demand (2/3)

LUAPULA PROVINCE					
EX\YEAR	1992	1997	2002	2007	2012
MANSA	1,939	2,634	3,982	6,311	10,122
KAWAMBWA	289	393	594	941	1,509
MWENSE	131	178	269	426	684
NCHELENCE	444	603	912	1,445	2,318
SAMFYA	415	564	852	1,351	2,166
LUSAKA PROVINCE					
EX\YEAR	1992	1997	2002	2007	2012
LUSAKA MAIN	12,776	17,743	23,359	30,173	38,005
AIRPORT INT.	297	412	543	701	883
CHINIKA	1,470	2,042	2,688	3,472	4,373
CHELSTON	3,448	4,789	6,304	8,143	10,257
EMMASDALE	2,410	3,347	4,406	5,692	7,169
MAKENI	1,104	1,533	2,019	2,607	3,284
ROMA	2,870	3,986	5,247	6,778	8,538
RIDGEWAY	3,713	5,157	6,789	8,769	11,045
WOODLANDS	6,387	8,870	11,678	15,084	19,000
CHONGWE	122	169	223	288	363
CHILANGA	613	851	1,121	1,448	1,824
KAFUE	2,541	3,529	4,646	6,001	7,559
NAMALUNDU G.	154	214	282	364	458
LUANGA	125	174	229	295	372
NORTHERN PROVINCE					
EX\YEAR	1992	1997	2002	2007	2012
KASAMA	1,997	2,491	3,705	5,553	8,529
CHINSALI	298	372	553	829	1,273
ISOKA	393	490	729	1,093	1,678
LUWINGU	182	227	338	506	777
MBALA	777	969	1,441	2,161	3,318
MFUWE	119	148	221	331	508
MPIKA	964	1,203	1,788	2,681	4,117
MPULUNGU	235	293	436	654	1,004
MUNGWI	127	158	236	353	542
MPOROKOSO	226	282	419	628	965
NAKONDE	354	442	657	984	1,512
*KAPUTA	-	249	371	556	854

\*Mark : Proposed exchange, at present telephone services in the area is provided from Kasama exchange via radio system.

Table 4-3 Exchange Area Demand (3/3)

NORTH-WESTERN PROVINCE					
EX\YEAR	1992	1997	2002	2007	2012
SOLWEZI	1,309	1,586	2,092	2,810	3,789
KABOMPO	263	319	420	565	761
KASEMPA	296	359	473	635	857
MUFUMBWE	100	121	160	215	289
MWINILUNGA	338	410	540	726	978
ZAMBEZI	303	367	484	650	877
SOUTHERN PROVINCE					
EX\YEAR	1992	1997	2002	2007	2012
CHOMA	2,132	2,983	4,561	7,027	10,864
CHIRUNDU	138	193	295	455	703
GWEMBE	123	172	263	405	627
ITEZHI TEZHI	124	174	265	409	632
KALOMO	521	729	1,115	1,717	2,655
LIVINGSTONE	4,196	5,871	8,977	13,829	21,381
SIAVONGA	326	456	697	1,074	1,661
ZIMBA	73	102	156	241	372
MAZABUKA	1,366	1,911	2,923	4,502	6,961
MAAMBA	445	623	952	1,467	2,268
MONZE	1,193	1,669	2,552	3,932	6,079
NAMUWALA	156	218	334	514	795
PEMBA	209	292	447	689	1,065
WESTERN PROVINCE					
EX\YEAR	1992	1997	2002	2007	2012
MONGU	1,236	1,264	1,403	1,579	1,800
KALABO	216	221	245	276	315
KAOMA	270	276	306	345	393
LIMULUNGA	43	44	49	55	63
LUKULU	142	145	161	181	207
SENANGA	163	167	185	208	237
SESHEKE	82	84	93	105	119



Table 4-4 Demand for Rural and Urban (1/3)

EX. NAME	1993			1997			2002			2007			2012		
	TOTAL	RURAL	URBAN	TOTAL	RURAL	URBAN	TOTAL	RURAL	URBAN	TOTAL	RURAL	URBAN	TOTAL	RURAL	URBAN
GRAND TOTAL	126329	22352	103977	161452	37726	123726	221159	44422	176728	344047	65469	238578	418932	98836	320106
PROVINCE(3/3)	15435	8118	7317	28757	18881	9875	38152	15756	14396	44610	23231	21378	66748	34685	32143
PROVINCE(2/3)	47443	3929	43514	68139	5191	62948	7358	73877	186144	18451	95693	138287	15283	122923	
PROVINCE(1/3)	63442	18985	44457	88556	14653	73903	118571	21316	92255	152294	31787	121507	213838	48148	165556
CENTRAL	6789	3273	3516	3516	3519	4197	4428	4158	5911	15694	7178	7976	21219	10435	10784
KABWE	4815	2321	2494	6899	2964	3135	8218	4828	4192	11131	5474	5657	15958	7481	7688
CHIBOMBO	88	42	45	111	54	57	158	73	76	283	188	182	274	135	139
CHISAMBA	208	108	100	263	128	135	354	174	181	488	238	244	649	319	338
CHALATA	22	11	11	28	14	14	37	18	19	51	25	26	69	34	35
SERENJE	388	183	197	482	234	248	649	318	331	875	432	447	1188	584	684
MUKUSHI	487	196	211	516	251	265	695	348	355	941	463	478	1273	626	647
MUNSIYA	351	169	182	445	216	229	688	294	386	812	399	413	1838	540	558
MUPEPETWE	54	26	28	68	33	35	92	45	47	125	61	63	168	83	86
KANOMA	19	9	10	24	12	12	32	16	17	44	22	22	59	29	30
KAPIRIMPOSHI	364	176	189	461	224	237	622	385	317	842	414	428	1138	568	579
MANPUNDWE	81	39	42	182	58	53	138	68	78	187	92	95	253	124	128
COOPERBELT	49888	3353	46535	68709	4199	50518	88958	5588	75372	107953	7484	108475	143613	18174	125439
NDOLA MAIN	6825	0	6825	8454	0	8454	11274	0	11274	15034	0	15034	19939	0	19939
IND. SOUTH	525	53	471	658	67	591	867	89	778	1156	119	1037	1538	162	1376
IND. NORTH	1175	120	1055	1455	149	1306	1948	199	1741	2583	287	2321	3442	363	3079
KARUSHI	2795	0	2795	3462	0	3462	4617	0	4617	6157	0	6157	8198	0	8198
KANSENSHI	1378	0	1378	2458	0	2458	3267	0	3267	4357	0	4357	5796	0	5796
LUANSHA	2921	297	2624	3618	372	3247	4825	495	4338	6434	694	5771	8559	982	7657
MASAITI	110	11	99	136	14	122	182	15	163	242	25	217	322	34	288
NORTH RISE	1370	0	1370	1697	0	1697	2263	0	2263	3817	0	3817	4814	0	4814
PANODZI	1393	0	1393	1725	0	1725	2381	0	2381	3058	0	3058	4081	0	4081
KITWE IND.	14311	1457	12854	17728	1820	15908	23642	2427	21214	31526	3251	28275	41937	4420	37517
MFULIRA	4564	465	4099	5654	580	5073	7548	774	6765	10054	1837	9817	13374	1489	11965
KALULUSHI	1812	183	1629	2254	129	2125	2872	172	2700	3643	238	3405	4533	313	4220
ITIMPI	388	31	357	482	39	443	589	52	537	719	78	641	889	94	795
CHAMBISHI	434	44	389	537	55	482	716	74	643	955	98	857	1271	134	1137
CHINGOLA	5778	588	5190	7157	735	6422	9545	988	8565	12728	1313	11415	16931	1784	15147
CHILILABOMBE	1888	184	1624	2249	238	2018	2987	387	2601	3984	411	3573	5299	558	4741
EASTERN	4632	2548	2084	6876	3782	3094	11415	6278	5137	18161	18542	8625	32288	17347	14941
CHIPATA	2785	1531	1253	4134	2274	1868	6862	3774	3088	11522	6337	5185	19398	18669	8729
CHADIZA	176	97	79	262	144	118	434	239	195	729	481	328	1228	675	553
KAYETE	266	147	126	395	218	178	656	361	285	1182	686	496	1856	1821	835
LUNDAZI	345	192	157	517	285	233	859	472	387	1442	753	649	2428	1835	1693
NYIMBA	159	87	72	236	138	106	392	216	176	658	382	286	1188	689	499
PETAUKE	441	243	199	655	368	295	1888	589	489	1826	1884	822	3874	1691	1383
SINDA	111	61	50	165	91	74	274	151	123	451	253	207	776	427	349
SUPULA	3813	1731	2082	4371	2581	1878	6589	3773	2835	18474	6843	4431	16738	8791	7887
PANSA	1815	1043	772	2634	1587	1127	3982	2274	1788	6311	3641	2678	10122	5988	4222
KAWANBE	271	155	115	393	225	168	594	339	255	941	543	398	1589	878	629
MWENSE	123	78	52	178	182	76	269	154	115	426	246	188	684	399	285
MCHENGE	416	239	177	645	345	258	912	521	391	1445	834	611	2318	1351	967
SANFYA	389	223	165	564	323	241	852	487	366	1351	779	571	2166	1263	984

Table 4-4 Demand for Rural and Urban (2/3)

EX. NAME	1993			1997			2002			2007			2012		
	TOTAL	RURAL	URBAN	TOTAL	RURAL	URBAN	TOTAL	RURAL	URBAN	TOTAL	RURAL	URBAN	TOTAL	RURAL	URBAN
PROVINCE(2/3)	47443	3529	43914	80139	5191	54948	88428	7358	73877	106144	19443	95652	138287	15283	122923
LUSAKA	42186	1428	40658	52815	1749	51066	69534	2238	67303	99815	2776	87238	113138	3497	109632
LUSAKA MAIN	14145	569	13577	17743	788	17843	23359	893	22466	38172	1112	29861	38895	1488	36605
AIRPORT INT.	329	13	316	412	16	396	543	21	522	781	28	676	883	33	851
CHENIKA	1628	65	1562	2842	81	1961	2688	183	2585	3472	128	3344	4373	161	4212
CHELSTON	3818	153	3664	4789	189	4599	6384	241	6863	8143	388	7843	18257	378	3879
EMRASDALE	2668	8	2668	3347	8	3347	4486	8	4486	5692	8	5692	7169	8	7169
MAKENI	1222	49	1173	1533	61	1473	2019	77	1941	2687	96	2511	3284	121	3163
ROMA	3178	128	3058	3986	157	3828	5247	281	5047	6778	258	6528	8538	315	8223
RIDGEWAY	4111	8	4111	5157	8	5157	6789	8	6789	8769	8	8769	11845	8	11845
WOODLANDS	7872	284	6787	8878	358	8528	11678	446	11231	15884	556	14528	19688	780	18308
CHONGWE	135	5	138	169	7	163	223	9	215	288	11	278	363	13	350
CHILANGA	679	27	651	851	34	818	1121	43	1078	1443	53	1394	1824	67	1756
KAPE	2813	113	2700	3529	139	3398	4646	178	4468	6081	221	5788	7559	279	7280
KAPALUNDU GOR	171	7	164	214	8	205	282	11	271	384	13	358	458	17	441
LUANGWA	138	6	133	174	7	167	229	9	228	295	11	284	372	14	358
NORTHERN	5337	3588	2829	1324	3442	3882	18894	5138	5774	16329	7675	8654	25877	11786	13291
KASABA	1816	854	962	2491	1171	1328	3785	1741	1964	5523	2619	2943	8529	4889	4528
CHINSALI	271	127	144	372	175	197	553	268	293	829	358	439	1273	598	675
ISOKA	357	168	189	498	238	268	729	343	386	1853	514	579	1678	789	889
LWINGU	165	78	87	227	187	128	338	159	179	586	238	288	777	365	412
MBALA	786	332	374	969	455	514	1441	677	764	2161	1816	1145	3318	1559	1759
MUFUWE	188	51	57	148	78	78	221	184	117	331	156	175	588	239	269
MPIKA	876	412	464	1283	565	638	1788	848	948	2681	1268	1421	4117	1935	2182
MPOLDNGU	214	101	113	293	138	155	436	295	231	654	387	347	1084	472	532
MUNGWI	115	54	61	158	74	84	236	111	125	353	166	187	542	255	287
MPOROKOSO	285	96	189	282	133	149	419	197	222	628	295	333	965	454	511
MAKORDE	322	151	171	442	288	234	657	389	368	984	462	522	1512	711	801
KAPUTA	182	86	96	249	117	132	371	174	197	556	261	295	854	491	453

Table 4-4 Demand for Rural and Urban (3/3)

EX. NAME	1993			1997			2002			2007			2012		
	TOTAL	RURAL	URBAN	TOTAL	RURAL	URBAN	TOTAL	RURAL	URBAN	TOTAL	RURAL	URBAN	TOTAL	RURAL	URBAN
PROVINCE(3/3)	15435	8318	7117	20757	10881	9875	14396	13756	14396	46618	23231	21378	66748	34685	32143
N-WESTERN	2465	887	1578	3161	1831	1330	4178	3352	2818	5681	1818	3791	7552	2483	5121
SOLWEZI	1237	485	752	1586	517	1069	2892	678	1414	2810	988	1902	3789	1285	2584
KABOMPO	248	81	167	319	104	215	428	136	284	565	182	382	761	242	519
KASEMBA	288	92	196	359	117	242	473	153	326	635	285	438	857	272	584
MUFUMBWE	94	31	64	121	48	82	169	52	108	215	69	145	289	92	197
MWINILUNGA	319	105	215	410	134	276	548	175	365	726	235	491	978	311	667
ZAMBEZI	286	94	193	367	128	247	484	157	327	658	218	440	877	279	598
SOUTHERN	11941	6199	4842	15395	8584	6811	23539	13014	18525	36268	19873	16387	56862	38458	25684
CHONA	2148	1281	867	2983	1664	1320	4561	2522	2848	7827	3851	3175	18864	5982	4982
CHIRURUDU	138	78	61	193	108	85	295	163	132	455	249	206	782	382	321
QWEMBE	123	69	54	172	96	76	263	145	118	485	222	183	627	341	288
ITEZHI TEZHI	124	70	55	174	97	77	265	147	119	489	224	185	632	343	289
KALOHU	523	294	229	729	487	323	1115	616	498	1717	941	776	2655	1442	1212
LIVINGSTONE	4211	2364	1847	5871	3274	2597	8977	4963	4814	13829	7579	6258	21381	11616	9785
SIAYONGA	327	184	143	456	254	202	697	386	312	1874	589	486	1681	982	759
ZIMBA	73	41	32	182	57	45	156	86	78	241	132	109	372	282	179
MAZABURA	1371	770	601	1911	1066	846	2923	1616	1387	4582	2467	2835	6961	3782	3179
MAAPBA	447	251	196	623	347	275	952	526	426	1467	884	663	2268	1232	1836
MONZE	1197	672	525	1669	931	738	2552	1411	1141	3932	2155	1777	6979	3382	2776
MAMWALA	157	88	69	218	122	97	334	185	149	514	282	232	795	432	363
PEMBA	218	118	92	292	163	129	447	247	288	689	378	311	1065	579	486
WESTERN	1929	1112	817	2281	1266	935	2443	1398	1852	2749	1548	1281	3134	1746	1388
SONGU	1188	639	469	1264	727	537	1483	799	684	1578	889	698	1888	1082	787
KALABO	194	112	82	221	127	94	245	148	106	276	155	121	315	175	139
KAOMA	242	148	182	276	159	117	386	174	132	345	194	151	393	219	174
LIMULUNGA	39	22	16	44	25	19	49	28	21	55	31	24	63	35	28
LUKULU	127	73	54	145	84	62	161	92	69	181	182	79	287	115	92
SEMANGA	146	84	62	167	96	71	185	105	88	288	117	91	237	132	105
SESHEKE	74	42	31	84	48	36	93	53	48	185	59	46	119	67	52

Table 4-5 Statistical Data for Mobile Telephone Service in 27 Countries in 1990

Countries	Population	NO. of Main Lines	NO. of Mobile Tel
Canada	26,094,200	13,936,486	86,680
Cayman Islands	27,810	9,553	259
Dominican Republic	6,870,000	237,438	688
Puerto Rico	3,800,000	768,367	21,310
Morocco	23,958,000	286,493	94
Tunisia	7,769,900	248,885	401
Austria	7,595,400	3,039,640	38,321
Belgium	9,875,716	3,855,387	21,086
Finland	4,954,591	2,470,038	138,160
Germany, Fed. Rep.	61,320,400	28,377,000	123,145
Iceland	251,743	128,661	6,519
Sweden	8,400,000	5,600,000	229,000
Switzerland	6,715,000	3,632,765	42,977
Costa Rica	2,865,812	256,708	187
Paraguay	4,098,200	94,380	127
Suriname	400,000	32,249	291
Australia	15,606,156	7,267,618	70,000
Papua New Guinea	3,561,500	30,939	11
Japan	122,970,000	51,951,000	239,000
Korea, Rep. of	41,975,000	10,326,321	20,293
Macau	443,500	65,710	329
Bahrain	488,548	89,130	2,779
Kuwait	1,958,000	296,049	4,602
Qatar	370,000	83,215	175
Syria	11,523,000	477,702	3,227
Turkey	54,845,000	4,920,757	9,846
United Arab Emirates	1,534,000	309,966	13,823

Table 4-6 Statistical Data for Radio-Paging Service in 31 Countries in 1990

Countries	Population	NO. of Main Lines	NO. of Paging Sub.
Austria	17,211,000	7,952,964	81,498
Bahrain	516,444	93,995	5,028
Belgium	9,947,782	3,990,429	116,568
Cyprus	706,900	254,510	1,600
Denmark	5,146,000	2,911,000	47,836
Egypt	52,890,000	1,717,498	4,000
Finland	4,998,000	2,670,000	40,388
France	58,285,700	28,084,922	243,052
Hongkong	5,859,100	2,446,989	266,752
Iceland	255,000	126,493	3,036
Ireland	3,523,401	983,000	12,260
Italy	57,764,000	22,350,000	93,021
Japan	123,542,000	54,209,656	3,437,000
Kenya	26,000,000	183,240	396
Kuwait	2,140,000	360,092	5,524
Luxembourg	380,000	183,700	3,901
Mexico	85,784,224	5,189,802	100,000
Netherlands	15,009,000	6,940,000	291,000
New Zealand	3,427,196	1,473,384	32,000
Norway	4,249,817	2,132,290	88,833
Portugal	10,530,000	2,379,265	10,072
South Korea	42,869,000	13,513,523	150,000
Spain	38,960,000	12,602,600	52,934
Suriname	420,000	36,812	500
Swaziland	770,000	13,524	48
Sweden	8,591,300	5,848,700	126,912
Switzerland	6,796,000	3,942,701	38,701
Turkey	56,473,035	6,893,267	20,921
United Arab Emirates	1,590,000	430,023	64,176
United Kingdom	57,240,000	25,404,000	673,000
United States	249,970,000	127,178,122	2,120,000

Table 4-7 Statistical Data for Leased Circuits Service in 23 Countries in 1990

Countries	Population	NO. of Main Lines (X)	Private L'sd CCT (B)
Saudi Arabia	14,000,000	1,384,096	9,029
Australia	17,211,000	7,952,963	843,079
Bahrain	516,444	93,995	446
Barbados	257,082	83,366	1,060
Cote D'ivoire	10,812,782	64,177	140
United Arab Emirates	1,590,000	430,023	656
Gabon	1,200,000	20,754	53
Guadeloupe	392,000	117,983	1,035
Hongkong	5,895,100	2,446,989	59,486
Hungary	10,535,000	996,000	1,023
Luxembourg	380,000	183,700	12,236
Macau	461,800	93,155	1,426
Malaysia	17,860,000	1,585,744	15,528
Malawi	8,290,000	26,170	72
Martinique	364,000	122,041	2,426
Papua New Guinea	3,727,200	30,187	655
Philippines	61,480,180	610,126	187
Senegal	7,400,000	44,326	90
Singapore	2,690,100	1,040,187	52,960
Togo	3,543,500	10,516	90
Zimbabwe	9,400,000	125,747	865

Table 4-8 Statistical Data for Data Terminals Service in 21 Countries in 1990

Countries	Population	NO. of Main Lines (X)	Data Term. on PSTN (A)	Data Term. on PSDN (C)
Saudi Arabia	14,000,000	1,384,096	31,517	153
Australia	17,211,000	7,952,963	20,768	177,819
Bahrain	516,444	93,995	1,700	3,659
Barbados	257,082	83,366	1,350	170
Cote D'ivoire	10,812,782	64,177	538	48
United Arab Emirates	1,590,000	430,023	1,319	563
Gabon	1,200,000	20,754	423	344
Guadeloupe	392,000	117,983	988	171
Hongkong	5,895,100	2,446,989	21,996	26,511
Hungary	10,535,000	996,000	574	496
Luxembourg	380,000	183,700	334	749
Macau	461,800	93,155	537	27
Malaysia	17,860,000	1,585,744	5,592	1,153
Malawi	8,290,000	26,170	176	61
Martinique	364,000	122,041	702	1,136
Papua New Guinea	3,727,200	30,187	715	124
Philippines	61,480,180	610,126	4,224	401
Senegal	7,400,000	44,326	110	125
Singapore	2,690,100	1,040,187	45,113	443
Togo	3,543,500	10,516	128	72
Zimbabwe	9,400,000	125,747	130	802