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Handbook on Good Practice in Public Enterprise Sector Reviews

Janardan Prasad Singh

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Chief Economist's Office

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Introduction

The purpose of this review is to identify exemplary practices in presenting and analyzing economic and financial data on the public enterprise (PE) sector. Rather than suggesting a normative design of a PE reform program, it is a descriptive review of examples of particularly illuminating tables and indicators with regard to the structure and performance of the PE sector. It is meant to be a reference for task managers in country departments in the region.

This review is divided into two parts. The first part provides examples of analyses and presentations of data on public enterprise financial performance and the impact of PEs on country economies. The second part provides examples of analyses that assess the impact of PE reform.

The two parts of the review contain a total of 19 topics of exemplary practices. Within each topical section is a brief overview of the issue, a description of the approach used in the examples, and the reason why the examples were determined to be noteworthy. Tables, charts, and sample text are excerpted from the Bank reports and included in the main body of this review.

The topics chosen for review reflect the major objectives of public enterprise sector adjustment operations. Since the overarching objective of PE reform is to improve the efficiency and financial performance of economic activity, exemplary practices in analyzing the efficiency and finances of the PE sector are highlighted.

Public enterprises play a significant role in the economies of Sub-Saharan Africa. As sector adjustment policies are implemented, it is expected that the scope and form of public enterprise involvement will change. Analyses and approaches to the presentation of data on the impact of the public enterprise sector on country economies are therefore included in this review.

The components of sector adjustment operations are reflected in the analysis and illustrations incorporated in this review. Reducing the PE financial burden on government expenditures is a key feature of adjustment. Innovative and thoughtful approaches to analyzing the aggregate PE financial burden and fiscal flows between government and PEs, as a means to obtain baseline data, observe trends, and measure progress, are noted. Likewise, labor policies aimed at reducing excess staffing are an important feature of adjustment operations, and methodologies to estimate the cost of employee retrenchment are included.

With regard to analyses of the impact of public enterprise reform, the Bank's empirical work is limited because of the relatively short duration over which reforms have been implemented. Also, methodological difficulties exist in isolating the impact of PE reform. The state-of-the art of evaluating the impact of PE reforms is therefore only beginning to take shape. A few examples of analyses in this area, however, are included in this review. In some countries, data limitations preclude the kinds of analyses and presentations illustrated here. Exemplary practices for a particular country may not therefore be applicable to other countries.

Rather than being an exhaustive rendering of all possible exemplary practices, this document represents a first step towards identifying and distilling examples of exemplary practices in the area of PE analysis. As noted above, the examples are of positive rather than normative analyses. To the extent that demand indicates and resources permit, there may be future editions that widen the scope to normative issues.

In any event, the Chief Economist's Office of the Africa Region would be pleased to receive additional comments and suggestions as to how future editions may be improved and made more useful. Please direct your comments and suggestions to Mr. Robert Armstrong, Ext. 34584.

Bank documents reviewed in the preparation of this report include mainly Country Economic Memoranda (CEMs), Public Enterprise Sector Reports, Technical Reports, Bank Discussion Papers, Working Papers, Issue Papers, Staff Appraisal Reports, and President's Reports. The coverage was not confined to documents concerning Sub-Saharan Africa, although emphasis was just upon examples from countries with data bases and economic structures most similar to those found in Africa.

The bibliography at the end of this report includes references cited in this review as well as other documents that may be useful resources.

The author of this document, Mr. Janardan Prasad Singh, is a consultant to the World Bank. A draft of this document was reviewed by a panel of peer reviewers with experience and expertise in PE analysis. The document was designed and produced under the overall direction of Robert Armstrong, Economic Adviser in the Office of the Chief Economist.

1. Data on the Size of the Public Enterprise Sector

Data on the number of public enterprises in the sector is one indication of the scope of PE involvement in the economy. In the case of Tanzania which has 425 parastatals, the scope of PE involvement in the economy is significant solely on the basis of numerical indicators.

The report on Parastatals in Tanzania. Towards a Reform Program (Report No. 7100-TA, 1988), incorporates a comprehensive description of Tanzania's PE sector. The Tanzania report includes an extensive table with descriptions of PE ministry affiliation, holding companies, PE size as defined as paid up capital and employment, the percent of private participation, and whether any management contract is in force. Likewise, the Uganda report, Public Sector Administrative Reform and Planning Study prepared for the Ministry of Finance, includes a succinct presentation of data highlighting the number of firms and extent of government ownership.

Public enterprise reform efforts need to start with an accounting of the scope of parastatal involvement in the economy, and the Tanzania and Uganda reports document the range of activity. With such a diverse and broad scope of involvement in virtually every subsector in the case of Tanzania in particular, a thorough description of the range of public enterprise activity is a necessary precursor to establishing a basis for the designation of reform priorities.

The attached appendix (Tables 1.1 and 1.2) includes excerpts from the Tanzania and Uganda reports that illustrate the approach used to describe the breadth of the parastatal sector and the extent of government ownership. The comprehensive and concise approach could serve as a model for replication if comparable data are available in other countries.

The Kenya Country Economic Memorandum (CEM), Re-Investing in Stabilization and Growth Through Public Sector Adjustment (Report No. 9998-KE, 1992), includes a graphic illustration excerpted below in the appendix that summarizes the scope and extent of government ownership in the sector (Table 1.3). It disaggregates enterprises with direct and indirect central government equity, and majority and minority government ownership. The utility of the illustration is its concise presentation of the structure and composition of the sector.

Table 1.1

MINISTRY AFFILIATION	HOLDING COMPANIES Operating Companies Independent Companies	Size (latest yr.) Paid-up Capital ('000 Tsh)	Size (latest yr.) Employmt.	Private Participation (%)	Management Contract With a/	Type of Agreement b/	Terms of Agreement a/
AGRICULTURE AND LAND	CASHEWNUT AUTHORITY OF TANZ.	210.0	604				
	Mtwara Cashew Co Ltd.	6.0	60				
	TANITA Co. Ltd.						
	NATL FOOD AND AGRIC CORP						
	Arusha Plantations						
	Bagamoyo Farms						
	Basuto Plantation						
	Dakawa Rice Farms						
	Kigamboni Poultry Farm						
	Kiru Valley Dev Co.						
	Mbozi Maize Farms	8.0	110				
	Setchet Wheat Co.	8.6	221				
	Tan Seed Co.						
	West Kilimanjaro Farms						
	NATIONAL MILLING CORPORATION	20.0	[illegible]				
	Dodoma Wine Co.						
	National Poultry Co.						
	SUGAR DEVELOPMENT CORPORATION						
	Kagera Sugar Co.				Kagera Sugar Ltd.	B	F
	Kilombero Sugar Co.	244.0	6060				
	Mtibwa Sugar Estates Ltd.	180.2	2250				
	Tanga. Planting Co.				M/S Carl Bro A/S (Denmark)	N	n.a.
	TANZANIA SISAL AUTHORITY		340				
	Kimamba Sisal Estate Co.						
	Mambo Sisal Estates Co.		1250				
	Morogoro Sisal Estates Co.						
	Mohoro Sisal Estate Co.						
	Tan Carpet Co.						
	Mwakaora Tea Estates						
	Mafuta ya Ilulu						
	Msanga Livestock Co.	2.5					
	NOFRECO						
	National Distributors Ltd.	10.0	240				
	National Ranching Co Ltd						
	Mwombeni Sisal Estate Co.		3400				
	Oljoro Farms						
	Mollii Estate Ltd	5.0	770	50			

Source: Report on Parastatals in Tanzania, Towards A Reform Program, Report No. 7100-TA, 1988, pp. 54 - 63.

MINISTRY AFFILIATION	HOLDING COMPANIES Operating Companies Independent Companies	SIZE (latest yr.) Paid-up Capital ('000 Tsh)	Employment	Private Participation (%)	Management Contract With b/	Type of Agreement b/	Terms of Agreement b/
	Ruvu Rice Farms						
	Sisal [illegible] Spinning Co.						
	Sisalana Products Ltd						
	Tanga. Coffee Curing Co Ltd.	0.5	[illegible]				
	Tanga. Packers Ltd						
	Tanga. Pyrethrum Board		[illegible]				
	Tangold Products Co						
	Tanzania Agric. Research Org. d/						
	Tanzania Animal Feeds Co.						
	Tanzania Coffee Mktg. Board						
	Tanzania Cordage Ltd.						
	Tanzania Cotton Mktg. Board						
	Tanzania Dairies Ltd.	1.5	101				
	Tanzania Dairies Ltd. - DSM	2.0	100				
	Tanzania Dairies Ltd. - Tabora		63				
	Tanzania Dairy Farming Co. Ltd.						
	Tanzania Hides and Skins	7.0	[illegible]				
	Tanzania Instant Coffee Co.						
	Tanzania Livestock Research Org. d/						
	Tanzania Tea Authority		1557				
	Tanzania Tea Blenders	11.0	720	40			
	Tobacco Authority of Tanzania		1470				
	Tropical Pesticide Res. Inst. d/						
	Uyole Agricultural Centre.						
COMMUNICATIONS AND TRANSPORT	NATIONAL TRANSPORT CORPORATION	0.3	80				
	Dar Passenger Transport	20.7	[illegible]				
	Dodoma Regional Transport Co	20.0	164				
	Iringa Regional Transport Co						
	Lindi Regl Transport Co	0.5					
	Mwanza Regl Transport	4.2	165				
	Natl Bus Services	14.0	[illegible]				
	Natl Inst of Transport d/						
	Ruvuma Regional Transport Co	11.7	[illegible]				
	Tan Coastal Shipping Line	11.4	[illegible]				
	Air Tanzania Corp	357.8	[illegible]				
	[illegible] Transport Co.	2.0	41				
	Board of Regis. of Architects d/						
	Kagera Regional Transport						
	Morogoro Regl Transport Co						

MINISTRY AFFILIATION	HOLDING COMPANIES Operating Companies Independent Companies	Size (latest yr.) Paidup Capital ('000 Tsh)	Employmt.	Private Participation (%)	Management Contract With a/	Type of Agreement b/	Term of Agreement c/
	Mwananchi Eng.Constr Co.	11.6	2000				
	Mwanza Regional Transport						
	National Board of Materials Mgt. d/						
	National Construction Council d/						
	National Estates & Designing Corp.		104				
	Tabora Regional Transport						
	Tanzania Central Freight Bureau d/						
	Tanzania Harbours Authority		[illegible]				
	Tanzania Posts & Telecomm. Corp		[illegible]				
	Tanzania Railways Co.		[illegible]				
DEFENCE	Mradi wa Nyumbu						
	Mzinga Corp						
EDUCATION	Institute of Adult Education d/						
	Institute of Education d/						
	National Examination Council d/						
	Sokoine Univ. of Agriculture d/						
	Tan Elimu Supplies	65.0	600				
	Tanzania Library Service d/						
	Univ. of Dar es Salaam d/						
FINANCE AND PLANNING	Bank of Tanzania	20.0	600				
	Bima Motors Ltd						
	Cooperative Rural Devt. Bank	208.1	200	40			
	Inst. of Finance Management d/						
	Karadha Company Ltd.	70.0	45				
	National Bank of Commerce	80.0	[illegible]				
	Natl Bd of Accountants & Auditors d/						
	National Insurance Corp.	5.0	[illegible]				
	National Lottery		80				
	National Productivity Council d/						
	National Radiation Commission d/						
	Rasilimali Ltd						
	Rufiji Basin Dev Author		64				
	Stiegler's Gorge Safari Corp						
	State Insurance Brokers						
	Tanzania Audit Corp.		[illegible]				
	Tanzania Housing Bank	100.0	[illegible]				
	Tanzania Investment Bank	100.0	[illegible]				
	Tan. Natl. Science Res. Council d/						
	THB Estates Co	10.0	27				

MINISTRY AFFILIATION	HOLDING COMPANIES Operating Companies Independent Companies	Size (latest yr.) Paid-up Capital ('000 Tsh)	Size (latest yr.) Employmt.	Private Participation (%)	Management Contract With a/	Type of Agreement b/	Terms of Agreement c/
FOREIGN AFFAIRS	Arusha Intl Conf. Centre d/						
HEALTH	Muhimbili Medical Centre d/						
	National Food & Nutrition Centre d/						
	Natl. Inst. of Medical Research d/						
JUDICIARY	Tanzania Legal Corp						
LAND, HOUSING AND URBAN	Ardhi Institute d/						
	Kisarawe Brick Co						
	Natl. Environmental Mgt. Council d/						
	National Housing Corp						
	National Estates & Designing Corp.	1.0	196				
	Registrar of Buildings d/		304				
	Tanzania Concrete Articles						
MANPOWER DEVT. AND LABOR	Inst. of Dev. & Mng. Mzumbe d/						
	National Inst. of Productivity d/						
	National Inst. of Social Welfare d/						
	National Provident Fund d/						
MINERALS AND ENERGY	STATE MINING CORPORATION	183.6	890				
	Buckreef Gold Mines						
	Coastal Salt Works						
	Kahama Gold Mines Co						
	Kilwa Ammonia Co						
	Lupa Gold Mines						
	Minjingu Phosphate						
	New Almasi Ltd						
	Nyanza Salt Mines	8.0	872	19			
	Pugu Kaolin Mines Co						
	Tanzania Diamond Cutting Co	40.0	482				
	Tanzania Gemstone Inds.	1.0	70				
	Tanzania Magnesite Co						
	Tanga. Meerschaum	2.4	142	44			
	Williamson Diamonds	22.0	2214	80			

MINISTRY AFFILIATION	HOLDING COMPANIES / Operating Companies / Independent Companies	Paidup Capital ('000 Tsh)	Employmt.	Private Participation (%)	Management Contract With d/	Type of Agreement b/	Terms of Agreement e/
	TANZANIA PETROLEUM DEVT. CORP.		[illegible]				
	Agip Tanzania Ltd	30.0	248	50			
	BP Tanzania Ltd	13.2	140	50			
	Gas Supply Co.						
	Tanz. & Ital. Petrol Refining	28.0	400	50			
	Tanzania Electric Supply Co.	1088.3	2216				
NATURAL RESOURCES AND TOURISM	Bagamoyo Fishing Co.						
	Fibre Boards Africa Ltd.	18.0					
	Giraffe Wattle Extract Co.Ltd						
	Hotel Embassy						
	Hotel Seventy Seven Village	61.0	287				
	Kilimanjaro Timber Utilization Co.						
	Kilwa Sawmill Co						
	Mang'ula Sawmill						
	Mbeya Sawmill Ltd						
	Mingoyo Sawmill						
	Moshi Sawmill Co		270				
	Mashi Hotel Ltd						
	Mount Meru Hotels	40.0	280	30			
	Mwanza Hotel Ltd						
	National Tours Ltd						
	New Safari Hotel Ltd						
	Ngorongoro Conserva. Area Auth. d/						
	Nyamisati Fishing Co						
	Sao Hill Sawmill (T) Ltd						
	Seaforia Ltd						
	Serengeti Safari Lodges	22.8	400				
	Serengeti Wildlife Research Inst. d/						
	State Travel Services Ltd						
	Tabora Misitu Products Ltd	1.4	180				
	Tanzania Fisheries Corp		108				
	Tanzania Fisheries Research Inst. d/						
	Tanzania Forestry Research Inst. d/						
	Tanzania Hotel Investments						
	Tanzania Hotels Ltd						
	Tanzania National Parks d/						
	Tanzania Tourist Corp. d/	181.0			Sheraton Overseas Mgt Corp (USA)	M	n.a.
	Tanzania Wildlife Corp	8.2	287				
	Tanzania Wood Industry Corp						
	Tembo Chipboards Ltd.	0.3	231	30			
	TTC Gift Shops Ltd						
	Uvuvi Kigoma Ltd						

MINISTRY AFFILIATION	HOLDING COMPANIES Operating Companies Independent Companies	Size (latest yr.) Paid-up Capital ('000 Tsh)	Size (latest yr.) Employmt.	Private Participation (%)	Management Contract With a/	Type of Agreement b/	Terms of Agreement c/
PRIME MINISTER'S OFFICE	Audio Visual Institute a/						
	Cooperative College a/						
	DDCs (7?)						
	Inst. of Rural Devt. Planning a/						
	Kariakoo Market Corp.	10.0	[illegible]				
	Kibaha Education Centre a/						
	National Arts Council a/						
	National Kiswahili Council a/						
	Tanzania Film Co Ltd a/						
	Tanzania News Agency/Shihata a/						
	Tanzania School of Journalism a/						
PRESIDENT'S OFFICE	Capital Construction Equipment						
	CDA a/						
	Ceramics Industries Ltd						
	Dodoma Brick & Tiles Works						
	Integrated Concrete Ind.						
	Workers' Development Corp. (T) d/	[illegible]	[illegible]				
TRADE AND INDUSTRY	BOARD OF INTERNAL TRADE	1.7	[illegible]				
	Agric. & Industrial Supplies Co	[illegible]	[illegible]				
	Biashara Consumer Co	47.3	[illegible]				
	Bldg. Hardware & Elec. Supply Co	44.6	[illegible]				
	Dar Textile Company Ltd.	12.0	[illegible]				
	General Food Company	[illegible]	[illegible]				
	Household Supplies Co.	125.0	[illegible]				
	National Pharmaceutical Co Ltd.	9.1	[illegible]				
	Stationery & Office Supply	2.3	[illegible]				
	NATIONAL CHEMICAL INDUSTRIES	[illegible]	[illegible]				
	General Tyre	30.0	[illegible]	[illegible]			
	Keko Pharmaceutical Industry		[illegible]				
	Polysacks Co	12.0	[illegible]				
	Sabuni Industries Ltd.	[illegible]	[illegible]				
	Tanzania Fertilizer Co. Ltd.	278.0	[illegible]	40	Klockner Ind.[illegible] (Austria)	M,O	V o/a.
	Tanzania Pharmaceutical Industry	[illegible]	[illegible]				
	Tanga. Tegry Plastics	6.0					

INDUSTRY AFFILIATION	HOLDING COMPANY Operating Companies Independent Companies	Size (latest yr.) Paid-up Capital ('000 Tsh)	Employment	Private Participation (%)	Management Contract With a/	Type of Agreement b/	Terms of Agreement c/
	NATIONAL DEVELOPMENT CORPORATION	8.8	[illegible]				
	Air Communication Technologies						
	Aluminum Africa Ltd.	80.8	1400	87			
	Kilimanjaro Machine Tools Co	111.4	178		PTIC Machine Export (Bulgaria)	S	P
	Liganga Iron and Steel						
	Light Engrng Mfg Co				Tungsram (Hungary)	S	P
	Mang'ula Mech. Machine Tool	46.8	220				
	Mbeya Farm Equipment						
	Mech. and Machine Tools						
	Metal Box Tanzania Ltd.	20.9	371	20	Metal Box p.l.c. Intl. (UK)	S	P,V
	Morogoro Farm Equipment						
	National Bicycle Co.						
	National Engineering Co.	12.0	374	0			
	National Steel Corp	8.5	84				
	Refrigeration Equipment						
	Southern Paper Mills	1589.7					
	Steel Rolling Mills Ltd.	15.0	220	4			
	Tanzania Cables Ltd	10.0	61	20	Comcraft Services Ltd. (UK)	S	P,V
	Tanzania Cream Corbo						
	Tanzania Elec. Supply Mfg. Co	37.7	180	20			
	Tanzania Oxygen	6.4	128	40			
	Tanzania Watch Assembling Co	3.0	10				
	Ubungo Farm Implements	12.2	220				
	NATIONAL TEXTILE CORPORATION	480.0	127				
	Binaboso Mfg Ltd	2.0	670				
	Friendship Textile Mill	20.0	4246				
	Kilimanjaro Textile	22.0	2000	40			
	Morogoro Canvas Mill	122.2	900				
	Musoma Textile	256.0	840				
	Mwanza Textile	134.6	2781				
	Tanzania Bag Corp.-Mill I	220.0	600				
	Tanzania Bag Corp.-Mill II	40.7	410				
	Tanzania Sewing Thread Mfg Co.						
	Tanga. Dyeing & Weaving Mill	10.1	2000				
	Ubungo Spinning Mills						
	Ubungo Corporate Ltd.	12.2					

MINISTRY AFFILIATION	HOLDING COMPANIES Operating Companies Independent Companies	Size (latest yr.) Paidup Capital ('000 Tsh)	Size (latest yr.) Employmt.	Private Participation (%)	Management Contract With a/	Type of Agreement b/	Terms of Agreement c/
	SMALL INDUSTRY DEVT. CORP. d/		682				
	Tanzania Handicrafts Mktg Co						
	STATE MOTOR CORPORATION	2.0	68				
	Burns & Sisco (T) Co.	0.2	65				
	East African Motor Assemblies						
	Express Tanzania Ltd	118.0	148				
	Farm Machinery Distribution						
	Motor Mart Tanzania Ltd	0.4	40				
	Motor Service Co						
	Mwananchi Tractor & Veh. Assem.						
	Neon & General Signs (T) Ltd						
	Riddoch Motors	5.0	257				
	Tanzania Auto Mfg. Co Ltd	25.0	132				
	Tanzania Motor Corp	20.0					
	Tanzania Tractor Mfg	12.0					
	Trailers & Low Loaders Mfg.	5.0	110				
	TANZANIA BREWERIES LTD.	20.0	2202	48	Agrocomplect (Bulgaria)	M,S	P
	Darbrew Ltd.	5.0	186				
	TBL Farms						
	Tanzania Malting						
	TANZANIA KARATASI ASSOCIATED INDS.		41		Gibbons Barford Print Export Ltd.	M	P,V
	Eastern Africa Publications Ltd						
	Kibo Paper Industries	4.8	865	?			
	National Printing Co.	10.0	648				
	Printpak Tanzania Ltd.	14.0	480				
	Tanzania Publishing House						
	TANZANIA LEATHER ASSOCIATED INDS.		65				
	Morogoro Leather Goods Co	8.7	118				
	Morogoro Shoe Co	63.4	440				
	Morogoro Tanneries	20.0	224				
	Mwanza Tanneries	22.0	126				
	Tanzania Shoe Co.	18.0	2319				
	Tanzania Tanneries Co Ltd.	20.0	222				

MINISTRY AFFILIATION	HOLDING COMPANIES Operating Companies Independent Companies	Size (latest yr.) Paid-up Capital ('000 Tsh)	Employmt.	Private Participation (%)	Management Contract With a/	Type of Agreement b/	Terms of Agreement c/
	TANZANIA SARUJI CORPORATION		64		M/S Pragoinvest (Czechoslovakia)	M,S	F,V
	African Marble Co.						
	Mangula Prefab. Concrete						
	Mbeya Cement Co.						
	Morogoro Ceramics Wares				Comerfit Mgt. Services (Panama)	M	F,V
	Mwanza Glass Works						
	Saruji Trucking Co.	10.0					
	Tanga. Cement Co.	480.0	642				
	Tanzania Clay Products						
	Tanzania Gypsum Ltd.						
	Tanzania Portland Cement Ltd	8.0	786				
	Tanzania Sheet Glass				Comerfit Mgt. Services (Panama)	M	F,V
	Afica Pencils Co						
	Arusha Metal Industry						
	Board of External Trade d/		221				
	Bruce (Tanzania) Ltd.						
	CAMARTEC d/						
	College of Business Education d/						
	Land Rover Tanzania						
	National Shipping Agencies Co.	20.0	602				
	[illegible] Press Ltd.	1.4	66	80			
	Mwanza Clay Products						
	MTCo (II)						
	Rubber Industries	1.8	120				
	Tabora Textile Mill						
	Tanga. Standard (Newspaper) Ltd.	22.8	120				
	Tanzania Bureau of Standards d/		157				
	Tanzania Cigarette Co	100.0	1069				
	Tanzania Engg. Mfg. Design Org. d/						
	Tanzania Ind. Research & Devt. Org.		78				
	Tan. Ind. Stud. & Consult. Org. d/		122				

MINISTRY AFFILIATION	HOLDING COMPANIES Operating Companies Independent Companies	Size (latest yr.) Paid-up Capital ('000 Tsh)	Employmt.	Private Participation (%)	Management Contract With a/	Type of Agreement b/	Terms of Agreement c/
	Tanzania Packages Mfg.						
	Tanzania Starch Mfg.						
	Tanzania Trust						
	Tanzania Vehicle Finance						
	Zana za Kilimo-Mbeya	44.8	640		M/S Ganco (Sweden)	M,S	F
WATER	National Urban Water Authority						

a/ Operating or approval 1987-89. May be incomplete.

b/ M = Management Agreement; S = Others: Consultancy or Technical Advisory/Services/Services Advisory/Services Assistance/Consultancy Agreement.

c/ F = fixed fees; v = variable fees; n.a. = not available.

d/ Non-commercial agency.

e/ By Tanzania Tourist Corporation for the following companies (or hotels): Kilimanjaro, Kunduchi, Tanzania Tours Ltd., Sofitel New Africa, Novotel Mount Meru and Serengeti Safari Lodges.

Sources: SCOPO, "Agenda for Industrial Recovery", Vol. II, p. 80 ff and Inter-Ministerial Parastatal Management and Technical Agreements Committee, "Diary".

Note: The "Diary" uses the following names of companies with management contracts which do not appear in the SCOPO list of parastatals: KILTEX (TEXCOT); DAHACO - DSM Airport Handling Co. (ATCT); TPC Ltd. (SUDECOT); ALAF (NDCT); Morogoro Polyester Textiles Ltd. (TEXCOT); Mbeya Textile Mill Ltd. (TEXCOT).

Government Ownership of PEs

Table 1.2
Government Direct Majority Holding (Percentage) Page 1

Name of Enterprise	Ministry of Finance or Parent Co.	Other
African Textile Mills Ltd.	51.00	49.00
Agip (Uganda) Ltd.	50.00	50.00
Blenders (Uganda) Ltd.	100.00	
Cable Corporation Ltd.	51.00	49.00
Coffee Marketing Board	100.00	
Domestic Appliances Ltd. °	56.00	44.00
Foods and Beverages Ltd and subsidiaries	100.00	
Fresh Foods Ltd.	100.00	
Winits (U) Ltd.	100.00	
Institute of Public Administration	100.00	
International TV Sales	100.00	
Jubilee Ice & Soda Works Ltd.	100.00	
Kakira Sugar Works Ltd.	51.00	49.00
Kibimba Rice Co.Ltd.	100.00	
Kiira Sawmills & Plywood Factory Ltd.	100.00	
Kinyara Sugar Works Ltd.	n.a.	n.a.
Lake Katwe Salt Co.Ltd. °	100.00	
Lake Victoria Bottling Co.Ltd.	80.00	20.00
Law Development Centre	100.00	
Lint Marketing Board	100.00	
Makerere University	100.00	
Mulago Hospital Board	100.00	
National Council of Sport	100.00	
National Curriculum Development Centre	100.00	
National Enterprise Corporation	100.00	
National Housing and Construction Corp. and subsidiaries	100.00	
Housing Finance Co. of Uganda Ltd.	50.00	50.00
Uganda Clays Ltd.	75.00	25.00
Gobott (Uganda) Ltd.	75.00	25.00
National Insurance Corp. and subsidiary	100.00	
Uganda Hire Purchase Co.Ltd.	n.a.	n.a.
National Social Security Fund	100.00	
National Water and Sewerage Corp.	100.00	
New Vision	100.00	
Nile Breweries Ltd.	100.00	
Nile Hotel Ltd.	100.00	
Nsamizi Training Centre	100.00	
Paramount Manufacturers Ltd. °	100.00	

NOTE: Defunct or non-operating = ° n.a. = not available

Source: Public Sector Administrative Reform and Planning Study, Uganda, Ministry of Finance, prepared by BMB, November 1990.

Government Direct Majority Holding (Percentage) Page 2

Name of Enterprise	Ministry of Finance or Parent Co.	Other
Peoples Transport Co.Ltd.	100.00	
Printpak (Uganda) Ltd.	100.00	
Produce Marketing Board	100.00	
Public Libraries Board	100.00	
Reconstruction & Development Corp.	100.00	
Saimmco (Soroti Agr.Impl.Machinery) °	n.a.	n.a.
Shell (Uganda) Ltd.	50.00	50.00
Sino-Uganda Fisheries Joint Venture Ltd.	n.a.	n.a.
Steel Corp.of East Africa Ltd.	51.00	49.00
Sugar Corporation of Uganda Ltd.	51.00	49.00
Toro and Mityana Tea Co.Ltd.	51.00	49.00
Toro Development Corp. °	n.a.	n.a.
Total (Uganda) Ltd.	50.00	50.00
Transocean (Uganda) Ltd.	51.00	49.00
Uganda Air Cargo Ltd.	n.a.	n.a.
Uganda Airlines Corp.	100.00	
Uganda Blanket Manufacturers Ltd.	83.75	16.25
Uganda Dairy Corp.	100.00	
Uganda Development Corp.	100.00	
Uganda Electricity Board	100.00	
Uganda Fisheries Industry Ltd.	100.00	
Uganda Fishnet Manufacturers Ltd.	92.00	8.00
Uganda Garments (1973) Ltd.	100.00	
Uganda General Merchandise Ltd.	100.00	
Uganda Hardwares Ltd. and subsidiary	100.00	
General Equipments Ltd.	100.00	
Uganda Industrial Machinery Ltd.	100.00	
Uganda International Conference Centre	100.00	
Uganda Motors Ltd. and subsidiaries	100.00	
Comrade Cycle Co.(Uganda) Ltd. °	51.00	49.00
Ecta (Uganda) Ltd	100.00	
Gomba Motors	100.00	
Republic Motors	100.00	
Uganda National Examinations Board	100.00	
Uganda National Parks	100.00	
Uganda Pharmaceuticals Ltd.	100.00	
Uganda Posts & Telecommunications Corp.	100.00	
Uganda Prisons Industries Ltd.	100.00	
Uganda Railways Corp.	100.00	
Uganda Steel Co.Ltd. °	51.00	49.00
Uganda Tea Authority	100.00	
Uganda Tea Corp.	n.a.	n.a.
Uganda Tea Growers Corp.	100.00	
Uganda Tourist Development Corp. and subsidiary	100.00	
Uganda Tours and Travels °	n.a.	n.a.
Uganda Transport Corp.	100.00	
Uganda Vocational Training Centre	100.00	
UGMA Engineering Corp. Ltd.	51.00	49.00

NOTE: Defunct or non-operating = ° n.a. = not available

Government Indirect Majority Holding — Page 3

Name of Enterprise	UDC or Parent Co.	NEC	DFCU	Crane Industries	Other
African Ceramics Ltd.	94.60		2.50		2.90
Agricultural Enterprises Ltd. and subsidiaries	86.70			13.30	
Ankole Tea Co.Ltd.	79.47				20.53
Bugamba Plantations Co.Ltd.	98.30				1.7
Kiko Tea Co.Ltd.	98.30				1.7
Muzizi Tea Plantation Co.Ltd.	100.00				
Mwenge Tea Co.Ltd.	95.94				4.06
Salama Estates Ltd.	100.00				
East African Distilleries Ltd.	51.00		23.00		26.00
Itama Mines °	100.00				
Lango Development Corp. °	99.56				0.44
Lawere Industries Ltd.		100.00			
Mukisa Foods		100.00			
NEC Bakery and Confectionery Ltd.		100.00			
NEC Canteen Ltd.		100.00			
NEC Foam Products Ltd.		100.00			
NEC Lime - Dura (Kasese) Ltd.		100.00			
NEC Mobility Ltd.		100.00			
NEC Post Co.Ltd.		100.00			
NEC Pharmaceuticals Ltd.		100.00			
NEC Textiles		100.00			
NEC Timber Products Ltd.		100.00			
NEC Trading Co.Ltd.		100.00			
NEC Works Ltd.		100.00			
Nectarine Restaurant & Bar Ltd.		100.00			
Nyanza Textiles Industries Ltd. (NYTIL) and subsidiary	50.30		12.50	36.20	1.00
Lebel (Uganda) Ltd. °	51.00				49.00
Sukulu Mines °	100.00				
Tororo Industrial Chemicals & Fertilizers Ltd.(TICAF) °	86.50				13.50
Ugadev Bank Ltd.	100.00				
Uganda Cement Industry Ltd.	51.30				48.70
Uganda Consolidated Properties Ltd. and subsidiary	53.40		13.30	32.00	1.30
Kulubya Properties Ltd.	93.00				7.00
Uganda Crane Estates Ltd.	100.00				
Uganda Crane Industries Ltd.	97.75				2.25
Uganda Fish Marketing Corp.Ltd. °	97.50				2.50
Uganda Hotels Ltd.	83.30			16.30	
Uganda Leather & Tanning Industry Ltd. (ULATI)	98.00				2.00
Uganda Libyan Arab Holding Co.	50.00				50.00
Uganda Livestock Industries Ltd.	100.00				
Uganda Meat Packers Ltd.	100.00				
Uganda Metal Products & Enamelling Co.(TUMPECO)	100.00				
Uganda Spinning Mill Ltd.	100.00				
Wolfram Investments Ltd. °	30.00		30.00		40.00

Government Direct/Indirect Majority Holding

Name of Enterprise	Ministry of Finance or Parent Co.	DFCU	UDC	Other	
Kampala International Hotel Corp.	85.00		15.00		
Papco Industries Ltd.	89.80		10.20		
Uganda Grain Milling Co. Ltd. and subsidiaries	47.90	16.60	31.20	4.30	
Bread Ltd.	75.00	25.00			
Uganda Maize Industries Ltd.	100.00				
Uganda Millers Ltd.	100.00				
Uganda Foods Ltd.	100.00				
United Garment Industries Ltd.(UGIL)	10.75		61.75	27.50	

Government Direct Minority Holding

Name of Enterprise	Min.of Finance			Other	
Agro-Chemicals Ltd. °	25.00			75.00	
British American Tobacco Co.(Uganda) Ltd.	30.00			70.00	
Uganda American Insurance Corp.	49.00			51.00	

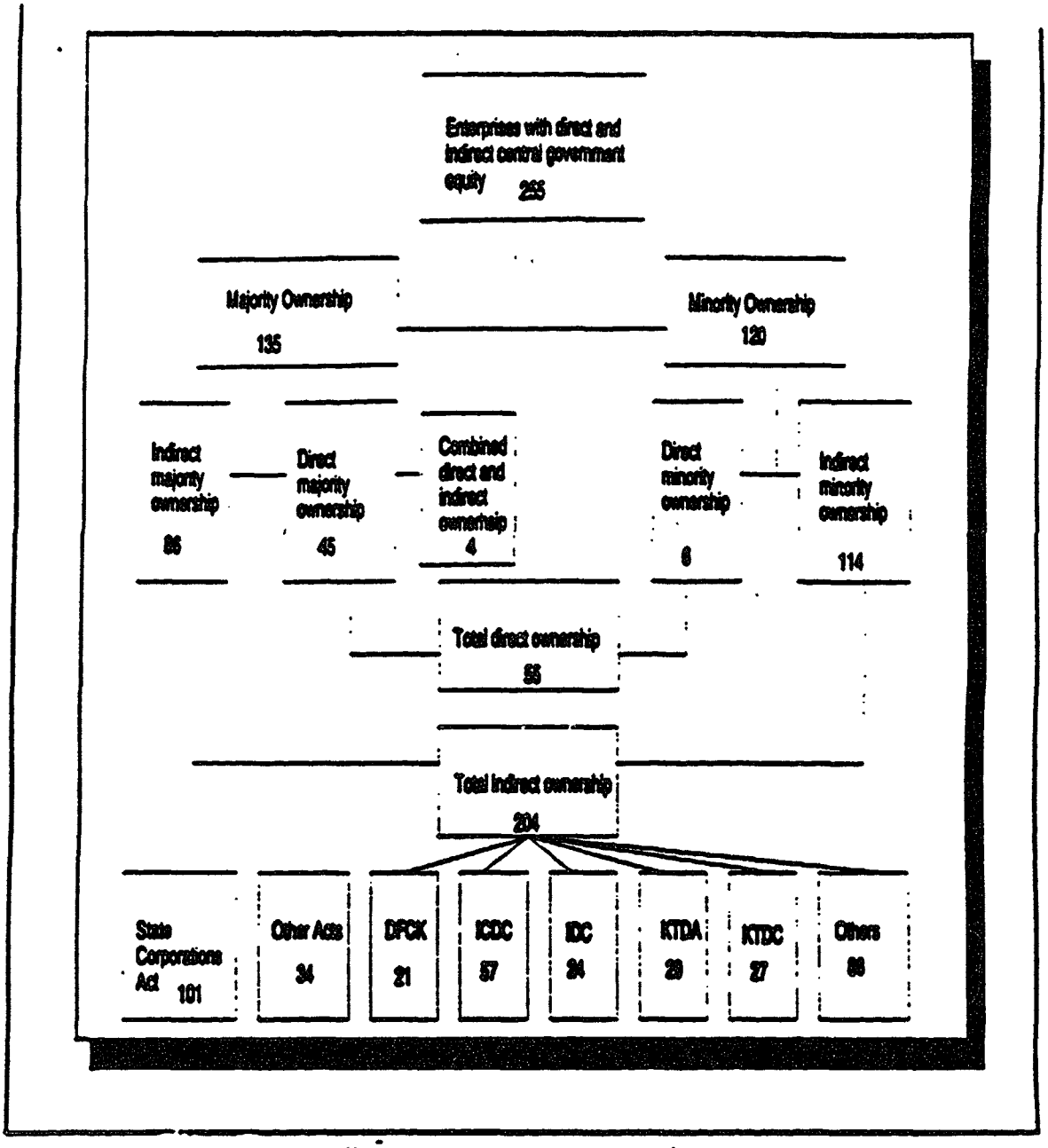
Government Indirect Minority Holding

Name of Enterprise	UDC			Other	
Associated Match Co.Ltd.	15.00			85.00	
Associated Paper Industries Ltd.	25.00			75.00	
Chillington Tool Co. (Uganda) Ltd.	15.00			85.00	
Development Finance Co.of Uganda	25.00			75.00	
Uganda Bags and Hessian Mills Ltd.	26.00			74.00	

NOTE: Defunct or non-operating = °

Table 1.3

Kenya: The Structure of the Parastatal Enterprise Sector



Source: Kenya, Re-Investing in Stabilization and Growth Through Public Sector Adjustment, Report No. 9998-KE, January 1992

2. Impact of the Public Enterprise Sector on the Economy

Data illustrating the number of public enterprises highlighted in Section 1 provides some indication of the breadth of government involvement in the economy. But it does not provide parameters of the depth of government involvement. Public enterprise contributions to GDP, investment, employment, credit, and external debt are useful indicators of the importance of PEs in the economy.

Sector reports usually include data on the impact of public enterprises on at least some of these indicators. The Senegal Parapublic Sector Review (Report No. 7774-SE, 1989), includes a text table that summarizes trends in GDP, investment, and employment over a seven-year period (Table 2.1). The President's Report on the PE Reform Loan to Tunisia (Report No. P-5055-TUN, 1989) includes a table highlighting the importance of PEs in the economy according to all five indicators (Table 2.2).

More extensive treatment is included in the Kenya Country Economic Memorandum (CEM), Re-Investing in Stabilization and Growth Through Public Sector Adjustment (Report No. 9998-KE, 1992). It includes extensive national data on the parastatal sector derived from local periodic censuses and surveys. Among the indicators illustrated are public enterprise GDP in current and constant prices, employment by sector, and gross fixed capital formation in constant and current prices (Table 2.3). The Kenya CEM also includes an illustration depicting the contribution of public enterprises to modern sector employment in comparison to the rest of the economy (Table 2.4).

For the Sub-Saharan region as a whole, a Bank Technical Paper, Africa's Public Enterprise Sector and Evidence of Reforms No. 95, 1989), is the most inclusive. It presents a table illustrating the importance of the aggregate PE sector in 31 Sub-Saharan countries with averages for each of the five indicators from 1980-86. Subsequent tables provide annual data for each indicator for all 31 countries (Table 2.5).

The examples cited here provide concise presentations of data that illustrate the relative importance of public enterprises in the economy. The tables from the Senegal, Tunisia, and Kenya reports and the Bank Technical paper are included below.

Table 2.1 Senegal: The Economic Role of Public Enterprises

(CFAF Billion)

	1981	1986	1987 1/
1. No. of PEs 2/	70	85	85
2. a. Gross-Value-Added of PEs	65.6	97.1	97.4
b. GDP at market prices	669.8	1295.3	1421.3
c. Share of PEs (a)/(b) %	9.8	7.5	6.9
3. a. Employment in PEs (in 000's)	30.6	30.8	30.2
b. Modern-sector empl. (in 000's)	178.0	N.A.	N.A.
c. Share of PEs (a)/(b) %	17.2	N.A.	N.A.
4. a. PEs fixed investment	41.6	44.9	58.0
b. Investment in the economy	102.4	183.0	197.6
c. Share of PEs (a)/(b) %	40.6	24.5	29.4

1/ Estimated.

2/ Includes only enterprises in which the Government has direct participation.

Source: The Senegal Parabublic Sector Review
Report No. 7774 - SE, 1989, p. 2

Table 2.2

TUNISIA
PUBLIC ENTERPRISE REFORM LOAN

PE SECTOR: MACROECONOMIC INDICATORS
(million dinars)

	1983	1984	1985
A. GDP			
PEs	3190.6	3712.5	4033.2
Total Economy	10278.5	11890.7	12852.8
% PEs/Total	31.1	31.2	31.4
B. Investment			
PEs	382.4	722.0	778.9
Total Economy	1728.8	2101.3	1923.7
% PEs/Total	22.7	34.4	30.4
C. Domestic Credit			
PEs	1027.8	1234.9	1340.9
Total Economy	2711.9	3284.8	3574.8
% PEs/Total	37.9	37.6	38.8
D. External Debt (US$)			
PEs	1172.3	1084.3	1198.9
Total Economy	3888.8	3732.8	4388.1
% PEs/Total	30.8	28.9	27.3
E. Employment			
PEs	174286	na	148981
Total Formal Sector	988242	na	na
% PEs/Formal Sector	29.3		

Source: The President's Report on the PE Reform Loan to Tunisia, Report No. P-5055-TUN, 1989.

Table 2.3 Selected Indicators of PE Involvement in the Kenyan Economy

GROSS DOMESTIC PRODUCT BY ORIGIN AT CURRENT PRICES
MAJORITY - OWNED PARASTATAL ENTERPRISES
(In Millions of Kenya Pounds)

INDUSTRY	1985	1986	1987	1988	1989	1990 1/
Manufacturing and mining	93.7	104.7	109.1	107.0	111.7	121.3
Electricity	34.7	35.9	37.0	40.1	47.3	57.5
Trade, restaurants & hotels	96.9	111.0	114.0	115.7	147.0	167.3
Transport, storage & comm.	201.2	218.7	255.5	272.0	355.8	407.8
Finance & business services	51.3	54.1	66.1	81.0	98.1	107.2
Other services	1.9	2.0	2.4	2.6	2.4	4.4
Imputed bank service charges	-50.2	-49.9	-55.9	-63.0	-79.8	-65.0
TOTAL	429.5	476.4	528.0	555.4	682.6	800.3

1/ Provisional

Source: Central Bureau of Statistics.

Table 1b: GROSS DOMESTIC PRODUCT BY ORIGIN AT CURRENT PRICES
MINORITY - OWNED PARASTATAL ENTERPRISES
(In Millions of Kenya Pounds)

INDUSTRY	1985	1986	1987	1988	1989	1990 1/
Manufacturing	90.9	109.0	112.0	128.0	144.2	167.8
Trade, restaurants & hotels	6.2	11.2	13.2	17.5	15.7	20.1
Finance & business services	13.4	15.3	11.4	5.5	11.6	12.5
Imputed bank service charges	-10.7	-11.8	-6.8	-2.1	-7.8	-2.3
TOTAL	99.8	123.8	129.9	148.9	163.6	198.1

1/ Provisional

Source: Central Bureau of Statistics.

Table 1c: GROSS DOMESTIC PRODUCT BY ORIGIN AT CURRENT PRICES
TOTAL PARASTATAL ENTERPRISES
(In Millions of Kenya Pounds)

INDUSTRY	1985	1986	1987	1988	1989	1990 1/
Manufacturing and mining	184.6	213.7	221.0	235.0	255.9	289.1
Electricity	34.7	35.9	37.0	40.1	47.3	57.5
Trade, restaurants & hotels	103.0	122.2	127.2	133.2	162.7	187.3
Transport, storage & comm.	201.2	218.7	255.5	272.0	355.8	407.8
Finance & business services	64.7	69.4	77.5	86.4	109.7	119.7
Other services	1.9	2.0	2.4	2.6	2.4	4.4
Imputed bank service charges	-60.9	-61.6	-62.6	-65.1	-87.6	-67.3
TOTAL	529.3	600.2	657.9	704.3	846.2	1011.1

Source: Kenya, Re-Investing in Stabilization and Growth Through Public Sector Adjustment, Report no. 9998-KE, January 1992.

: GROSS DOMESTIC PRODUCT BY ORIGIN AT CONSTANT 1982 PRICES
MAJORITY - OWNED PARASTATAL ENTERPRISES
(In Millions of Kenya Pounds)

INDUSTRY	1985	1986	1987	1988	1989	19901/
Manufacturing and mining	73.8	74.2	74.7	72.9	70.2	70.4
Electricity	18.2	19.5	20.7	24.0	24.5	25.6
Trade, restaurants & hotels	65.9	62.3	79.9	102.9	113.6	93.3
Transport, storage & comm.	156.7	164.0	174.5	170.7	209.8	224.3
Finance & business services	35.3	36.9	44.9	52.8	58.6	57.7
Other services	1.5	1.4	1.9	1.6	1.2	2.0
Imputed bank service charges	-34.6	-33.9	-37.8	-40.7	-47.3	-34.4
TOTAL	316.8	324.4	358.9	384.3	430.6	439.0

1/ Provisional

Source: Central Bureau of Statistics.

Table 2b: GROSS DOMESTIC PRODUCT BY ORIGIN AT CONSTANT 1982 PRICES
MINORITY - OWNED PARASTATAL ENTERPRISES
(In Millions of Kenya Pounds)

INDUSTRY	1985	1986	1987	1988	1989	19901/
Manufacturing	68.5	69.3	69.2	69.1	68.6	68.6
Trade, restaurants & hotels	2.7	5.4	6.2	8.0	6.0	7.3
Finance & business services	9.8	9.5	6.9	2.5	4.4	5.0
Imputed bank service charges	-7.8	-7.3	-4.1	-1.0	-3.0	-0.9
TOTAL	73.2	76.8	78.3	78.6	76.0	80.0

1/ Provisional

Source: Central Bureau of Statistics.

Table 2c: GROSS DOMESTIC PRODUCT BY ORIGIN AT CONSTANT 1982 PRICES
TOTAL PARASTATAL ENTERPRISES
(In Millions of Kenya Pounds)

INDUSTRY	1985	1986	1987	1988	1989	19901/
Manufacturing and mining	142.3	143.4	143.9	142.0	138.8	139.0
Electricity	18.2	19.5	20.7	24.0	24.5	25.6
Trade, restaurants & hotels	68.6	67.7	86.1	110.9	119.6	100.6
Transport, storage & comm.	156.7	164.0	174.5	170.7	209.8	224.3
Finance & business services	45.2	46.4	51.8	55.3	62.9	62.7
Other services	1.5	1.4	1.9	1.6	1.2	2.0
Imputed bank service charges	-42.5	-41.2	-41.9	-41.6	-50.3	-35.3
TOTAL	390.0	401.2	437.1	462.9	506.5	519.0

1/ Provisional

TABLE 3a: PRODUCTION ACCOUNTS FOR MAJORITY - OWNED PARASTATAL ENTERPRISES
(In Millions of Kenya Pounds)

INDUSTRY	1985 Gross Output At Basic Prices 1/	1985 Intermed Cons.	1985 Gross Domestic Product (at Factor Cost) Total	1985 Labour Costs	1985 Operating Surpl. 2/	1986 Gross Output At Basic Prices 1/	1986 Intermed Cons.	1986 Gross Domestic Product (at Factor Cost) Total	1986 Labour Costs	1986 Operating Surpl. 2/
Manufacturing and mining	331.8	238.1	93.7	29.7	64.0	343.2	238.5	104.7	29.5	75.2
Electricity	74.2	39.5	34.7	8.0	26.7	83.9	46.9	37.0	10.7	26.3
Trade, restaurants and hotels	142.8	45.9	96.9	20.2	76.7	140.4	29.4	111.0	18.9	92.1
Transport, storage and comm.	359.1	157.9	201.2	98.1	103.1	385.4	166.7	218.7	111.9	106.8
Finance & business services	69.8	18.5	51.3	30.6	20.7	73.4	19.4	54.1	33.7	20.4
Other services	3.4	1.4	1.9	1.9	0.0	3.4	1.4	2.0	1.9	0.0
Imputed bank charges	0.0	50.2	-50.2	0.0	-50.2	0.0	49.9	-49.9	0.0	-49.9
TOTAL	981.1	551.6	429.5	188.5	241.0	1029.7	552.2	477.5	206.6	270.9

INDUSTRY	1987 Gross Output At Basic Prices 1/	1987 Intermed Cons.	1987 Gross Domestic Product (at Factor Cost) Total	1987 Labour Costs	1987 Operating Surpl. 2/	1988 Gross Output At Basic Prices 1/	1988 Intermed Cons.	1988 Gross Domestic Product (at Factor Cost) Total	1988 Labour Costs	1988 Operating Surpl. 2/
Manufacturing and mining	426.0	160.9	109.1	42.4	66.7	357.6	250.7	106.9	33.4	73.5
Electricity	100.6	63.7	37.0	12.6	24.3	122.4	82.3	40.1	15.9	24.2
Trade, restaurants and hotels	110.3	22.8	87.5	17.3	70.3	184.1	56.0	128.1	16.4	111.7
Transport, storage and comm.	420.8	165.3	255.5	130.8	124.6	505.1	233.2	272.0	137.0	134.9
Finance & business services	88.9	22.8	66.1	38.9	27.2	104.8	23.9	81.0	44.2	36.7
Other services	4.2	1.8	2.4	2.3	0.1	4.5	1.9	2.6	2.5	0.1
Imputed bank charges	0.0	55.9	-55.9	0.0	-55.9	0.0	63.0	-63.0	0.0	-63.0
TOTAL	1150.8	493.1	501.6	244.3	257.3	1278.5	710.8	567.7	249.6	318.1

1/ After deducting indirect taxes less subsidies from total output.

2/ Including consumption of fixed capital.

EMPLOYMENT BY SECTOR
MAJORITY - OWNED PARASTATAL ENTERPRISES

	1985	1986	1987	1988	1989	1990 1/
Manufacturing and Mining	33,010	33,549	32,822	33,836	34,067	34,880
Electricity	5,918	6,576	7,315	8,137	8,127	7,780
Distribution	9,100	9,256	9,777	9,740	10,239	12,520
Transport	26,021	24,843	25,599	29,682	30,087	27,799
Finance	7,657	7,985	8,358	8,631	10,017	10,497
Other Services	1,895	1,895	1,895	1,959	1,944	1,904
Overall Total	83,601	84,104	85,766	91,985	94,481	95,380

1/ Provisional

Source: Central Bureau of Statistics.

Table 4b: EMPLOYMENT BY SECTOR
MINORITY - OWNED PARASTATAL ENTERPRISES

	1985	1986	1987	1988	1989	1990 1/
Manufacturing and Mining	21,987	22,814	22,329	23,246	22,460	22,747
Distribution	2,096	2,190	2,809	2,961	2,794	2,711
Transport	1,121	1,335	1,105	1,024	997	1,023
Overall Total	25,204	26,339	26,243	27,231	26,251	26,481

1/ Provisional

Source: Central Bureau of Statistics.

Table 4c: EMPLOYMENT BY SECTOR
TOTAL PARASTATAL ENTERPRISES

	1985	1986	1987	1988	1989	1990 1/
Manufacturing and Mining	54,997	56,363	55,151	57,082	56,527	57,627
Electricity	5,918	6,576	7,315	8,137	8,127	7,780
Distribution	11,196	11,446	12,586	12,701	13,033	15,231
Transport	27,142	26,178	26,704	30,706	31,084	28,822
Finance	7,657	7,985	8,358	8,631	10,017	10,497
Other Services	1,895	1,895	1,895	1,959	1,944	1,904
Overall Total	108,805	110,443	112,009	119,216	120,732	121,861

1/ Provisional

NUMBER OF FIRMS
MAJORITY - OWNED PARASTATAL ENTERPRISES

	1985	1986	1987	1988	1989	1990 1/
Manufacturing and Mining	32	32	32	32	32	32
Electricity	1	1	1	1	1	1
Distribution	17	21	21	20	22	21
Transport	7	7	7	7	8	8
Finance	14	14	14	14	14	14
Other Services	4	4	4	4	4	4
Overall Total	75	79	79	78	81	80

1/ Provisional

Source: Central Bureau of Statistics.

Table 5b: NUMBER OF FIRMS
MINORITY - OWNED PARASTATAL ENTERPRISES

	1985	1986	1987	1988	1989	1990 1/
Manufacturing and Mining	74	77	78	77	76	76
Distribution	12	11	11	12	11	11
Finance	13	13	13	13	13	13
Overall Total	99	101	102	102	100	100

1/ Provisional

Source: Central Bureau of Statistics.

Table 5c: NUMBER OF FIRMS
TOTAL PARASTATAL ENTERPRISES

	1985	1986	1987	1988	1989	1990 1/
Manufacturing and Mining	106	109	110	109	108	108
Electricity	1	1	1	1	1	1
Distribution	29	32	32	32	33	32
Transport	7	7	7	7	8	8
Finance	27	27	27	27	27	27
Other Services	4	4	4	4	4	4
Overall Total	174	180	181	180	181	180

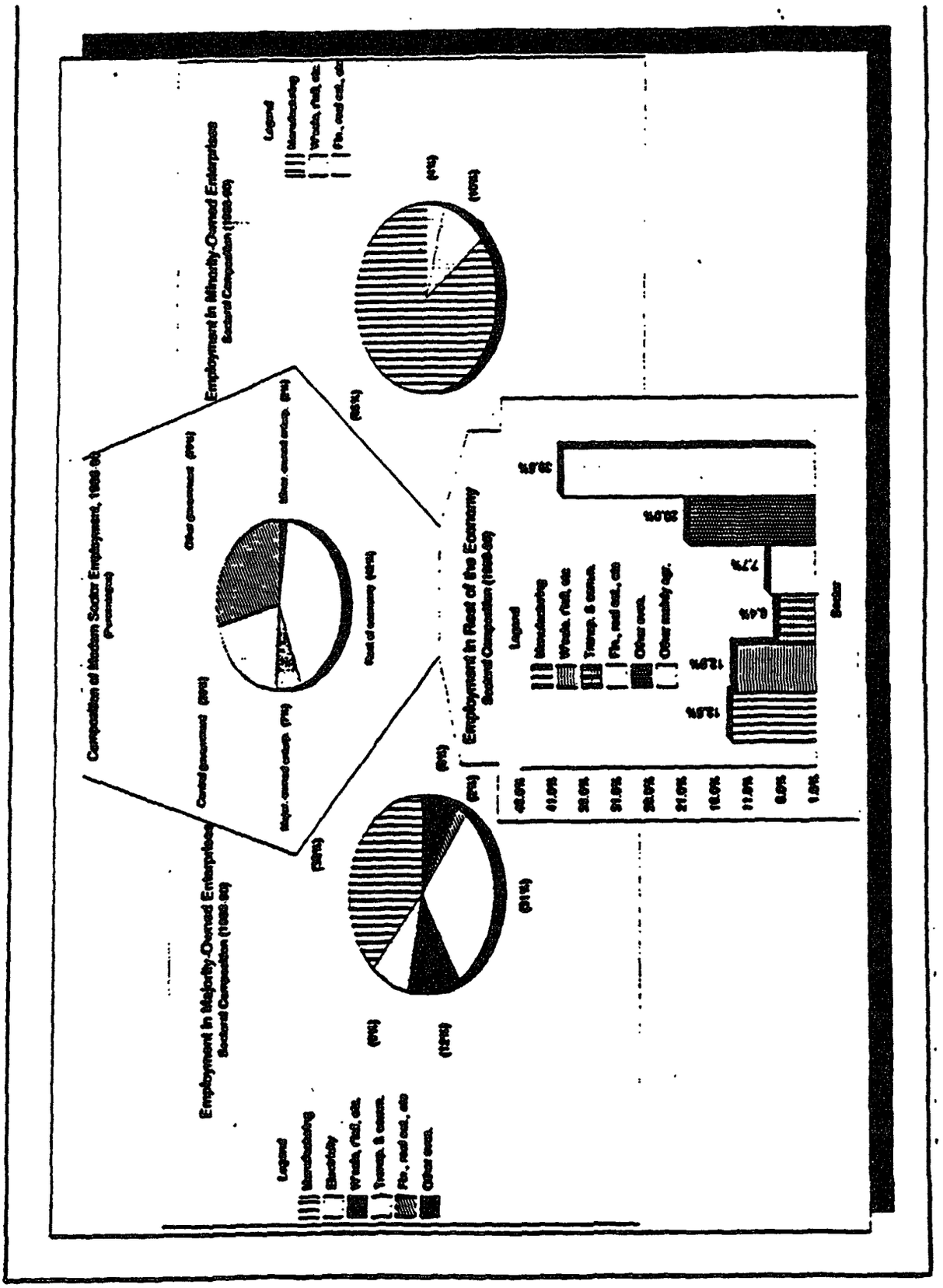
1/ Provisional

NUMBER OF FIRMS BY SIZE OF EMPLOYMENT, 1985
MAJORITY - OWNED PARASTATAL ENTERPRISES

Range	Man.& Mining	Electricity	Distribution	Trans.&Comm.	Financial	Services	Total
1 - 50	1	0	2	2	2	0	7
51 - 100	2	0	7	0	2	0	11
101 - 200	5	0	1	0	1	2	9
201 - 300	6	0	1	1	1	0	9
301 - 400	2	0	1	1	1	0	5
401 - 500	3	0	1	0	3	0	7
501 - 600	1	0	0	0	0	0	1
601 - 700	0	0	0	0	0	1	1
701 - 800	3	0	0	0	2	0	5
801 - 900	2	0	0	0	0	0	2
901 - 1000	1	0	2	0	0	1	4
1001 - 2000	4	0	1	1	1	0	7
2001+	5	1	1	2	1	0	10
	35	1	17	7	14	4	78

Source: Central Bureau of Statistics

Table 2.4 Public Enterprise Employment in Kenya



Source: Kenya, Re-Investing in Stabilization and Growth Through Public Sector Adjustment, Report No. 9998-KE, January 1992

Sub-Saharan Africa: The Public Enterprise Sector

Table 2.5: Size of PE Sector- Summary Table

Country	Number of PEs a.	PE contribution to GDP a.	PE Share of Domestic Investment a.	PE Share of Formal Sector Employment	PE share of Domestic Credit a.	PE share of External Debt (DOD) a.
BENIN	57			42.4%	45.3%	35.4%
BOTSWANA	9 b.				-23.1% b.	14.6%
BURUNDI	84 c.	5.6%	36.6%	27.4%	13.1%	6.7%
CAMEROON	58					43.6%
CAR	29	4.6%	17.6%			18.6%
CONGO	94 d.	18.6%	39.8% b.	28.4%		29.6%
COTEDIVOIRE	158 e.		17.9% c.			9.3%
ETHIOPIA	189	4.6% b.				14.3%
GAMBIA	19					1.2%
GHANA	181		25.6%	55.6% b.	18.6%	14.8%
GUINEA	167	25.6%		68.8%		8.8%
GUINEABIS	36					
KENYA	175		28.7% d.	8.6%	3.5%	8.1%
LIBERIA	21				11.7%	18.8%
MADAGASCAR	184	2.3% c.		7.1% c.	14.5% c.	29.3%
MALAWI	13	7.8%	14.2%	11.2%	7.8%	12.9%
MALI	51	12.1% d.	8.1%	17.4%		2.6%
MAURITANIA	112	25.6%				16.7%
MAURITIUS	28	7.2%				4.8%
NIGER	44	4.9% e.	19.5%		23.8%	19.6%
NIGERIA	118	13.8% f.	28.6%			11.9%
RWANDA	48				5.3%	8.5%
SENEGAL	58	9.5%	32.7%		24.5%	14.7%
SIERRALEONE	22		1.2% e.	17.1%		24.6%
SOMALIA	45	1.6% g.		5.3% d.		2.2%
SUDAN	268	47.5%			18.9%	3.8%
TANZANIA	428	13.8%	25.5%		29.6%	18.2%
TOGO	65			24.8%		5.5%
UGANDA	138				3.2%	3.1%
ZAIRE	129	22.6%		18.6%	8.6%	25.3%
ZAMBIA	123 f.	31.8%	54.1% f.	37.2%	14.6%	38.5%

a. NUMBER OF PEs: Non-financial Public Enterprises; definition does not include financial PEs or or public agencies. Mostly, PEs listed are government majority-owned; of these, most are wholly owned
b. 1978 Figure
c. Of which seven PEs dormant in 1984, 1985; 11 PEs dormant in 1986.
d. Includes financial PEs.
e. Includes financial PEs.
f. ZIMCO group which represents 95% of PE turnover.

a. PE CONTRIBUTION TO GDP: PE Gross Value Added / GDP at market prices.
b. Manufacturing PEs only.
c. For a sample of 16 PEs.
d. For a sample of 29 PEs; about 90% of PE gross value added.
e. Data excludes Uranium exporting PE.
f. For a sample of four major PEs; about 31% of cumulative government investment in PE sector.
g. Manufacturing PEs only; nearly half of PE gross value added.

a. PE SHARE OF DOMESTIC INVESTMENT: PE Gross Investment / Total Gross Domestic Investment
b. Net investment.
c. Estimate for 1986.
d. For a sample of 12 major enterprises; about two-thirds of PE gross value added.
e. For a sample of two PEs: DIMINCO and Guma Valley Water Company.
f. Estimated on the basis of net financial resources available to ZIMCO.

a. PE SHARE OF FORMAL SECTOR EMPLOYMENT: Formal sector implies wage labor though definition may vary.
b. Estimated.
c. Estimate for agricultural and industrial PEs.
d. Manufacturing PEs only.

a. PE SHARE OF DOMESTIC CREDIT: Domestic Credit (claims on Gov't (net), NPEs, privates, and fin. inst.).
b. Negative figures imply a large net government surplus to central bank.
c. Short term credit only.

a. PE SHARE OF EXTERNAL DEBT: PE External Debt Outstanding (DOD) / Official External Debt Outstanding (DOD;

Source: Africa's Public Enterprise Sector and Evidence of Reforms, Daniel Swanson and Teferra Wolde-Semait No. 95, 1989, p. 35.

3. Public Enterprise Output As A Share of Total Output

The output of public enterprises as a share of country GDP provides a very useful indicator of the importance of public enterprises in the economy. The World Development Report, 1988 provides a concise graph excerpted below illustrating the share of value added as a portion of total output by state-owned-enterprises in selected developing countries (Table 3.1).

The President's Report on the Sri Lanka Public Enterprise Adjustment Credit (Report No. 5351-CER, 1990) includes a table excerpted below which highlights public manufacturing enterprise output as a percent of total output for nine subsectors such as food and beverages, paper, and metals. A unique feature of this table is that it also includes data on public enterprise exports as a portion of total subsector exports and total industrial exports (Table 3.2).

Table 3.1: Nonfinancial SOE shares of value added and investment

Source: World Development Report 1988, p. 169

Table 3.2

SRI LANKA - PUBLIC MANUFACTURING ENTERPRISES ADJUSTMENT CREDIT

VALUE OF INDUSTRIAL PRODUCTION, VALUE ADDED, EXPORTS AND EMPLOYMENT BY SUB-SECTORS AND MAJOR PMEs, 1977-1988
(Rs Million at current factor prices)

Category	Total Industrial Production: Output Value 1987	Output Value 1988	Value Added 1987	Value Added 1988	1988 Value Added as % of output	PMEs: Output Value 1987	Output Value 1988	PMEs' Output as % Subsector's 1987	1988	Export 1987 - US$ M Subsector	PMEs	Export 1988 - US$ M Subsector	PMEs	Employment 1988 PMEs
Food, beverages and tobacco	12,882	14,676	7,184	8,236	58.0	1,391	1,342	8.9	9.1	38.2		32.2		10,538
Textiles, wearing apparel and leather products	16,428	18,189	4,469	4,757	26.4	1,344	1,770	8.1	9.7	488.7	2.1	482.9	2.2	8,823
of which Textile Corporation						1,135	1,646	7.4	9.1		1.9		2.2	8,499
Wood and wood products (excluding furniture)	677	848	458	488	72.9	330	180	44.9	38.7					8,891
Paper and paper products	1,572	1,482	682	781	52.3	830	646	42.5	42.8					4,816
Chemicals, petroleum, coal, rubber and plastic products	13,477	13,691	3,371	3,827	28.0	11,352	10,229	84.2	74.8	110.0	88.9	110.0	14.7	8,829
of which Petroleum Corp*						10,886	9,748	81.3	71.2		87.9		12.9	6,019
Non-metallic mineral products (except petroleum and coal)	2,160	2,257	1,194	1,530	67.7	1,727	1,839	81.9	80.6	136	8.4	105.6	17.0	10,270
of which Cement Corporation						1,369	1,378	83.9	83.2					3,300
Basic metal products	387	487	49	71	14.6	387	487	100.0	100.0					1,800
Fabricated metal products, machinery and transport	2,668	2,477	1,294	1,518	61.3	46	51	2.2	2.1	18.6		18.9		800
Manufactured products n.e.s.	168	176	82	99	59.8	-		8.9	8.9	8.7		12.9		
Total	48,849	54,683	18,813	21,969	39.9	16,858	16,849	34.7	30.8	749.8	59.6	786.0	33.9	80,800
Total (exl food, bev & tob)	35,570	39,359	11,319	12,636	32.6	15,665	15,107	42.7	38.6	714.6	59.6	752.9		45,700
GDP	177,731	222,319					Total Exports			1392		1478		
Total (exl food, bev & tob) as % of GDP			6.9	6.9			Ind Exports % Total Exports			53.2		53.9		
							PMEs Exports % Industrial Exports				13.6		4.3	
							PMEs Exports % Total Exports				7.2		2.3	
							PMEs' Employees as % of Indus Employment							60
							PMEs' Employees as % of Total Employment							10

*excluding Paranthan which was closed in 1985 due to disturbances and fertilizer which was closed in 1986 due to uneconomical operations. The fertilizer plant is now under liquidation in conjunction with PERP.

Source: Table 22, Review of the Economy, 1987, Central Bank of Ceylon
Table 23 for value of ind. prod
Table 2.9 for exports (convert Rs to US$)—US$ M PMEs
Table 71 for exports (convert Rs to US$)—Subsector data

Source: The President's Report on the Sri Lanka Public Enterprise Adjustment Credit, Report No. 5351-CE, 1990, p.46.

4. Public Enterprise Financial Performance

The financial performance of public enterprises affects many aspects of the economy including government expenditures, domestic credit markets, and external debt. Net financial losses can result in increased transfers from the central government, reduced dividends and tax revenues from public enterprises, and higher borrowing and debt service requirements. Analysis of the financial performance of public enterprises is therefore an important element in PE reform planning.

The Tanzania report, Parastatals in Tanzania. Towards a Reform Program, Report No. 7100-TA, 1988), includes a summary table excerpted in the attached appendix which aggregates the financial performance of parastatals during a three-year period (Table 4.1). The most comprehensive sources of data on parastatal financial performance in Tanzania are the audits conducted by the Tanzania Audit Corporation. The data demonstrate a declining trend in financial performance on average among parastatals. The annexes to the Tanzania report include data on individual firms and firms by sector which allows for variations in perfomance among firms to be observed.

Illustrating the aggregate financial performance of parastatals can be useful in monitoring the effect of macroeconomic adjustments, such as increases in interest rates, reductions in subsidies, and elimination of price controls. The aggregate data is most informative when juxtaposed to sector-specific and firm-specific data that can be used to determine more precisely the impact of adjustment measures. Also, the aggregate financial performance data gives some indication of the strengths and weaknesses of the sector as a whole and its financing needs. But aggregated profit and loss statements may not reflect certain flows between governments and parastatals such as subsidies and transfers. Hence, they are one of several instruments that can be used to assess the health of parastatals. Efficiency measures discussed in subsequent sections of this review supplement data on financial performance.

The Staff Appraisal Report for the Uganda Enterprise Development Project (Report No. 9739-UG, 1991) includes a concise table excerpted below that highlights gross profit and loss for a sample of public enterprises (Table 4.2). Each firm is listed separately by sector, and totals for each sector are noted. The advantage of the presentation of financial performance data in this way is that is provides a quick summary of the financial status of the sector. Additional descriptive data provided in the same concise format is included in the Public Sector Administrative Reform and Planning Study for Uganda prepared by BMB for the Ministry of Finance, November 1990). Among the data included (and excerpted below) are net sales and net profits, current ratios, liquidity ratios, and retained profit and depreciation (Tables 4.3, 4.4, 4.5, 4.6).

Public Enterprise Financial Performance

Table 4.1

TANZANIA: FINANCIAL PERFORMANCE OF PARASTATALS AUDITED BY TANZANIA AUDIT CORPORATION, 1983-85

	1983		1984		1985	
	Numbers	Profit Before Tax (TSh. Million)	Number	Profit Before Tax (TSh. Million)	Number	Profit Before Tax (TSh. Million)
Parastatals with Profits	196	3,876.5	213	2,911.9	199	3,911.4
Parastatals with Losses	165	(918.2)	171	(2,994.4)	165	(1,853.0)
Net Profit	361	2966.3	384	(82.5)	364	1968.4

Source: Tanzania Audit Corporation Annual Reports

SOURCE: Report on Parastatals in Tanzania, Towards a Reform Program, Report No. 7100-TA, 1988, p. 17

Table 4.2 Financial Indicators of PE Sector Performance
Uganda

A. Operating Results (Gross Profit/Loss) by Sector
from 1985 to 1988
(US$ million)

Name of Sector/Enterprise	Years 1985	1986	1987	1988
I. COFFEE SECTOR				
Coffee Marketing Board	37.9	18.9	14.9	11.6
Total Coffee Sector	37.9	18.9	14.9	11.6
II. MANUFACTURING SECTOR				
African Ceramics Co. Ltd	(0.2)	(0.1)	(0.0)	(0.1)
African Textile Mills Ltd	(0.3)	(0.3)	(0.0)	(0.2)
Agricultural Enterprises Ltd	(2.1)	N/A	N/A	N/A
Associated Paper Industries Ltd	(0.1)	0.0	(0.0)	0.2
Blenders (Uganda) Ltd	(0.0)	0.0	0.0	0.0
Cable Corp. Ltd	0.1	0.1	(0.4)	(0.2)
Chillington Tool Co. (Uganda) Ltd	(0.1)	0.1	(0.5)	(1.2)
Dunlop (E.A.) Ltd	(0.3)	0.0	(0.1)	N/A
East African Distilleries Ltd	0.2	0.4	0.2	(0.0)
East African Steel Corp. Ltd	(0.2)	(0.1)	0.1	N/A
[illegible] Works Ltd	N/A	N/A	(0.1)	(0.0)
[illegible] Co. Ltd	0.1	(0.6)	0.1	N/A
[illegible] Sawmills and Plywood Factory Ltd	(1.2)	(0.3)	(0.0)	(0.2)
Lake Victoria Bottling Co. Ltd	(0.0)	0.0	0.4	2.2
[illegible] Foods Ltd	0.0	0.0	0.0	(0.1)
[illegible] Textiles Ltd	(0.2)	(0.0)	(0.0)	N/A
New Vision	N/A	N/A	(0.1)	0.0
Nile Breweries Ltd	0.1	(0.1)	N/A	N/A
Nyanza Textile Industry Ltd (NYTIL)	(3.8)	0.4	1.8	0.0
[illegible] Industries Ltd	0.0	0.1	(0.1)	(0.2)
[illegible] (Uganda) Ltd	(0.3)	(0.2)	(0.3)	(0.5)
Toro and Mityana Tea Co. Ltd	N/A	0.5	(0.2)	(1.1)
Uganda Metal Products and Enamelling Co. (TUMPECO)	0.1	(0.7)	0.0	(0.1)
Uganda Engineering Corp. Ltd	(0.4)	(0.1)	(0.2)	0.1
Uganda Bags and Hessian Mills Ltd	0.0	0.0	0.0	0.1
Uganda Bicycle Manufacturers Ltd	(0.3)	(0.1)	0.2	(0.2)
Uganda Clays Ltd	0.1	0.2	(0.3)	0.1
Uganda Dairy Corp	(0.7)	0.4	0.9	2.8
Uganda Feeds Manufacturers Ltd	0.1	0.5	0.0	(0.2)
Uganda Grain Milling Co. Ltd	3.8	0.0	2.9	N/A
Uganda Leather and Tanning Industry Ltd (ULATI)	(0.2)	(0.1)	(0.1)	(0.0)
Uganda Meat Packers Ltd	(0.1)	(0.1)	(0.0)	N/A
Uganda Spinning Mill Ltd	(0.0)	(0.6)	(0.0)	N/A
Sugar Corp. of Uganda Ltd	(0.3)	(0.6)	(0.9)	(3.2)
Uganda Tea Growers Corp.	0.8	(0.1)	(0.1)	N/A
Uganda Garment Industries Ltd (UGIL)	(5.2)	(0.3)	(0.1)	(1.0)
[illegible] Ltd	(0.7)	0.0	0.0	[illegible]
Total Manufacturing Sector	(7.3)	[illegible]	2.4	[illegible]
III. TRADE & HOTELS SECTOR				
Agro (Uganda) Ltd	3.9	8.7	4.8	2.8
[illegible] (Uganda) Ltd	N/A	N/A	0.4	N/A
Foods and Beverages Ltd	2.3	1.7	2.6	2.6
General Industries Ltd	(0.1)	(0.1)	(0.0)	(0.1)
[illegible]	N/A	N/A	0.1	0.2
International TV Sales	(0.2)	0.1	0.0	0.0
Lint Marketing Board	N/A	0.2	0.0	(0.4)
Nile Hotel Ltd	N/A	N/A	N/A	0.2
Produce Marketing Board	0.6	(1.1)	0.2	1.2
[illegible]	N/A	0.0	(0.1)	(0.1)
Toyota (Uganda) Ltd	2.9	4.9	1.6	1.9
Uganda General Merchandise Ltd	(0.2)	(0.6)	0.2	0.1
Uganda Hardwares Ltd	(0.1)	0.4	0.2	0.5
Uganda Hotels Ltd	(0.2)	(0.1)	(0.0)	N/A
Uganda Motors Ltd	1.1	2.0	3.0	(0.7)
Uganda Pharmaceuticals Ltd	0.2	0.5	0.3	0.3
Uganda Tea Authority	(0.1)	(0.1)	N/A	N/A
Total Trade & Hotels Sector	[illegible]	17.9	12.4	6.1
IV. TRANSPORT & COMMUNICATION SECTOR				
Peoples Transport Co. Ltd	(0.1)	0.2	(0.0)	2.1
[illegible] (Uganda) Ltd	(1.1)	(0.2)	0.2	0.1
Uganda Airlines Corp.	(3.9)	(3.2)	(1.4)	(12.1)
Uganda Posts and Telecommunications Corporation	7.3	4.0	2.1	7.4
Uganda Railways Corp.	2.7	4.0	1.2	10.4
Uganda Transport Corp.	(0.1)	0.0	(0.4)	0.8
Total Transport & Communication Sector	[illegible]	4.8	[illegible]	[illegible]
V. ELECTRICITY & WATER SECTOR				
National Water and Sewerage Corp.	0.1	(0.0)	(1.2)	0.4
Uganda Electricity Board	(0.2)	(0.1)	(1.0)	N/A
Total Electricity & Water Sector	[illegible]	[illegible]	[illegible]	[illegible]
VI. OTHERS				
Housing Finance Co. of Uganda	0.0	0.0	(0.1)	(0.2)
National Housing and Construction Corp.	(0.0)	(0.0)	0.0	2.4
National Social Security Fund	N/A	(0.3)	(0.0)	(0.3)
[illegible] Ltd	N/A	N/A	(0.0)	0.0
Uganda American Insurance Corp.	(0.0)	(0.0)	(0.0)	(0.1)
Uganda Consolidated Properties Ltd	0.3	0.3	0.2	0.4
[illegible]	0.3	(0.0)	(0.1)	(0.3)
[illegible]	(0.2)	(0.1)	(0.3)	N/A
Total Others	[illegible]	[illegible]	0.4	[illegible]
TOTAL ALL SECTORS	36.3	30.4	28.9	9.3
Number of Reporting Enterprises	61	64	67	56

Rates of Exchange:
1985 1 US$ = USh. 6.7
1986 1 US$ = USh. 14.3
1987 1 US$ = USh. 75.8
1988: 1 US$ = USh. 160.8

Source: Staff Appraisal Report for the Uganda Enterprise Development Project, Report No. 9739-UG - 1991, p. 51.

Uganda

Table 4.3

Net Sales, Net Profit and Net Profit Margin of a Sample of PEs, 1985 - 1988 (U.Sh. million)

Name of Enterprise	Net Sales 1985	1986	1987	1988	Net Profit (Loss) 1985	1986	1987	1988	Net Profit (Loss) Margin in % 1985	1986	1987	1988
I. COFFEE SECTOR												
Coffee Marketing Board	1,227.1	2,327.2	5,909.4	12,207.4	187.9	68.1	1,216.3	(262.7)	15.3	2.7	20.6	(2.2)
Total Coffee Sector	1,227.1	2,327.2	5,909.4	12,207.4	187.9	68.1	1,216.3	(262.7)	15.3	2.7	20.6	(2.2)
II. MANUFACTURING SECTOR												
African Ceramics Co. Ltd	0.2	1.3	1.6	10.4	(1.7)	(1.3)	(1.7)	(8.0)	(958.8)	(98.9)	(106.3)	(76.9)
African Textile Mills Ltd	3.6	11.4	42.1	124.7	(2.5)	(3.8)	(0.9)	0.5	(72.3)	(33.3)	(2.1)	0.4
Agricultural Enterprises Ltd	4.2	NA	NA	NA	(13.9)	NA	NA	NA	(329.0)			
Associated Paper Industries Ltd	2.2	5.0	11.1	42.6	(0.3)	0.5	(0.8)	22.7	(15.1)	10.3	(7.2)	53.3
Blenders (Uganda) Ltd	1.8	3.3	5.7	37.1	(0.1)	0.1	0.2	2.1	(6.7)	2.5	3.5	5.7
Cable Corp. Ltd	3.6	11.4	15.9	110.4	(0.6)	0.6	(33.3)	(47.9)	(15.5)	5.3	(209.4)	(43.4)
Chillington Tool Co. (Uganda) Ltd	4.2	23.0	49.4	153.5	(0.7)	1.9	(37.3)	(124.7)	(16.2)	8.1	(75.5)	(81.2)
Dunlop (E.A) Ltd	2.6	5.6	13.6	NA	(2.1)	0.5	(6.9)	NA	(80.9)	9.1	(50.7)	
East African Distilleries Ltd	5.1	11.8	44.4	140.4	1.2	6.2	17.4	1.1	23.7	52.1	39.2	0.8
East African Steel Corp. Ltd	6.2	9.1	53.9	NA	(1.4)	(0.9)	5.0	NA	(22.9)	(10.3)	9.3	
Jubilee Ice and Soda Works Ltd	NA	NA	9.4	35.3	NA	NA	(4.1)	(2.1)			(43.6)	(5.9)
Kibimba Rice Co. Ltd	7.7	16.6	36.7	NA	0.9	(8.1)	11.3	NA	12.1	(49.0)	30.8	
Kiira Sawmills and Plywood Factory Ltd	1.5	8.4	35.0	130.1	(7.7)	(4.9)	(58.0)	(357.0)	(505.0)	(59.0)	(165.7)	(274.4)
Lake Victoria Bottling Co. Ltd	15.0	59.0	54.2	601.8	(0.1)	12.4	31.4	251.0	(0.8)	21.0	57.9	41.7
Mukisa Foods Ltd	1.6	6.8	21.2	29.8	0.1	0.5	0.9	(5.6)	4.8	7.0	4.2	(18.8)
NEC Textiles Ltd	4.3	8.0	15.0	NA	(0.9)	(0.1)	(2.8)	NA	(20.7)	(1.6)	(18.7)	
New Vision	NA	NA	9.1	62.5	NA	NA	(9.0)	1.1			(98.9)	1.8
Nile Breweries Ltd	15.0	22.6	NA	NA	2.7	8.2	NA	NA	17.9	36.2		
Nyanza Textiles Industry Ltd (NYTIL)	48.2	126.2	433.5	1,520.8	(25.4)	5.6	136.6	4.7	(52.8)	4.4	31.5	0.3
Papco Industries Ltd	5.0	5.3	[illegible]	18.8	0.0	1.3	(1.5)	(18.6)	0.9	24.5	(37.5)	(98.9)
Printpak (Uganda) Ltd	2.4	2.9	21.8	80.2	(2.0)	(2.4)	(21.3)	(54.9)	(82.3)	(82.1)	(97.7)	(68.5)
Toro and Mityana Tea Co. Ltd	NA	23.8	104.4	235.7	NA	6.7	19.5	(102.7)		27.9	18.7	(43.6)
Uganda Metal Products and Enamelling Co. (TUMPECO)	5.2	14.9	33.6	66.3	0.1	(10.2)	2.2	(6.1)	2.5	(68.9)	6.5	(9.2)
Ugma Engineering Corp. Ltd	3.4	8.9	29.3	116.6	(7.4)	(1.6)	(54.6)	(64.7)	(217.7)	(18.2)	(186.3)	(55.5)
Uganda Bags and Hessian Mills Ltd	0.0	0.1	23.4	105.2	0.0	0.0	1.9	12.1	2.9	11.7	8.1	11.5
Uganda Blanket Manufacturers Ltd	1.3	7.1	85.5	66.0	(1.6)	(1.9)	13.2	(5.9)	(119.8)	(26.5)	15.4	(8.9)
Uganda Clays Ltd	5.9	16.4	38.2	124.2	0.3	2.9	(22.2)	10.6	5.8	17.5	(58.1)	8.5
Uganda Fishnet Manufacturers Ltd	4.5	16.4	48.4	222.6	1.1	7.7	2.4	33.4	23.5	47.0	5.0	15.0
Uganda Grain Milling Co. Ltd	74.9	2.6	1,021.1	NA	24.1	0.5	259.3	NA	32.2	19.8	25.4	
Uganda Leather and Tanning Industry Ltd (ULATI)	0.7	4.2	28.5	55.8	(0.8)	(0.6)	(1.1)	8.9	(114.1)	(15.1)	(3.9)	15.9
Uganda Meat Packers Ltd	0.0	0.0	3.8	NA	(0.5)	(0.5)	(1.0)	NA	0.0	0.0	(26.3)	NA
Uganda Spinning Mill Ltd	0.0	0.0	0.0	-	(0.2)	(8.1)	(2.1)	0.0	0.0	0.0		-
Sugar Corp. of Uganda Ltd	9.0	10.4	5.6	985.8	(2.4)	(7.1)	(58.5)	(347.0)	(26.5)	(69.0)	(1,044.6)	(35.2)
Uganda Tea Growers Corp.	3.5	1.9	4.1	NA	0.3	(2.0)	(4.4)	NA	9.5	(106.0)	(107.3)	
United Garment Industries Ltd (UGIL)	4.3	3.9	20.9	167.8	(1.1)	(3.2)	(9.6)	(107.0)	(25.9)	(82.2)	(45.9)	(63.8)
Winits (U) Ltd	0.3	2.3	7.1	14.0	(0.2)	0.5	2.6	(1.8)	(56.5)	21.0	36.6	(12.9)
Total Manufacturing Sector	217.3	450.4	2,331.5	5,238.4	(42.7)	11.0	172.8	(905.8)	(17.2)	(0.7)	7.3	(17.3)
III. TRADE & HOTELS SECTOR												
Agip (Uganda) Ltd	107.9	244.9	548.0	1,273.9	3.6	20.4	1.7	14.3	3.3	8.3	0.3	1.1
Esso (Uganda) Ltd	NA	NA	41.2	NA	NA	NA	29.6	NA			71.8	
Foods And Beverages Ltd	101.8	231.4	1,640.1	4,105.0	16.3	25.7	284.6	377.0	16.0	11.1	17.4	9.2
General Equipment Ltd	1.1	0.7	1.4	7.0	(0.6)	(0.3)	0.5	2.1	(52.7)	(45.7)	35.7	30.0
Gomba Motors	NA	NA	31.5	138.5	NA	NA	7.6	15.0			24.1	10.8
International TV Sales	0.6	19.1	38.4	30.3	(1.0)	0.8	1.8	1.4	(185.4)	4.2	4.7	4.6
Lint Marketing Board	NA	149.1	348.1	910.3	NA	9.5	172.9	(111.3)		6.4	49.7	(12.2)
Nile Hotel Ltd	NA	NA	NA	242.1	NA	NA	NA	32.3		-	-	13.3
Produce Marketing Board	87.7	97.8	355.4	1,722.5	5.2	(11.6)	21.5	204.1	5.9	(11.9)	6.0	11.8
Republic Motors	NA	0.2	20.0	122.9	NA	0.0	1.7	22.0		6.2	8.5	17.9
Total (Uganda) Ltd	144.9	278.8	663.4	2,019.3	15.7	81.8	5.4	302.2	10.9	29.3	0.8	15.0
Uganda General Merchandise Ltd	4.0	16.9	404.4	513.5	(0.4)	0.8	20.6	14.8	(9.8)	4.7	5.1	2.9
Uganda Hardwares Ltd	3.9	21.2	149.8	734.5	(0.9)	5.4	15.7	61.9	(22.4)	25.4	10.5	8.4
Uganda Hotels Ltd	6.7	15.2	81.3	NA	(0.4)	0.8	12.5	NA	(8.2)	5.2	15.4	
Uganda Motors Ltd	26.9	177.2	939.5	725.2	9.1	86.7	237.0	(36.4)	33.8	48.9	25.2	(5.0)
Uganda Pharmaceuticals Ltd	17.1	88.1	197.4	452.0	1.4	6.7	26.7	39.8	8.0	11.5	13.5	8.8
Uganda Tea Authority	1.0	1.6	NA	NA	(0.7)	(1.5)	NA	NA	(69.9)	(95.4)		
Total Trade & Hotels Sector	503.6	1,312.3	5,459.9	12,998.8	47.2	225.3	839.8	939.2	9.4	17.2	15.4	7.2
IV. TRANSPORT & COMMUNICATION SECTOR												
Peoples Transport Co. Ltd	2.7	10.5	9.4	788.2	(0.8)	0.7	(99.2)	194.7	(29.0)	7.2	(1,055.3)	25.7
Transocean (Uganda) Ltd	6.8	21.0	335.9	719.4	(7.3)	(1.0)	15.6	11.4	(108.0)	(4.9)	4.6	1.6
Uganda Airlines Corp.	56.5	205.1	519.2	979.8	(3.9)	(38.9)	(381.5)	(1,152.8)	(7.0)	(18.9)	(73.5)	(117.7)
Uganda Posts and Telecommunications Corporation	31.1	247.5	882.3	2,128.5	(118.3)	57.4	(2,122.6)	837.1	(380.0)	23.2	(240.6)	39.3
Uganda Railways Corp.	87.7	174.7	482.5	3,494.0	17.8	57.7	90.4	323.7	20.3	33.0	18.7	9.3
Uganda Transport Corp.	11.4	0.4	268.0	1,219.4	(0.4)	0.1	(31.9)	89.0	(3.3)	20.0	(11.9)	7.3
Total Transport & Communication Sector	196.3	659.7	2,497.3	9,329.3	(113.6)	76.0	(2,529.2)	303.1	(57.6)	11.5	(101.3)	3.3
V. ELECTRICITY & WATER SECTOR												
National Water and Sewerage Corp.	9.1	8.3	14.1	381.2	0.4	(12.1)	(77.1)	62.8	4.7	(146.3)	(546.8)	16.5
Uganda Electricity Board	25.7	49.9	223.2	NA	13.3	12.1	(43.9)	NA	51.9	24.2	(19.7)	
Total Electricity & Water Sector	34.8	58.2	237.3	381.2	13.8	0.0	(121.0)	62.8	39.6	0.0	(51.0)	16.5
VI. OTHERS												
Housing Finance Co. of Uganda	0.0	0.0	8.7	16.7	0.0	0.0	(4.5)	(15.8)	23.5	26.5	(51.7)	(94.6)
National Housing and Construction Corp.	0.0	0.1	91.7	438.9	(0.0)	(0.1)	62.1	281.4	(20.8)	(83.3)	67.7	65.6
National Social Security Fund	NA	0.0	0.0	0.0	NA	(4.2)	(0.7)	(30.3)		0.0	0.0	0.0
Ugadev Bank Ltd	NA	NA	0.8	11.5	NA	NA	(2.3)	0.5			(287.5)	4.3
Uganda American Insurance Corp.	4.9	12.7	32.9	73.1	0.0	0.6	0.1	0.6	0.9	4.4	0.3	0.8
Uganda Consolidated Properties Ltd	3.3	7.6	37.3	130.8	2.0	4.0	18.2	42.8	59.5	52.4	48.8	32.7
Uganda Dairy Corp	34.9	47.3	350.3	1,235.0	(4.5)	6.3	69.4	280.0	(12.9)	13.2	19.8	22.7
Uganda Livestock Industries Ltd	4.4	0.9	0.0	0.0	1.6	(12.9)	(8.2)	(22.0)	35.9	(1,468.4)	0.0	0.0
Uganda National Parks	0.1	0.2	2.9	NA	(0.3)	(1.9)	(26.2)	NA	(407.6)	(1,108.1)	(903.4)	
Total Others	47.8	68.7	574.5	1,896.0	(1.2)	(8.2)	107.9	537.2	(2.5)	(11.9)	20.6	28.2
TOTAL ALL SECTORS	2,256.8	3,073.9	16,959.9	42,041.1	92.0	340.1	(313.4)	673.8	4.1	7.1	(1.8)	1.6
Number of Reporting Enterprises	61	64	67	56								

Table 4.4

Current Ratios, 1985 - 1988

Name of Sector/Enterprise	Years 1985	1986	1987	1988
I. COFFEE SECTOR				
Coffee Marketing Board	2.13	1.90	1.79	1.38
Total Coffee Sector	2.13	1.90	1.79	1.38
II. MANUFACTURING SECTOR				
African Ceramics Co. Ltd	0.21	0.39	0.35	0.07
African Textile Mills Ltd	0.72	0.79	2.26	1.27
Agricultural Enterprises Ltd	1.24	n.a.	n.a.	n.a.
Associated Paper Industries Ltd	4.18	2.10	3.04	2.89
Blenders (Uganda) Ltd	0.42	0.75	0.94	0.94
Cable Corp. Ltd	0.40	0.39	0.13	0.45
Chillington Tool Co. (Uganda) Ltd	0.95	2.57	6.80	1.09
Dunlop (E.A) Ltd	0.37	0.88	0.45	n.a.
East African Distilleries Ltd	1.12	1.31	1.26	1.23
East African Steel Corp. Ltd	1.77	2.95	11.05	n.a.
Kibimba Rice Co. Ltd	2.46	0.72	1.51	n.a.
Kiira Sawmills and Plywood Factory Ltd	0.99	0.95	0.93	2.57
Lake Victoria Bottling Co. Ltd	1.17	0.89	1.03	1.53
Mukisa Foods Ltd	0.83	1.00	1.10	0.00
NEC Textiles Ltd	0.63	0.75	0.98	n.a.
New Vision	n.a.	n.a.	1.64	1.82
Nile Breweries Ltd	1.03	1.15	0.00	n.a.
Nyanza Textiles Industry Ltd (NYTIL)	1.06	1.48	3.11	2.57
Papco Industries Ltd	0.71	0.71	0.65	0.79
Printpak (Uganda) Ltd	1.79	1.02	1.21	4.17
Uganda Metal Products and Enamelling Co. (TUMPECO)	1.09	1.08	1.14	0.81
Toro and Mityana Tea Co. Ltd	n.a.	1.49	0.75	0.36
Ugma Engineering Corp. Ltd	0.36	0.46	0.42	0.57
Uganda Bags and Hessian Mills Ltd	2.14	1.05	3.61	2.45
Uganda Blanket Manufacturers Ltd	0.27	0.42	1.03	0.94
Uganda Clays Ltd	1.08	1.28	0.93	3.17
Uganda Dairy Corp	0.83	1.95	1.92	4.53
Uganda Fishnet Manufacturers Ltd	1.89	1.58	1.06	1.28
Uganda Grain Milling Co. Ltd	1.27	1.06	1.33	n.a.
Uganda Leather and Tanning Industry Ltd (ULATI)	0.88	0.64	7.41	4.40
Uganda Meat Packers Ltd	0.03	0.02	0.18	n.a.
Uganda Spinning Mill Ltd	0.18	1.85	0.77	n.a.
Sugar Corp. of Uganda Ltd	3.09	2.95	1.78	2.20
Uganda Tea Growers Corp.	1.04	1.34	1.84	n.a.
United Garment Industries Ltd (UGIL)	1.26	0.97	3.38	1.43
Wolsa (U) Ltd	0.69	0.96	1.14	0.81
Total Manufacturing Sector	1.03	1.30	1.39	1.53
III. TRADE & HOTELS SECTOR				
Agip (Uganda) Ltd	1.88	1.80	0.97	0.98
Esso (Uganda) Ltd	n.a.	n.a.	1.15	0.97
Foods And Beverages Ltd	1.22	1.08	1.02	0.00
General Equipments Ltd	0.69	2.30	2.96	4.00
Gomba Motors	n.a.	n.a.	1.03	1.05
International TV Sales	0.92	3.93	3.04	1.18
Lint Marketing Board	n.a.	1.05	1.40	-8.00
Produce Marketing Board	1.66	1.33	1.10	1.17
Republic Motors	n.a.	0.85	2.89	2.66
Total (Uganda) Ltd	1.01	1.01	0.95	1.03
Uganda Hardwares Ltd	0.84	1.15	1.80	0.78
Uganda Hotels Ltd	1.83	1.34	12.49	1.70
Uganda Motors Ltd	1.57	2.58	1.49	0.95
Uganda Pharmaceuticals Ltd	11.82	2.14	2.46	2.90
Uganda Tea Authority	0.81	0.00	n.a.	n.a.
Total Trade & Hotels Sector	1.31	19.66	1.24	1.36
IV. TRANSPORT & COMMUNICATION SECTOR				
Peoples Transport Co. Ltd	1.11	3.87	2.90	1.37
Transocean (Uganda) Ltd	0.82	0.44	1.02	0.96
Uganda Airlines Corp.	1.80	0.87	0.43	0.41
Uganda Posts and Telecommunications Corporation	0.70	1.71	0.89	1.86
Uganda Railways Corp.	5.38	4.89	8.94	4.70
Uganda Transport Corp.	1.88	0.38	0.26	0.40
Total Transport & Communication Sector	1.05	1.61	14.44	0.99
V. ELECTRICITY & WATER SECTOR				
National Water and Sewerage Corp.	3.19	2.89	1.09	10.41
Uganda Electricity Board	2.54	3.34	1.74	n.a.
Total Electricity & Water Sector	2.62	3.39	1.69	10.41
VI. OTHERS				
Housing Finance Co. of Uganda	46.12	12.83	7.49	11.16
National Housing and Construction Corp.	0.63	7.16	1.72	1.86
National Social Security Fund	n.a.	1.40	3.13	10.44
Uganda Consolidated Properties Ltd	0.95	0.69	1.10	0.30
Uganda Livestock Industries Ltd	1.38	0.27	0.87	0.12
Uganda National Parks	0.41	1.89	3.37	n.a.
Total Others	1.18	0.64	1.85	1.31
TOTAL ALL SECTORS	1.41	1.88	1.18	1.34
Number of Reporting Enterprises	59	62	63	53

Table 4.5

Liquidity Ratios, 1985 - 1988

Name of Sector/Enterprise	Years			
	1985	1986	1987	1988
I. COFFEE SECTOR				
Coffee Marketing Board	1.67	1.48	1.05	0.45
Total Coffee Sector	1.67	1.48	1.05	0.45
II. MANUFACTURING SECTOR				
African Cotton Co. Ltd	0.01	0.05	0.10	0.05
African Textile Mills Ltd	0.24	0.39	1.05	0.86
Agricultural Enterprises Ltd	0.35	n.a.	n.a.	n.a.
Associated Paper Industries Ltd	2.12	1.72	0.63	0.27
Blandon (Uganda) Ltd	0.25	0.18	0.16	0.16
Cable Corp. Ltd	0.09	0.11	0.02	0.15
Chillington Tool Co. (Uganda) Ltd	0.43	2.08	2.42	0.05
Dunlop (E.A) Ltd	0.06	0.45	0.24	n.a.
East African Distilleries Ltd	0.82	1.05	0.80	0.22
East African Steel Corp. Ltd.	0.68	2.56	10.76	n.a.
Kilembe Rice Co. Ltd	0.66	0.18	0.13	n.a.
Kilitu Sawmills and Plywood Factory Ltd	0.80	0.34	0.26	1.14
Lake Victoria Bottling Co. Ltd	0.59	0.69	0.45	1.28
Mukwa Foods Ltd	0.01	0.06	0.02	0.00
NEC Textiles Ltd	0.31	0.14	0.18	n.a.
New Vision	n.a.	n.a.	0.98	1.18
Nile Breweries Ltd	0.72	0.63	n.a.	n.a.
Nyanza Textiles Industry Ltd (NYTIL)	0.24	0.59	0.79	0.76
Pepsi Industries Ltd	0.14	0.54	0.18	0.01
Printpak (Uganda) Ltd	0.54	0.56	0.43	0.75
Uganda Metal Products and Enamelling Co. (TUMPECO)	0.25	0.47	0.4	0.16
Toro and Mityana Tea Co. Ltd	n.a.	0.71	0.39	0.11
Uganda Engineering Corp. Ltd	0.06	0.15	0.18	0.31
Uganda Bags and Hessian Mills Ltd	0.11	0.63	0.41	0.65
Uganda Blanket Manufacturers Ltd	0.07	0.09	0.91	0.63
Uganda Clays Ltd	0.74	0.91	0.33	2.10
Uganda Dairy Corp	0.31	0.62	0.63	1.93
Uganda Fishnet Manufacturers Ltd	0.19	1.16	0.11	0.24
Uganda Grain Milling Co. Ltd	0.87	0.44	0.48	n.a.
Uganda Leather and Tanning Industry Ltd (ULATI)	0.12	0.27	5.40	2.43
Uganda Meat Packers Ltd	0.03	0.02	0.18	n.a.
Uganda Spinning Mill Ltd	0.18	1.85	0.77	n.a.
Sugar Corp. of Uganda Ltd	2.57	1.47	1.10	1.01
Uganda Tea Growers Corp.	1.03	1.11	1.73	n.a.
United Garment Industries Ltd (UGIL)	0.27	0.16	0.08	0.20
Winin (U) Ltd	0.69	0.96	0.66	0.80
Total Manufacturing Sector	0.85	0.65	0.65	0.59
III. TRADE & HOTELS SECTOR				
Agip (Uganda) Ltd	0.64	0.84	0.64	0.33
Esso (Uganda) Ltd	n.a.	n.a.	0.46	0.19
Foods And Beverages Ltd	0.99	0.39	0.49	0.00
General Equipments Ltd	0.43	2.08	2.18	0.24
Gordon Motors	n.a.	n.a.	0.18	0.60
International TV Sales	0.90	2.15	1.69	0.11
Lint Marketing Board	n.a.	0.89	1.35	0.46
Produce Marketing Board	0.85	0.69	0.78	0.92
Republic Motors	n.a.	0.48	0.60	1.07
Total (Uganda) Ltd	0.64	0.91	0.51	0.85
Uganda Hardwares Ltd	0.73	0.98	0.67	0.20
Uganda Hotels Ltd	1.47	1.19	5.16	0.87
Uganda Motors Ltd	1.62	0.86	0.85	0.46
Uganda Pharmaceuticals Ltd	1.36	0.47	0.43	0.38
Uganda Tea Authority	0.79	0.88	n.a.	n.a.
Total Trade & Hotels Sector	0.81	0.73	0.63	0.73
IV. TRANSPORT & COMMUNICATION SECTOR				
Peoples Transport Co. Ltd	1.81	2.75	1.97	1.16
Transmission (Uganda) Ltd	0.82	0.86	0.98	0.95
Uganda Airlines Corp.	0.78	0.77	0.41	0.40
Uganda Posts and Telecommunications Corporation	0.43	1.35	0.88	1.05
Uganda Railways Corp.	3.85	3.42	6.07	4.43
Uganda Transport Corp.	0.53	0.26	0.13	0.12
Total Transport & Communication Sector	0.87	1.38	0.84	0.97
V. ELECTRICITY & WATER SECTOR				
National Water and Sewage Corp.	2.36	1.72	0.51	9.39
Uganda Electricity Board	1.53	2.47	1.46	n.a.
Total Electricity & Water Sector	1.61	2.31	1.38	9.39
VI. OTHERS				
Housing Finance Co. of Uganda	45.73	12.46	7.34	10.43
National Housing and Construction Corp.	0.43	7.88	1.43	1.41
National Social Security Fund	n.a.	1.40	5.13	10.43
Uganda Consolidated Properties Ltd	0.95	0.69	1.10	0.24
Uganda Livestock Industries Ltd	1.26	0.25	0.07	0.12
Uganda National Parks	0.40	1.68	3.57	n.a.
Total Others	1.16	0.63	1.64	1.10
TOTAL ALL SECTORS	1.18	1.18	0.83	0.74
Number of Companies Responding	39	62	63	53

Table 4.6

Retained Profit and Depreciation of a Sample of PEs, 1985 - 1988 (U.Sh. '000)

Enterprises	Retained Profit 1985	Retained Profit 1986	Retained Profit 1987	Retained Profit 1988	Depreciation 1985	Depreciation 1986	Depreciation 1987	Depreciation 1988
I. COFFEE SECTOR								
Coffee Marketing Board	187,910	68,088	1,216,270	(262,686)	3,713	6,325	33,004	492,097
Total Coffee Sector	187,910	68,088	1,216,270	(262,686)	3,713	6,325	33,004	492,097
II. MANUFACTURING SECTOR								
African Ceramics Co. Ltd	(1,697)	(1,254)	(1,711)	(8,016)	543	563	564	554
African Textile Mills Ltd	(2,457)	(3,802)	(910)	456	400	395	361	614
Agricultural Enterprises Ltd	(13,875)							
Associated Paper Industries Ltd	(332)	(513)	(779)	22,736	27	55	124	61
Blenders (Uganda) Ltd	(124)	84	92	1,237	0	0	62	1,418
Cable Corp. Ltd	(556)	599	(33,317)	(47,931)	326	495	13,599	39,257
Chillington Tool Co. (Uganda) Ltd	(629)	799	(37,298)	(124,747)	24	120	3,989	9,513
Dunlop(E.A.)Ltd.	(2,131)	509	(6,928)		56	60	31	
East African Distilleries Ltd	396	2,976	6,862	(6,677)	185	254	834	19,616
East African Steel Corp. Ltd	(1,417)	(939)	5,013		1,813	2,112		
Jubilee Ice and Soda Works Ltd			(4,147)	(2,075)			1,535	1,615
Kibimba Rice Co. Ltd	927	(8,146)	11,348		3,818	4,692	10,205	
Kiira Sawmills and Plywood Factory Ltd	(7,706)	(4,943)	(58,035)	(356,960)	707	1,534	4,469	35,051
Lake Victoria Bottling Co. Ltd	(335)	3,857	18,060	148,669	224	3,357	2,493	11,977
Mukisa Foods Ltd	79	234	364	(5,568)	9	31	97	
NEC Textiles Ltd	(881)	(126)	(2,824)		274	188	163	
New Vision			(9,020)	1,134			6,444	5,586
Nile Breweries Ltd	1,345	4,085			405	453		
Nyanza Textiles Industry Ltd (NYTIL)	(25,439)	5,591	(83,366)	4,708	5,439	5,875	6,760	155,572
Papco Industries Ltd	47	1,301	1,493	18,642	192	212	398	1,521
Printpak (Uganda) Ltd	(1,961)	(2,351)	(21,302)	(54,863)	143	182	282	40,302
Toro and Mityana Tea Co. Ltd		6,654	19,522	(102,718)		5,711	15,001	63,189
Uganda Bags and Hessian Mills Ltd	0	3	(70)	320	0	1	114	131
Uganda Blanket Manufacturers Ltd	(1,592)	(1,872)	13,151	(5,901)	72	60	1,185	1,257
Uganda Clays Ltd	(182)	1,092	(22,199)	10,609	105	170	20,868	18,817
Uganda Dairy Corp	(4,500)	5,427	35,953	279,993	977	886	1,916	
Uganda Fishnet Manufacturers Ltd	451	3,666	(3,581)	11,251	163	233	7,432	22,864
Uganda Grain Milling Co. Ltd	11,083	11,437	155,578		4,037	5,184	6,862	
Uganda Leather and Tanning Industry Ltd (ULATI)	(848)	(437)	(1,126)	6,246	249	248	581	520
Uganda Livestock Industries Ltd	791	(12,907)	(8,190)	(21,968)	30	57	68	82
Uganda Meat Packers Ltd	(502)	(532)	(53,269)	(1,003)	2	158	581	520
Uganda Metal Products and Enamelling Co. (TUMPECO)	(464)	(10,239)	2,042	(6,127)	560	654	672	705
Uganda Spinning Mill Ltd	(165)	(8,069)	(2,115)		71	70	33	
Uganda Tea Growers Corp.	329	(2,008)	(4,359)		561	603	627	
Ugma Engineering Corp. Ltd	(7,391)	(1,617)	(54,605)	(64,728)	333	475	17,971	25,741
United Garment Industries Ltd (UGIL)	(1,118)	(3,219)	(9,568)	(106,994)	75	999	8,075	56,916
Winin (U) Ltd	(165)	488	1,027	(1,821)	9	27	19	378
Total Manufacturing Sector	(61,219)	(14,372)	(148,194)	(412,096)	21,837	35,922	134,417	513,377
III. TRADE & HOTELS SECTOR								
Agip (Uganda) Ltd	1,852	9,773	268	4,360	190	1,920	3,316	10,969
Esso (Uganda) Ltd			7,899					
Foods And Beverages Ltd	5,335	8,530	75,895	100,523	366	834	21,202	44,725
General Equipment Ltd	(994)	(336)	342	1,218	4	7	7	11
Gomba Motors			2,035	4,013			97	291
International TV Sales	(1,047)	801	1,835	502	89	178	389	182
Lint Marketing Board		9,546	172,851	(111,279)		1,067	1,810	42,287
National Insurance Corp.		5,746	(2,849)	(49,143)		264	225	77,348
Nile Hotel Ltd				32,340				4,900
Produce Marketing Board	5,204	(11,597)	21,456	168,991	406	579	6,939	42,287
Republic Motors		6	479	5,856		3	242	393
Total (Uganda) Ltd	950	4,803	(24,248)	94,668	198	333	16,965	19,350
Uganda General Merchandise Ltd	(384)	256	3,557	3,957	133	223	3,738	4,517
Uganda Hardwares Ltd	(891)	2,108	4,181	61,888	38	81	505	1,392
Uganda Hotels Ltd	(553)	1,792	12,541		529	645	1,601	
Uganda Motors Ltd	3,336	28,910	63,107	(36,430)	54	52	1,225	4,932
Uganda Pharmaceuticals Ltd	849	2,456	2,549	4,838	108	197	938	4,691
Uganda Tea Authority	672	(1,482)			15	12		
Total Trade & Hotels Sector	14,397	61,212	344,098	286,302	2,130	6,385	59,199	258,175
IV. TRANSPORT & COMMUNICATION SECTOR								
Peoples Transport Co. Ltd	(794)	748	(99,184)	186,482	17	2,735	11,158	104,096
Transocean (Uganda) Ltd	(7,340)	(1,026)	15,433	4,577	2,798	353	300	18,810
Uganda Airlines Corp.	(3,944)	(38,855)	(381,451)	(1,152,775)	1,269	1,518	35,648	40,255
Uganda Posts and Telecommunications Corporation	(118,342)	57,343	(2,122,601)	837,104	8,098	11,551	26,076	11,801
Uganda Railways Corp.	17,787	57,697	90,355	323,734	6,632	8,833	45,002	1,992
Uganda Transport Corp.	(383)	82	(31,945)	44,484	119	31	70,266	6,701
Total Transport & Communication Sector	(113,016)	76,009	(2,529,193)	243,608	18,933	25,021	188,450	23,655
V. ELECTRICITY & WATER SECTOR								
National Water and Sewerage Corp.	430	(12,082)	(77,053)	62,805	496	10,052	66,110	185,771
Uganda Electricity Board	13,343	12,088	(43,869)		324	422	692	
Total Electricity & Water Sector	13,773	6	(120,922)	62,805	820	10,474	66,802	185,771
VI. OTHERS								
Development Finance Co. of Uganda (DFCU)	(279)	(679)	9,465	19,048	23	104	646	5,763
Housing Finance Co. of Uganda	3	11	(4,841)	(15,812)	1	5	657	1,342
National Housing and Construction Corp.	(16)	(55)	62,080	281,415	3	43	5,452	8,165
National Social Security Fund		(4,151)	(11,213)	(30,289)		313	250	1,842
Cooperative Bank Ltd			1	12				
Uganda American Insurance Corp.	44	555	(112)	(560)	150	284	339	992
Uganda Consolidated Properties Ltd	1,201	1,180	4,720	2,413	46	143	239	1,611
Total Others	959	(3,216)	60,330	256,236	223	892	7,583	19,715
TOTAL ALL SECTORS	42,884	187,727	(1,177,391)	174,159	47,456	84,989	459,455	2,192,990
Number of Reporting Enterprises	60	64	68	58				

5. Public Enterprise Efficiency

The main objective of public enterprise reform is to improve the efficiency with which public resources are allocated through divestiture, liquidation, or restructuring of those firms that remain under public ownership. Analysis of the efficiency of public enterprises is therefore an important ingredient for planning sector reforms and assessing subsequent performance.

Partial indicators of public enterprise efficiency such as labor productivity and incremental capital-output ratios provide a glimpse of the efficiency of the public enterprise sector. The Tanzania Report, Parastatals in Tanzania. Towards a Reform Program, (Report No. 7100-TA, 1988), includes partial indicators of efficiency for public and private firms in the industrial sector from 1975-1979. As noted in the table excerpted below, selected indicators of labor productivity are consistently lower for the public sector vis a vis the private sector (Table 5.1).

The approach provided in the Tanzania report can be useful in identifying redundant labor in the parastatal sector and formulating plans for labor restructuring. The planning process could be facilitated by the labor productivity data that is disaggregated by sector in the annexes of that report.

The Kenya Country Economic Memorandum, Re-Investing in Stabilization and Growth Through Public Sector Adjustment (Report No. 9998-KE, 1992), provides data on total factor productivity of the parastatal sector during a five-year period (Table 5.2). It also incorporates a bar chart illustrating parastatal incremental capital output ratios. The illustrations are particularly useful for their comparison of the performance of the parastatal and private sectors (Table 5.3).

The Review of the Finances of the Decentralized Public Sector, Egypt, (Report No. 6421-EGT, 1987) identifies aggregate indicators of PE productivity including the incremental capital output ratio, marginal productivity of capital, average labor productivity, and marginal labor productivity (Table 5.4). The report also cites a more sophisticated indicator of productivity derived from an analysis of total factor productivity. In addition to including aggregate indicators for the PE sector as a whole, the report derives total factor productivity for individual PE subsectors such as coke and steel within the context of case studies on each subsector (Table 5.5).

A Bank report, Tanzania. An Agenda for Industrial Recovery, includes an analysis of value added and economic efficiency in the Tanzania industrial parastatals, and is limited to data for 1984. The report identifies the percent of PEs in the industrial sector that provide negative value added when all inputs are valued at world market prices. The table excerpted below highlights the study findings that 54 percent of all parastatals in the industrial sector produce negative value added, as compared to only 11 percent in the private sector (Table 5.6).

The advantage of this report's approach is that it provides a more comprehensive measure of industrial efficiency than indicators such as labor productivity. The uniqueness of the Tanzania analysis is that it includes data on private sector value added which provides a point of comparison for parastatal performance.

The Industrial Sector Review for Ethiopia, Strategies and Policies for Improved Performance (Report No. 7831-ET, 1989), includes a technical annex that incorporates a methodology for calculating indicators of economic efficiency in selected parastatal manufacturing enterprises: nominal protection coefficient (NPC), the effective protection coefficient (EPC), and domestic resource cost (DRC). These indicators are estimated based on the structure of protection and the actual operations of public enterprises for a given year. The following appendix includes excerpts describing the methodology.

Although these indicators are only two of many efficiency indicators, the utility of the methodology is that in countries where access to foreign exchange is a constraint on further expansion, these indicators provide input into government investment decision making. The analysis suggests which public enterprises are most likely to generate or save the most foreign currency for the least use of domestic resources.

Table 5.1 Average Indicators of Performance: Public and Private Industries 1975-79, Tanzania

	Public	Private
Manhours per Employee	2,160.2	3,009.0
Labor Cost per Employee	13,490.0	8,355.8
Labor Cost per Manhours	5.7	2.9
Output-Labor Ratio	41,944.4	90,467.0
Output-Manhour Ratio	19.0	31.2
Labor Cost/Total Cost (%)	32.8	15.9
Capital-Labor Ratio	2.8	23.8
Capacity Utilization (%)	56.2	50.2
Output-Capital Ratio	1.4	1.4
Size of Firm - Employee per Unit	972.4	81.4
Capital per Unit (at 1000 per unit)	25,782.0	16,248.1

Source: Semboja, op. cit.

Source: Report on Parastatals in Tanzania, Towards a Reform Program, Report No. 7100 - TA, 1988, p. 19

Table 5.2

TFP of the Parastatal and Private Sectors 1986-90 (percentages)

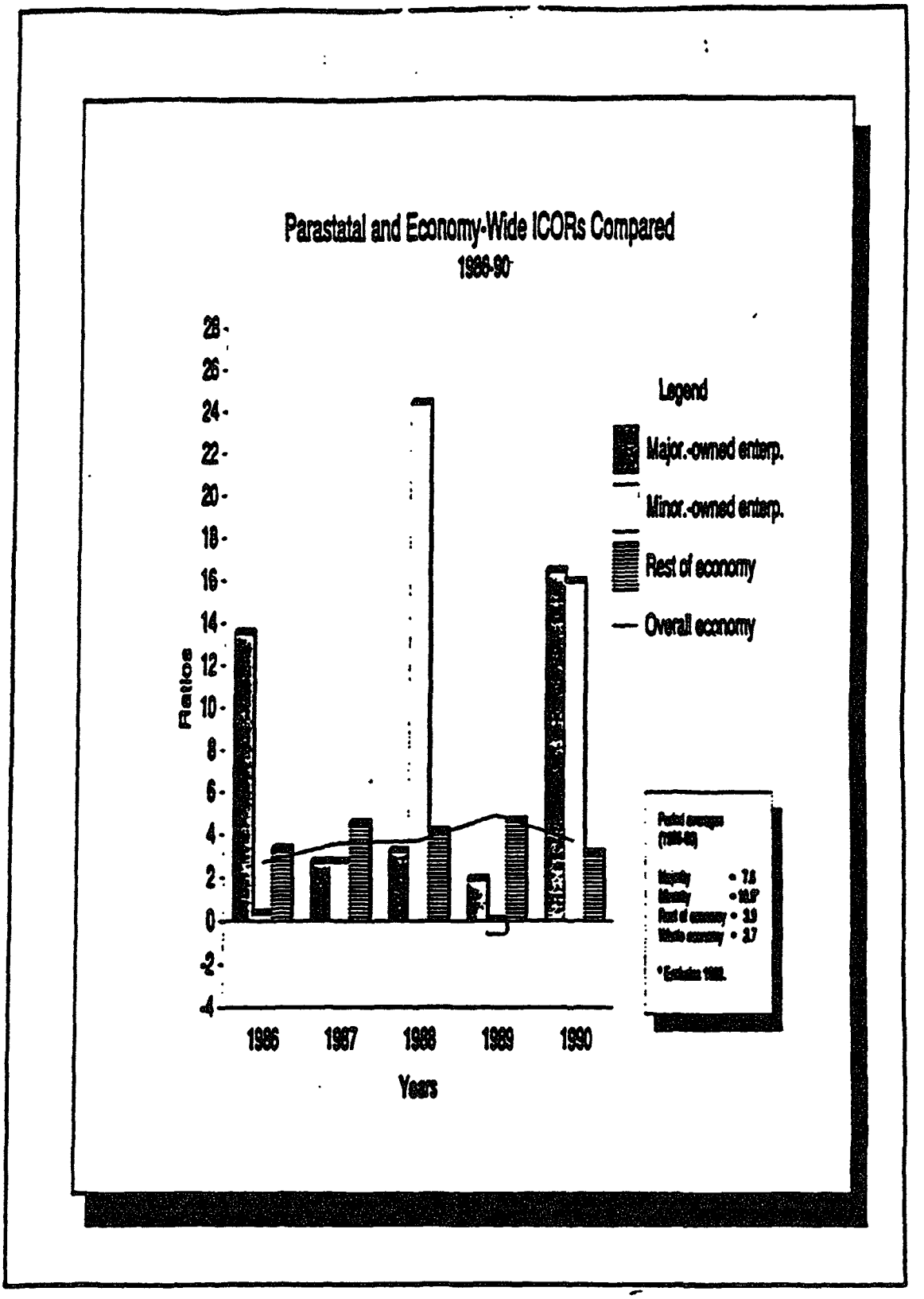
	1986	1987	1988	1989	1990	1986-90
Change in TFP a/						
Private Sector	6.9	1.1	7.8	6.0	5.3	5.4
Parastatals	-4.5	2.0	-3.5	1.9	-4.8	-1.7
Majority-Owned Enterprises	-6.6	1.8	-4.7	1.8	-7.2	-3.0
Minority-Owned Enterprises	3.3	1.6	-0.9	-2.7	4.7	1.2
Growth Rate of Value-Added b/						
Private Sector c/	10.2	10.2	10.2	10.2	10.2	10.2
Parastatals	2.9	9.0	5.9	9.4	2.5	5.9
Majority-Owned Enterprises	2.[illegible]	10.6	7.1	12.0	2.0	6.8
Minority-Owned Enterprises	5.0	1.9	0.5	-3.4	5.2	1.8
Growth Rate of Labor Inputs d/						
Private Sector	5.0	5.4	4.3	1.0	4.2	4.0
Parastatals	1.5	1.4	6.4	1.3	0.9	2.3
Majority-Owned Enterprises	0.6	2.0	7.3	2.7	1.0	2.7
Minority-Owned Enterprises	4.5	-0.4	3.8	-3.6	0.9	1.0
Growth Rate of Capital Inputs d/ e/						
Private Sector	2.3	11.7	1.2	6.5	5.4	5.4
Parastatals e/	11.4	11.4	11.4	11.4	11.4	11.4
Majority-Owned Enterprises	15.3	15.3	15.3	15.3	15.3	15.3
Minority-Owned Enterprises	0.5	0.5	0.5	0.5	0.5	0.5

Source: Bank staff estimates

a/ Change in TFP is calculated as the difference between the rates of growth of value-added and factor inputs (labor and capital) weighted by their income shares.
b/ At factor cost.
c/ Period average.
d/ Weighted by their income shares.

Source: Kenya, Re-Investing in Stabilization and Growth Through Public Sector Adjustment, Report No. 9998-KE, 1992

Table 5.3
Kenya



Source: Kenya, Re-Investing in Stabilization and Growth Through Public Sector Adjustment, Report No. 9998-KE, 1992

Table 5.4
Egypt

AGGREGATE PRODUCTIVITY INDICATORS FOR PUBLIC COMPANIES

Indicators	1973-1983/84	1973-1979	1979-1983
Incremental Capital-Output Rates (ICOR)	9.1	6.7	19.0
Marginal Productivity of Capital (%)	11.0	15.0	5.0
Average Labor Productivity (LE/1973 prices)	1027 (1973)	1414 (1979)	1253 (1983/84)
Marginal Labor Productivity (LE/1973 prices)	-	3086	433

SOURCE: Report No. 6421-EGT
Egypt: Review of the Finances of The Decentralized Public Sector
March 1987.

Table 5.5
Egypt
TOTAL FACTOR PRODUCTIVITY ANALYSIS FOR PUBLIC COMPANIES 1973-1983/84
(In Percentages)

	1973-1979	1979-1983/84	1973-1983/84
Growth Rate of			
- Value-added	11.7	1.2	6.6
- Labor input	3.6	4.2	3.8
- Capital input	6.7	7.0	6.6
Total factor productivity change	6.52	(-)4.43	1.37
Contribution to Value-added growth by:			
- Labor input	15.0	171.1	28.1
- Capital input	29.2	297.5	51.0
- Total factor productivity change	55.7	(-)369.1	20.0

Source: Egypt: Review of the Finances of The Decentralized Public Sector March 1987, Report No. 6421-EGT.

Table 5.6
Tanzania

Percent of Sector

Sector	Domestic Resource Cost /a: Less than One	Greater than One /b	Infinity (Neg. value added)	Total
Public	22	24	54	100
Private	28	61	11	100
Total	23	27	50	100

/a Short-run Domestic Resource Cost: cost of domestic factors (labor and capital assumed at sunk cost, shadow priced) for generating one unit of world priced value added calculated at actual levels of capacity utilization. Calculations made at capacity rates attainable if foreign exchange for recurrent inputs were not a constraint are not significantly different.

/b Excluding infinity.

Source: Report on Parastatals in Tanzania, Towards A Reform Program cited from Tanzania: An Agenda for Industrial Recovery, Volume II, Table 13, p. 136.

I.2 METHODOLOGY

I.2.1 Measures of efficiency

Two measures of efficiency have been used in this study.

I.2.1.1 Protection coefficients

The rate or coefficient of protection is a measure of the border incentives (or disincentives) provided by the Government to allow Ethiopian producers to compete in both domestic and export markets with commodities selling at world prices. The assistance may take many forms, such as tariffs, quotas, import embargos, implicit or explicit subsidies or differential rates of taxation. The incentives may apply to the producers' inputs or outputs or value added. Two different coefficients of protection are normally used.

The nominal protection coefficient (NPC) takes into account all of the assistance which influence the price of the output.[1] It is defined as the ratio of the domestic market (or protected) price to the world (or free trade) price, i.e.

$$NPC = \frac{\text{Domestic Price}}{\text{World Price}}$$

The higher the domestic price is relative to the world price the larger will be the NPC. A high NPC indicates that the domestic producer is unlikely to be internationally competitive. In the context of the Industrial Sector Review, the producer has little prospect of being able to profitably export its output. The economy would be able to produce more goods and services with its available resources if production was concentrated in activities with low NPCs. Some of this production could be exported to generate foreign exchange to pay for imports of other commodities which could not be produced domestically without high levels of assistance.

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1 In this study the NPC and NPI are used interchangeably. The correspondence between them is:
NPI = (NPC - 1) x 100%

Source: Industrial Sector Review for Ethiopia, Strategies and Policies for Improved Performance, Report No. 7831-ET, 1989.

Nominal coefficients of protection can be measured for specific commodities or groups of commodities. Groups of commodities may be a particular activity within an enterprise, or all of the output of an enterprise. Using appropriate weights, NPCs can also be calculated for groups of enterprises within a corporation, for industries or for a broad sector such as manufacturing.

The NPC is a gross measure of assistance to a producer or activity. However, production involves the processing of inputs. The cost of inputs may also be inflated by tariffs and other forms of assistance to the suppliers of the inputs. The activity may also receive assistance which does not change the domestic/world price ratio, eg subsidies. What is needed is a net measure of assistance which takes into account the effects of assistance to outputs, assistance to inputs and any assistance to value added.

The effective coefficient of protection (EPC) is a measure of the net assistance to an activity's outputs and inputs. It is defined as:

$$EPC = \frac{\text{Value added at domestic prices}}{\text{Value added at world prices}} = \frac{VADP}{VAWP}$$

where

VADP = Output at domestic prices - Inputs at domestic prices + Assistance to value adding factors,

and

VAWP = Outputs at World prices - Inputs at world prices.

Value added is defined as the difference between the value of production of an activity and the cost of recurrent inputs such as materials, consumables, energy and other utilities, spare parts and maintenance, royalties and technical assistance. Thus value added includes the cost of factors of production (labour and capital) plus any residual profit. Usually it is not possible to calculate an EPC for a particular

commodity, because of the difficulty in identifying the inputs and value added for that commodity. They are usually estimated at the enterprise or more aggregate level.

The NPC and the EPC are related. Usually the EPC is higher than the NPC because typically assistance levels increase with each stage of processing so that assistance to inputs is less than assistance to outputs. If the assistance to inputs and outputs is equal, and there is no assistance to value adding factors, then the NPC and the EPC are the same. The relationship also depends on the share of value added in the value of output. If the value added share is high then the EPC approaches the NPC. They are the same if the value added share is one. As the value added share approaches zero, the EPC can become very high, since all of the assistance to outputs is allocated to a very small value added.

The EPC measures the extent to which the structure of incentives or protection allows the returns to factors of production, including any residual profits, to exceed or to fall short of the returns achievable if the activity had to compete without any government intervention.[1] Ranking by their EPCs gives a rough indicator of how different activities are favoured by the structure of protection. A high EPC ranking suggests that the activity is relatively assisted by the protection structure and that there are government created economic incentives for resources to move into that activity. Conversely a low EPC indicates that the activity is relatively taxed, and that the structure of protection has reduced its potential size. Whether or not the differential structure of incentives leads to the inefficient use of scarce factors of production can be estimated using another measure, the domestic resource cost.

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1 Several different methods have been developed to calculate effective rates. They differ principally in their treatment of non-traded inputs. The Corden method includes such inputs with value added implying that such inputs gain some of the benefit from assistance to the activity. The Balassa method includes them with other inputs and tries to estimate a price distortion for them. The Balassa method has been used in this study. The advantage of this is that the same measure of value added at world prices can be used for both EPC and DRC calculations.

I.2.1.2 Domestic resource costs

The domestic resource cost (DRC) is an indicator of the net foreign exchange that resources can earn or save in a particular activity. It is defined as the ratio of domestic resources used in a activity, appropriately valued at their opportunity cost, to the value added measured at international prices, i.e.

$$DRC = \frac{wl + rk}{VAWP} = \frac{\text{Economic cost of domestic labour and capital}}{\text{Value added at world prices}},$$

where (w) and (r) are the opportunity costs of labour (l) and capital (k), respectively. The difference between the numerator and the denominator is the residual surplus or loss. If the DRC is less than one, the activity is considered to be efficient because the cost of its primary factors of production, when appropriately valued, is less than the value of the foreign exchange that it earns or saves and there is a residual surplus. Conversely the more by which the DRC exceeds one, the more inefficient the activity is at generating foreign exchange, and consideration should be given to reallocating the resources to some other activity, or to not increasing the resources for this particular activity.

Before taking any action, however, it is desirable to rationalise why a DRC might be high. Are too many factors of production being allocated to an activity which yields a low value added at world prices, ie the operation is demonstrably uneconomic? Is there excess labour employed or is there underutilisation of capital? Is the technology of production appropriate? Identification of the actual sources of the inefficiency may enable improvements to be made. It is possible to recalculate the DRC to take account of some of these factors.

Once capital equipment is installed there may not be any suitable alternative uses, particularly in a country like Ethiopia with a shallow industrial base and few producers of most goods. Such capital can be regarded as a sunk cost. It is helpful to know if the activity is economic in the short run. A short-run DRC can be calculated. It is defined as the ratio of the opportunity cost of labour to the value

added at world prices, i.e. the value of capital is excluded from the numerator. If the short-run DRC is greater than one it suggests that perhaps there may be a case for immediate cessation of production, even if the capital equipment is scrapped. More typically, however, the short-run DRC is less than one, while the long-run DRC (which includes the opportunity cost of capital in the numerator) is greater than one. This suggests that production might continue during the economic life of the capital equipment, but serious consideration should be given to not replacing the equipment, or examining whether there are other activities where it might more economically be used.

I.2.1.3 Alternative environments

Is this study NPCs, EPCs and long-run and short-run DRCs have been estimated based on the structure of protection and the actual operations of enterprises in 1986/87. These are referred to as benchmark estimates.

Alternative estimates have also been made to identify the implications of fuller capacity utilisation by enterprises, of higher labour productivity, and the effects of a devaluation of the exchange rate.

There is considerable uncertainty about the estimates of the NPCs for some enterprises. The NPC is used to calculate the value added at world prices and so it effects the values of the EPC and the DRCs. For certain enterprises, some sensitivity analysis for alternative values of the NPC has also been undertaken. Of particular interest is how high must the NPC be before the DRC estimate exceeds one.

The enterprises that were covered in this study are discussed in the next sub-section.

I.2.2 The Survey of Enterprises

A survey of selected public enterprises was carried out to obtain estimates of effective protection and domestic resource costs. The sample[1] of 36 enterprises is listed in Table I.1. Initially 34 enterprises were selected within six of the Corporations under the control of the Ministry of Industry. During the main mission two more enterprises were added: the Nazereth Tractor Factory, which is part of the Ethiopian Metal Works Corporation, and the Dire Dawa Meat Canning Factory, which is part of the National Meat Corporation, controlled by the Ministry of Agriculture.

The Ministry of Industry provided details of the quality and value of commodity production, domestic and export sales, inputs, and structural data for each enterprise for 1986-87. Some of the enterprises also supplied additional information on employment, capacity utilization and their usage of inputs. The data was reviewed for omissions and inconsistencies and to ensure that it had all been entered correctly into the worksheets.

The sample provided very high coverage of activity in the National Leather and Shoe Corporation and good coverage of the National Textiles Corporation, the National Chemicals Corporation and the Ethiopian Metal Works Corporation. About 20 per cent of activity in the National Beverages Corporation was covered, and only one (exporting) enterprise in each of the Ethiopian Food Corporation and the National Meat Corporation. Estimates of total ERPs and DRCs for the enterprises in each Corporation and for the all of the enterprises surveyed were calculated but they are not necessarily indicative of other enterprises not included in the sample.

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1 I do not know how the sample was chosen. It seems oriented towards activities already exporting or with some export potential.

[illegible]/Enterprise	No. of Estabs	Gross Output 000birr	Gross Output 000birr	Number of Perm. Industrial Emps.	Number of Perm. Industrial Emps.	Salaries and Benefits 000birr	Salaries and Benefits 000birr
ETHIOPIAN FOOD CORPORATION	30	273022		5706		17659	
1 Ethiopian Spice Extraction			10902		53		391
NATIONAL MEAT CORPORATION		n.a.					
2 Dire Dawa Meat Canning			6325		417		879
ETHIOPIAN BEVERAGES CORPORATION	26	430422		6934		29177	
3 Ambo Mineral Water			7092		214		1638
4 Babile Mineral Water			2478		96		678
5 Addis Glass & Bottle			5301		223		723
6 Harar Brewery			49367		341		1901
7 Awash Winery			20070		425		1978
Sub total			84300		1299		6918
NATIONAL TEXTILES CORPORATION	20	475100		34695		91983	
8 Addis Garment			2666		440		924
9 Adei Abeba Yarn			39549		2377		6743
10 Akaki Textile			87518		6002		19690
11 Kombolcha Textile			20649		1378		3150
12 Dire Dawa Textile			109771		6557		20069
13 Ethiopian Fibre Products			21807		1716		3715
14 Gullele Garment			7462		534		993
Sub total			289422		19004		55284
NATIONAL LEATHER & SHOE CORPORATION	15	222141		6025		21832	
15 Addis Tannery			10424		351		910
16 Awash Tannery			34035		743		2350
17 Kombolcha Tannery			5076		95		242
18 Ethiopia Pickling & Tanning			14169		237		781
19 Ethiopian Tannery			34498		873		2218
20 Modjo Tannery			13273		230		801
21 Anbessa Shoe			12870		809		2039
22 Ethiopian Footwear			6292		284		902
23 Ethiopian Rubber & Canvas Shoe			24875		974		3013
24 Tikur Abay Shoe			25566		681		2453
25 Universal Leather Articles			1437		159		469
Sub total			182523		5445		16670
[illegible] CHEMICAL CORPORATION	15	112522		2457		9989	
26 Ethiopia Plastic			13527		469		160[illegible]
27 Ethiopian Foam & Thermoplastic			7752		150		6[illegible]
28 Gullele [illegible]			12006		184		6[illegible]
29 [illegible]			3181		147		6[illegible]
30 [illegible]			14080		215		9[illegible]
Sub total			52146		1173		44[illegible]

Table 1.1 Coverage of Sampled Industrial Public Enterprises

Enterprise	NO. OF ESTABS	GROSS OUTPUT		NUMBER OF PERM. INDUSTRIAL EMPS.		SALARIES AND BENEFITS	
		000birr	000birr			000birr	000birr
[illegible] METAL WORKS CORPORATION	21	150187		3679		13541	
31 [illegible] Iron & Steel			25148		436		2176
32 [illegible], Metal Works			17169		257		905
33 [illegible] Household Utensils			3975		128		426
34 [illegible] Metal Tool			4731		172		894
35 [illegible] Tractor [illegible] Assembly			12595		128		554
36 [illegible] Household & Office Furniture			4723		261		1061
Sub total			67841		1382		6018
			693467		28774		90579
[illegible] SUGAR CORPORATION	6	172400		10286			
[illegible], TEXTILE & KNITTING CORPORATION	3	113545		1699			
[illegible] PAPER WORKS CORPORATION	11	59357		3024			
[illegible] BUILDING MATERIALS ENT.	4	53448		1419			
[illegible] CORPORATION	5	91428		2203			
[illegible]	162	1853501	693467	77689	28774		90579

Source: [illegible] Statistical Bulletin No. V, Ministry of Industry.
[illegible] corporations not in the sample, the data relates to 1985/86.)

I.2.3 Data and Underlying Assumptions

A great deal of data is needed to estimate rates of protection and DRCs. The data requirements are shown schematically in Figure I.1.

Structural data

The first step was to collect structural data on the values of output, intermediate inputs and value added for each of the 36 public enterprises. To calculate DRCs, the value added must be decomposed into labour and capital costs and any residual profit. The values of each of these items in 1986/87 is shown in Table I.2. The way in which these values were calculated is set out in Attachment A. The net value of production was used for the value of output.

In 1986/87, seven of the public enterprises had a negative profit. Three of them, Dire Dawa Meat Canning, Sabile Mineral Water and Universal Leather Articles had such large losses that their value added was negative. This means that they would have negative DRC estimates.[1] The value of their inputs is less than the value of their outputs, and the opportunity cost of the factors of production is greater than their value added at world prices.

Next the values of output was split up into production for the domestic market and exports respectively. The reason for this is that the assistance structure is different for local and export sales. The enterprises provided information on their exports and domestic sales at the commodity level, which were used to allocate total output between the two categories.

Similarly, the total value of materials were apportioned into three categories. The enterprises provided detailed information on their direct and indirect material inputs, including spare parts, which were further split between domestically sourced and imports. Details of inputs of fuels and other utility inputs were also supplied.

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1 If the value added at domestic prices and at world prices are both negative, then the formula generates a positive DRC.

Figure I.1 – Schematic Representation of Data Requirements to Estimate Coefficients of Protection and Domestic Resource Costs

Valuation	Value of Output		Value of Intermediate Inputs			Value Added		
Private Prices	A		B			V		
	Domestic	Export	Traded B12		Other	Factors of Production C		Residual (Profit)
			Dom.	Imp.		Labour	Capital	
	A1	A2	B1	B2	B3	C1	C2	D
Social (world) Prices	E		F			W		
	Domestic	Export	Traded F12		Other	Factors of Production G		Residual (Profit)
			Dom.	Imp.		Labour	Capital	
	E1	E2	F1	F2	F3	G1	G2	H

NPC – total output	=	A/E	EPC	=	V/W
– domestic	=	A_1/E_1		=	$(A-B)/(E-F)$
– export	=	A_2/E_2	DRC – long-run	=	$(G_1+G_2)/W$
– total inputs	=	B/F	– short-run	=	G_1/W
– traded	=	B_{12}/F_{12}			
– domestic	=	B_1/F_1			
– imported	=	B_2/F_2			
– other	=	B_3/F_3			

Table 1.2 [illegible] Structural Data on Public Enterprises for 1986/87

Enterprise	Value of Production: Gross	Value of Production: Less Ind. Taxes	Value of Production: Nett	Value of Intermed. Inputs Used	Value Added: Wages & Benefits	Value Added: Deprecn	Value Added: Net Profit	Value Added: Total	Value of Fixed Assets: Nett Book Value	Value of Fixed Assets: Re-valued at Current Prices
	<------	------	------	------	000Birr ------	------	------	------>	<- '000	Birr ->
1 [illegible] Spice Extraction	10902	192	10710	9684	391	135	500	1026	1018	4189
2 [illegible] Meat Canning	6325		6325	8850	879	230	-3434	-2325	2088	3381
3 [illegible] Mineral Water	7092	1197	5895	3722	1638	350	185	2173	1175	9262
4 [illegible] Mineral Water	2478	413	2065	2296	678	77	-986	-231	688	3483
5 [illegible] Glass & Bottle	5301	443	4858	4608	723	1873	-2346	250	3477	5924
6 [illegible] Brewery	49367	29908	19459	11785	1901	3605	2168	7674	33997	47945
7 [illegible] Winery	20070	6833	13237	7450	1978	438	3371	5787	2536	8076
8 [illegible]	2666	103	2563	2334	924	245	-940	229	547	3290
9 [illegible]	39549	3603	35946	24930	6743	3329	944	11016	13390	51595
10 [illegible]	87518	9275	78243	48064	19690	1664	8825	30179	6858	44054
11 [illegible] Textile	20649	828	19821	14143	3150	9717	-7189	5678	153139	165860
12 [illegible] Textile	109771	9932	99839	63217	20069	3412	13141	36622	23334	102434
13 [illegible] Fibre Products	21807	1025	20782	13408	3715	425	3234	7374	3033	14180
14 [illegible] Garment	7462	370	7092	5606	993	178	315	1486	1512	2350
15 [illegible] Tannery	10424	3057	7367	4809	910	128	1520	2558	707	2763
16 [illegible] Tannery	34035	2094	31941	24000	2350	362	5229	7941	2114	8673
17 [illegible] Tannery	5076		5076	3880	242	73	881	1196	916	1092
18 [illegible] Pickling & [illegible]	14169		14169	11273	781	189	1926	2896	837	3043
19 [illegible] Tannery	34498	2091	32407	27893	2218	1160	1136	4514	8852	44106
20 [illegible] Tannery	13273	22.	13251	10665	801	190	1595	2586	1565	1790
21 [illegible] Shoe	12878	973	11905	8361	2039	222	1283	3544	1280	4730
22 [illegible] Footwear	6292	630	5662	4189	902	49	522	1473	576	3012
23 [illegible] Rubber & Canvas Shoe	24875	2094	22781	16332	3013	419	3017	6449	3994	10933
24 [illegible] Shoe	25566	2311	23255	17433	2953	229	2640	5822	3225	4470
25 [illegible] Leather Articles	1437	75	1362	1754	469	364	-1225	-392	2010	3198
26 [illegible] Plastic	13527	433	13094	7072	1608	646	3768	6022	3273	9696
27 [illegible] & Thermoplastic	7752	753	6999	3740	652	153	2454	3259	1238	3221
28 [illegible] Soap	12006	910	11096	6420	644	146	3886	4676	1062	1353
29 [illegible]	3181	925	2256	1997	603	234	-578	259	1145	11844
30 [illegible]	14880	812	14068	10239	904	103	2822	3829	693	1138
31 [illegible] Iron & Steel Foundry	25148	1810	23338	17521	2176	446	3195	5817	9414	11510
32 [illegible] Metal Works	17169	1081	16088	11437	905	233	3513	4651	1184	6602
33 [illegible] Household Utensils	3975	256	3719	1753	428	101	1437	1966	873	1535
34 [illegible] Metal Tools	4731	267	4464	2132	894	161	1277	2332	1384	5003
35 [illegible] Tractor Assembly	12595	1018	11577	7006	554	1378	2639	4571	13485	17754
36 [illegible] Household & Office Furniture	4223	276	3947	1764	1061	76	1046	2183	471	1535
Total	693467	86010	607457	420947	90579	32740	61771	185090	307092	644964

Unfortunately for most inputs only value data were available. This information was used to estimate each enterprise's values of traded domestic and imported inputs (including utilities). The value of other inputs was obtained as a residual by subtracting the value of inputs identified by the enterprises from their values of total intermediate inputs used. The imported inputs may be understated if the enterprise did not import them directly. This appears to be the case for some enterprises producing metal products. The classification is only important, however, for calculating the effects of exchange rate movements on levels of assistance and DRCs.

These steps produced the information needed at private prices (the elements A1 to D in Figure I.1). The main advantage of this decomposition of outputs and inputs is that is possible to undertake a wide range of sensitivity analyses of the impact of exogenous factors on the performance and efficiency of the enterprises. The major task, however, is to obtain the corresponding information at social (or world) prices.

Outputs at world prices

The nominal rate of protection (NRP) afforded to an enterprise is a weighted average of the nominal rates for each commodity that it produces. Quantity, value and unit value data were obtained for each commodity produced by each public enterprise, from their accounts. The commodities accounted for all or a large proportion of the enterprises' output. The data were cross checked to see that the quantity times the unit value equalled the value. Inconsistencies were rectified. The unit value data originally supplied were based on historic planning prices. These were replaced by unit values reflecting actual selling prices in 1986/87. In most cases, however, the differences between the two unit values were not great. Separate unit values were obtained for exports and local sales of commodities.

Most enterprises concentrate on the production of a limited range of [illegible] with quantities of many other [illegible] can usually be ignored without unduly affecting the estimates of protection or domestic resource costs. This simplifies the task of

deriving estimates of world prices for each commodity, which is by far the hardest and most time consuming part in calculating ERPs and DRCs.

For each commodity, an estimate of the corresponding world price was required. Most of this work was done by World Bank staff using international price data for comparable products. This is not an easy task. It is difficult to ensure that the products are comparable. Even if the physical specification appears similar there may be differences in quality. Ideally, comparisons should be made with commodities exported by countries with similar production technologies, but often this is not possible. Many of the product descriptions supplied by the public enterprises were very broad, which again makes it hard to derive comparable international prices.

The price comparisons should be for the same time period if possible, and also refer to the same geographic point. Thus the international price should include the cost of transporting goods to the same market as supplied by the local producer. In Ethiopia the appropriate point is Addis Ababa. Thus c.i.f. costs and inland freight should be included. Due to the cost of internal transport, Ethiopian producers probably derive considerable natural protection, but this may be offset somewhat if imported inputs are required in the production process.

The enterprises supplied prices for their export commodities. These prices were also used for world prices of comparable products sold on the local market. All exports incur an export tax of 2 per cent.

Imports are tightly controlled in Ethiopia through prohibition [illegible] rationing of foreign exchange. This applies particularly to final consumer goods. If this were not the case, the tariff schedule could be used to determine the assistance available to Ethiopian producers. If local prices exceeded the landed duty paid price of the equivalent imported good, consumers would prefer the import. Under these circumstances, the tariff would set a ceiling to the [illegible] available. The existence of quantitative import controls, including [illegible] means that the tariff schedule can therefore be regarded as an indicator of the lower limit of assistance where not other information

is available.[1]2 This has been done for some commodities.

On the other hand, all prices are tightly controlled in Ethiopia so that much of the available assistance may not be used by producers. The existence of a thriving private market for goods suggests that some of the benefits of the assistance regime are appropriated by distributors rather than producers. This means that the structure of protection cannot be considered in isolation from the pricing and distribution system. Relaxation of price controls without changes to protection may increase significantly assistance levels for Ethiopian producers, while at the same time ~~reducing the assistance provided~~ to distributors. This could well be a desirable outcome if it changed the relative incentives of producing and trading.

Inputs at world prices

The Maritime and Transit Authority provided details of tariffs, discriminatory taxes and transport costs for many imported inputs. This information was used to calculate accounting ratios (of local to world prices) for these inputs, and for comparable domestically produced inputs. The international price should include the cost of transporting the imported input to the enterprise.

For other domestic inputs, price comparisons were made to adjust the values.[2] As with domestic outputs, such comparisons are fraught with difficulties.

A previous World Bank study[3] estimated [illegible] prices for [illegible] and [illegible] utilities which were used to deflate the values of these inputs.

The third category of inputs covers a variety of mainly non-traded goods and services. For each enterprise these inputs were deflated by a [illegible] factor [illegible] to obtain the social value. [illegible]

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1 The municipal and transaction taxes are higher for imports than for [illegible] should be added to the tariff.
2 Further details to be supplied by the World Bank.
3 Details please.

consistent with what has been used in other studies, and for other countries.

Assistance to value adding factors

No explicit subsidies or other assistance to value adding factors were identified. However, there may be some implicit subsidies for those enterprises which export at a loss. If these losses were not underwritten by the government the exports would not take place.

It is not clear how this problem should be tackled. One way would be to allocated a subsidy equal to the losses on export sales. This would increase the enterprise's value added at private prices and hence its ERP. It would not, however, influence the NRP or the DRC.

Where an enterprise sells on both export and domestic markets, it may not be possible to apportion losses between the two categories of markets. If the profit on local sales is greater than the loss on export sales there may be no subsidy. Rather the export sales are cross subsidised by the profitable local sales.

There were four enterprises which exported in 1986/87 and which operated at a loss. These were Dire Dawa Meat Canning, Addis Garment, Universal Leather Articles and Massawa Salt. But if it is assumed that these enterprises were subsidised, how should the losses of those enterprises which only supplied the local market be treated? Since all of the enterprises are publically owned they could operate indefinitely at a loss.

No subsidies have been included in these estimates. The total assistance to loss making enterprises may therefore be understated.

[illegible]

Ratios of the social or shadow price, or opportunity cost (the terms are [illegible] obtained from a paper by Weiss[illegible], which presented preliminary results of the so called Bradford study.

These ratios are known as conversion factors. Separate factors were estimated for different categories of labour, as shown in Table I.3. The methodology used to derive the conversion factors is summarised in Weiss (1987).

Table I.3: Conversion Factors for Labour Costs

Category of Labour	Conversion Factor Range	Assumed Average
Unskilled Labour		
- Rural	0.35-1.13[a]	0.55
- Urban	0.51-0.73[a]	0.65
Skilled Labour	1.10	
Average for Manufacturing	0.70	

a A range of regional estimates.
Source: Weiss, op. cit.

A standard conversion factor of 0.75 was used for the preliminary SRC estimates derived during the ISR Mission. Ideally, however, different estimates should be used depending on the location and the skill mix of the enterprises. The available data is set out in Table I.4. Unfortunately a consistent definition of skill was not provided by each enterprise. The share of wages for skilled workers seems high on average. If skill adjusted conversion factors are estimated, the average factor is considerably above that reported by Weiss (0.70). For several enterprises the estimated conversion factor exceeds 1.0. The extent of this seems implausible. The skill characteristics of the enterprises in this study may differ from those covered by Weiss, which perhaps does not justify using a higher average factor than 0.75.

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1 Weiss, J., 'Shadow Prices — Approaches to Estimating National Economic Parameters: Jamaica, Nepal and Ethiopia', Project Appraisal, Vol. 2, No. 1, March 1987, pp. 21-31.

Table I.4 - Employment and Wages Data by Public Enterprise for 1986/87

Enterprise	Value of Wages & Benefits	Perm. Ind. Workers	Workers			Wages & Salaries		
			Skilled	Un-skilled	Total	Skilled	Un-skilled	Total
	'000 birr	No.	<---- No. ---->			<--- '000 Birr ---->		
1 Ethiopian Spice Extraction	391	53	29	28	57	206	160	366
2 Dire Dawa Meat Canning	879	417			n.a			n.a
3 Ambo Mineral Water	1638	214	39	288	327	443	366	809
4 Babile Mineral Water	678	96	26	236	262	151	382	533
5 Addis Glass & Bottle	723	223	84	203	287	430	366	796
6 Harar Brewery	1901	341	71	401	472	500	641	1141
7 Awash Winery	1978	425	66	649	715	227	581	808
8 Addis Garment	924	440	378	62	440	928	7	935
9 Adei Ababa Yarn	6743	2377	2474	292	2766	328	28	356
10 Akaki Textiles	19690	6002	4520	1556	6076	10694	2406	13100
11 Combolcha Textile	3150	1378	1134	842	1976	2029	671	2700
12 Dire Dawa Textiles	20059	6557	6219	318	6537	15140	580	15720
13 Ethiopian Fibre Products	3715	1716	1257	479	1736	1669	479	2148
14 Gullele Garment	993	534	471	50	521	810	40	850
15 Addis Tannery	910	351			n.a			n.a
16 Awash Tannery	2350	743			n.a			n.a
17 Combolcha Tannery	242	95			n.a			n.a
18 Ethiopia Pickling & Tanning	781	237	100	152	252	474	214	688
19 Ethiopian Tannery	2218	873			n.a			n.a
20 Modjo Tannery	801	230			n.a			n.a
21 Anbessa Shoe	2039	809	553	190	743	119	21	140
22 Ethiopian Footwear	902	284			n.a			n.a
23 Ethiopian Rubber & Canvas Shoe	3013	974	380	590	970	101	50	151
24 Tikur Abay Shoe	2953	681			n.a			n.a
25 Universal Leather Articles	469	169			n.a			n.a
26 Ethiopia Plastic	1608	469	37	448	485	271	1025	1296
27 Addis Foam & Thermoplastic	652	158	27	155	182	196	427	623
28 Gullele Soap	644	184	25	160	185	185	344	529
29 Massawa Salt	603	147	6	134	140	64	713	777
30 Tsedey Paints	904	215	36	199	235	285	608	893
31 Ethiopian Iron & Steel Foundry	2174	436	115	321	436	846	1022	1868
32 Kality Metal Works	905	257	193	45	238	605	78	683
33 Kolfe Household Utensils	428	128	76	61	137	269	93	362
34 Kotobe Metal Tools	894	172	159	13	172	727	18	745
35 Nazareth Tractor Assembly	554	128			n.a			n.a
36 Warka Household & Office Furniture	1061	261	172	89	261	787	178	965

n.a. not available.

The social cost of capital

The social cost of capital of each enterprise is the sum of the cost of the capital consumed plus the opportunity cost of that capital. The cost of capital consumed equals the depreciation rate times the current market value of the capital.

Time series data of the book values of fixed assets were obtained from each enterprise. A series of investment each year was derived from the book values. The investment values were revalued to 1986/87 using an implicit price index for private investment and replacing the accounting depreciation rates by rates which more accurately reflect deterioration in the economic life of the asset. The estimated book values and market values of capital stocks in 1986/87 for each enterprise and the depreciation rates used are shown in Table I.5.[1] In many cases the current market value is significantly greater than the book values. This means that the social cost of capital is often significantly greater than the private cost, which is taken to be the actual depreciation allowed for by the enterprises in their accounts.

In an earlier study of agricultural DRCs for Ethiopia[2], the World Bank used a rate of 12 per cent for the shadow price of capital. (The shadow price is the highest return to capital in the next alternative investment.) Weiss (1987), however, proposed a rate of 8 per cent for the economic discount rate a 'opportunity cost of capital' for Ethiopia.

A rate of 10 per cent has been used for these DRC calculations. Other things being equal, the higher the rate the higher will be the long-run DRC estimates, since more of the value added at social prices is attributable to the cost of capital, leaving less for the residual.

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1 See WP Report 5828-ET, Tables 2.1 and 2.2, pp. 124-125. The index was for the years 1974/75 to 1986/87. The values were 738, 775, 814, 928, 960, 979, 1000, 1014, 1054, 1076, 1146, 1192, and 1238.

2 World Bank, "Ethiopia — An Export Action Program", Report No. 6422-ET, June 1987 (Annex A).

Table I.5 - Capital Stocks and Capacity Utilisation, 1986/87

CORPORATION/Enterprise	Capital Stocks Book Value	Re-valued	Depreciation Rate	Estimated Capacity Utilisation
	'000 birr	'000 birr	%	%
ETHIOPIAN FOOD CORPORATION				
1 Ethiopian Spice Extraction	1018	4189	9.7	82*
NATIONAL MEAT CORPORATION				
2 Dire Dawa Meat Canning	2088	3381	7.2	25*
ETHIOPIAN BEVERAGES CORPORATION				
3 Ambo Mineral Water	1175	9262	10.1	74
4 Babile Mineral Water	688	3483	10.1	99
5 Addis Glass & Bottle	3477	5924	9.1	68
6 Harar Brewery	33997	47945	8.3	64
7 Awash Winery	2530	8076	9.0	33
NATIONAL TEXTILES CORPORATION				
8 Addis Garment	547	3290	8.2	26
9 Adei Ababa Yarn	13390	51595	7.7	92
10 Akaki Textiles	6858	44054	7.7	94
11 Combolcha Textile	153139	185800	7.7	24
12 Dire Dawa Textile	23334	102434	7.7	98
13 Ethiopian Fibre Products	3033	14180	7.7	76
14 Gullele Garment	1512	2350	8.2	30
NATIONAL LEATHER & SHOE CORPORATION				
15 Addis Tannery	707	2763	7.1	n.a
16 Awash Tannery	2114	8673	7.1	88
17 Combolcha Tannery	916	1082	7.1	n.a
18 Ethiopia Pickling & Tanning	837	3043	7.1	n.a
19 Ethiopian Tannery	8852	44106	7.1	n.a
20 Modjo Tannery	1565	1790	7.1	18
21 Anbessa Shoe	1288	4730	7.1	51
22 Ethiopian Footwear	576	3012	7.1	n.a
23 Ethiopian Rubber & Canvas Shoe	3994	10933	7.1	55*
24 Tikur Abay Shoe	3225	4470	7.1	[illegible]*
25 Universal Leather Articles	2010	3193	7.1	30*
NATIONAL CHEMICAL CORPORATION				
26 Ethiopia Plastic	3273	9696	8.9	77
27 Addis Foam & Thermoplastic	1239	3221	7.7	25
28 Gullele Soap	[illegible]	[illegible]	8.0	[illegible]
29 Massawa Salt	1145	11544	7.7	43
30 Tsehay Paints	693	1138	7.1	40
ETHIOPIAN WORKS CORPORATION				
31 Ethiopian Iron & Steel	9414	11510	10.8	60
32 Kaliti Metal Works	1184	6602	8.2	n.a
33 Kolfe Household Utensils	873	1535	7.4	[illegible]*
34 Kotebe Metal Tools	[illegible]	[illegible]	[illegible]	[illegible]*
35 Nazareth Tractor Assembly	[illegible]	[illegible]	6.2	[illegible]*
36 Wanza Household & Office Furniture	[illegible]	[illegible]	[illegible]	[illegible]*

* Mission estimates of capacity utilisation.
n.a not available.

Exchange rate

The estimates of EPCs and DRCs were made using the official exchange rate of 2.07 Birr to the $US. In the black market, exchange rates of 4 Birr or more to the $US are quoted. The overvalued official exchange rate increases the assistance needs and DRCs of Ethiopian producers.

I.3 RESULTS

I.3.1 Nominal and Effective Protection

The benchmark estimates of NRPs and ERPs are shown in Table I.6, together with estimates of the values of outputs, intermediate inputs and value added at private and social (economic) prices.

The results indicate great variability in levels of protection both within and between Corporations. All enterprises receive negative output assistance for their export activities. Some of these exporting enterprises are profitable even though they receive low or small negative rates of effective protection. Examples in this category include Ethiopian Spice Extraction and the tanneries.

Other enterprises export at loss. In some cases, the losses are so great that they exceed factor payments. This produces a large negative effective rate, but this does not mean that the enterprises are in any sense economic. Examples in this category include Dire Dawa Meat Canning[1], and Massawa Salt.

The only other exporters of any significance are the two garment producers in the sample, Addis Garment and Gullele Garment. Addis Garment exported around two-thirds of its output. Because of this it is estimated to have a low nominal rate of protection across all of its production. The estimated value added at world prices is however very low, yielding an effective rate of protection of over 200 per cent. If a subsidy had been imputed to cover its losses on export markets, the effective rate would have been much higher. Gullele exported around 21 per cent of output. For its domestic sales the estimated rate of nominal protection was over 80 per cent, giving an average level of protection of around 61 per cent across all sales. Although it made some profit at private prices, the value added at world prices is estimated to be negative, producing a large negative effective rate.

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1 Insufficient data has been provided so far on Dire Dawa Meat Canning to enable ERPs and DRCs to be calculated. From its structural data, however, we can be sure that it is not economic.

Thus, based on the economic environment in 1986/87, only spice extraction and tanning were viable export activities within the sample of enterprises. In the case of spice extraction, the viability depends on international demand conditions for its output and local supply conditions for inputs. Its value added per unit output is low. If the input price rises relative to the price of its output it may be an unprofitable activity, as has been the case in many past years. On the other hand if it can obtain its supplies of peppers at advantageous prices it could easily become a highly assisted activity. The firm has indicated that there might be scope for it to achieve cost savings if it could more closely integrate with its suppliers of domestic inputs.

Turning to the other activities, hopes have been expressed that some of the commodities produced within the Ethiopian Beverages Corporation have some export potential. A little wine and beer is already exported, but at prices well below costs of production. This indicates that Harar Brewery and Awash Winery are not economic, even though the estimated NRP and ERP for the latter are low.[1] Two enterprises, Babile Mineral Water and Addis Glass and Bottle, have negative value addeds at world prices. The effective rates for the beverage producers may be underestimated. Because of the poor bottling technology, there is a potential danger of consumers swallowing glass slivers in their drink. Hence the domestic product is inferior to the product used for the international price comparisons.

The estimated ERP for Ambo Mineral Water is around 40 per cent. Like other beverage producers, it faces significant bottling problems if it hopes to export. Production is geared to expensive multiple-use returnable glass bottles which is not a viable arrangement for exports. The bottles are not a good marketing proposition, particularly given the poor standard of the Ethiopian transport system, nor could [illegible] low cost plastic bottles, which would increase the import content, would have to be used in any export venture.

[illegible] on the basis of data in the ERP Mission Paper on Export [illegible], op. cit.

Within the National Textiles Corporation, the estimates of assistance are variable and in some instances surprisingly low. This could be due to problems with price comparisons. There may not have been enough allowance for the generally lower quality of some textile products. On the other hand the domestic price controls may hold down the production price of textiles. Of the seven sampled enterprises, three had low levels of assistance, two high ERPs of greater than 100 per cent, while the other two had negative value added at world prices. One surprising result is the generally high levels of input assistance faced by all but the exporting enterprises. This input assistance represents a significant implicit tax on potential exporters. In particular, a high price is paid for cotton.

The National Leather and Shoe Corporation comprises a very efficient and economic tanning sub-sector and highly assisted producers of leather products. For tanning the effective rates were all less than 10 per cent or negative. The tanneries obtain some benefit from access to hides and skins at slightly below world prices. This may not provide an incentive to increase the supply of skins and hides, which is necessary if the tanneries are to increase their production. The estimated effective rates for the production of shoes were all over 100 per cent, and even these estimates may be too low because the poor quality of the domestic product means that the NRPs are probably understated. These estimates are, however, supported by limited data on some trial export shipments of shoes.

Assistance for the National Chemical Corporation was also very variable. Addis Ababa Foam and Thermoplastic, and Gullele Soap are estimated to be highly assisted with nominal rates of 70 and 80 per cent and effective rates of 100, while in the case of Ethiopia Plastic and Trade Paints the tax on their inputs is estimated to exceed the assistance on their outputs, yielding negative effective rate estimates. These require further investigation of products. It is difficult to imagine that Ethiopia is such an efficient producer of [illegible] the duties on imported inputs, and its labour overheads.

As with chemicals, the assistance estimates were variable for enterprises in the Ethiopian Metal Works Corporation. Some of these enterprises were estimated to have low or negative effective rates. These numbers warrant further examinations.

The overall estimates of assistance should be interpreted with some caution. Apart from the apparent anomalies outlined above, the average figures include some of the nonsense values for those enterprises with calculated negative value added at world prices. The average level of output assistance was 23 per cent, while the average effective rate was 26 per cent.

I.3.2 Domestic Resource Costs

The overall estimate of the long-run DRC for the 36 enterprises in 1986/87 was 0.82, while the corresponding short-run estimate was 0.45. These numbers give weight to those enterprises with negative DRCs, reflecting negative value addeds at world prices. If these six enterprises[1] are excluded the average long-run and short-run DRCs become 0.65 and 0.41, respectively.

In general the DRC and ERP estimates are well correlated. However, some enterprises with a high ERP may have a long-run DRC of less than one if they are sufficiently profitable. Addis Foam and Thermoplastic, and Warka Household and Office Furniture are examples of this. Profits represented one-third and one-quarter, respectively, of their values of output.

Conversely a lowly assisted activity may have a long-run DRC of greater than one if it has not made sufficient provision for the replacement of its capital stock. Ethiopian Tannery is such an example.

Including those enterprises with negative DRCs, 11 had a long-run DRC of one or less, while the corresponding number with short-run DRCs of one or less was 11. There were 5 enterprises with a short-run DRC of

1 These would be seven if Dire Dawa Meat Canning was included.

greater than one, namely the four shoe factories, Addis Garment and Nazereth Tractor Assembly. The DRCs are high for these enterprises because they have very low but positive estimated value addeds at world prices. Estimates based on a formula where the denominator approaches zero should always be treated with caution. They are at least more economic than the enterprises with negative value addeds.

At the Corporation Level, only the Ethiopian Beverages Corporation recorded an average long-run DRC of greater than one.

I.3.3 Sensitivity Analysis

1.3.3.1 Nominal rates of protection

In any study of assistance, estimating the nominal rates of protection for inputs and outputs is always the hardest task, and most subject to error. Output rates of protection are the key determinant of the ERP and the DRC.

Table I.7 shows for each public enterprise the nominal rate of output protection required[1] to yield an estimated long-run DRC of 1.0. It also shows the corresponding short-run DRCs and ERPs, and, for comparison purposes, the benchmark estimates of nominal rates.

While there may be uncertainty about the precise values of the nominal rates, there may be greater confidence that the rate is above or below a certain level. Thus so long as it is believed that the nominal output rate for Ethiopia Plastic is less than 70 per cent (compared with the estimated rate of - 12 per cent), there can be some confidence that it is an economic activity in terms of its long-run DRC.

If there is any uncertainty about the values of any other variables that enter into the calculation of DRCs or ERPs, a similar sensitivity analysis can be carried out for those variables.

This sensitivity analysis is of most interest for the enterprises in the National Chemical Corporation and the Ethiopian Metal Works Corporation. It indicates that the enterprises in these Corporations, other than [illegible] Salt and Nazareth Tractor Assembly, would have satisfactory DRCs at quite high nominal output rates. In the case of the shoe and beverage manufacturers it also indicates by how much they need to reduce their price disadvantages to become classified as economic [illegible]. However, in both cases the reservations [illegible] previously about the estimates of benchmark NRPs should be noted.

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1 [illegible] the [illegible] and [illegible] [illegible] changing the [illegible] estimated values of output at world prices and [illegible] corresponding value added at world prices.

The sensitivity analysis does not really clarify the position of enterprises in the National Textiles Corporation. The nominal rates that give a long-run DRC of 1 are sometimes lower and sometimes higher than the estimated rates. In comparison with other studies, such as that by Mitikie[1], the rates in this study are considerably lower than in those other studies. This would indicate that textile producers may not be economic users of resources.

I.3.3.2 Capacity utilisation and efficiency

For a variety of reasons, many of the enterprises are unable to operate at full capacity. This section considers the implications of this for the enterprises' assistance requirements and DRCs. To do so it is necessary to define capacity, to measure it and then to incorporate the measure into the assistance calculations.

Capacity is taken to be a technical measure of the maximum volume of output capable of being produced with the existing stock of capital equipment. Usually it is based on a three-shift operation. Production typically involves a series of operations. Different capital equipment is used for each operation. The capacity of each piece of capital equipment might vary. The piece(s) of capital equipment with the lowest rating will determine the overall capacity of the enterprise. The capacity is set by the first bottleneck in the production process. A corollary of this is that sometimes capacity may be expanded significantly at little cost if a bottleneck can be removed. (This applies in the case of Ethiopian Iron and Steel.) Also it is not a good indicator of efficiency of operation if the bottleneck process is operating at full capacity while all other processes are running at a fraction of their capacity, even though under this definition full capacity utilisation is being achieved by the enterprise.

[illegible] capacity [illegible] capacity utilisation high because of a bottleneck, or is it low because

1 [illegible] of the [illegible] Industry [illegible] Addis Ababa University, September [illegible].

of factors internal or external to the firm? Internal factors might include poor maintenance of equipment, bad layout, low productivity or low quality. These internal factors may, however, reflect external causes. Spares may be unavailable to undertake repairs and maintenance, low productivity may be due to a lack of trained labour, the poor quality may be due to the quality of the purchased inputs, eg aluminium for Kolfe household utensils. Other external causes include a shortage of materials, or foreign exchange to purchase imported materials or spares; sufficient labour may be unavailable - particularly to operate more than one shift; or, of course, these may be insufficient demand at the going price to justify operating at full capacity.

Each enterprise was asked to supply details of its full capacity level of output, based on three shifts. Most provided estimates. The approach adopted varied from enterprise to enterprise. In some instances capacity was related to planning targets. Due to other production constraints, which are recognised in the planning process, this would give a lower estimate of full capacity and imply a very high level of capacity utilisation. Mission staff also made some estimates which filled in many of the gaps. They also overlapped with some of the enterprise estimates. Generally the two estimates were close, but sometimes the mission's estimates as significantly lower, eg for Ethiopian Rubber and Canvas Shoe. The estimates are shown in Table I.5. Enterprise estimates were used when available, unless they differed significantly from the Mission's estimates, in which case the latter were used. The distribution of capacity utilisation was as shown in Table I.8. There was significant variation in capacity utilisation, both overall and within sectors.

Table I.8: Distribution of Capacity Utilisation by Enterprise

Capacity Utilisation	No. of Enterprises
[illegible] or more	[illegible]
70 - 89%	6
50 - 69%	6
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
	[illegible]

If an enterprise can operate at full capacity, it will reduce the cost of capital per unit output. This in turn will enable the enterprise to lower its output price or to increase profitability, or some combination of both. If the firm is exporting as a price taker and/or is operating at low or negative profitability the outcome might be to maintain existing prices and increase profits. If profit rates are already satisfactory the lower costs might be passed on the consumers. (In practice, with prices rising generally, increased capacity utilisation may slow down the rate of price increase.) The actual outcome is unclear and will depend on the circumstances of each enterprise and the policy of the government.

Two alternative calculations can be made to illustrate the effects of operating at full capacity. The first calculation assumes that the lower cost is reflected in higher profitability rather than changed prices. This means that the unit values of outputs and inputs at private and at social prices are unchanged and hence nominal and effective rates of protection stay the same as shown in Table I.6. Also the unit value added at social prices is unchanged. The total value added at social prices does increase, however, due to the scale effect of extra production. The composition of value added also changes because the extra production is achieved without the need for additional capital equipment. The share of capital in value added is reduced and hence the estimated long-run DRC falls. The short-run DRC is unchanged. The effect on the long-run DRC will depend on the share of capital in value added at social prices and on the level of capacity utilisation. The greater the share of capital and the smaller the level of capacity utilisation the greater the effect will be on the DRC.

The effect can be calculated by increasing the values of outputs and inputs, including the components of value added - other than capital, by the reciprocal of the proportion of capacity utilisation. Alternatively the value of capital at social prices can be deflated by the proportion of capacity utilisation. Both methods have the same effect on the long-run DRC for an enterprise. They have different effects, however, on [illegible] enterprise [illegible] levels of capacity utilisation [illegible]

weight if its output is increased to reflect full capacity utilisation. To avoid these scale or compositional effects, long-run DRCs which incorporate full capacity utilisation have been estimated by deflating the value of capital at social prices rather than by increasing the values of all other inputs, and the value of output.

For the second calculation it is assumed that the lower cost of capital is passed on to the customer via lower prices. (This would be unlikely if the output is exported.) Since the world or social price of outputs is unchanged, the effect will be to reduce nominal and effective rates of protection. The value added at social prices and the share of capital in that value added are as in the first calculation so that the DRC estimates are the same as before.

The implications of these alternative calculations are demonstrated in the example shown in Figure I.2. The benchmark and full capacity estimates of assistance and DRCs are shown in Table I.9. (Some of the estimates for the Corporation sub-totals and the overall total will have to be revised once the outstanding capacity utilisation data are obtained.)

Data on capacity utilisation in 1986/87 was not available for six enterprises. For the other enterprises, operating at full capacity, and hence with lower per unit capital costs, improves their performance. The improvement is greatest where actual capacity utilisation was low, and capital costs were high.

However, capacity utilisation adjustments do not enable any enterprise with an estimated DRC of greater than unity to become classified as economic, and no enterprise with a very high effective rate has its rate reduced to a more reasonable level. The only significant change is for Addis Garment, where the ERP falls from over [illegible] per cent to around [illegible] per cent. As stated previously, the estimates for this [illegible] change dramatically because of the very low value added at [illegible].

The overall ERP falls from [illegible] per cent to [illegible] per cent when the [illegible] full capacity [illegible] DRC falls from [illegible] to [illegible]. Operating at full capacity [illegible]

is not the saviour for any enterprise with unsatisfactory levels of protection or DRCs. It should be noted that these estimates understate the benefits of full capacity operations because linkages between enterprises are ignored. Through these linkages lower production costs for one enterprise should reduce input costs, and hence assistance needs, for user enterprises. These linkages would not affect estimates of DRCs.

I.3.3.3 Labour productivity and efficiency

As with capacity utilisation, it is possible to adjust the benchmark estimates of DRCs and assistance to allow for the effects of lower labour costs per unit output. Reducing labour costs will lower both long-run and short-run DRC estimates. Nominal and effective rates of protection are only affected, however, if producers pass on some of the benefits by lowering prices to consumers. If producers are price takers this is not likely to happen.

While it is generally recognised that most of Ethiopia's public enterprises employ more labour than might be necessary to achieve their production targets, it is not easy to quantify the extent of this. The cost of labour is not only a function of its quantity and price but also of the productivity of that labour. The price of labour is already taken account of in the benchmark estimates.

A conservative estimate has been made that labour costs in each public enterprise could be reduced by one-third by shedding labour and improving the productivity of the remaining labour. The estimate is based on observations by technical experts during visits to the enterprises. To illustrate the low levels of labour productivity, labour input in the clothing industry was found to be up to four times higher than the worldwide standard labour input.[2]

The results are shown in Table I.13. They indicate the improvement in efficiency possible if labour productivity can be increased

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[illegible] Constraints [illegible] Elements of an [illegible] World Bank [illegible] Division, October [illegible] p. [illegible]

significantly. An alternative interpretation is that they show the additional burden that must be borne by public enterprises through saddling them with the dual responsibilities to produce goods and to absorb as much labour as possible. If an important objective for the manufacturing sector is employment generation, the cost of labour over and above that needed to produce at minimum cost should be recognised as a subsidy to labour rather than a subsidy to production.

A significant improvement in productivity has been assumed. Not surprisingly, the implied benefits for the performance of enterprises are considerable, especially when labour costs are a large share of total costs. Although the overall impact is similar to that for the full capacity utilisation scenario, the distribution of effects across enterprises is different.

In particular, some enterprises with benchmark DRCs of greater than unity are pushed into the less than unity or the close to unity categories. The former include Ethiopian Fibre Products and Ethiopian Tannery, while the second category includes Ambo Mineral Water and Ethiopian Footwear. The effective rates for these four enterprises also fall significantly.

Not surprisingly, the overall short-run DRC falls from 0.45 to 0.30, while the average long-run DRC drops from 0.82 to 0.67. The average effective rate of protection drops significantly to 6 per cent.

7.3.3.4 Exchange rates and efficiency

The exchange rate plays a number of important roles, eg influencing capital inflow and determining the value of international debt. In the long run, however, its key role is to determine the relative prices of tradable and non-tradable goods and services and to adjust the levels of [illegible] exports and imports. One way of raising [illegible] is to devalue, thereby encouraging more export and [illegible] activity. Whether or not such action is successful will depend on domestic supply and import substitution elasticities, and on export demand elasticities.

Egypt

EFFECTIVE RATES OF PROTECTION AND ECONOMIC RATES OF RETURN IN PUBLIC SECTOR INDUSTRY, 1980/81

Industry	Effective Rate of Protection	Economic Rate of Return
Textiles		
Cotton textiles	-28.10	13.6
Wool textiles	23.3	14.1
Jute products	93.3	-5.1
Carpets	125.4	4.2
Food		
Sugar	-72.2	34.2
Oils and essences	-79.3	78.1
Starch and yeast	-88.4	45.0
Oils, soaps and detergents	-93.3	14.4
Processed vegetables	-56.8	12.3
Chemicals		
Artificial fibres	NVAMP	-9.5
Non-edible oil	NVAMP	-11.1
Leather and tanning	-12.3	8.3
Coke	NVAMP	-17.4
Metals		
Iron and steel	75.7	2.7
Aluminum	NVAMP	-21.0
Non-ferrous metals	895.2	-3.1
Steel Pipes	647.1	-2.0
Ferrous castings	NVAMP	-46.2
Ceramics	-205.6	-12.75
China and glass	2415.2	-16.4
Engineering		
Motor vehicles	NVAMP	-32.7
Railway carriages	16.8	17.3
Bicycles and motorcycles	481.9	-3.2
Motor vehicle parts	-3.4	11.5
Industrial electrical products	-32.5	52.6
Consumer durables	-7.5	20.0
Consumer electronics	1885.4	-3.6

Source: Review of the Finances of the Decentralized Public Sector in Egypt, Report No. 7831-EGT, 1989.

Table 5.8

The Divergence between Economic and Financial Profitability in Public Sector Industry, 1980/81

	Economic Rate of Return	Financial Rate of Return
Cotton Textiles	3.6	5.9
Wool Textiles	14.1	15.4
Jute Products	5.1	17.5
Carpets	4.2	18.3
Oils, Soaps & Detergents	14.4	-6.6
Sugar	34.2	7.1
Processed Vegetables	12.3	2.2
Oils and Essences	78.1	17.6
Starch and Yeast	45.0	6.2
Artificial Fibres	-9.5	1.9
Non-edible Oils	-11.1	3.8
Coke	-17.4	-20.7
Leather and Tanning	8.3	4.1
Iron and Steel	2.7	10.9
Aluminum	-21.0	12.5
Non-ferrous metals	-3.1	15.5
Steel pipes	-2..0	18.9
Formed and shaped steel	6.4	11.7
Ferrous castings	-46.2	-6.7
Road motor vehicles	-32.7	-13.4
Railway carriages	17.3	12.1
Bicycles and motorcycles	-3.2	1.5
Indust electrical products	52.6	24.4
Electrical consumer durables	20.0	15.8
Consumer electronics	-3.6	20.5
Ceramics	-12.8	2.4
China and glass	-16.4	20.6

Source: Review of the Finances of the Decentralized Public Sector in Egypt, Report No. 7831-EGT, 1989.

6. The Impact of Macroeconomic Policies on Public Enterprises

The Review of the Finances of the Decentralized Public Sector, Egypt, (Report No. 6421-EGT, 1987), provides a quantitative evaluation of the impact of key policies changes on the macroeconomic performance of public enterprises. The analysis compares the effect of present policies on public enterprise performance under present policies (the base scenario) as compared to PE performance in the context of a change in a particular policy variable. The combined impact of different policy changes is then assessed. Among the policy changes whose impact on PEs is modeled is the unification of the exchange rate, adjustment in domestic energy prices, and PE price determinations on the basis of economic efficiency. The methodology is discussed in an 11-page excerpt which is included in the following appendix.

The utility of this analysis is its ability to demonstrate to borrowing governments that poor public enterprise performance is not an insurmountable problem, but rather, can be significantly improved through a combination of appropriate policy adjustments.

Egypt

IMPACT OF POLICIES ON THE MACROECONOMIC PERFORMANCE OF PUBLIC ENTERPRISES

Introduction

4.1 A thorough reform of the NPE sector, as noted, constitutes a major challenge for Egypt. A comprehensive program of action needs to be implemented with immediate effect. Many of the elements of the required reform program were highlighted in the previous chapter. The purpose of this chapter is to provide a quantitative evaluation of the impact of key policy changes on the macroeconomic performance of public enterprises. The discussion focuses on the outlook for NPE performance under the present policy environment. The outcome in this 'reference path' is next compared with situations that result from a number of controlled policy experiments. That is, each experiment considers the impact of a change in only one policy variable at a time. In the final experiment we illustrate the combined impact of changes in these variables.

Macroeconomic Framework

4.2 The quantitative analysis of policy changes is based on an economy-wide model using the accounting framework of a social accounting matrix (SAM) [1/]. A basic characteristic of this model is its internal consistency. This is a major advantage because it ensures that the results in one account are fully consistent with the outcome in the other accounts. Another notable feature is that many prices, including the free market exchange rate, are determined endogenously. A sharp distinction is drawn between public and private production by explicitly modelling the key interventions affecting public production. Thus the determination of prices, the allocation of foreign exchange, investment program and use of financial surpluses are different for public and private enterprises.

The Reference Run

4.3 The idea of the reference run is to construct a base scenario which can be compared with the scenarios that assume specific changes in key policy variables. The reference run assumes that the policy framework in the medium-term remains similar to the one that is currently in place. That is, the multiplicity of exchange rates, the present pricing policy for public enterprises, the existing trade policy and the current fiscal policy are retained in the reference run. The external environment in the reference run, and in all other experiments, is the same as presented in the current country

1/ The model is explained in detail in a separate working paper entitled The Impact of Policies on the Macroeconomic Performance of Public Enterprises in Egypt, Draft Working Paper, Egypt Division, World Bank, 1986.

Source: Review of the Finances of the Decentralized Public Sector for Egypt, Report No. 6421-EGT, 1987.

economic report [1]. The main assumptions regarding the external environment and the policy framework in the reference run are summarized in Tables 4.1 and 4.2.

4.4 The projected developments in the national accounts under the reference scenario are presented in Table 4.3. The overall GDP shows an average growth rate during the estimation period of only 2.2% which is less than the population growth rate (2.5%). This depressing growth prospect reflects the sharp decline in Egypt's external circumstances coupled with inadequate compensatory policy measures. In fact, the deterioration in Egypt's terms of trade, largely the consequence of the dip in the price of oil, implies an even larger reduction in domestic income in the 1986/87 period. Thus, gross domestic income (GDI) declines sharply in 1985/86 and 1986/87 and then registers a modest improvement based on a projected revival in oil prices. Public sector income falls faster than the private sector income, chiefly due to the direct impact of the reduction in oil export income, but also due to the continued inefficiency of public enterprises.

Table 4.1: KEY ASSUMPTIONS UNDERLYING MEDIUM-TERM EXTERNAL ENVIRONMENT

	Base Year Level	Rate of Change (%)				
	1984 85	1985/86	1986/87	1987/88	1988/89	1989/90
Crude petroleum output (mi.tons)	43.7	-2.3	7.7	8.7	0.0	0.0
Natural gas output (mi. tons)	3.2	21.9	7.7	19.0	20.0	20.0
Crude oil export price ($/barrel)	27.0	-26.0	-35.0	19.0	15.0	11.0
Workers remittances (current $ mi.)	3496.0	-17.0	3.0	3.0	3.0	3.0
Suez Canal receipts (current $ mi.)	897.0	5.6	10.9	9.7	9.7	9.7
Net foreign borrowings (current $ mi.)	3415.0	-28.0	-13.0a/	-21.0a/	3.0	3.0

a/ Assumes repayment of arrears accumulated up to 1985/86.

1/ World Bank Sec: Report No. 6795-EGT, Arab Republic of Egypt-Current Economic Situation and Economic Reform Program, July 1986.

Table 4.2: REFERENCE CASE POLICY ASSUMPTIONS

	Base Year Value	Nominal Rate of Growth (%)				
	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90
Commercial bank incentive exchange rate (LE/$)	1.25	6.0	6.0	6.0	6.0	6.0
Average Domestic Energy price (LE/ton) a/	41.0	15.0	15.0	12.0	12.0	12.0
Electricity price (milliemes/kwh)	16.0	25.0	15.0	12.0	12.0	12.0
Cotton Procurement price (LE/ton)	585.0	15.0	12.0	10.0	8.0	8.0
Public Fixed Investment (LE mi.)	6122.0	0.0	-15.0	10.0	15.0	20.0
Share of private savings mobilised by the Government (%)	70.0	6.0	-3.0	-3.0	0.0	0.0

a/ Includes natural gas.

4.5 The financial performance of NPEs deteriorates further. The overall deficit widens from 8% of GDP in 1984/85, the base period, to 9% in 1986/87. (See Table 4.4). This happens even though a significant cut in NPE investment is assumed. The current surplus (NPE saving) weakens noticeably, declining from 9.2% in 1984/85 to less than 6% in 1986/87. The main factors contributing to this include a fall in oil income, the inefficiency of NPEs and a faster increase in cost of production relative to output prices. Following a projected revival in oil prices beginning in 1987/88, there is a small improvement in NPE surplus. However, the overall deficit remains large.

4.6 The weakening of NPE finances translates into a larger budgetary burden (See Table 4.5). Despite a significant slow down in public expenditure, the gross national fiscal deficit remains large (17-20 percent of GDP). The share of NPE in total deficit rises from 33% in 1984/85 to 42% in 1989/90.

Table 4.3: GROWTH SCENARIO IN THE REFERENCE PATH
(In Percentages)

	1985/86	1986/87	1987/88	1988/89	1989/90	Average 1984/85-1989/90
GDP (at market prices)	1.1	2.8	2.5	2.3	2.3	2.2
Gross domestic income	-3.7	-4.4	2.9	3.3	3.4	0.2
Public income	-8.3	-8.0	2.5	2.1	2.7	-1.0
Private income	2.2	2.2	3.3	3.6	3.6	3.1
Exports	5.8	8.0	10.0	4.1	4.5	4.6
Imports	-11.9	-4.3	2.0	3.7	2.7	-1.7

Source: IBRD Projections

Table 4.4: NPE FINANCIAL PERFORMANCE IN THE REFERENCE PATH
(% of GDP)

	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90
Overall Surplus(+) Deficit(-)	-7.8	-8.0	-9.1	-7.8	-7.5	-6.7
Investment	17.0	15.0	15.0	15.0	15.5	15.5
Current Surplus	9.2	7.0	5.9	7.2	8.0	8.8

Source: IBRD Projections

Table 4.5: BUDGETARY BURDEN OF NPEs IN THE REFERENCE PATH
(% of GDP)

	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90
Gross national fiscal deficit	23.5	21.7	21.3	18.4	17.5	17.0
Budgetary burden of NPEs	7.8	9.0	9.1	7.8	7.5	7.2
Share of NPE deficit in national fiscal deficit (%)	33	41	43	42	43	42

Source: IBRD Projections

4.7 The balance of payments pressure intensifies further. This is reflected in a substantial depreciation of the free market exchange rate (20% annually) (see Table 4.6). A positive aspect of this, however, is the stimulus to private exports. Nevertheless, the overall export performance does not show much improvement because the share of private exports in total exports is very small. The official exchange rate applicable for public exporters appreciates in real terms generating an additional disincentive factor.

Table 4.6: EXPORT PERFORMANCE AND EXCHANGE RATES IN THE REFERENCE RUN

	1984/85—1989/90 (annual average rate of change)
Total exports (g&nfs/volume)	6.6
Public sector exports(g&nfs/volume)	4.0
Private sector exports (g&nfs/volume)	17.0
Nominal free market exchange rate (annual rate of depreciation)	20.2
Official exchange rate (annual rate of depreciation)	7.6
Differential between domestic and international inflation	9.0
Weighted average exchange rate (annual depreciation)	17.2

Source IBRD Projections.

Policy Overview

4.8 In the previous chapter we presented key elements of a macroeconomic policy reform program required for improving MPE performance. Among those, three specific measures constitute the backbone of a successful reform program. These are:

(i) Unification of the exchange rate.

(ii) Adjustment in domestic energy prices so as to close the gap between domestic and world energy prices by 1991/92.

(iii) Allowing prices in MPEs to be determined according to economic efficiency.

The simulation model is used first to analyse the effect of each of these three policy initiatives separately. The analysis illustrates that each action will have strong positive impact in some areas, but the total impact may not be very large. On the other hand, the analysis in the simulation

experiment that allows all three policies to be implemented simultaneously indicates that the policies reinforce each other and, therefore, yield a large improvement in terms of both growth prospects and macroeconomic balances. The main message is that a comprehensive reform program will be needed to achieve a substantial improvement in the macroeconomic performance of Egypt's public enterprises.

Unification of the Exchange Rate

4.9 The impact of the unification of the exchange rate on the macroeconomic performance of NPEs in the medium-term is summarized in Table 4.7. The growth prospects improve following the unification of the exchange rate. The GDP grows by 3.3% annually over the projection period compared

Table 4.7: MEDIUM-TERM IMPACT OF THE UNIFICATION OF THE EXCHANGE RATE, 1984/85 - 1989/90

	Reference Case	Exchange Rate Scenario
	(Annual Average Growth Rates)	
GDP (at f.c.)	2.2	3.3
GDI	0.2	2.0
Exchange rate depreciation	17.2	11.2
Total exports (g&nfs)	6.6	9.5
Public exports (g&nfs)	4.0	9.1
Private exports (g&nfs)	17.0	11.4
Imports (g&nfs)	-1.8	-1.5
Consumer price index	13.7	10.7
Public income (at f.c.)	1.0	3.6
Private income (at f.c.)	3.3	2.7
	(% of GDP, end of period)	
NPE current surplus	8.8	9.3
NPE budgetary burden	4.4	4.2
Overall national fiscal deficit	17.2	16.5

Source: IBRD Projections

with 2.2% in the reference run. The main impetus to growth comes from the public sector. The unification of the exchange rate removes the bias against the NPE exports due to an over-valued official exchange rate. Thus, NPE exports grow faster which in turn improve NPE income and saving. The balance of payments situation also improves as reflected in a slower depreciation of the exchange rate (11.2% annually compared with 17.2% in the reference case).

4.10 Although most variables improve, the impact, in many instances, is small. For example, the NPE's budgetary burden in 1989/90 falls marginally from 4.4% of GDP in the reference case to 4.2%. Similarly, the overall national fiscal deficit shows an improvement of only 0.7% of GDP. Another problem is that private sector's income grows slower than in the reference

case. This happens due to two factors. First, the unified exchange rate depreciates much less compared with the free market rate in the reference scenario, causing a slower growth in private exports and income. Secondly, despite the reduction in private income, the Government continues to mobilize the same proportion of private saving as previously, causing a crowding out effect on private investment.

Energy Price Reform

4.11 The medium-term impact of an increase in domestic energy prices, such that the gap between world and domestic energy prices is closed by 1991/92, is shown in Table 4.8. The reform of the energy prices has a substantial positive effect on NPE surplus and the national budget. Thus the NPE surplus in 1989/90 surges to 12.6% of GDP compared with 8.8% in the reference case. The large increase in NPE surplus obtains from the combined effects of a larger revenue from domestic consumption of energy as well as higher revenue from energy exports due to a slower growth in domestic consumption. The increase in NPE surplus improves its fiscal contribution so that its budgetary burden and the overall national fiscal deficit both fall significantly. The other notable positive effect is on the balance of payments. The exchange rate in the free market depreciates much less compared with the reference case due to the larger availability of foreign exchange in the official pool which reduces the pressure on the free market.

4.12 The impact on overall economic growth, although positive, is small. The public sector's income does grow noticeably (3.3% compared with 1.0% in the reference case) but the private sector's income grows relatively less.

Table 4.8: MEDIUM-TERM IMPACT OF AN ENERGY PRICE REFORM, 1984/85 - 1989/90

	Reference Case	Energy Price Reform Case
	Annual Average Growth Rates	
GDP (at f.c.)	2.2	3.0
GDI	0.2	1.1
Exchange rate depreciation		
- official	7.6	7.6
- free market	20.2	10.0
- weighted average	17.2	8.3
Total exports	6.6	10.1
Public exports (g&nfs)	4.0	9.6
Private exports (g&nfs)	17.0	13.0
Imports (g&nfs)	-1.8	-0.5
Consumer price index	13.7	9.9
Public income (at f.c.)	-1.0	3.3
Private income (at f.c.)	3.3	2.6
	(% of GDP at end of period)	
NPE current surplus	8.8	12.6
NPE budgetary burden	4.4	1.2
Overall national fiscal deficit	17.2	15.1

Source: IBRD projections.

partly due to a slower growth in exports but also because of the crowding-out effect of government borrowings.[1/]

Public Sector Pricing Reform

4.13 The medium-term effects of a public sector pricing reform, which allows all NPE prices, except energy, to be determined according to economic efficiency, are depicted in Table 4.9. The variables that respond positively to this

Table 4.9: MEDIUM-TERM IMPACT OF PUBLIC SECTOR PRICING REFORM, 1984/85-1989/90

	Reference Case	Public Sector Pricing Reform Case
	Annual Average Growth Rates	
GDP (at f.c.)	2.2	2.5
GDI	0.2	0.5
Exchange rate depreciation		
-official	7.6	7.6
-free market	20.2	17.1
-weighted average	17.2	13.1
Consumer price index	13.7	12.4
Total exports (g & nfs)	6.6	6.2
Public exports (g & nfs)	4.0	4.0
Private exports (g & nfs)	17.0	15.0
Imports	-1.8	-1.7
Public income (at f.c.)	1.0	2.0
Private income (at f.c.)	3.3	3.1
	(% of GDP, end of period)	
NPE current surplus	8.8	10.0
NPE budgetary burden	4.4	3.3
Overall national fiscal deficit	17.2	16.7

Source: IBRD projections

policy change are NPE surplus, the budgetary burden of NPE and the national fiscal deficit. The economy's growth prospects also improve but only marginally. The positive impact of this reform on public sectors output growth is smaller compared with the previous two simulations. By freeing prices, the efficiency of public production improves but the stimulus through increased exports, as in the earlier simulations, is not available because there is no change in the exchange rate policy or in energy prices. There is also a small positive effect on the balance of payments. As a consequence of price flexibility and its impact on demand, the efficient public producers expand output while the relatively inefficient producers undergo a contraction. This is turn leads to a fall in the import intensity of public production, causing a reduction in the demand for foreign exchange in the official pool and thereby resulting in a relatively lower depreciation of the free market exchange rate.

1/ Although the fiscal deficit improves, the simulation assumes that the same share of private savings is mobilized by the Government.

Combined Policy Reform

4.14 Below we report the results of a combined policy package that include the following elements:

(i) unification of the exchange rate;
(ii) increase in domestic energy prices so as to close the gap between world and domestic energy prices by 1991/92;
(iii) a reform of NPE pricing policy such that prices are fully flexible;
(iv) a slowdown in the government borrowings from the private sector in response to the improvement in the overall budget deficit;
(v) removing all restrictions from public and private sector exports, except cotton;
(vi) allowing a smaller decline in public investment relative to the base run.

For ease of reference, the key policy assumptions in the combined policy case are compared with the reference case in Table 4.10. The Government has already made progress in many of the above policy areas. However, the effort has to be considerably strengthened in terms of comprehensiveness, magnitude and the pace of implementation.

Table 4.10: ASSUMPTIONS UNDERLYING THE COMBINED POLICY PACKAGE

	Reference Case	Combined Policy Case
Trade Policy		
Exchange Rate	Dual Exchange System	Unified and Flexible Exchange System
Export Restrictions	Compulsory surrender requirements for all agricultural exports	No surrender requirement, except for cotton.
Public Sector Pricing	Prices based on average variable cost	Prices based on marginal cost
Energy Pricing (Annual average growth rate)		
Oil and gas (%)	12 a/	46 a/
Electricity (%)	15 a/	35 a/
Fiscal Policy		
Share of private savings mobilized by Government (%)	69-65 b/	69-45 b/
Public fixed investment (% of GNP)	19-14 b/	19-18 b/

a/ Between 1986/87 and 1989/90.
b/ The values in the base year (1984/85) and the final year(1989/9 respectively.

4.15 The positive impact of the combined policy package is substantial. The overall GDP grows at 5.1% annually compared with 2.1% in the reference run. Both public and private incomes grow significantly faster compared with the reference run. The dramatic improvement in the public sector's income leads to a much higher NPE saving (reaching 13.0% of GDP in 1989/90 compared with 8.8% in the reference run, which in turn causes a significant reduction in its budgetary burden. The national fiscal deficit falls sharply from 17.2% of GDP in 1989/90 in the reference run to 12.4%, despite a larger public investment, because of a larger fiscal contribution of NPEs. The balance of payments also improves, as reflected in the slower depreciation of the exchange rate.

Table 4.11: MEDIUM-TERM IMPACT OF COMBINED POLICY SCENARIO, 1984/85-1989/90

	Reference Case	Public Sector Pricing Reform Case
	Annual Average Growth Rates	
GDP (at f.c.)	2.1	5.1
GDI	-1.1	-3.6
Exchange rate depreciation	17.2	11.8
Consumer price index	13.7	11.8
Total exports (g & nfs)	6.6	13.4
Public exports (g & nfs)	4.0	13.0
Private exports (g & nfs)	17.0	15.1
Imports	-1.8	1.3[a/]
Public income (at f.c.)	1.0	5.7
Private income (at f.c.)	3.3	4.5
	(% of GDP, end of period)	
NPE current surplus	8.8	13.0
NPE budgetary burden	4.4	2.6
Overall national fiscal deficit	17.2	12.4

Source: IBRD projections

a/ Annual average growth rate is 4.9% over the period 1985/86-1989/90

4.16 The factors contributing to the favorable results in the combined policy scenario are as follows. First, the public sector pricing and other reforms improve the efficiency of public production. The marginal productivity of both labor and capital rise. Second, the energy price reform and the unification of the exchange rate both provide significant impetus to public exports, which in turn boosts public sector output. The combined effects of a faster growth in output, relatively higher output prices and the surplus obtained from higher energy prices generate a substantial improvement in NPE surplus and national budgetary revenues. The larger public saving allows both a higher level of public investment and lower government borrowing from the private sector. The former provides the third channel for improvement in public enterprise output. The latter releases resources for

additional private investment, which in turn contributes to a higher level of output in the private sector (see Table 4.12). The private sector also benefits from the elimination of compulsory surrender requirements for agricultural exports, excluding cotton.

Table 4.12: SAVING-INVESTMENT BALANCE IN THE COMBINED POLICY CASE

	Reference Case		Combined Policy Case	
	1984/85	1989/90	1984/85	1989/90
	(As a % of GDP)			
NPE Saving	9.2	8.8	9.2	13.0
NPE Investment	17.0	15.5	17.0	16.4
NPE Deficit	-7.8	-6.7	-7.8	-3.4
Other public saving	-9.1	-8.6	-9.1	-4.2
Other public investment	6.6	1.9	6.6	4.8
Other public deficit	-15.7	-10.5	-15.7	-9.0
Total public deficit	-23.5	-17.2	-23.5	-12.4
Private saving	16.3	17.0	16.3	14.2
Private investment	6.7	6.2	6.7	8.8
Private surplus	9.6	10.8	9.6	5.4
Foreign saving	13.6	7.0	13.6	7.1

Source: IBRD projections

Conclusion

4.17 The current weak macroeconomic performance of Egypt's NPEs does not constitute an insurmountable problem. As illustrated above, through appropriate policy reforms, the economic impact of NPEs can be substantially improved. The challenge for policy makers is to take bold initiatives and quickly implement a comprehensive economic reform program which has elements similar to those discussed in chapter 3. Indeed, without a major reform of the existing policy framework there can be little hope for a revival in NPEs' macroeconomic performance. However, while the macroeconomic adjustment is a prerequisite for a successful reform of the public enterprises, there is significant room for productivity improvements through enterprise specific actions. These improvements can be brought about through changes in output-mix, raising the level of labor skills, providing incentive payments, upgrading the level of technology, more aggressive marketing techniques and improved management skills.

7. Impact of Public Enterprise On Investment

Public enterprises usually account for a significant share of total investment in borrowing countries. Because the extent of PE investment varies from as much as 80 percent of total investment in Zambia to less than 10 percent in the Dominican Republic, it is important that reform efforts proceed with accurate data on the role of public enterprises in country investment.

The draft report on Morocco. Issues and Prospects in the Public Sector, (Report No. 10157-MOR, 1992), illustrates the importance of PE investment relative to the private sector and other public entities. Pie charts and bar graphs excerpted below show trends in the composition of investment in the economy from 1982-1989 (Table 7.1). Public and private sector investment is disaggregated, and within public sector investment, PEs' and central and local government share of total investment is highlighted (Table 7.2).

The Tanzania report, Parastatals in Tanzania. Towards a Reform Program, (Report No. 7100-TA, 1988), includes text figures that depict trends in fixed capital formation from 1971-1985. Text tables which are included below in this review identify the government's paid-up share capital in PEs in absolute measures and as a percent of total share capital by sector: financial institutions, national resources/tourism, communications and works, agriculture and livestock, energy and minerals, industries and trade (Table 7.3).

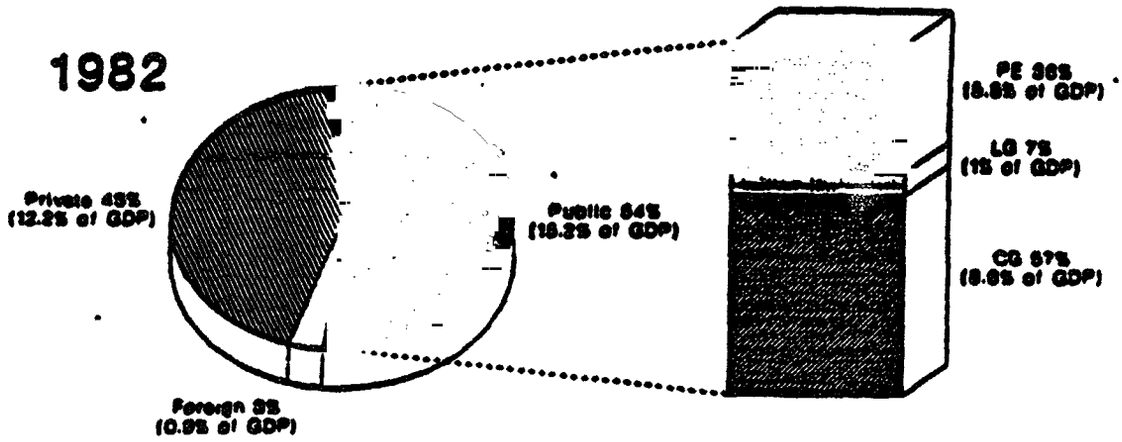
The Senegal Parapublic Sector Review (Report No. 7774-SE, 1989), presents another way to highlight PE investment. Table 7.4 below identifies the level of total planned government investment as part of the three-year investment program for all major sectors, as well as the portion of total sector investment accounted for by PEs.

7. IMPACT OF PUBLIC ENTERPRISES ON INVESTMENT

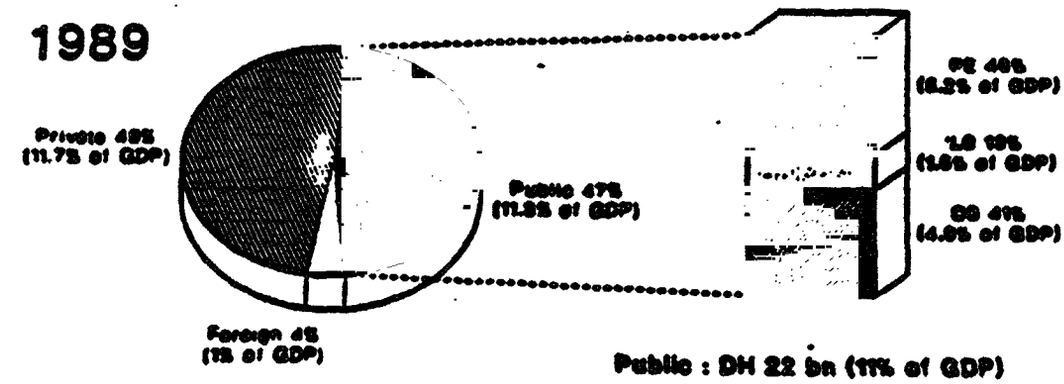
Morocco

Table 7.1

Composition of Investment 1982 - 1989



Total : DH 28 bn (28% of GDP) Public : DH 14 bn (15% of GDP)



Public : DH 22 bn (11% of GDP)

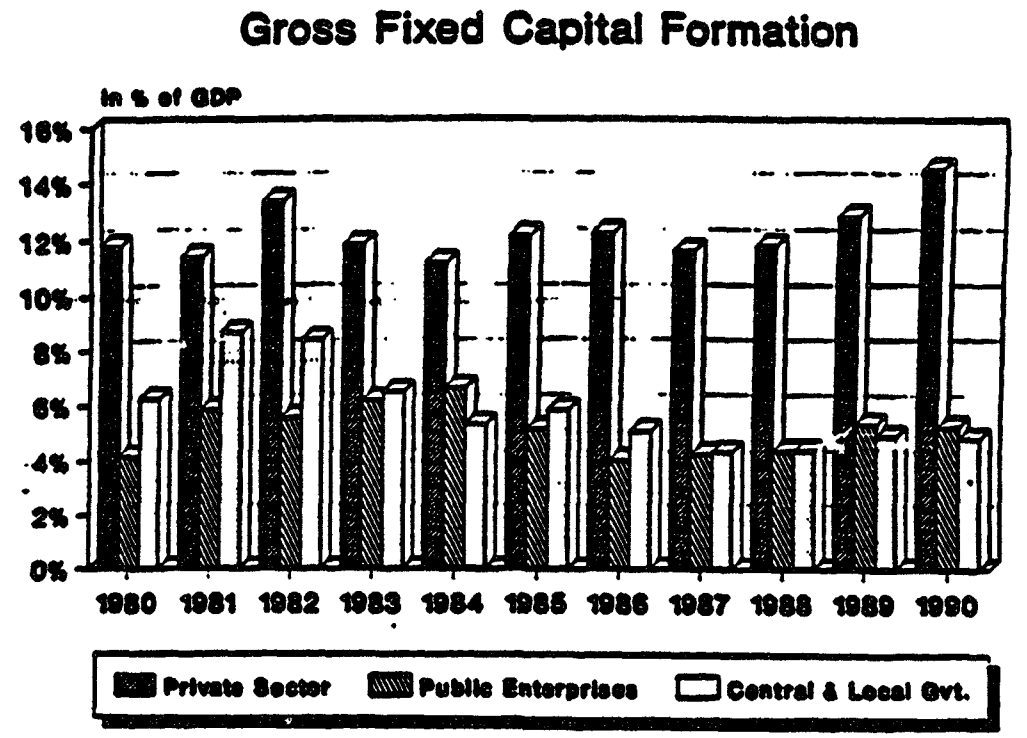
Total : DH 46 bn (24% of GDP)

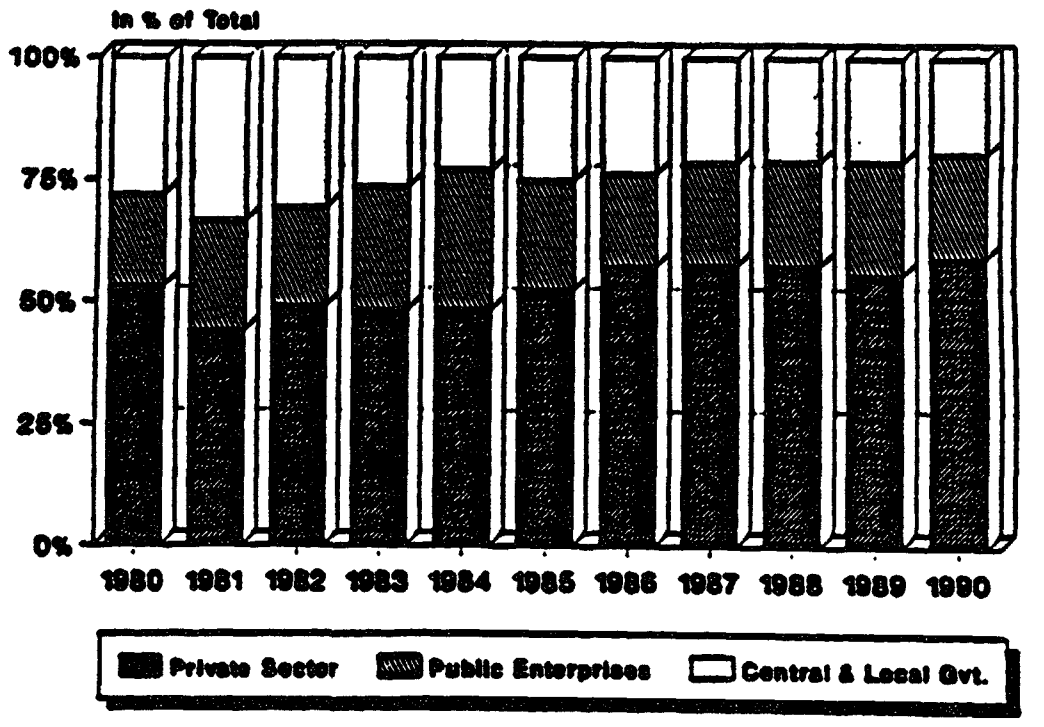
Size of figures proportional to totals
(As percent of GDP).

Source: Morocco, Issues and Prospects in the Public Sector, Report No. 10157-MOR 1992.

Morocco

Table 7.2





Source: Morocco: Issues and Prospects in the Public Sector, Report No. 10157-MOR,

TABLE 7.3

Tanzania

GOVERNMENT SHAREHOLDING IN PARASTATALS, JUNE 30, 1986

Sector	Paid up Share Capital (TSh. Million)	Percent of Total
Financial Institutions	408.7	4.6
National Resources/Tourism	637.6	7.2
Communications and Works	624.8	7.1
Agriculture & Livestock	1228.5	14.0
Energy & Minerals	3249.7	36.9
Industries & Trade	2656.3	30.2
TOTAL SHARE CAPITAL	8,805.6	100.0

Source: Ministry of Finance, Treasury Registrar, Tanzania

Source: Report on Parastatals in Tanzania, Towards A Reform Program
Report No. 7100-TA, 1988, p. 7

Senegal

Table 7.4

Senegal - Distribution of Planned Government Investment in Public Enterprises by Activity (1988/89-1990/91)

(CFAF Billion)

	Total 3-Year Program	PEs	PEs Share (%)
1. Primary Sector	161.9	67.4	41.7
- Agriculture	79.5	65.7	82.6
- Others	82.3	1.7	2.1
2. Secondary Sector	68.2	44.2	64.7
- Mining	16.2	3.1	19.1
- Industry	16.9	11.9	70.4
- Energy	33.9	28.9	85.3
- Others	1.3	0.3	23.1
3. Tertiary Sector	133.3	52.3	39.2
- Transport	104.0	24.7	23.8
- Telecommunications	27.8	27.6	99.3
- Others	1.5	0.0	0.0
4. Quaternary Sector	107.3	30.2	28.1
- Water Supply & Sanitation	19.8	14.8	74.7
- Housing & Habitat	43.9	14.7	33.5
- Others	43.6	0.7	1.6
TOTAL	470.7	194.1	41.2

Source: Senegal Parapublic Sector Review, Report No. 7774-SE, 1989, p. 4

8. Direct and Indirect Flows Between Public Enterprises and Government

Public enterprises finance their investments and operations by direct and indirect government transfers, by inter-public enterprise debt, and by borrowing externally and internally. Government guarantees of public enterprise debt and interagency arrears are indirect flows that do not appear in government budgets. A flow of funds analysis depicts the transfer of funds that occurs between government and public enterprises.

The Public Enterprise Sector Review for Ghana, (Report No. 10048-GH, 1991), provides a comprehensive analysis of the direct and indirect financial flows between government and public enterprises and summarizes the budgetary burdens associated with government support of PEs. As noted in Tables 8.1 and 8.2 included below, the Ghana report disaggregates:

- direct flows from government to public enterprises (including subventions, equity contributions, and loans);
- indirect government flows to public enterprises (including tax arrears, tax exemptions, dividend arrears, and payments by government due to defaults on guaranteed loans); and
- direct flows fom public enterprises to government (direct taxes paid, dividends paid, and loan repayments).

The data is provided in current and constant cedis and trends can be observed from 1985-89. Summary tables present the figures in a very transparent manner. Annex III of the sector report discusses data issues on financial flows in greater detail.

The advantage of the Ghana report is that it highlights trends in indirect as well as direct flows between government and PEs. The inclusion of both flows is important because governments may reduce direct subsidies to PEs, but the financial burden on government could remain the same or increase if governments assume a larger share of PE debt, which is an indirect flow to PE. Also, the transparency of financial flows is important for assessing the actual impact of the public enterprise sector on government budgets and for determining the actual impact of reforms whose aim is to limit PE dependency on the government.

The Public Enterprise Administrative Reform and Planning Study, Uganda, (prepared by BMB for the Ministry of Finance, November 1990), documents inter-public enterprise debt (Table 8.3). The utility of this data is that it provides a more comprehensive picture of PE financial flows beyond that which is included in a flow of funds analysis between governments and public enterprises.

Table 8.1

FINANCIAL FLOWS BETWEEN Government AND 14 CORE PEs: 1985-89
(in million current cedis)

	1985	1986	1987	1988	1989
A. Direct Flows					
From Government to PEs					
1. Subventions	680	1306	942	216	215
2. Equity contributions	192	100	148	206	101
3. Loans	250	1854	3697	3424	4997
Total direct flows from Government to PEs	1122	3260	3034	3061	4958
From PEs to Government					
1. Direct taxes paid	334	646	648	300	0
2. Dividends paid	0	4	15	39	15
3. Loan repayment	0	0	0	24	24
Total direct flows from PEs to Government	334	650	663	363	39
Net direct outflow from Government to PEs	788	2610	1944	2639	4642
B. Indirect Flows					
From Government to PEs					
1. Tax arrears	404	2610	746	2212	5697
2. Tax exemptions	215	3660	7923	4026	11467
3. Dividend arrears	95	687	927	615	1697
4. Payment by govt. due to defaults on guaranteed loans	104	536	1663	2128	4011
Total indirect flows from govt. to PEs	818	7493	11259	8981	22872
Net outflow from govt. to PEs	1606	10103	14293	12042	27830
Total Government expenditures	43704	95587	100915	147019	162974

SOURCE: Estimated from data provided by the Ministry of Finance and Economic Planning, the Office of the Controller and Accountant General, the Internal Revenue Service and the State Enterprises Commission.

Source: The Public Enterprise Sector Review for Ghana, Report No. 10048-GH, 1991.

Table 8.2

FINANCIAL FLOWS BETWEEN Government AND 14 CORE PEs: 1985-89
(in million constant 1985 cedis)

	1985	1986	1987	1988	1989
A. Direct Flows					
From Government to PEs					
1. Subventions	680	1048	541	94	82
2. Equity contributions	192	80	85	90	38
3. Loans	250	1497	870	1127	1678
Total direct flows from Government to PEs	1122	2615	1496	1312	1800
From PEs to Government					
1. Direct taxes paid	334	518	372	131	0
2. Dividends paid	0	3	9	17	6
3. Loan repayment	0	0	0	10	9
Total direct flows from PEs to Government	334	521	381	158	15
Net direct outflow from Government to PEs	788	2094	1115	1154	1785
B. Indirect Flows					
From Government to PEs					
1. Tax arrears	404	2094	428	967	2191
2. Tax exemptions	215	2937	4548	1759	4410
3. Dividend arrears	95	551	532	269	653
4. Payment by govt. due to defaults on guaranteed loans	104	430	955	930	1543
Total indirect flows from govt. to PEs	818	6012	6463	3925	8797
Net outflow from govt. to PEs	1606	8106	7579	5078	10582
Total Government expenditures	43704	76715	57931	64257	62682

SOURCE: Estimated from data provided by the Ministry of Finance and Economic Planning, the Office of the Controller and Accountant General, the Internal Revenue Service and the State enterprises Commission

Source: The Public Enterprise Sector Review for Ghana, Report No. 10048-GH, 1991.

Table 8.3

Inter-PE Debt as at End December 1989 (U.Sh. '000) UGANDA

Name of Enterprise	Total Claims		PEs
	By PE	On PE	Net claim
African Ceramics Co.Ltd	0	6,011	(6,011)
Agricultural Enterprises Ltd	9,174	4,015	5,159
Blenders (Uganda) Ltd	0	7,581	(7,581)
Cable Corp. Ltd	18,007	0	18,007
Coffee Marketing Board	38,920	288,881	(249,961)
East African Distilleries Ltd	0	34,519	(34,519)
Foods and Beverages Ltd	0	663,378	(663,378)
Lint Marketing Board.	0	68,912	(68,912)
National Housing and Construction Corp.	6,206		6,206
National Social Security Fund	15,559	2,127	13,432
Nile Breweries Ltd	0	9,434	(9,434)
Nile Hotel Ltd	18,641	28,735	(10,094)
Nyanza Textiles Industry Ltd (NYTIL)	19,176	130,862	(111,686)
Pepco Industries Ltd	1,219	6,710	(5,491)
Produce Marketing Board	0	79,278	(79,278)
Shell (Uganda) Ltd	272,157	1,816	270,341
Sugar Corp. of Uganda Ltd	11,658	12,350	(692)
Transocean (Uganda) Ltd	657,115	0	657,115
Uganda Airlines Corp.	37,659	212,894	(175,235)
Uganda Blanket Manufacturers Ltd	0	2,132	(2,132)
Uganda Consolidated Properties Ltd	45,225	5,644	39,581
Uganda Development Corp.	118,733	22,210	96,523
Uganda Electricity Board	40,901	69,045	(28,144)
Uganda General Merchandise Ltd	0	10,214	(10,214)
Uganda Grain Milling Co. Ltd	1,500	37,930	(36,430)
Uganda Hardwares Ltd	0	11,531	(11,531)
Uganda Hotels Ltd	5,186	13,838	(8,652)
Uganda Leather and Tanning Industry Ltd (ULATI)	0	16,193	(16,193)
Uganda Meat Packers Ltd	0	16,231	(16,231)
Uganda Metal Products and Enamelling Co.(TUMPECO)	0	10,897	(10,897)
Uganda Motors Ltd	84	8,078	(7,994)
Uganda Pharmaceuticals Ltd	0	3,940	(3,940)
Uganda Posts and Telecommunications Corp.	225,898	49,116	176,782
Uganda Railways Corp.	367,165	44,554	322,611
Uganda Tea Authority	0	2,110	(2,110)
Uganda Transport Corp.	0	14,609	(14,609)
United Garment Industries Ltd (UGIL)	0	14,408	(14,408)
Total	1,910,183	1,910,183	0

Notes:
1. All PEs were requested to provide data on inter-PE debt; 37 PEs responded.
2. This schedule includes all claims of over U.Sh. 1,000 notified by the PEs.
3. Where there was a difference between two PEs as to the size of a claim, the higher figure was used.

Source: Public Enterprise Administrative Reform and Planning Study for Uganda, Ministry of Finance (prepared by BMB), 1990.

9. Flow of Funds Between Public Enterprises and Central and Local Governments

In countries such as Morocco where local governments play a relatively important role in the public sector, the flow of funds between public enterprises and government should reflect the interdependence of the uses and sources of funds between public enterprises and the central government and local governments.

The Morocco draft report, Issues and Prospects in the Public Sector (Report No. 10157-MOR, 1992), includes analyses that illustrate the web of financial flows among the central government, local governments, and PEs. The diagrams in the text (Tables 9.1, 9.2, and 9.3) highlight the importance of the PE sector as a major sources of funds for central and local governments, and highlight the fact that changes in one sector could have significant consequences for the financing of another part of the public sector or the public sector as a whole.

The importance of the Morocco flow of funds analysis is that macroeconomic policies aimed at improving the financial condition of either the central or local governments or public enterprises, could have a significant impact on another branch. These fiscal interdependencies need to be known for purposes of macroeconomic policy planning. If under a reform plan PEs are no longer granted tax concessions, PEs may pay lower dividends and require larger subsidies from the central government. Greater budgetary burden on the central government could preclude necessary transfers to local governments.

The following is a description of the construction of a flow of funds matrix for Morocco. This model is included here as an illustration for possible adaptation to other countries.

9. FLOWS OF FUNDS BETWEEN PUBLIC ENTERPRISES AND CENTRAL AND LOCAL GOVERNMENTS

II. SAVINGS AND INVESTMENT IN THE PUBLIC SECTOR

32. The achievement of the country's economic and social objectives during the nineties will require substantial increases in public savings, given the disappearance of the public sector's major source of finance--external debt rescheduling--at the end of 1992. The resource mobilization strategy should hinge on the formulation of an incentive framework capable of extending to the rest of the public sector the increase in savings achieved previously at the CG level. Although the need to maintain the momentum of policy reform at the CG level remains critical, only a more widespread improvement of public savings can ensure that the policy of decentralizing public investment to the LG and PEs will be consistent with internal and external equilibria.

33. The starting point of the new resource mobilization strategy is to recognize that the analysis of the public sector in Morocco cannot be identified with that of the CG alone[28]. The relative importance of the CG, the LG and the PE sectors has to be evaluated along with the economic and financial relations that link them to one another and to the rest of the economy in order to obtain a clearer picture of the Moroccan public sector today. This exercise is carried out in the next section (Section A). In Section B, we argue that an important feature of the Moroccan adjustment and stabilization experience during the eighties has been the declining role of CG capital spending in national investment, and in public investment in particular. While these developments reflect a greater involvement of the private sector in the process of capital formation, they are also indicative of a deliberate strategy by the authorities to rely increasingly on PE and LG to undertake investment projects of public interest. However, as argued in Section C, this decentralization of investment expenditure has not been accompanied by sufficient increases in LG and PE savings. As a result, their combined financing needs have not declined and they have actually increased as a share of the overall public sector borrowing requirement.

A. The Flow of Funds in the Public Sector

34. The analysis of the flow of funds supports the view that the LG and PEs play important parts in the Moroccan public sector, although the CG maintains a dominant role. Moreover, financial flows among the three public sector entities appear to be important in terms of their total uses and sources of funds. This interdependence should be reflected in the design of policy reforms aimed at raising public savings in Morocco. Such an approach will minimize the

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28/ So far, the public sector in Morocco has been a general concept more than a clearly defined economic entity. This has been largely due to a lack of easily accessible macroeconomic data on non-central government activities. Recent sectoral and structural adjustment work carried out by the Bank, as well as the stabilization and technical assistance programs of the Fund, have reduced this serious data problem. To date, however, no attempt has been made to consolidate the public sector accounts.

Source: Morocco: Issues and Prospects in the Public Sector, World Bank Report No.

risk of simply shifting fiscal imbalances from one part of the public sector to another instead of reducing it for the whole public sector.

35. A measure of the relative importance of the various public sector actors in the economy is provided by Table II.1. The CG, LG and PE together account for 28% of total urban employment, with the CG responsible for over two-thirds of public sector employment and wages; the total public sector wage bill is equivalent to over 14% of GDP. In terms of overall current expenditures [29], the CG is responsible again for over two-thirds of the total for the public sector; the share of non-CG entities, amounting to over DH 10 billion, corresponds to 9.5% of GDP. In terms of investment, the responsibility for expenditures appears to be even more decentralized in the public sector: the CG is directly accountable for only 40% of total public sector investment, while the PE sector actually contributes more to public sector investment than the CG. The table also indicates that the greatest savings effort is also made by the PE sector. Finally, Table II.1 illustrates the relative importance of public sector entities in the country's capital transactions with the rest of the world. More than half of total inflows of foreign capital in 1989 accrued to the CG. As much as one-fifth of the DH 18 billion of public foreign capital inflows financed PE activities directly. On the other hand, LGs appear to be largely insulated from external capital transactions.

36. The flow of funds affecting the public sector is also depicted by Diagrams 1(a) and 1(b) for 1989. The diagrams illustrate the relative importance of the three branches of the public sector in terms of current and capital transactions, describe the sources and uses of funds for the public sector, and highlight the financial relationship among public sector agents[30].

29/ On final goods and services, i.e., excluding all transfers (interest payments, current transfers, taxes and dividends).

30/ The economy-wide consistency of the flows, and their relationships to the national accounts is ensured through the constructions of a complete flow of funds (see the Appendix to this section--paras. 48-52). The matrices separate the flow of funds of the major public sector entities into those of the CG, LGs and the PEs. The matrices also separate out the activities of the financial system into three entities, namely the Central Bank (CB), the Commercial Deposit Banks (Banks), and the Specialized Financial Institutions (SFI). The residual category of domestic agents is the Private Sector which consolidates households and non-financial firms. Finally, the external sector is represented by the Rest of the World category (RW). The flow of funds tables integrate the national income, financial, fiscal and balance of payments accounts for the eight categories of agents holding physical and financial assets.

Table 9.1 PUBLIC SECTOR INDICATORS, 1989 /a

	Central Government	Local Governments	Public Enterprises	TOTAL PUBLIC SECTOR
Employment				
Thousands	638	60	190	888
In % of Total PS	71.8%	6.8%	21.4%	100.0%
In % of Urban Empl.	19.9%	1.9%	6.0%	27.8%
Wage Bill				
DH Millions	19,683	1,230	6,628	27,541
In % of Total PS	71.5%	4.5%	24.1%	100.0%
In % of GDP	10.3%	0.6%	4.5%	14.4%
Current Expenditures				
DH Millions	22,515	2,459	7,849	32,823
In % of Total PS	68.6%	7.5%	23.9%	100.0%
In % of GDP	11.8%	1.3%	4.1%	17.1%
Investment				
DH Millions	8,861	2,878	10,052	21,791
In % of Total PS	40.7%	13.2%	46.1%	100.0%
In % of GDP	4.6%	1.5%	5.2%	11.4%
In % of Total Invst.	19.2%	6.3%	21.8%	47.3%
Savings				
DH Millions	1,347	829	6,407	8,583
In % of Total PS	15.7%	9.7%	74.6%	100.0%
In % of GDP	0.7%	0.4%	3.3%	4.5%
In % of Total Savings	2.9%	1.8%	13.9%	18.6%
Foreign Debt				
DH Millions	122,464	31	18,715	141,210
In % of Total PS	86.7%	0.0%	13.3%	100.0%
In % of GDP	63.9%	0.0%	9.8%	73.7%
In % of Total F. Debt	72.3%	0.0%	11.1%	83.4%
Foreign Capital Inflows				
DH Millions	14,002	9	3,881	17,892
In % of Total PS	78.3%	0.1%	21.7%	100.0%
In % of GDP	7.3%	0.0%	2.0%	9.3%
In % of Total F Cp Inf	53.7%	0.0%	14.9%	68.6%

/a All data are for 1989, except employment which is 1988 (1986 for PE).
Source: Ministry of Finance; Ministry of Plan; World Bank estimates.

37. Current transactions are broken down in taxes, dividends, interest payments, transfers (including subsidies) and final consumption on goods and services. For the PE sector, the category value-added is added, representing the major source of funds. For each sector, the excess of resources over uses corresponds to savings. The diagram highlights several important points.

- First, the PE sector is a major source of funds for the CG and the LG, contributing over DH 5 billion to their total resources in the form of direct taxes and dividends. This amount represents almost one-fifth of the PE total uses of funds. These flows constitute 10% and 18%, respectively of the CG and the LG overall sources of funds. On the other hand, current flows from the CG to the PE sector--interest income on CG debt and operating transfers--are considerably less important. The net contribution of the sector to the CG finances is therefore very important.[31]

- Second, the central bank contributes significantly more to the CG current resources in the form of dividends and taxes than either domestic money banks or the specialized financial institutions (SFI). The banks in particular receive back interest payments from the CG equivalent to four times their tax payments to the CG.

- Third, the CG and the PE transfer abroad over 11% and 26%, respectively, of their total resources. In particular, their interest payments to foreign creditors (over DH 10 billion) are considerably greater than domestic interest payments.

- Fourth, another important link between public sector entities is the CG current transfers to the LG. The DH 1 billion transfer in 1989 represented almost 30% of total LG resources and exceeded its entire savings (DH 0.8 billion) in that year.

38. Capital transactions illustrate how investment by each public sector agent is financed through savings, capital transfers, and borrowing (Diagram 1(b)). The most important points that emerge from the flow chart are the following.

- First, arrears appear to have a pervasive presence in the financing of the public sector[32]. Changes in the stock of arrears can be regarded as forced lending by one agent to another. For example, the CG raised almost DH 1.5 billion by running arrears vis-à-vis the private sector and PEs. This indicates that over a quarter of total lending by private agents to the CG was involuntary. Similarly, the forced lending by the PEs to the CG (DH 0.6 billion) almost entirely

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31/ This is true even if capital transfers are included (see below). These points are elaborated in more detail in Part III, Section C (see para. 90-105).

32/ Although 1989 was undoubtedly a slippage year in terms of public finance, the problem of arrears remains very current. According to preliminary data, the stock of arrears owed by PEs and to PEs both rose by around 30% in 1990 compared to a year earlier.

offset the CG outflow in the form of amortization of its bonds held by PEs (DH 0.7 billion)[33]. Furthermore, for PEs, one-half of gross bank credit was apparently allocated to the repayment of arrears[34].

- Second is the importance of external flows (except for the LG). Around one-third of net lending to the public sector (excluding changes in arrears) is from abroad. As discussed later in the report, net foreign lending has remained positive in the second half of the eighties solely because of extensive rescheduling arrangements[35].

- Third, the extension of credit by the central bank to the CG is rather limited (DH 0.6 billion), though it is as important as dividend and tax payments (see Diagram 1(a)), reflecting largely the reluctance by the authorities to rely on monetization of CG deficits.

- Fourth, the LGs are much more dependent on capital flows from the CG than the PEs. Almost two-thirds of LG capital needs[36] are met by the CG either in the form of capital transfers or lending, and only one-tenth by borrowing. The PE sector, on the other hand, relies on the CG for less than 17% of its financing requirements, including DH 0.8 billion of involuntary lending by the CG in the form of arrears accumulation.

39. In summary, the flow of funds indicates (i) that important linkages among the CG, the LG and PE exist, and (ii) that the public sector appears to rely extensively on two forms of involuntary finance: external debt rescheduling and arrears build-up. The implications of the first point is that policies designed to improve the financial conditions of one branch of the public sector may have important, possibly offsetting, consequences for the finances of another branch or for the public sector as a whole. For example, the discriminatory fiscal

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33/ In 1989, the CG amortized DH 0.7 billion of outstanding PERL bonds.

34/ For the CG, only the change in net credit from banks and SFI is shown in the Diagram since no detail was available regarding new credit and repayments.

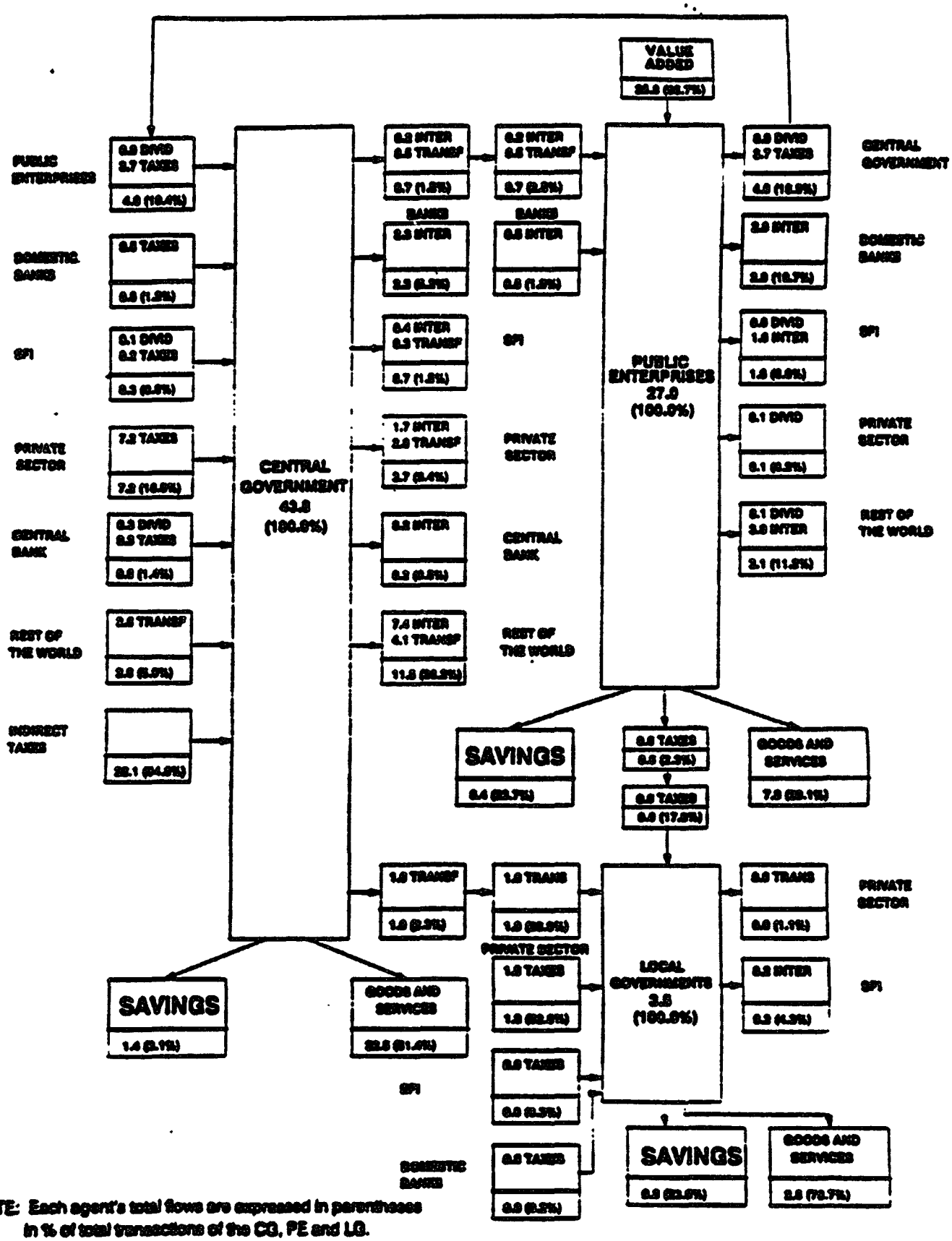
35/ In Part III of the report, it will be shown that the portion of foreign inflows corresponding to debt rescheduling accounts for the bulk of <u>total</u> net financing for the CG, given the large amortization payments due on foreign debt.

36/ Capital needs are defined here as total sources of funds. Strictly speaking, the capital needs should exclude the savings generated by the current transactions. The point made here, however, is not affected by

Table: 9.2

DIAGRAM 1(a): PUBLIC SECTOR CURRENT TRANSACTIONS - 1989

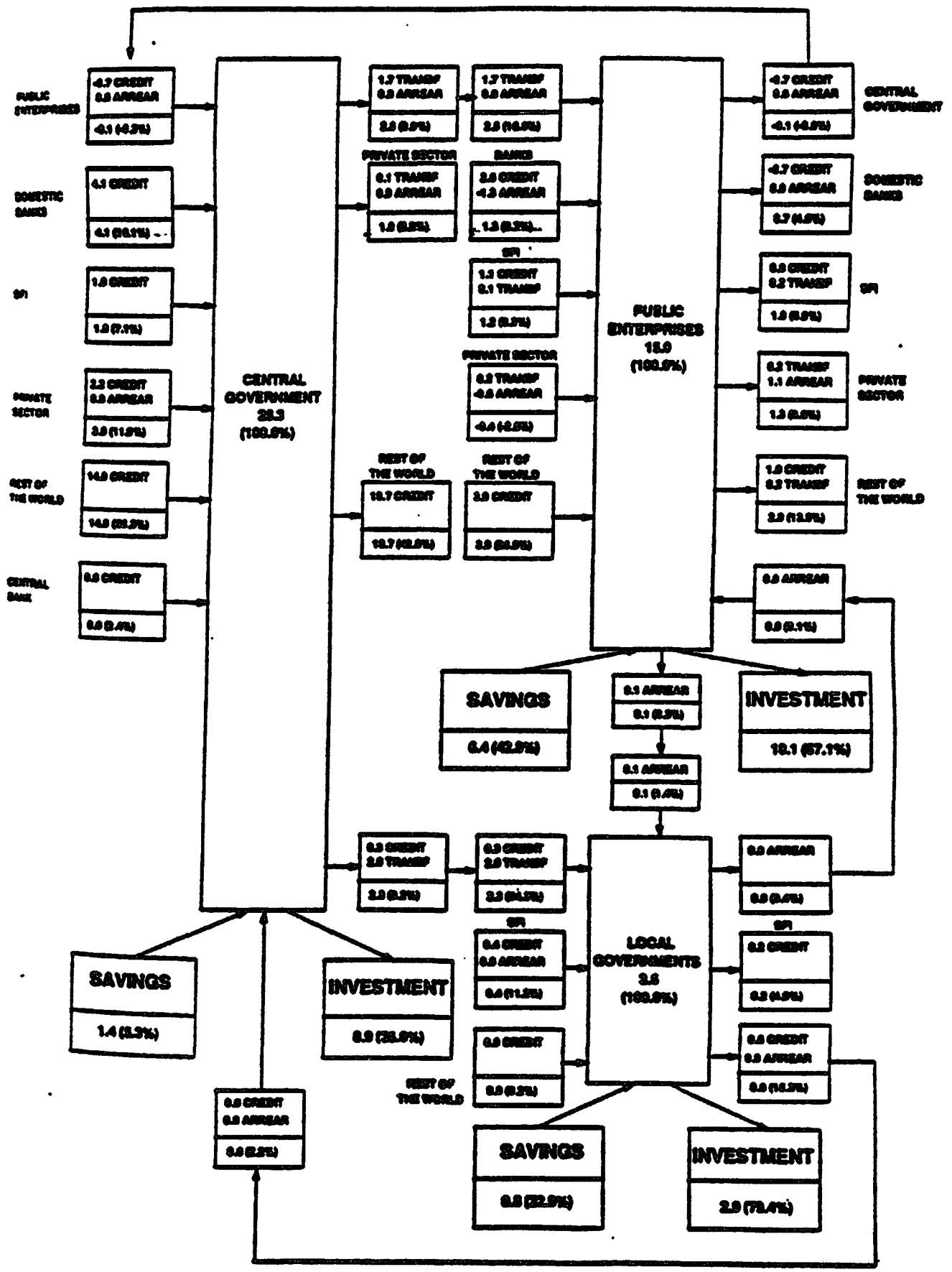
(IN BILLIONS OF DH)



NOTE: Each agent's total flows are expressed in parentheses in % of total transactions of the CG, PE and LG.

Table 9.3

DIAGRAM 1(b): PUBLIC SECTOR CAPITAL TRANSACTIONS - 1989
(IN BILLIONS OF DH)



APPENDIX: The Complete Flow of Funds

48. In this appendix, we illustrate the complete flow of funds matrices that underlie the analysis of the public sector. The current flows are broken down into transfers, taxes, dividends, and interest for each sector. Capital accounts are broken down (where possible) into changes in credit, changes in arrears, transfers and, where applicable, changes in equity participation. In Tables A.1 and A.2 only the sum of the flows is reported to simplify the presentation. Annex I provides a more detailed description of these accounts and their derivation.

49. The current accounts summarize the sources of funds for each sector in the economy and its allocation to different uses. The sources of funds for each sector are current transfers (and taxes for the CG and LG), dividends, and interest received from all the other sectors as well as the value-added generated by the production activities. These funds are in turn used by each sector to pay transfers, dividends, and interest to the other sectors, as well as to purchase goods and services; the excess of income over expenditures for each sector defines its savings.

50. The row "Central Government", for example, indicates that the CG receives direct taxes from the private sector, direct taxes and dividends from the financial institutions[49] and PEs, and transfers from the RW. Finally, the valued-added category represents indirect taxes paid to the CG.[50] In the columns "CG", these funds are in turn allocated to the private sector in the form of interest payments on the CG debt and consumer subsidies; to financial institutions, the LG and the RW in the form of interest payments and transfers[51]; and to final consumption on goods and services. The excess of these current expenditures over total sources of funds represents the CG savings[52].

49/ The term "financial institutions" refers to the banks, SFI, and CB.

50/ In the national accounts, indirect taxes represent the difference between GDP at factor cost (i.e., the sum of value-added) and GDP at market prices. The classification of taxes between direct and indirect is presented in Annex I.

51/ The sum of DH 1,006 million for the LG refers entirely to the 30% of the VAT which is allocated to equilibrate the recurrent budgets of the LG, since that is the only current transaction between the LG and the CG. See Annex I for details.

52/ This amount is lower than the savings shown in the CG accounts (see Table I.1). This results from the difference in classification of certain expenditure items. In particular, the 30% of the VAT allocated to the LG is classified as capital expenditures in the CG accounts, while much of this transfer is of a current nature (see previous footnote). Similarly, the CG contribution to cover part of the SFIs' foreign exchange losses is also classified as a capital expenditure by the CG, while it should be

TABLE A.1: FLOW OF FUNDS - CURRENT ACCOUNTS 1989

In Millions of Current Dalasis

USES	Private Sector	Banks	SFI	Central Bank	Central Govt	Local Govt	Public Enterp.	Rest of World	SUB-TOTAL (a)	VALUE ADDED (b)	[illegible]
[illegible] Sector	—	2490	769	0	3671	38	50	12575	19593	135720	[illegible]
[illegible]	3280	—	584		2270	0	2900	0	9034	1276	[illegible]
[illegible]	2409	101	—	0	653	151	1611	0	4925	463	[illegible]
[illegible] Bank	76	1226	.	—	214	0	0	263	1777	211	[illegible]
[illegible] Govt	7222	504	273	614	—	0	4549	2597	15759	28065	[illegible]
[illegible] Govt	1835	8	10	0	1006	—	618	0	3477	0	[illegible]
[illegible]. Enterpr.	0	495	0	0	664	0	—	0	1159	25841	[illegible]
[illegible] of World	591	0	732	69	11485	0	3016	—	15893	49652	[illegible]
[illegible] & Serv.	115286	3449	870	986	22515	2459	7849	41771	195185	—	195185
[illegible] EXP. (a)	130699	8271	3238	1669	42478	2648	20593	57206	266802	—	[illegible]
[illegible] (b)	24614	2039	2150	319	1346	829	6407	8339	46043	—	46043
[illegible] (a+b)	155313	10310	5388	1988	43824	3477	27000	65545			
										241228	

NOTES:
- GDP: Gross Domestic Product
- GNP: Gross National Product
- GNS: Gross National Savings
- GDS: Gross Domestic Savings
- M,X: Imports and Exports of Goods and Non-Factor Services
- CA: Current Account (bdr = before debt relief)
- FS: Foreign Savings
- RESC: Rescheduling Gains

191576 = GDP	7881 = FS = X - M	195185 = GDP+M-S = C+X
181735 = GNP	-6840 = CA	153414 = C
37704 = GNS(bdr)	-1499 = RESC (- = gain)	41771 = X
38162 = GDS	-8339 = CA bdr	49652 = M
241228 = GDP+M	GNS+ (- (CA+RESC)) =	46043 = S = (GDS+FS)

In the VALUE-ADDED column, the entry in Rest of the World row corresponds to Imports.
In the Goods & Services row, the entry in Rest of the World column corresponds to Exports.
(See Annex I for details)

treated as a current transfer. The misclassification of these expenditures overstates the size of CG savings, or, alternatively, overstates its capital spending. One of the advantages of a consistent set of Flow of Funds accounts is to provide a more accurate picture of the savings-investment balances of the different agents in the economy.

TABLE A.2: FLOW OF FUNDS - CAPITAL ACCOUNTS 1989

In Millions of Current Dirhams

USES: / SOURCES:	Private Sector	Banks	SFI	Central Bank	Central Govt	Local Govt	Public Enterpr.	Rest of World	SUB-TOTAL (a)	SAVINGS (b)	TOTAL (a+b)
vate Sector	—	5307	3436	1151	981		1283	2720	14878	24613	39491
:ks	5463	—	-198	4248	0	0	682		10195	2039	12234
·	3245	-107	—		0	178	1033	3302	7651	2150	9801
:ral Bank	3739	1640	-37	—	0	0	0	343	5685	319	6004
:r/l Govt	3010	4087	1801	605	—	553	-68	14002	23990	1347	25337
:a: Govt	0	0	407	0	2329	—	49	9	2794	829	3623
:. Enterpr.	-389	1307	1244		2513	14	—	3881	8570	6407	14977
: of World	2012	0	3148		10653		1946	—	17759	8339	26098
-TOTAL (a)	17080	12234	9801	6004	16476	745	4925	24257			
ESTMENT (b)	22411	0	0	0	8861	2878	10052	1841		46043	
TOTAL (a+b)	39491	12234	9801	6004	25337	3623	14977	26098			

:.wk1

I: Total Investment
S: Total Savings

I = 46043 = S

51. The capital accounts describe the savings-investment balance for each economic agent. These accounts state that savings plus changes in financial liabilities (sources of funds) are equal to investment plus changes in financial assets (uses of funds). For example, the row "Public Enterprises" in table A.2 indicates that PEs receive financial resources from[33] the private sector through increases in equity participation[34], the issue of domestic debt and increases in arrears; from financial institutions through extension of credit, increased equity participation and increases in arrears; from the CG through increased equity participation, capital transfers, and increases in arrears; from the LG through increases in arrears; and from the RW through disbursements of foreign loans. Savings are then added to these flows to obtain total capital resources. These resources are in turn allocated to reduce arrears vis-à-vis the other agents, increase equity participation in private sector companies, repay loans to the financial system and abroad, and accumulate real assets (investment).

52. The consistency of the flows of funds presented here with the national accounts can be verified by summing up the entries in the value-added column of the Current Accounts table (Table A.1). This sum (DH 241,228 million) corresponds to GDP (DH 191,576 million) plus imports (DH 49,652 million), i.e., total available supply of goods and services in the economy. This amount equals total final consumption by all agents (DH 153,414 million), plus exports (DH 41,771 million) plus total savings (DH 46,043 million).

33/ i.e, increase their liabilities vis-à-vis the other agents.

34/ It should be recalled that the definition of the PE sector adopted in this study includes enterprises which have some private sector participation

THE KINGDOM OF MOROCCO

ISSUES AND PROSPECTS IN THE PUBLIC SECTOR

Derivation of the Flow of Funds

1. This annex describes the construction of a simple flow-of-funds matrix for Morocco[1], the purpose of which is two-fold. First, the flow-of-funds accounts are used to evaluate within an internally consistent framework what the most important financial links within the public sector, between the public sector and the rest of the economy, and their evolution since 1982 - the year preceding Morocco's balance of payments crisis. This analysis is carried out in the report. Second, the flow-of-funds exercise provides a map of public sector real and financial flows which can be used to facilitate the conduct of macroeconomic policy[2]. Such a synthetic statistical tool is frequently available in other developing countries, and it is generally regarded as a useful instrument of financial planning at the macroeconomic level.

2. The methodology for estimating these flows relies heavily on the primary sources of data usually available within the Moroccan administration (see below for a list of the data sources used). However, often, a different breakdown from that available is needed for the flow-of-funds exercise, and in that case, we have relied on the ministerial departments (and the Central Bank) for their expertise. Furthermore, as is clear from the double-entry nature of the flow of funds, different sources may give different data and their reconciliation must be undertaken.

3. The practical value of the flow-of-funds instrument, especially for policy makers, would be lost if it could not be updated in time every year. Therefore, some flows need to be estimated before the official data become available since a precise evaluation may not be obtained quickly, if at all. This is turn implies that a margin of error--possibly significant--has to be accepted to obtain an overall view quickly.

1/ This exercise does not attempt to provide a complete update of the extensive work carried out in 1982 by the Department of Statistics in the Ministry of Plan. The Plan's work provided a much more detailed and complete flow of funds for the Moroccan economy, following their previous exhaustive work leading to the construction of the Moroccan 1980 input-output tables.

2/ The regular national accounts updates of the Ministry of Plan provide information regarding the flow of funds in the economy. However, the data do not usually become available with the detail needed to generate intra-public sector flows and to consolidate the public sector accounts.

-4. Consistency in the accounts is obtained by adjusting the categories for which information is least available (e.g., changes in arrears, dividends paid abroad) and by treating the private sector in general as the residual agent. This "manual" approach has been chosen instead of those based on algorithms which distribute discrepancies among the different "cells" of the matrix according to a preselected set of weights reflecting the degree of confidence placed on the information of each "cell"[3]. The resulting matrices are presented in Tables A.I.1 and A.I.2

DATA SOURCES [and ACRONYMS]

National Accounts (Ministère du Plan). [NA-MP]

Statistiques du trésor (Direction du trésor). [ST]

Income Statement and Profit & Loss Account of the Central Bank (Bank Al-Maghrib). [BA-IS]

Balance Sheets of the Central Bank, Banks and SFIs (Bank Al-Maghrib Annual Report) [BA-AR]

Consolidated Income Statement and Profit & Loss Account of Commercial Banks (Bank Al-Maghrib). [DB-IS]

Evolution of Domestic Debt of the Central Government (Direction du trésor). [DD]

Income Statements and Balance Sheets of the SFIs (CIH, CNCA, CDG, FEC, BNDE). [SFI-IS] and [SFI-BS]

DEPP Database. [DEPP]

Balance of Payments (Office de changes) [OC]

Debt Reporting System of the World Bank [DRS].

1. The Central Government

A. Current Account: Sources of Funds

(A.1) Breakdown of Taxes. The breakdown is undertaken in two stages. First, government revenues are separated into direct taxes, indirect taxes and transfers (which include dividends and transfers from abroad accruing

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3/ It could be argued that the approach followed in the report attaches weights of zero on the private sector entries and in some specific cells, while placing a weight of one on all others.

TABLE A.1.1 : FLOW OF FUNDS - CURRENT ACCOUNTS 1989

In Millions of Current Dirhams

	Private	Banks	SPE	CB	CG	LG	P.E.	R of World	SUBTOTAL (a)	VALUE ADDED (b)	TOTAL (a+b)
DIV							50		50		
INT		2.490	769		1.675			8	4.942		
TRA					1.986	38		12.567	14.691		
TAX									0		
TOT		2.490	769	0	3.671	38	50	12.575	19.599	135.720	155.319
DIV									0		
INT	3.280		584		2.270		2.900	0	9.034		
TRA									0		
TAX									0		
TOT	3.280	0	584	0	2.270	0	2.900	0	9.034	1.276	10.310
DIV	35						11		46		
INT	2.374	101			353	151	1.600	0	4.579		
TRA					300				300		
TAX									0		
TOT	2.409	101	0	0	653	151	1.611	0	4.925	463	5.388
DIV									0		
INT	76	1.224			214			263	1.777		
TRA									0		
TAX									0		
TOT	76	1.224	0	0	214	0	0	263	1.777	211	1.988
DIV			105	350			891		1.346		
INT									0		
TRA								2.597	2.597		
TAX	7.222	504	168	264			3.658		11.816		
TOT	7.222	504	273	614	0	0	4.549	2.597	15.759	28.065	43.824
DIV									0		
INT									0		
TRA					1.006				1.006		
TAX	1.835	8	10				618		2.471		
TOT	1.835	8	10	0	1.006	0	618	0	3.477		3.477
DIV									0		
INT		495			156				651		
TRA					508				508		
TAX									0		
TOT	0	495	0	0	664	0	0	0	1.159	25.841	27.000
DIV							50		50		
INT	591	0	732	69	7.370		2.966		11.728		
TRA					4.115				4.115		
TAX									0		
TOT	591	0	732	69	11.485	0	3.016	0	15.893	49.452	65.345
DIV	35	0	105	350		0	1.002	0			
INT	6.321	4.310	2.055	69	12.034	151	7.466	271			
TRA	0	0			7.923	38	0	15.164			
TAX	9.057	512	178	264		0	4.276	0			
TOT	15.413	4.822	2.338	683	19.983	189	12.744	15.435			
	115.286	3.449	870	986	72.315	2.499	7.849	41.771			193.185
(a)	130.699	8.271	3.238	1.669	42.678	2.648	20.593	57.206			
(b)	34.614	2.099	2.159	319	1.346	529	6.457	8.339			46.043

TABLE A.1.2: FLOW OF FUNDS – CAPITAL ACCOUNTS ,1989

In Millions of Current Dalasis

USES / SOURCES		Private	Banks	SFT	CB	CD	LG	P.E.	R of World	TOTAL CAPITAL INFLOWS (a)	SAVINGS (b)	TOTAL
Private Sector	CREDIT		5,307		1,151				2,720	9,178		
	TRANSFERS					100		230		330		
	ARREARS					881		1,053		1,934		
	TOTAL		5,307	3,436	1,151	981		1,283	2,720	11,378	24,613	
Banks	CREDIT	3,463		(190)	4,248			663		10,178		
	TRANSFERS									0		
	ARREARS							17		17		
	TOTAL	3,463		(190)	4,248			682		10,195	2,009	
SFT	CREDIT	3,245	(107)				178	833	3,302	7,451		
	TRANSFERS							230		230		
	ARREARS									0		
	TOTAL	3,245	(107)				178	1,033	3,302	7,681	2,130	
Central Bank	CREDIT	3,739	1,640	(57)						5,342		
	TRANSFERS								343	343		
	ARREARS									0		
	TOTAL	3,739	1,640	(57)					343	5,685	319	
Government	CREDIT	2,230	4,082	1,801	605		540	(697)	14,002	22,563		
	TRANSFERS									0		
	ARREARS	780	5				13	629		1,427		
	TOTAL	3,010	4,087	1,801	605		553	(68)	14,002	23,990	1,247	
Local government	CREDIT			405		324			9	738		
	TRANSFERS					2,005				2,005		
	ARREARS			2				49		51		
	TOTAL			407		2,329		49	9	2,794	529	
Public Enterprises	CREDIT		2,621	1,000					3,881	7,552		
	TRANSFERS	187		154		1,720				2,061		
	ARREARS	(378)	(1,314)			703	14			(1,115)		
	TOTAL	(189)	1,307	1,244		2,913	14		3,881	8,570	6,407	
Rest of the World	CREDIT	2,012		3,140		10,633		1,946		17,551		
	TRANSFERS							230		230		
	ARREARS									0		
	TOTAL	2,012		3,140		10,633		1,946		17,730	8,339	
TOTAL CAPITAL OUTFLOWS (a)	CREDIT	16,689	13,543	6,201	6,004	10,977	718	2,317	23,914			
	TRANSFERS	187	0	154	0	3,855	0	460	343			
	ARREARS	204	(1,309)	2	0	1,644	27	1,748	0			
	TOTAL	17,080	12,234	9,601	6,004	16,476	745	4,025	24,257			
INVESTMENT (b)		22,411	0	0	0	5,861	2,578	10,852	1,841		46,043	
TOTAL (a+b)												

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directly to the CG budget as revenues)[4]. In the second stage, direct taxes are broken down by recipient (the CG and the LG) and by payer (the Private Sector, PEs, Banks, and SFI). This second stage is done as follows.

- Corporate taxes (IS and PSN) paid by PEs, banks, SFIs and the Central Bank (CB) for 1989 are estimated on the basis of the provisions made in 1988 for these taxes in their respective P&L accounts. The balance is attributed to the private sector.

- 25% of LG receipts are assumed to be obtained from the PE sector.

- the above condition is sufficient to allocate to the CG and the LG the amounts of taxes in the P&L accounts for PEs appearing under the heading "*Impôts et taxes*" (i.e., all direct taxes except IS and PSN). The same shares of "*Impôt et taxes*" going to CG and LG are assumed to hold for the Banks and SFI[5].

(A.2) Dividends (DH 1,346 m.) are from [ST] (*Evolution des monopoles et exploitations*).

(A.3) Transfers from abroad are from the current account and include fishing royalty fees for the use of Moroccan waters [OC][4].

(A.4) Indirect Taxes (DH 28,065) appear under the column "value-added" for the CG.

B. Current Account: Uses of Funds

(B.1) Interest Payments. The interest payments on domestic CG debt in 1989 are calculated on the basis of the stock held by each agent at the end of 1988 by applying an estimate of the weighted average interest rates as follows:

4/ For the purpose of the flow of funds, direct taxes accruing to the CG comprise the following (see [ST]): IS & PSN, IBP, PTS, *Taxe urbaine*, *Taxe de license*, *Contribution complementaire*, *Taxe sur produits des actions*, *Majorations de retards*, *Taxe sur le profits immobiliers*. The total for 1989 is DH 10,374 m. Transfers (DH 2,270 m.) comprise total dividends and fishing royalties paid by the EEC (the latter are classified under *Produits divers* in [ST] and are treated as transfers from the rest of the world in the flow of funds). Indirect taxes are the rest of the government revenues. For the LG, all revenues are classfied as direct taxes (except CG transfers).

5/ The Central Bank in Morocco does not pay any taxes to the local governments.

DEBT HOLDER	RATE 1989	STOCK 1988	INTEREST PAYMENTS
		-- (In millions of dirhams) --	
Public Enterprises	6%	2,604	156
SFI	11%	3,210	353
Private Sector	11%	15,225	1,675
Subtotal		21,039	2,184

The residual (Banks = DH 2,270 m.) is obtained as the difference between total interest payments on CG domestic debt (DH 4,454 m.) and the subtotal above. The implicit average interest rate for the banks would thus be 7.4%. This rate is very close to the weighted average rate which would emerge under the hypothesis that half of CG debt is in the form of mandatory placements at 4.25%, and the rest at 11%. The amount of interest paid by banks is also close to the amount that appears in [DB-IS] (DH 2,525 m.).

Interest paid by the CG to the CB is calculated from [BA-IS] and corresponds to the lines:

	Discount income on customs draft and surety bonds	(DH 143 m.)
+	Interest payments (under "*Gouvernement*")	(DH 2 m.)
+	Commissions (under "*Gouvernement*").	(DH 69 m.)

Interest payments on foreign debt are from the balance of payments [OC] -- see (A.2) for the rest of the world below.

(B.2) Transfers.

* Transfers paid to the private sector (DH 1,996 m.) are the sum of consumer subsidies in [ST], plus the items under the headings "interest rebates" and "TME" (subsidies to Moroccan workers abroad) appearing under the investment budget of the Ministry of finance ("*Charges Communes*").

* Transfers to the SFI (DH 300 m.) are interest rebates under the foreign exchange coverage scheme financed in the "*Charges Communes*".

* Transfers to PEs (DH 508 m.) refers to total current transfers effectively received by the sample of PEs in the DEPP database, excluding ORMVAs and *Centres de Travaux*, which are considered as part of the CG administration for the purpose of this report. This amount is very close to that appearing in the ST (DH 569 m.).

* Transfers to the LG (DH 1,006 m.) are the portion of the VAT transfers which are eventually allocated to the recurrent budgets of the LG.

* Transfers to the rest of the world are from the balance of payments [OC].

(B.3) Goods and Services (DH 27,352) are the total current expenditures of the CG budget [ST] adjusted for the uses in (B.1) and (B.2) to avoid double counting.

(B.4) Savings is the current balance in the [ST] adjusted for the current expenditures identified above which appear in the investment budget of the Ministry of Finance[6].

C. Capital Account: Sources of Funds.

(C.1) Credit.

* Credit from the private sector (DH 2,230 m.), banks (DH 4,082 m.), SFI (DH 1,801 m.), and PEs (- DH 697 m.) is derived from the increase in CG debt holdings for each agent between 1988 and 1989 as illustrated in the table below:

Table A.I.3
EVOLUTION OF THE DOMESTIC DEBT OF THE CENTRAL GOVERNMENT
(In Millions of Dirhams)

Debt Holder	1988	1989	Increase 1988-89	% change
Banks	30,532	34,614	4,082	13.4
SFI	3,210	5,011	1,801	56.1
Public Enterprises	2,604	1,907	-697	-27.8
Private Sector	15,225	17,455	2,230	14.6
TOTAL	51,571	58,987	7,416	14.4

Source: Ministry of Finance.

* Credit from the CB (DH 605 m.) is the increase in CB claims on the Treasury [BA-BS].

6/ This adjustment will reduce the amount of the CG savings compared to what appears in the CG budget (Table I.1 in the report). In fact, there are considerably more current expenditures classified under the capital budget in Morocco than those identified above. A more detailed adjustment is the work painstakingly undertaken in the context of the national accounts, and which is well beyond the scope of the present report. Nevertheless, the adjustment that is made for the construction of the Flow of Funds does provide a more realistic indication of the savings effort by the CG than what appears in the published Treasury's statistics.

* Credit from the rest of the world (DH 14,002 m.) is from the balance of payments [OC] and includes the rescheduling gains both in terms of interest and principal (since amortisations and interest payments appear on a "before debt relief" basis).

* Credit from the LG (DH 451 m.) refers to the surplus generated by the LG sector assumed to be deposited at the Treasury General, which is the exclusive deposit taker of the LG. The amount is somewhat different from that appearing in Table I.2 (DH 320 m.).

(C.2) Changes in Arrears by the CG are estimated on the basis of the increase in the total arrears appearing in the CG accounts (DH 1,982 m.--see table I.1 in the report). This amount is broken down among the different agents and modified to take into account the data available from other sources (e.g., PEs). It is treated as a residual (balancing) for all sectors both as a source and a use of funds.

(C.3) Savings is from (B.4) above.

D. Capital Account: Uses of Funds.

(D.1) Credit.

* Credit to the LG (DH 324 m.) refers to an exceptional loan made by the Treasury to finance the reduction of arrears by LG.

* Credit to the rest of the world represents amortisation payments on CG debt (before debt relief).

(D.2) Capital Transfers.

* Transfers to the private sector (DH 100 m.) is the capital subsidy to promote hotel construction appearing in the CG investment budget.

* Transfers to the LG (DH 2,005 m.) is the total VAT transfers reduced by the amount allocated to the current budgets of the LG.

* Transfers to PEs (DH 1,750 m.) are the capital transfers to the sector (excluding the ORMVAs and the *Centres de travaux*) plus increases in CG equity participation in PEs.

(D.3) Changes in Arrears. (see C.2 above.)

2. The Local Governments

A. Current Account: Sources of Funds

(A.1) Taxes (DH 2,471 m.) are derived from the administrative accounts of the LG and are allocated to the various agents in the economy following the approach described above for the CG.

(A.2) Transfers: See (B.2) for the CG. This amount (DH 1,006 m.) is somewhat different from that shown in Table I.2 due to the adjustment needed to equilibrate the overall flow-of-funds matrix.

B. Current Account: Uses of Funds.

(B.1) Interest payments are derived from the Income Statement of the FEC (*Fonds d'équipement communal*).

(B.2) Transfers to private sector (DH 38 m.) correspond to the item "subsidies" in the administrative accounts of the LG.

(B.3) Goods and services (DH 2,459 m.) total current expenditures adjusted for the interest payments and other transfers.

(B.4) Savings is the difference between total sources and uses of funds.

C. Capital Account: Sources of Funds

(C.1) Credit

* Credit from the SFI (i.e., the FEC) for DH 405 m. is estimated from the FEC Annual Reports.

* Credit from the Treasury is from (D.1) for the CG above.

* Credit from abroad (DH 9 m.) is the disbursements under the "*Fonds de villes arabes*" (multilateral arab aid protocol for municipal finance).

(C.2) Transfers (DH 2,005 m.) is the share of VAT transfers attributable to capital spending (see (D.2) for the CG above).

(C.3) Changes in arrears (DH 49 m. with respect to PEs and DH 2 m. with respect to the SFIs) are estimated on the basis of information provided by the Ministry of Interior and are made compatible with the information available for PEs and the FEC.

D. Capital Account: Uses of Funds

(D.1) Credit.

* Credit to the SFI (DH 178 m.) represents an estimate of the amortization payments made by the LG to the FEC.

* Credit to the CG: See (C.1) for the CG above.

(D.2) Changes in arrears. (DH 27 m.): See (C.3) above.

(D.3) Investment (DH 2,878 m.) is derived from the LG administrative accounts and information from the Ministry of the Interior and Ministry of Finance.

3. The Public Enterprises

A. Current Account: Sources of Funds

(A.1) Value added for the sector is estimated on the basis of DEPP data as follows (in millions of DH):

VALUE ADDED = TURNOVER - PURCHASES OF MATERIALS - WAGES - INDIRECT TAXES.

25,841 = 85,973 - 46,596 - 6,628 - 6,908

(A.2) Transfers see (B.2) for the CG above.

(A.3) Interest Income

* Interest income from CG debt (DH 156 m.): See (B.1) for the CG above.

* Interest income from banks (DH 495 m.) is estimated by applying an average interest rate of 5% on PE deposits held in the banking system. The banks deposits are in turn derived from the DEPP database.

B. Current Account: Uses of Funds.

(B.1) Dividends are obtained by applying the following ratios of equity ownership for the dividend-paying enterprises in the DEPP database: 89% CG, 5% private sector, 5% foreign and 1% SFI. The total dividend payment is from [ST] (see (A.2) for the CG above).

(B.2) Interest Payments are estimated on the basis of financial expenses (around DH 7.5 billion) and financial liabilities (around DH 90 billion, excluding equity and arrears) for the sector as reported by the DEPP database. The following ratios were used to allocate total liabilities: 27% banks, 27% SFI and 54% foreign. The following average interest rates were applied to estimate domestic interest payments: 6.5% for the SFI and 11.5% for banks. The interest payments on foreign debt are from the balance of payments.

(B.3) Taxes (DH 4,276 m.) are from the DEPP database and are allocated between CG and LG according to the calculations indicated in (A.1) for the CG above.

(B.4) Goods and services (DH 7,849 m.) are calculated residually by subtracting savings (see below) and uses (B.1) through (B.3) above from total sources of funds.

(B.5) Savings (DH 6,407 m.) is obtained from the DEPP database by adding amortizations and other provisions to net income.

C. Capital Account: Sources of Funds.

(C.1) Credit. Net credit from SFI and banks is estimated based on the changes in domestic liabilities to the financial system for the PE sector as reported by the DEPP database (approximately DH 2.2 billion). New disbursements and repayments are then derived based on DEPP information regarding new credit to the major PEs and the constraints imposed by the flow of funds matrix. Credit from abroad is derived from the balance of payments.

(C.2) Transfers.

* Transfers from the CG (DH 1,750 m.): See (D.2) for the CG above.

* Transfers from the private sector (DH 187 m.) and from the SFI (DH 154 m.) refers to the estimated increases in their respective equity participation in PEs.

(C.3) Changes in arrears are derived from information provided by the DEPP and the Treasury.

D. Capital Account: Uses of funds.

(D.1) Credit. See (C.1).

(D.2) Transfers represent increases in PEs (net) equity participation in domestic private sector non-financial enterprises (DH 230 m.), SFI (DH 230 m.) and foreign companies (DH 200 m.) based on information provided by the DEPP.

(D.3) Changes in arrears are derived from information provided by the DEPP and the Treasury.

(D.4) Investment (DH 10,052 m.) is based on the changes in the consolidated balance sheet for the sample of PEs in the DEPP database. The balance sheet items that are considered to represent physical assets are *immobilisations brutes* plus *autres valeurs immobilisées* minus *titres de participation*. The volume of investment which is derived appears reasonable in light of the gross fixed investment reported for the major 11 PEs the same year (DH 8,724 m., or 87% of the total). The ratio is approximately the same for the preceding year (1988).

4. The Central Bank

A. Current Account: Sources of Funds

(A.1) Value added (DH 211 m.) represents CB profits (after tax) reported in the income statement of the Bank Al-Maghrib [BA-IS].

(A.2) Interest Income

* Interest income from the private sector (DH 76 m.) is from [BA-IS]. It is the sum of discount earnings and commissions under the category "Other".

* Interest income from banks (DH 1,224 m.) is obtained from the [BA-IS]. It corresponds to the sum of rediscount earnings, interest and commissions.

* Interest income from abroad (DH 263 m.) is derived from the balance of payments (see (B.1) for the rest of the world below) and is very close to the amount shown in [BA-IS] (DH 234 m.).

* Interest income from the CG: See (B.1) of CG above.

B. Current Account: Uses of Funds.

(B.1) Dividends (DH 350 m.): See (A.2) of the CG above.

(B.2) Taxes (DH 264 m.) are based on the tax provisions made in the P&L account of the CB for the preceding year, since taxes are paid with a lag of one year.

(B.3) Interest (DH 69 m.) is based on the residual item in [BA-IS] (DH 84 m.) which is mostly in the form of commissions charges on the foreign exchange transactions of the CB.

(B.4) Goods and services (DH 986 m.) is calculated residually by subtracting savings (see below) and uses (B.1) through (B.3) above from total sources of funds.

(B.5) Savings (DH 319 m.) is obtained from the increase in net worth (capital and reserves) of the CB between 1988 and 1989.

C. The Capital Account: Sources of Funds

(C.1) Credit

* Credit from banks (DH 1,640 m.) is the change in liquid CB reserves between 1988 and 1989 [BA-BS].

* Credit from SFI (- DH 37 m.) is the change in cash held in CB (*encaisses et valeurs à recouvrir*) [BA-BS].

* Credit from the rest of the world (DH 343 m.) is the decrease in net foreign assets held by the CB [BA-BS].

* Credit from the private sector is obtained residually from the difference in total liabilities (excluding net-worth) between 1988 and 1989.

D. Capital Account: Uses of funds

(D.1) Credit

* Credit to banks (DH 4,248 m.) is the difference in CB claims on deposit banks between 1988 and 1989 [BA-BS].

* Credit to the CG (DH 605 m.): See (C.1) for the CG above.

* Credit to the private sector (DH 1,151 m.) is calculated residually.

5. The Commercial Banks

A. Current Account: Sources of Funds

(A.1) Value added (DH 1,276 m.) represents the profits of the banking system estimated on the basis of their consolidated P&L account [DB-IS].

(A.2) Interest Income

* Interest income from PEs and the CG have been calculated above as their respective interest expenses.

* Interest income from SFI (DH 584 m.) and private sector (DH 3,280 m.) is obtained from [DB-IS] and [SFI-IS].

B. Current Account: Uses of Funds

(B.1) Taxes to the CG (DH 504 m.) and to the LG (DH 8 m.) are derived above under the current accounts for the CG and the LG.

(B.2) Interest

* Interest expenses paid to the CB (DH 1,224 m.): See (A.2) for the CB above.

* Interest expenses paid to the SFI (DH 101 m.) and private sector (DH 2,490 m.) are obtained from the [DB-IS] and [SFI-IS].

(B.3) Goods and services (DH 3,449 m.) are calculated as the sum of all non-interest expenses in [DB-IS].

(B.4) Savings (DH 2,039 m.) is obtained residually as the difference of total sources of funds minus expenses (B.1) through (B.3).

C. Capital Account: Sources of Funds

(C.1) Credit

* Credit from SFI (- DH 198 m.) is the change in SFI liabilities (*Concours et dépôts des OFS*) [BA-AR].

* Credit from the CB (DH 4,248 m.): See (D.1) for the CB above.

* Credit from PEs (DH 665 m.) and the private sector (DH 5,463 m.) (i.e.: reimbursements): See (C.1) for PEs above.

(C.2) Changes in arrears (DH 17 m.): See (D.3) for PEs above.

D. Capital Account: Uses of funds.

(D.1) Crédit

* Credit to the SFI (- DH 107 m.) is the change in loans to the SFI (*Concours aux OFS*) [BA-AR].

* Credit to the CB (DH 1,640 m.): See (C.1) for the CB above.

* Credit to the CG (DH 4,082 m.): See (C.1) for the CG above.

* Credit to the PE (DH 2,621 m.): See (C.1) for the PE above.

* Credit to the private sector (DH 5,307 m.) is the residual.

(D.2) Changes in arrears

* Settlement of arrears with respect to the CG (DH 5 m.): See (C.2) for the CG above.

* Increase in arrears by PE (DH 1,314 m.): See (C.3) for the PEs above.

6. The Specialized Financial Institutions

A. Current Account: Sources of Funds

(A.1) Value added (DH 1,276 m.) represents the profits of the SFI estimated on the basis of their P&L accounts [SFI-IS].

(A.2) Interest income

* Interest income from PEs, the CG, the LG and the banks have been calculated above as their respective interest expenses.

* Interest income from the private sector (DH 2,374 m.) is obtained residually from [SFI-IS].

(A.3) Transfers from the CG (DH 300 m.): See (B.2) for the CG above.

(A.3) Dividends from the private sector (DH 35 m.) and PEs (DH 11 m.) is based on information contained in [SFI-IS] and various annual reports of the SFI (see also (B.1) for the PEs above).

B. Current Account: Uses of Funds

(B.1) Taxes to the CG (DH 168 m.) and to the LG (DH 8 m.) are derived in (A.1) for the CG above.

(B.2) Interest

* Interest expenses paid to the rest of the world (DH 732 m.) are calculated on the basis of [SFI-IS], balance of payments data [OC] and DRS.

* Interest expenses paid to banks (DH 584 m.): See (A.2) for the banks above.

* Interest paid to the private sector (DH 769 m.) is the residual from total interest paid by SFI in [SFI-IS].

(B.3) Dividends to the CG (DH 105 m.) are from [ST].

(B.4) Goods and services (DH 870 m.) is calculated as the sum of all non-interest expenses after taxes and dividends in [SFI-IS].

(B.5) Savings (DH 2,150 m.) is obtained residually as the difference of total sources of funds minus expenses (B.1) through (B.4).

C. Capital Account: Sources of Funds

(C.1) Credit

* Credit from banks (- DH 107 m.): See (D.1) for the banks above.

* Credit from the LG (DH 178 m.): See (D.1) for the LG above.

- Credit from the PE (DH 803 m.): See (D.1) for the PE above.

Credit from the rest of the World (DH 3,302 m.) is from [OC] and it includes DH . 789 m. of interest and principal rescheduling gains (see also (C .)) for the rest of the world, below.

* Credit from the private sector (DH 3,245 m.) is the residual.

(C.2) Transfers from the PE (DH 230 m.): See (D.2) for the PE above.

D. Capital Account: Uses of funds

(D.1) Credit

* Credit to the banks (- DH 198 m.): See (C.1) for the banks above.

* Credit to the CB (- DH 37 m.): See (C.1) for the CB above.

* Credit to the CG (DH 1,801 m.): See (C.1) for the CG above.

* Credit to the LG (DH 405 m.): See (C.1) for the LG above.

* Credit to the PE (DH 1,090 m.): See (C.1) for the PE above.

* Credit to the rest of the world (DH 3,148 m.) is from the balance of payments [OC] and [DRS]. It represents an estimate of the amortization payments of the major SFIs.

* Credit to the private sector (DH 3,436 m.) is the residual.

(D.2) Transfers to PE (DH 154 m.): See (C.2) for the PE above.

(D.3) Changes in Arrears with respect to the LG (DH 2 m.): See (C.3) for LG above.

7. The Rest of the World

The accounts of the rest of the world are derived from the balance of payments as reported by the *Office des changes* [OC]. The information provided by the [OC] does not always distinguish between PEs, the CG and SFIs (since they are all public entities). Therefore the information from the [OC] is complemented by DRS, Treasury, DEPP and CB data.

The current account transactions are presented on a "before debt relief" basis. Rescheduling gains (both in terms of principal and interest) appear as capital inflows from the rest of the world to the different sector in the economy. The following break-down of rescheduling gains is estimated for 1989:

Table A.I.4
BREAKDOWN OF RESCHEDULING GAINS FOR 1989
(In Millions of Dirhams)

	CG	PE	SFI	TOTAL
Principal	6,427	1,776	1,511	9,714
Interest	895	326	278	1,499
Total	7,322	2,102	1,789	11,213

Source: Ministry of Finance; DRS; World Bank estimate.

A. Current Account: Sources of Funds

(A.1) Dividends from PE (DH 50 m.): See (B.1) for PE above.

(A.2) Interest payments are reported in [OC] broken down between public (corresponding to CG) and publicly guaranteed (PE and SFI), all on an "after debt relief" basis.

* Interest paid by the CG (DH 7,370 m.) is the amount that appears in [OC] (DH 6,544 m.) under *Revenu des investissement* (debit) for the government minus DH 69 m. which is attributed to the CB (see (B.3) for the CB above), plus interest rescheduling gains (DH 895 m. -- see Table A.I.4).

* Interest paid by the PE (DH 2,966 m.) is adjusted to include DH 326 m. of interest rescheduling gains.

* Interest paid by the SFI (DH 732 m.) is adjusted to include DH 278 m. of interest rescheduling gains.

* Interest paid by the CB (DH 69 m.): See (B.3) for the CB above.

* Interest paid by the private sector (DH 591 m.) is derived residually and refers mostly to interest on non-publicly guaranteed debt.

(A.3) Transfers from the CG (DH 4,115 m.) is the sum of DH 3,717 m. (*Transactions gouvernementales* - debit) and DH 398 m. (*Transferts publics* - debit) in [OC].

(A.4) Value-Added (DH 49,652 m.) represents the sum of imports of goods and non-factor services.

B. Current Account: Uses of Funds

(B.1) Interest

* Interest paid to the CB (DH 263 m.) is *Revenu des investissements (public)* (credit) in [OC].

* Interest paid to the private sector (DH 8 m.) is *Revenu des investissements (privé)* (credit) in [OC].

(B.2) Transfers

* Transfers to the CG (DH 2,597 m.) is the sum of DH 994 m. (*Transactions gouvernementales* -- credit) and DH 1,603 m. (*Transferts publics* -- credit) in [OC].

* Transfers to the private sector (DH 12,567 m.) corresponds to *Transferts privés* (credit) in [OC].

(B.3) Goods and Services (DH 41,771 m.) refers to exports of goods and non-factor services.

(B.4) Savings (DH 8,339 m.) is the sum of the (negative of the) current account balance before debt relief.

C. Capital Account: Sources of Funds

(C.1) Credit from and to the CG, PE, the LG, and SFI (i.e., repayment of principal and new disbursements) has been derived from [OC] with supplementary information specific to each sector as needed to obtain the breakdown required by the flow of funds. The principal repayments are on a "before debt relief" basis (see (D.1) for all the sectors above) and disbursements, therefore, incorporate total debt relief. The private sector is treated residually.

(C.2) Transfers from the PE (DH 200 m.): See (C.2) for the PE above.

D. Capital Account: Uses of Funds

(D.1) Credit: See (C.1) above and (C.1) for the CB above.

(D.2) Investment (DH 1,841 m.) represents foreign direct investment.

8. The Private Sector

The flows of funds for the private sector are derived from (a) information regarding the other sectors (e.g., dividends paid by the PE to the private sector) or (b) residually using the totals for the economy (e.g., investment) obtained from the [NA-MP].

A. Current Account: Sources of Funds

(A.1) Value added (DH 135,720 m.) is the difference between GDP (DH 191,576 m.) and the sum of the value added for the other sectors (excluding imports).

(A.2) Interest Income (DH 4,942 m.) is the sum of interest paid by banks, SFI, the CG and the rest of the world.

(A.3) Transfers (DH 14,601 m.) is the sum of transfers made by the CG and the rest of the world.

(A.4) Dividends (DH 50 m.) are paid by the CG.

B. Current Account: Uses of Funds

(B.1) Taxes paid to the CG (DH 7,222 m.) and to the LG (DH 1,835 m.) are derived in (A.1) for the CG above.

(B.2) Interest (DH 6,321 m.) is calculated as the sum of interest paid to banks, SFI, CB, and the rest of the world.

(B.3) Dividends to the SFI (DH 35 m.): See the SFI accounts above.

(B.4) Goods and services (DH 195,185 m.) are calculated as the difference between total consumption in [NA-MP] (DH 153,414 m.) and the sum of consumption for all the other sectors (excluding exports).

(B.5) Savings (DH 24,614 m.) is obtained as the difference between gross national savings (DH 37,704 m.) and the savings of all the other sectors (excluding foreign savings).

C. Capital Account: Sources of Funds

(C.1) Credit (DH 9,178 m.) is the sum of credit from banks, CB and the rest of the world.

(C.2) Transfers (DH 330 m.): See (D.2) for the CG and PE above.

(C.3) Changes in arrears (DH 1,934 m.): See (D.3) above for CG and PE.

D. Capital Account: Uses of Funds

(D.1) Credit (DH 11,226 m.) is the sum of credit extended to the CG and repayments made to banks, SFI, CB and the rest of the world.

(D.2) Transfers to the PE (DH 187 m.): See (C.2) for the PE above.

(D.3) Changes in Arrears (DH 204 m.): See (C.3) for the CG and the PE above.

(D.4) Investment is the difference between total investment (DH 46,043 m.) from [NA-MP] and the investment made by the other sectors.

10. The Aggregate Fiscal Effect of Public Enterprises

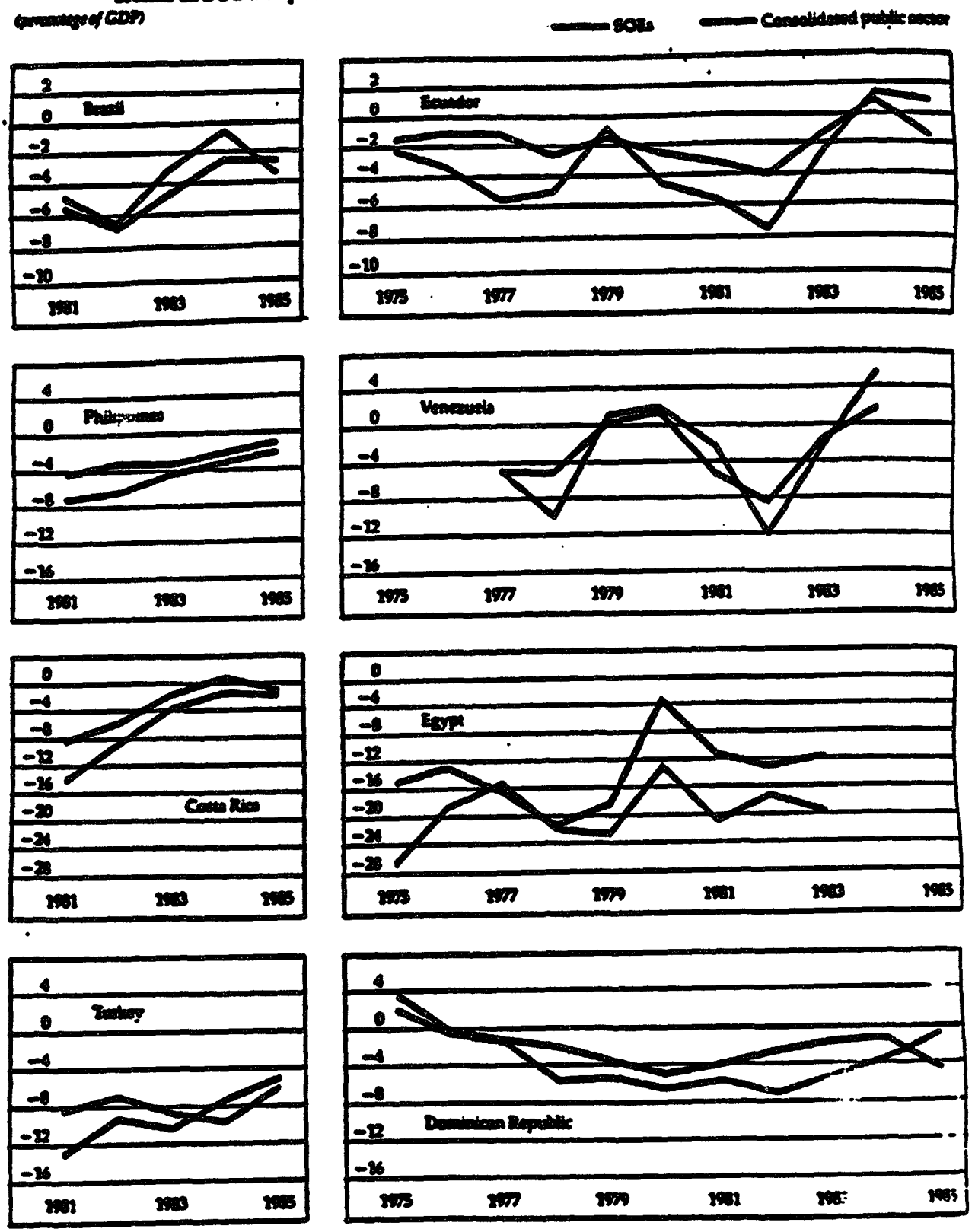
In addition to assessing direct and indirect flow of funds between public enterprises and central and local governments as a means of determining the fiscal impact of public enterprises, another approach is used in the World Development Report, 1988. It shows how the aggregate effect of state-owned enterprises (SOEs) is reflected in the overall deficit of the public sector. As noted in Table 10.1, the SOE sector had a larger deficit that the overall public sector deficit in Brazil, the Dominican Republic, Ecuador, Egypt, Turkey, and Venezuela. It is evident that the SOE drain on public finances is a factor explaining the overall financial status of the public sector.

While the flow of funds analysis provides an indication of the level of government support for public enterprises, it does not indicate the magnitude of the net transfer in relation to total government spending. In this illustration, the financial performance of SOEs is juxtaposed to overal public sector spending and deficits, and their role in the public finance picture is more pronounced.

Table 10.1

Trends in SOE and public sector balances

(percentage of GDP)



Note: SOE balances are calculated after taxes and before net transfers from government. Public sector balances are derived as total public revenue minus total public expenditure and are based on consolidated government and nonfinancial SOE accounts. The years covered vary because of differing data availability for individual countries.
Source: World Bank and IMF data.

Source: World Development Report, 1988.

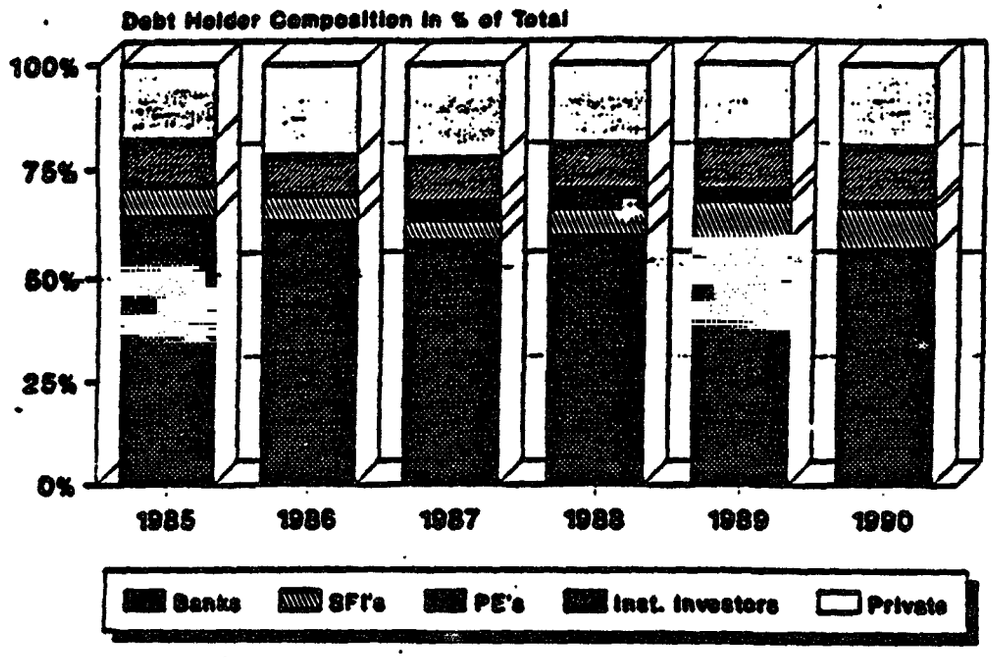
11. Public Enterprise Share of Domestic Debt

The portion of domestic debt held by public enterprises varies from less than 1 percent in Zaire to 45 percent in Benin. (Swanson and Wolde-Semait). The Morocco draft report, Issues and Prospects in the Public Sector, (Report No. 10157-MOR, 1992), illustrates domestic debt structure during the period 1985 through 1990 by disaggregating debtholder composition. The level of PE debt can be contrasted with debt held by banks, institutional investors, the private sector, and special financial institutions. In the case of Morocco, PEs account for only a small share of domestic debt, as illustrated in the graph below.

Data illustrating the share of domestic debt held by public enterprises is important for identifying the possible crowding out of private sector credit. Of course, the performance of PE loans must also be considered a factor affecting credit availability to the private sector. Large holdings of domestic debt by public enterprises, the inefficient use of borrowed funds, and the non-performance of domestic loans result in the crowding out of private sector borrowers. Study results indicate a positive correlation between private sector credit within the domestic credit structure and economic growth. (See Marsden, 1986)

Table 11.1
Morocco

Domestic Debt Structure



Source: Morocco: Issues and Prospects in the Public Sector, World Bank Report No. 10157-MOR, 1992

12. Comparing Public Enterprise and Private Sector Arrears in the Banking System

Public enterprises in Sub-Saharan Africa have generally operated not only in the absence of competition but with preferential treatment vis a vis the private sector. The report, Parastatals in Tanzania. Towards a Reform Program, (Report No. 7100-TA, 1988), provides a comparison between the arrears of parastatals and the private sector in the Tanzania Investment Bank.

As noted in Table 12.1 below, which is excerpted from the report, parastatals accounted for 73 percent of loans outstanding, of which 54 percent were in arrears. In contrast, the private sector accounted for only 27 percent of outstanding loans, of which 27 percent were in arrears.

The table illustrates the differential treatment provided to public and private sectors with regard to investment financing. In effect, the arrears allowed to the parastatals amount to expanded credit through the banking system. Reform of the public enterprise sector, which requires competition on an equal footing, would likely take note of such differential.

Table 12.1

[illegible]

Source: Report on Parastatals in Tanzania, Towards a Reform Program, Report No. 7100-TA, 1988.

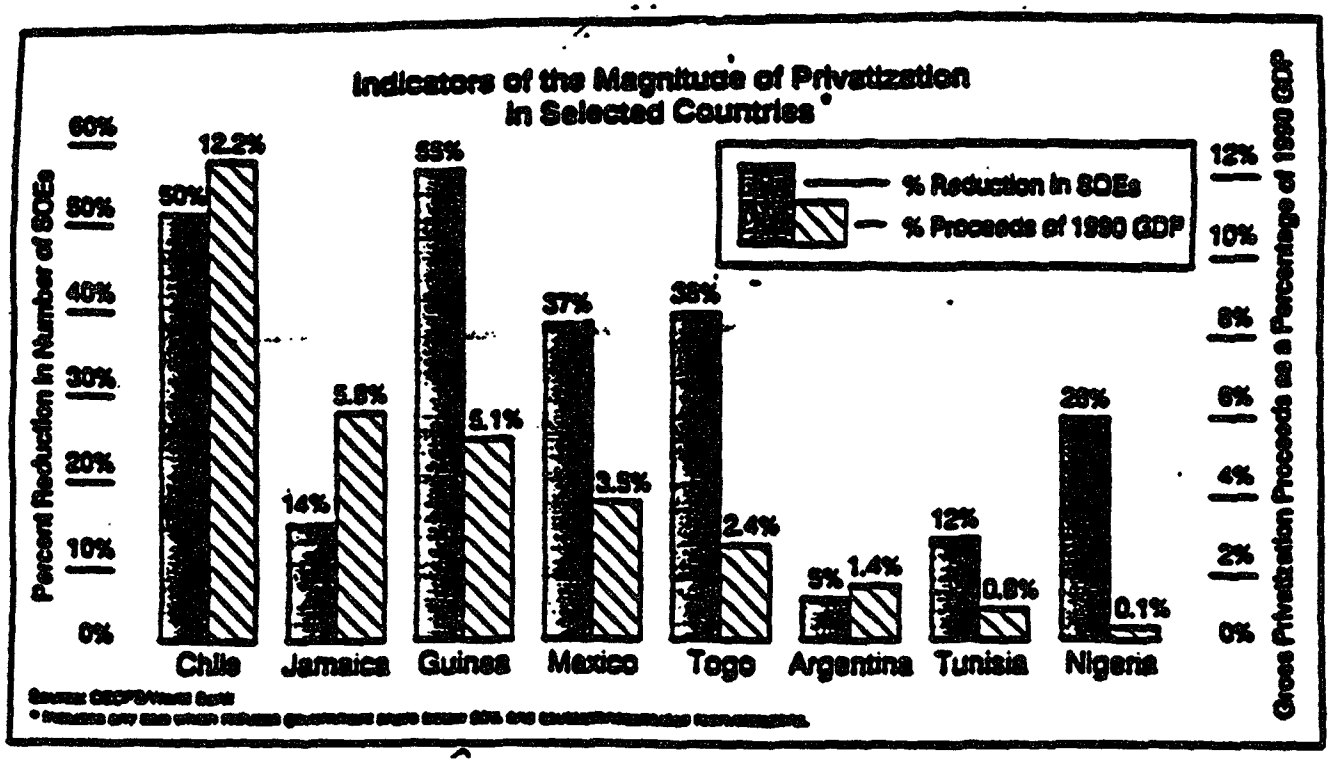
13. The Effect of Privatization on the Size of the Public Enterprise Sector

As noted above, the size of the PE sector can be characterized not only by the number of public enterprises, but more importantly, by their impact on economic indicators. Likewise, the impact of privatization efforts can be characterized not only by the number of PEs privatized, but by the impact on the economy.

A draft policy paper, Privatization: Lessons of Experience for Bank Group Lending, (1992), illustrates the number of SOEs privatized in selected countries using bar graphs that highlight the percent reduction in the number of SOEs in selected countries. The graph, which is included below, simultaneously indicates the proceeds from the sale of assets as a percent of GDP.

The juxtaposition of this data illustrates the fact that a large number of PEs can be privatized, but the impact could be relatively minimal. Likewise, a few privatized PEs could have a very significant effect. The presentation of privatization data in this way contrasts to other descriptions of the impact of privatization which tend to focus solely on the number of firms privatized. Data limitations may partly account for this fact. Nonetheless, as privatization efforts take hold, there will be a concomitant need for presentation of data that analyzes the substantive as well as numerical effects.

Table 13.1



Source: Privatization: Lessons of Experience for Bank Group Lending, (draft), 1992.

14. Economic and Financial Impact of Public Enterprise Reform

Improved efficiency and profitability are major objectives of public enterprise reform. As noted in the introduction to this review, very little systematic analysis of the results of public enterprise reform has been undertaken. The LAC region report, State-Owned Enterprise Reform in Latin America, (Occasional Paper Series, No. 2, 1991), is a first step toward more systematic analysis of the economic and financial impact of reform in Argentina, Chile, and Mexico. (See Public Enterprise Reform by Ahmed Galal, 1990, for a discussion of other, less systematic empirical research).

The report concludes that labor productivity increased in all three countries, and financial performance indicators likewise show improved profitability as a result of reforms. The table below summarizes the improvements in labor productivity and profitability.

Attached is the text discussion and tables from the LAC report which provide more detailed indicators (Tables 14.1 - 14.8).

III: STATE-OWNED ENTERPRISE PERFORMANCE

The primary objectives of state-owned enterprise reform are to improve enterprise financial and economic performance and increase the net fiscal contribution of enterprises to the government budget. The attainment of one objective does not necessarily imply the attainment of the other. Efficiency of the enterprise, for example, can be increased at the same time its net fiscal contribution declines due to the imposition of output price controls. Similarly, strict controls on government transfers to SOEs can increase the net fiscal contribution, but may come at the expense of investment required for efficient production. In this section we analyze the effects of state-owned enterprise reform on each of these objectives. The reform experience in the three countries studied has shown that SOE reform can lead to dramatic improvements in labor productivity, even where employment reduction policies are part of a targeted, rather than comprehensive, reform program. The experience in Chile has illustrated that strict control over SOE budgeting and financing can lead to a sharp positive reversal in the contribution of SOEs to the government budget. Finally, failure to improve the macroeconomic environment and distortionary policies, especially pricing policies, limit the success of reforms in improving financial performance and reducing the SOE budgetary burden.

As discussed in the previous section, SOE reform programs in Chile, Mexico, and Argentina shared a common set of objectives, but differed in terms of implementation strategies. Beginning in 1974 the Chilean government took action on all fronts, simultaneously establishing strict guidelines for SOE management to reduce costs and deficits, eliminating differential treatment of SOEs, liberalizing output prices, deregulating markets, and implementing privatizations. Mexico, beginning in 1983, followed a more gradual approach, initially seeking to control costs, maintain constant real output prices, and privatize small SOEs. These reforms were followed in 1986 by trade liberalization and financial restructuring of some enterprises. Today Mexico has one of the most comprehensive SOE reform programs in Latin America, including a broad privatization campaign and improved procedures for monitoring and evaluating SOE performance. Argentina initiated some SOE reforms in 1976, targeted toward employment and cost reduction, output price reform, and selective privatization. Although the government adopted a comprehensive SOE reform program only in 1989, review of the impact of earlier reforms on performance provides evidence on the relative success of a piecemeal, as compared with comprehensive, reform program and offers a useful comparison for analyzing the content and impact of current reforms.

Time series data are analyzed for the three countries for the periods prior to and after the adoption of SOE reform measures. The study attempted, where possible, to isolate the effects of reform and non-reform changes, especially changes in market prices for inputs and outputs. Non-availability of data, unreliable data resulting from high inflation rates, definitional differences in the performance indicators for the three countries, and differences in the competitive environment and time periods in which reforms were adopted allow for

Source: State-Owned Enterprise Reform in Latin America, Occasional Paper Series, No. 2, 1991.

only limited comparison of efficiency and profitability levels across countries.[18] We therefore focus our analysis on the comparison of performance and budgetary trends over the evolution of the reform process, with the aim of drawing conclusions on the impact of SOE reform on enterprise performance that reflect broad differences in the reform approaches employed in each country.

For each of the three countries, the economic and financial performance of SOEs and their macroeconomic impact were measured using data for a sample of SOEs and for the consolidated SOE sector. In the case of Chile, two data sources were employed to measure economic and financial performance: a large sample, which includes thirty SOEs, excluding CODELCO-CHILE, and a small sample, which includes the six largest SOEs.[19] For Mexico, labor productivity indicators for a sample of twenty "directly controlled" SOEs were used.[20] The Argentina performance indicators are based on data for the thirteen largest SOEs presented by SIGEP.[21] The budgetary, debt, and investment indicators for Chile and Argentina are based on data for the consolidated SOE sector. For Mexico macroeconomic indicators are based on data for both the "directly controlled" SOEs and the consolidated SOE sector. In the cases of Chile and Mexico in which a single large SOE predominates, some indicators are presented with and without this enterprise.[22]

A. ECONOMIC AND FINANCIAL PERFORMANCE

Economic Performance

SOE reform policies to eliminate redundant labor have resulted in substantial increases in labor productivity in each of the countries, despite

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[18] The data constraints on this study are not uncommon among public enterprise studies; the research design, too, is similar to that found in other analyses of SOE performance. See, for example, the World Bank study on South Korea (Shirley, 1989b).

[19] The large sample was obtained by selecting thirty SOEs that remained under government control during 1970-88 and for which reliable data were available from a study by Martinez (1985), which included data for 84 SOEs for the years 1970, 1973, 1979, and 1983. The small sample includes CAP, CODELCO-CHILE, CTC, EFE, ENAP, and ENDESA.

[20] The "directly controlled" SOEs are AEROMEXICO, AHMSA, ASA, AZUCAR, CAPUFE, CFE, CONASUPO, CONCARRIL, DINA, FERRONALES, FERTIMEX, FOVIGRO, FUMOSA, INMECAFE, PEMEX, PIPSA, PROFORMEX, PROPEMEX, SICARTSA, and SIDENA.

[21] In 1989 the 13 largest SOEs in Argentina were AA, AGP, AyE, ELMA, ENCOTEL, ENTel, FA, GdE, HIDRONER, OSN, SEGBA, YCP, and YPF. Some indicators are based on data for only 11 SOEs, for which consistent data are available.

[22] Chile's mining enterprise, CODELCO-CHILE, and Mexico's petroleum enterprise, PEMEX, account for more than 50 percent of the SOE sector's value added in some years and their performance fluctuates greatly with changes in output prices.

reduced capital investment. Gains in labor productivity occurred whether reforms were piecemeal or comprehensive and whether they emphasized efficiency improvements or financial performance. Labor productivity indices for Chile, Mexico, and Argentina are presented in Table III.1 and Figure III.1. Additional economic and financial performance indicators are given in Annex Tables 1 through 4.

In Chile output per worker rose steadily in all of the enterprises in the small sample, at an average rate across firms of 7 percent per annum during 1975-88.[23] For example in CAP, the steel producing enterprise, output per worker increased by 55 percent during the reform period, as a result of investments in new technology, increased foreign competition, and government pressure to improve performance. Output per worker in CODELCO-CHILE increased by 60 percent during 1976-88 as a result of improved technology and a 20 percent reduction in employment during 1971-88. The generalized increase in labor productivity in Chile is concrete evidence of the success of the government's policies to eliminate redundant labor.

The ratio of operating revenues to labor costs, a somewhat weaker measure of labor productivity, also increased over the reform period. For Chile's large sample this ratio rose by almost 20 percent between 1970 and 1974 and an additional 25 percent by 1983. This indicator provides further evidence on the impact of policies to cut employment and reduce costs.

In Mexico, as in Chile, there is evidence of increased SOE labor productivity during the reform period. After a period of falling labor productivity between 1979 and 1982, it rose sharply beginning in 1983. By 1988 average value-added per worker in the "directly controlled" enterprises (excluding PEMEX) was 48 percent higher than before the initiation of reforms.[24] The sharp decline in our estimated measure of labor productivity during 1980-82 may have resulted from social policies to maintain or increase employment, but the measure also may be distorted due to the relative deterioration in SOE output prices relative to wages during the period.

Eliminating redundant employment and increasing the contracting out of goods and services were primary objective of the SOE reforms initiated in Argentina in 1976. During 1976-82 employment decreased by 31 percent and real output increased, resulting in a 68 percent increase in output per worker for the 11 largest SOEs. The government's inability to sustain labor rationalization policies, especially during the 1981-82 recession, caused the rate of labor productivity growth to slow between 1982 and 1985, but it again picked up after

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[23] Labor productivity estimates for the small sample in Chile are based on physical units of output and the number of employees and are therefore quite reliable, as they do not require adjustments for inflation and are not affected by changes in relative prices.

[24] Productivity estimates are much less reliable in the case of Mexico than in Chile, as they are obtained by deflating the nominal SOE value-added by the economy-wide GDP deflator. Problems resulting from relative price changes are particularly important for PEMEX, which has been excluded from this indicator.

Table 14.1

Performance Indicators for SOEs in Chile, Mexico, and Argentina 1/

	Chile			Mexico		Argentina	
	(1976-80)	(1981-82)	(1983-88)	(1979-82)	(1983-88)	(1976-82)	(1983-8
Labor Productivity Index 2/	129.4 (128.5)	184.7 (190.2)	221.0 (227.3)	226.1 (120.4)	285.5 (134.8)	145.0	184.
Financial Performance (%):							
Operating Revenues/ Operating Costs	107.5 (97.8)	112.1 (107.9)	139.7 (134.0)	121.9 (92.8)	132.7 (99.9)	119.0	103
Net Income/ Fixed Assets 3/	4.2 (1.1)	-1.1 (-3.0)	4.3 (3.7)	(-6.0)	(-3.5)	NA	
Interest Payments/ Operating Revenues	8.1 (10.0)	16.8 (20.5)	12.8 (14.5)	16.2 (13.2)	21.0 (19.6)	9.1	20

Sources: Chile data from the Annual Financial Statements for the small sample; data not available for some enterprises in selected years. Mexico data from INEGI, SPP; labor productivity data are for the "directly controlled" SOEs and all other Mexico data are for the consolidated SOE sector. Argentina data from SIGEP.

Notes:

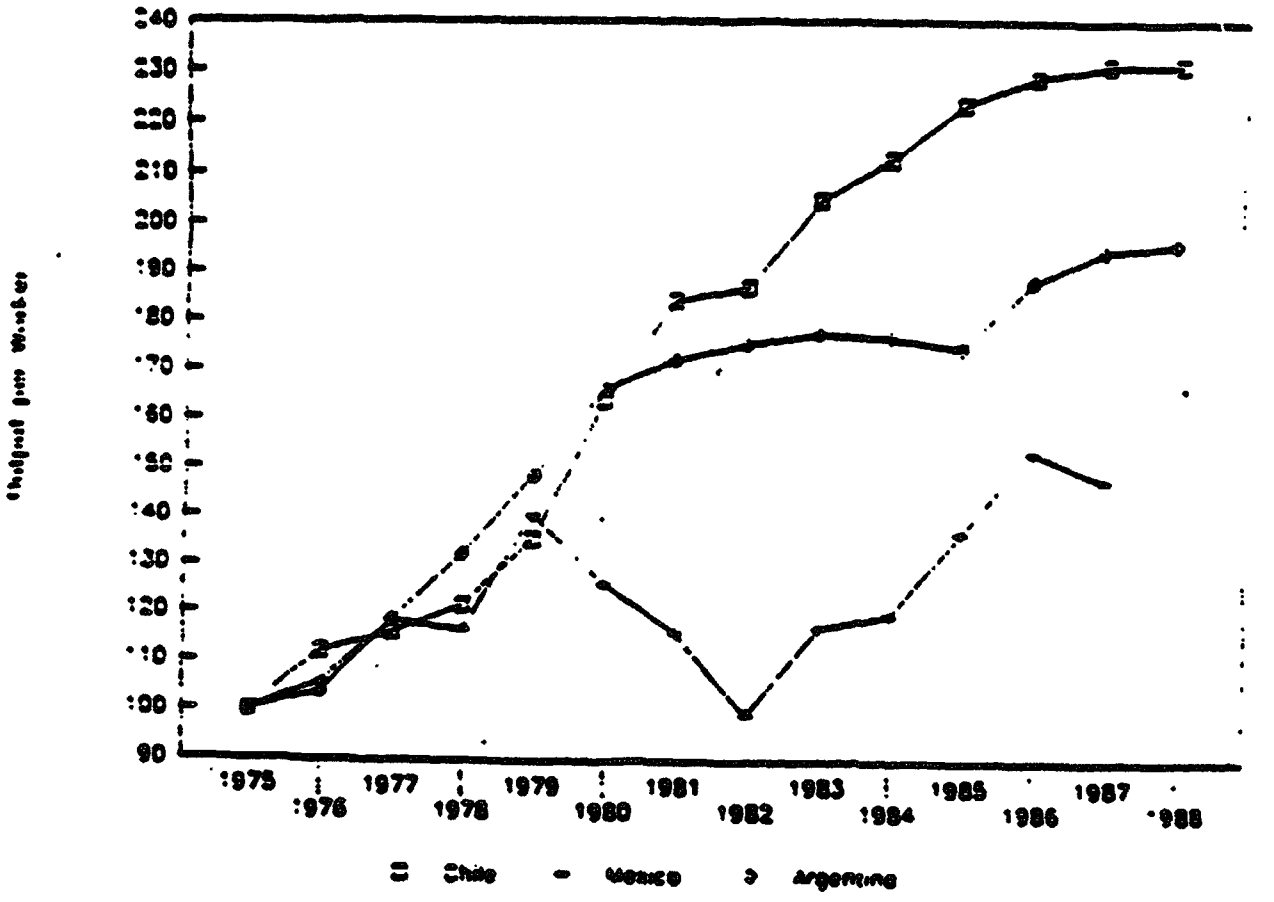
1/ Data in parentheses are excluding PEMEX for Mexico and excluding CODELCO for Chile.

2/ Index of labor productivity (1975=100) calculated based on physical units of output per worker for Chile, production units x 1970 prices per worker for Argentina and value added per worker for Mexico. For Mexico 1983-87 data only for 1983-88 period.

3/ As noted in the text, figures for Mexico's consolidated SOE net income are misleading due to the large special taxes paid by PEMEX to the Central Government, which force PEMEX profits to equal zero in every year.

Figure III.1

Labor Productivity



1985. Furthermore, productivity growth occurred despite reductions in capital investment. From 1975 to 1982 output grew more rapidly than investment, leading to a decrease in the ICOR from 3.2 to 2.2.[25] This increase in labor productivity suggests that targeted objectives, as part of a piecemeal reform program, can have an impact on increasing economic efficiency.

Financial Performance

Improved profitability is an almost universal goal of public enterprise reform, yet specific reform measures have ambiguous effects on operating costs and net income. On the one hand, productivity gains, simplified procurement procedures, and output price reforms tend to raise SOE profits. On the other hand, removal of input subsidies, including inputs provided and subsidized by other SOEs, and the elimination of preferential access to foreign exchange and trade protection can reduce profits. Furthermore, increased profitability need not imply similar changes in SOE efficiency if input and output price controls are in place. SOE financial performance, therefore, must be analyzed separately from efficiency and with regard to the specific reforms adopted in each country.

The experiences with SOE reform in the three countries are consistent with the above characterization. Productivity gains, output price reforms, and other policies which eliminated discriminatory treatment of SOEs contributed to overall improvements in financial performance during the reform period. Improvements in profitability were, however, not as marked as improvements in labor productivity or reductions in the fiscal burden, due to the affects of reform policies which forced SOEs to operate in a more competitive environment. Table III.2 presents financial performance indicators for Chile, Mexico, and Argentina.

In Chile SOEs experienced moderate growth in profitability up to 1980, a sharp decline in 1981-82, and relatively steady growth thereafter. For the large sample, net income increased by 56 percent in real terms from 1974 to 1979.[26] The profitability ratio, defined as the ratio of net income to fixed assets, which adjusts for changes in capital stock, also indicates improvements in financial performance between 1974 and 1979. For the small sample, the profitability ratio increased by 90 percent between 1976 and 1980, and by almost 70 percent excluding CODELCO-CHILE.

Beginning in 1981 the financial performance of the SOEs declined markedly. In 1982 all of the SOEs in the small sample earned losses, except CODELCO-CHILE, and their average profitability ratio declined from 4.2 percent in 1976-80 to -1.1 percent in 1981-82. These adverse results are primarily attributable to changes in non-operating costs and revenues, as the average ratio of operating

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[25] The incremental capital-output ratio (ICOR) is measured as cumulative investment divided by the cumulative change in output. Reductions in the ICOR over time can indicate improved capital productivity, especially if other inputs are stable or decreasing over the same period.

[26] Net income is defined as total (operating and non-operating) revenues minus total costs, including interest payments and exchange rate adjustments measured in constant prices.

revenues to operating costs for the small sample increased, although moderately, in 1981-82 relative to 1976-80. The ratio of interest payments to operating revenues more than doubled, from 8.1 percent during 1976-80 to 16.8 percent during 1981-82. The overall decline in SOE performance during this period is, however, largely a result of the severe economic crisis and the resulting stabilization policies. The government's anti-inflationary policy that fixed the nominal exchange rate and allowed for a substantial overvaluation of the peso contributed to higher input and interest costs during this period. This policy was especially costly to enterprises requiring imported inputs such as CODELCO-CHILE. Reforms in the economic policy environment which increased competition faced by SOEs may also have contributed to the temporary decline in SOE performance.

Since 1985 average profitability of Chile's six largest SOEs has increased significantly, especially in 1988. The profitability ratio for the small sample, averaged 4.3 percent during 1983-88, and 3.7 percent excluding CODELCO-CHILE. In contrast with the 1976-80 period, all enterprises in the small sample achieved higher profitability ratios after 1985, not just CODELCO-CHILE. Improved financial performance resulted not only from improved operating results, but also from lower interest costs, relative to the 1981-82 period. Overall, excepting the 1981-82 recession, the evidence suggests quite consistent improvements in SOE profitability during the public enterprise reform period.

With regard to financial stability, the ratio of total assets to total liabilities of Chile's six largest SOEs shows no discernible trend over the period, although there are large fluctuations in the ratio for individual firms. These fluctuations reflect the effects, first, of the financial policy that required SOEs to finance investment through borrowing without relying on government transfers. Second, the assumption of debt of some SOEs by CORFO led to a sharp reduction in indebtedness and improvements in the asset to liability ratio.

In Mexico the average financial performance of the SOEs has improved since the initiation of reforms in 1983. Comparing the reform period with 1979-82 for the consolidated SOE sector excluding PEMEX, operating revenues increased more rapidly than operating costs, leading to an increase in the average operating surplus. Higher operating costs resulted primarily from increased non-labor costs, as average personnel expenditures declined by about 15 percent from 1979-82 to 1983-88. Despite improvements, however, the operating surplus for the consolidated SOE sector excluding PEMEX remained negative during the reform period, largely as a result of price controls that kept output prices below unit costs, reflecting the government's commitment to maintaining non-commercial objectives for some enterprises (e.g. CONASUPO). The ratio of net income to fixed assets was also higher during the reform period than during 1979-82, but was still negative. A primary source of increased non-operating costs has been higher interest payments, which rose from 16 percent of operating revenues for the consolidated SOE sector during 1979-82 to 21 percent during 1983-88, as a result of rising SOE debt stocks, increased real interest rates, and exchange rate adjustments. PEMEX, however, had a large, positive operating surplus averaging 3.5 percent of GDP during 1983-88. As PEMEX, in addition to regular taxes, is required to transfer all remaining revenues to the Central Government in the form of special taxes, profit figures for the consolidated SOE sector

including PEMEX are misleading. If these special tax payments are excluded, then PEMEX profits more than cover the net losses of the rest of the consolidated SOE sector during the reform period.

The financial stability of SOEs in Mexico, measured by the ratio of total liabilities to total assets, improved during the reform period, as the ratio fell from an average of 11 percent during 1979-82 to 7 percent during 1983-88. The financial restructuring agreements (CRPs), which enabled 12 SOEs to transfer debt to the Central Government between 1985 and 1990, contributed to increased financial stability of the enterprises, but there is little evidence of their impact on improving operational efficiency.

In Argentina SOEs achieved a substantial improvement in financial performance during 1976-82 following the adoption of reforms. The average SOE operating surplus, net income, and the ability to self-finance investment were all higher during 1976-82 relative to 1971-75. The improved operating surplus is largely attributable to the government's policy of eliminating redundant labor and declining real wages, as average personnel expenditures per unit output declined by nearly one-third during 1976-82 compared with 1971-75. Financial performance, however, deteriorated during 1983-88. Higher real wages and other input prices and lags in real output prices adjustments, as a result of anti-inflationary policies, reduced the ratio of operating revenues to operating costs during 1983-88 to approximately the same level as during 1971-75. Furthermore, SOE interest payments as a share of operating revenues more than doubled, from 9 percent during 1976-82 to 20 percent during 1983-88. Although SOE debt stocks increased only marginally after 1982, higher interest rates and the large devaluation of the domestic currency in 1981-82 led to sharply higher interest costs that contributed significantly to the financial deterioration of the SOEs.

B. BUDGETARY, DEBT, AND OTHER MACROECONOMIC EFFECTS

State-owned enterprise performance plays a critical role in determining the magnitude of the overall public sector deficit, the external debt burden, and the levels of investment and overall economic activity in the country. SOE reform which focuses on controlling costs, eliminating price distortions, and reducing net government transfers, in general, is expected to reduce the SOE deficit, its share of the total public sector deficit, and the level of financing through external borrowing. Growth in SOE deficits and external debt, however, can be a desirable outcome of SOE reform that emphasizes enterprise rehabilitation and new investment to be financed through a combination of government transfers and external loans. As previously discussed, in each of the three countries in our study reducing the SOE fiscal burden is a primary objective of SOE reform, although the extent to which other objectives, such as social or efficiency objectives, are followed varies between countries.

Budgetary Effects

Chile, Mexico, and Argentina have all been successful in reducing enterprise deficits and net transfers from the Central Government. The extent of reductions in each country, however, depended on the government's ability to sustain tight controls over SOE expenditures and financing, the degree of real

Annex Table 14.2
Chile: Performance Indicators for Public Enterprises, 1970-1983
(Large Sample)

Indicator	1970	1974	1979	1983
Operating Revenue/ Labor Costs	3.8	4.5	5.0	5.6
Operating Surplus *	5.0	41.7	43.9	67.0
Operating Surplus/ Fixed Assets	0.03	0.06	0.10	0.14
Net Income *	1.3	35.5	55.5	48.1
Net Income/ Fixed Assets	0.01	0.06	0.11	0.10

Source: Martinez (1985).

* In constant 1983 prices

Table 14.3
Chile: Performance Indicators for Public Enterprises, 1976-1988 1/
(Small Sample)

	(1976-1980)	(1981-1982)	(1983-1988)
Labor Productivity (index)	129.4 (128.5)	184.7 (190.2)	221.0 (227.3)
Financial Performance (%):			
Operating Revenue/ Operating Costs	107.5 (97.8)	112.1 (107.9)	139.7 (134.0)
Interest Payments/ Operating Revenues	8.1 (10.0)	16.8 (20.5)	12.8 (14.5)
Net Income/ Fixed Assets	4.2 (1.1)	-1.1 (-3.0)	4.3 (3.7)
Total Assets/ Total Liabilities	341.1 (354.2)	259.8 (270.6)	370.3 (411.5)

Source: Annual Financial Statements of the enterprises.

Notes:
1/ Figures in parentheses exclude CODELCO-CHILE.
2/ Index of labor productivity (1975=100) calculated based on physical units of output per worker.

Table 14.4
Mexico: Performance Indicators for Public Enterprises, 1970-1988 1/

Indicator	1970-78	1979-82	1983-88
Labor Productivity 2/ (average annual growth rate)	5.7	-11.1	7.1
Revenues and Costs: 3/ (constant 1978 billion pesos)			
Operating Revenues	NA	195.0	223.7
Operating Costs	NA	209.0	230.5
Personnel Expenditures	NA	77.1	66.6
Financial Performance (%): 4/			
Operating Revenues/ Operating Costs	105.6 (95.5)	121.9 (92.8)	132.7 (99.9)
Interest Payments/ Operating Revenues	8.4 (8.8)	16.2 (13.2)	21.0 (19.6)
Net Income/ Fixed Assets 5/	(-3.0)	(-6.0)	(-3.5)
Operating Surplus/ Investment	13.2 (-13.2)	33.9 (-18.7)	97.1 (-0.5)
Total Liabilities/ Total Assets	11.8 (11.3)	11.4 (10.8)	6.9 (6.5)

Source: INEGI, Finanzas del Sector Publico, Cuentas de Produccion del Sector Publico; SPP, Cuentas de la Hacienda Publica.
Notes:
1/ Labor productivity are for a sample of "directly controlled" SOEs, excluding PEMEX; revenues and costs are for the consolidated SOE sector, excluding PEMEX; financial performance indicators are for for the consolidated SOE sector, and data in parentheses are excluding PEMEX.
2/ Ratio of real value added to number employed; 1975-78 only for 1970-78 period; 1983-87 only for 1983-88 period.
3/ 1978-82 data for 1979-82 period; 1983-87 data for 1983-88 period.
4/ Financial performance indicators calculated from data measured as a share of GDP in current prices.
5/ 1973-78 data for 1970-78 period for both net income/fixed assets and total liabilities/total assets. As noted in the text, figures for the consolidated SOE sector net income are misleading due to the large special taxes paid by PEMEX to the Central Government which force PEMEX profits to equal zero in every year

Table 14.5
Argentina: Performance Indicators for Public Enterprises, 1971-1988

Indicator	1971-75	1976-82	1983-88
Labor Productivity:			
(average annual growth rate)	n.a.	9.0	2.5
Employees (thousands)	382.4	330.6	293.1
Revenues and Costs (%):			
Operating Costs per Unit Output	81.7	78.1	92.9
Personnel	44.6	30.7	29.1
Goods and Services	37.1	47.4	63.9
Operating Revenue per Unit Output	84.9	93.1	95.6
Financial Performance:			
Operating Revenues/ Operating Costs	104.0	119.0	103.0
Net Income (millions 1970 Australes)	-15.8	399.5	-1601.5
Interest Payments/ Operating Revenues (%)	5.3	9.1	20.0
Operating Surplus/ Investment (%)	8.7	37.2	9.5

Source: Data for sample of 13 largest SOEs from SIGEP. Some indicators are based on data for 11 SOEs for which data are available.
Notes:
1/ Labor Productivity calculated based on physical units x 1970 prices per worker.

Table 14.6
Chile: Fiscal Effects of Public Enterprises, 1970-1988 1/
(Percent of GDP)

Indicator	1970-73	1974-75	1976-80	1981-82	1983-88
SOE Deficit (%):					
SOE Overall Deficit/GDP	6.2	0.4	0.2	1.6	0.0
	(5.4)	(1.3)	(0.6)	(0.9)	(-0.2)
SOE Deficit/GDP 2/	6.7	-3.8	-6.1	-4.7	-9.6
	(6.3)	(0.7)	(-2.1)	(-3.3)	(-5.8)
Transfers and Taxes (%):					
Government-SOE Transfers/GDP	1.4	0.8	0.4	0.0	0.0
SOE-Government Taxes/GDP	1.0	5.1	6.7	6.4	9.7
	(0.5)	(1.4)	(3.1)	(4.2)	(5.6)
Investment (%):					
SOE Investment/GDP	3.0	3.7	2.7	2.6	3.7
	(2.2)	(2.7)	(1.8)	(1.8)	(2.1)
SOE Investment/Public Sector Investment	30.8	34.3	44.6	52.7	57.2
External Debt (%):					
SOE External Debt/GDP					
(end of period)	NA	22.9	9.2	15.8	16.0
(period average)	NA	NA	12.4	13.1	20.9

Source: All 1970-85 data and data excluding CODELCO from Larrain; 1986-88 data from Budget Office, Ministry of Finance.

Notes:
1/ Data are for the consolidated SOE sector. Data in parentheses exclude the public copper enterprises (primarily CODELCO-CHILE); for this data 1983-85 data only for 1983-88 period.
2/ Excluding taxes and transfers.

Table 14.7
Mexico: Fiscal Effects of Public Enterprises, 1973-1988 1/
(Percent of GDP)

Indicator	1970-78	1979-82	1983-88
Directly Controlled SOEs 2/:			
SOE Overall Deficit/GDP	2.1	2.8	-0.2
	(0.9)	(1.2)	(0.3)
SOE Deficit/GDP 3/	2.4	1.0	-3.3
	(2.3)	(2.9)	(2.3)
Government-SOE Transfers/GDP 4/	1.6	2.5	2.8
SOE-Government Taxes/GDP 5/	1.2	4.4	5.9
	(0.1)	(0.8)	(0.7)
Consolidated SOE Sector:			
SOE Overall Deficit/GDP	1.8	2.8	-0.2
	(1.1)	(1.2)	(0.5)
SOE Investment/GDP 6/	4.5	7.0	4.1
	(3.2)	(3.8)	(2.6)
SOE External Debt/GDP 7/			
(end of period)	NA	20.4	21.0
(period average)	NA	10.9	18.8
SOE External Interest/GDP			
(end of period)	NA	2.3	0.9
(period average)	NA	1.4	1.8

Source: INEGI, Finanzas del Sector Publico, Cuentas de Produccion del Sector Publico; SPP, Cuentas de la Hacienda Publica.

Notes:
1/ Data in parentheses are excluding PEMEX.
2/ For the "directly controlled" SOEs 1977-78 data only for the 1970-78 period.
3/ Excluding taxes and transfers.
4/ Includes operational subsidies, capital transfers, and payment of liabilities, but excludes debt absorption.
5/ 1977-78 data only for 1970-78 period.
6/ 1983-87 data only for 1983-88 period.
7/ External debt and interest 1980-82 data only for 1979-82 period and 1983-87 data only for 1983-88 period.

Table 14.8

Argentina: Fiscal Effects of Public Enterprises, 1971-1988
(Percent of GDP)

Indicator	1971-75	1976-80	1981-82	1983-88
SOE Deficit (%):				
SOE Overall Deficit/GDP 1/	NA	2.3	4.3	0.4
SOE Deficit/GDP	NA	4.2	6.1	4.5
SOE Deficit/Public Sector Deficit	NA	56.7	84.5	56.2
Transfers and Taxes (%):				
Government-SOE Transfers/GDP 2/	NA	1.9	1.7	3.8
Investment (%): 3/				
SOE Investment/GDP	3.5	4.3	3.3	2.9
SOE Investment/Public Sector Investment	45.4	43.6	42.0	63.6
External Debt (%):				
SOE External Debt/GDP 4/	3.6	13.7	20.7	13.3
Short Term	NA	6.3	11.6	3.1
Long Term	NA	7.4	9.1	10.2

Source: Data for the consolidated SOE sector from the Ministry of Economy.

Notes:
1/ SOE Deficit plus net transfers from the non-financial public sector.
2/ Transfers from the non-financial public sector to SOEs; 1983-88 period are for 1983-87 only.
3/ 1983-88 period averages are for 1983-87 only.
4/ Reported for the final year of each time period for the thirteen largest SOEs.

15. Impact of Reforms on Government Budgetary Burden

One of the objectives of reform is to reduce the budgetary burden of state-owned enterprises on the government. The Turkey State Owned Enterprise Sector Review, Report No. 10014-TU, 1991) includes extensive data on state-owned enterprise (SOE) performance indicators subsequent to the implementation of macroeconomic and institutional reforms. Among the key findings summarized in the table excerpted below are declines in operating surplus, increases in the SOE budgetary burden from .3 percent of GNP to 3.9% of GNP from 1985-1990, and declines in labor productivity and value added (Table 15.1).

The Turkey review includes tables and graphs illustrating the rising trend in borrowing requirements among SOEs generally, the concentration of deficits in a subset of SOEs, the sources of deficit financing, and the complexity of financial flows between the SOEs and the rest of the public sector.

The report makes a useful contribution by providing a framework and methodology for determining the impact of SOE reforms. The combination of the aggregate analysis and SOE-specific analyses provides a basis for developing sector-wide fiscal adjustment packages and SOE-specific institutional reforms that need to be pursued.

The following are excerpts from the explanatory discussion in the Turkey report, as well as the twenty-four page analysis found in Annex 2 of the Turkey report.

Turkey State-Owned Enterprises: Impact of Reforms

Deteriorating Performance

13. Despite all these reforms, the borrowing requirement of the SOEs soared to 6.5% of GNP in 1990, almost 60% of the entire public sector's deficit (see Table 2). For 1991, the outcome could be worse as the Government, in anticipation of the general elections of October 1991, granted wage increases of about 30-40% in real terms to workers, further raised agricultural support prices and urged the SOEs to hold their price increases below inflation. These changes in policy are not included in the program for 1991 presented in Table 2. Developments underlying this deterioration are quite worrisome (see Annexes 1 and 2 for details):

- increasing income support to the agricultural sector over the last two years forced the Soil Products Office (TMO) to raise its borrowing from 0.2% of GNP in 1988 to 1.9% in 1990;
- the aggregate operating surplus of the sector (excluding TMO) has been on a declining path since 1985: it fell from 3.6% of GNP to a deficit of 0.6% in 1990. Moreover, a deficit of 1.4% of GNP was projected for 1991 before the recent round of wage increases;
- gross fixed investment of the sector fell by 34.5% since 1985-86 and the sector's contribution to value added has declined;

Table 15.1
KEY PERFORMANCE INDICATORS[1/]
(Percent of GNP)

	1985	1986	1987	1988	1989	1990	1991[2/]
Borrowing Requirement	3.0	3.4	4.4	2.7	2.6	6.5	3.8
of which TMO:	0.4	0.9	0.8	0.2	0.6	1.9	1.1
share of total public sector(%):	46.6	72.1	56.6	43.6	57.0	57.5	n.a.
Operating surplus	3.6	1.5	1.1	0.4	0.8	-0.6	-1.4
Budgetary burden[3/]	0.3	1.5	0.9	1.6	2.3	3.9	n.a.
Return on Capital Employed (%)	17.2	14.3	12.7	10.6	10.3	6.7	5.3
Free Cash Flow	n.a.	-7.4	-12.5	-8.5	-8.8	-4.0	n.a.
Financial Leverage Ratio	2.3	2.5	1.9	2.8	2.3	2.4	2.4
Earnings Decline Cover (%)	85.4	78.8	70.1	68.8	61.1	50.4	31.9
Industrial SOEs in Top 500 firms							
Employment (% of total)	n.a.	57.0	55.0	55.3	54.5	53.4	n.a.
Fixed Assets (% of total)	n.a.	69.0	68.7	69.8	68.9	65.9	n.a.
Value Added (% of total)	n.a.	46.0	44.8	47.0	45.8	41.6	n.a.
Labor productivity (% of private)	n.a.	85.0	75.0	86.0	90.0	62.3	n.a.

Source: Treasury, SIS, ISO, ISKO calculations

Notes: 1/ All indicators except borrowing requirement exclude TMO.
2/ Program
3/ Budgetary transfers, subsidies, arrears to Treasury, Social Security and ESFs.

14. The contribution of individual SOEs to the deficits over the last five years has been a function of the size and the nature of the enterprise (see Annex 2 for details). Deficits have been concentrated in terms of size in electricity (TEK), industries and trade related to agriculture (TMO, SEKER, sugar, and, TEKEL, alcohol and tobacco), railways (TCDD), telephone and telecommunications

Source: The Turkey State-Owned Enterprise Sector Review, Report No. 10014-TU, 1991

(PTT) and iron and steel (TDCI). Four major types of performance can be identified: (i) large SOEs with on-going investment programs which require outside financing (TEK); (ii) large SOEs with recently completed projects which have led to a noticeable increase in retained earnings and a reduction in financing needs (PTT and PETKIM, petrochemicals); (iii) SOEs used for agricultural support with persistent deficits (TMO, SEKER, TEKEL); (iv) genuinely poor performers, mainly in import-substituting industries (TTK, coal, and TDCI). It should be noted, however, that in 1990 only three SOEs had a surplus rather than a borrowing requirement: PTT, THY (airline) and BOTAS (oil pipeline). Operating losses were concentrated in TEK, TTK, TDCI and TCDD. Together, all loss-making SOEs accumulated a loss of TL5 trillion (1.9% of GNP) in 1990, while three SOEs (PTT, TEKEL and TPAO) generated 80% of about TL3 trillion of profits.

15. The increasing financing needs of the SOE sector not only directly crowded out the private sector from domestic financial markets but also raised the burden on the rest of the public sector. The contribution of foreign sources to the financing of SOE deficits fell from between 50 and 60% in the period 1985-88 to around 20% in 1989-90. This reflects the change from project financing to financing of operational needs. About 25% of the deficits have been financed through domestic interest-bearing liabilities. An increasing proportion (56% in 1989-90) is being financed through deferred payments to the private sector (16%) and the public sector (40%). Whereas this amount is close to historical averages with respect to the private sector, SOEs used to finance the rest of the public sector on average during the period 1985-88. Together with budgetary transfers, subsidies and arrears to Treasury, Social Security and Extra-Budgetary Funds (EBFs), the budgetary burden of the SOE sector rose rapidly to an estimated 3.9% of GNP in 1990 (see Table 2).

16. The rise in the SOE sector's deficits was accompanied by a deterioration in financial performance (indicators exclude TMO, see Annex 1 for details):

- return on capital employed (ROCE) in SOEs has fallen from 17.2% in 1985 to 6.7% in 1990. During this period, the decline was continuous and since 1988, the return is below the cost of financing as measured by the return on equity on the Istanbul Stock Exchange (ISE). SOEs earned only half as much, on average, than the private sector firms in the largest 500 industrial enterprises in Turkey (to which most of the SOEs belong);

- the sector's cash flow shortage, i.e. the cash borrowing requirement plus working capital needs, has been very high during most of the period 1985-90. As a share of GNP it was as high as 12.5% in 1986, but it fell to 4% of GNP in 1990 as a result of a reduction in investment and working capital;

- the sector employs 2.5 times as much debt as equity, a much higher amount than the private sector. This mainly reflects the fact that the choice of equity versus debt financing is not based on corporate criteria but rather on a decision of the central government which must approve equity injections into the sector;

- the earnings decline cover (EDC), indicating the percentage decline in earnings that can be sustained before interest payments are no longer

covered, has also fallen gradually from 85% in 1985 to . After the real wage increases of 1991, the sector is unlike to cover its interest payments;

17. Financial performance has not been equally poor or deteriorating ... SOEs and, if plant level data were available the picture would presumably become even more diverse. Particularly poor performers are the hard coal mine (TTK), the railways (TCDD) and, in recent years, the soil products office (TMO). But also the electricity company (TEK), the steel mill (TDCI) and a few smaller companies (meat and fish, cement, agricultural machinery) are in poor financial shape. With the exception of ORUS (forestry and wood products) and PETKIM (petrochemicals) there are no completely financially sound SOEs but some have good potential to improve (airlines, petroleum refineries and distribution and PTT).

18. Even though only partial indicators of economic performance are available, the evidence appears to be strong enough to suggest a deterioration in this area as well:

- over the period 1985-1990, the marginal efficiency of capital (i.e. how much value added can be produced per unit of fixed capital invested) in SOEs has been about half of that of the private sector. If the same efficiency could have been achieved, GDP could have been higher by about 3% in 1990;

- capacity utilization in manufacturing SOEs, especially in 1989-90, has been significantly below that of the private sector;

- labor productivity in industry has been on average 20% lower in SOEs than in the private sector and was up to 38% lower in 1990. In some sectors it was as much as 75% lower. Although labor productivity increased by 12% over the period 1985-90, it lags about 90% behind real wage increases;

- the share of SOEs in total employment (53%) and in fixed assets (66%) of the 500 largest industrial firms exceeds that of value added (42%), indicating the use of an inefficient factor combination or too large a scale of production.

- in the seven largest SOEs (in terms of fixed assets), total factor productivity (TFP) fell over the period 1985-90 in all SOEs that were increasing their capital stock (TEK, PTT, TCDD and TTK) except for the airline company. TFP rose in SOEs with declining capital (TKI, TDCI) and in the airlines.

19. Although it is easy to point to recent increases in wages and agricultural support prices and to the real exchange rate appreciation induced loss in competitiveness as direct causes of the rapid deterioration of performance, such an observation does not address the fundamental, underlying problem: SOEs are not run as commercial enterprises but more as government departments. Continuing political interference has bereft the SOEs from the flexibility of adjusting to changing market circumstances. In particular, the

continuing liberalization of the economy and lack of self-financing capacity has left them with an obsolete capital stock and unable to compete with the private sector, barely surviving due to a soft budget constraint.

20. Signs of problems in the SOE sector were already apparent at the end of the 1970s and again in 1987. The record SOE deficits of 1980 were resolved by raising prices and forcing a real wage erosion. In 1987, the deficit rose again (to 4.4%) and financing crisis was averted by drastic cuts in real investments and further real wage erosion. By 1988, real wages had fallen by 25% below their 1980 levels and by 1990 real investment was below its peak by 40%. The 1990 deficit will not be as easy to cure: (i) prices can hardly be adjusted upwards because of competition from imports and the domestic private sector, except for the natural monopolies; (ii) investment is insufficient to maintain an adequate capital stock, and; (iii) wages (risen by 100% in real terms since 1988) are now set by contracts including almost complete indexing. Addressing the underlying problems, discussed in the section III below, can no longer be avoided.

Divestiture

21. Although the Government emphasized divestiture as the key to improve the performance of the SOE sector and to promote overall economic efficiency, actual results fell far short of expectations and failed to achieve any of the objectives of the program. The results of the process through May 1991 can be summarized as follows (see Table A3.1 in Annex 3 for details):

- no holding, subsidiary or partnership has been liquidated;
- no holding has been privatized either in terms of ownership or control; 8% of the equity of Petkim and 1.5% of that of THY were sold;
- sales of all of the six subsidiaries (five cement plants and one catering company) have been overturned by court decision and, although the new owners continue to operate the plants for the time being, final resolution is still pending; of three other subsidiaries less than 5% of equity was sold on the stock market;
- sales of participations show mixed results: in less than half of the cases did the State manage to sell its entire participation; in the successful cases all sales were to local investors for amounts averaging US$270,000 per transaction, with the exception of Ansan, a private company rescued by the Government and subsequently sold for US$13.6 million to a foreign investor;
- total proceeds from all sales amounted to about US$530 million, with almost one third generated by the sale of 8% of Petkim and another 10% by the sale of 2.9% of Erdemir;
- the Government rescued Asil Celik (an ailing private steel producer) and turned it into an SOE in 1983; in 1985 it took over a failed textile plant and at different times during the decade it injected equity in seven other companies, mainly through public banks.

22. Not surprisingly, the little divestiture that took place did not lead to a noticeable improvement in efficiency. The total amount of the sales was small relative to the size of the sector, representing less than 0.5% of fixed assets. In most cases the amount sold did not allow private management to take over control of the company or the sales occurred in cases where the company was already under private control. The sales were not accompanied by measures to increase competition and to safeguard consumers from abuses by the new private sector owners. For example, the sale of the catering company amounted to no more than a transfer of a public monopoly into private hands as the company is required to be located on the airport premises for security reasons, but no space is available for any potential competitors. In the electricity sector, even if private participation in generation was welcomed, no regulatory framework addressing the issues of competition, pricing of distribution, service standards or consumer interests, was established.

23. Progress on the secondary objectives of privatization, the development of domestic capital markets, diffusion of ownership and generation of fiscal proceeds, was equally unimpressive. The first public offering turned into a major failure and no more offerings took place before April 1990. Most of the recent offerings were undersubscribed while private sector issues stirred significantly more attention. The need to generate fiscal revenue from sales of shares has generated a tendency to overvalue the shares. For most companies where the Government retained control, share prices have fallen more than the ISE index since the date of issue.

TURKEY

SOE SECTOR REVIEW

FISCAL PERFORMANCE, BUDGETARY IMPACT SUBSIDIZATION

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TURKEY SOE SECTOR REVIEW
FISCAL PERFORMANCE, BUDGETARY IMPACT AND SUBSIDIZATION

A. Introduction

1. This annex reviews the performance of SOEs from the fiscal perspective using conventional fiscal indicators, such as borrowing requirement (PSBR), primary deficit, and operational deficit. The sources of, or main contributors to the observed performance are also investigated. Reviewing the composition of deficit financing gives an idea of the contribution of SOEs to inflation, crowding out of the private sector from the domestic financial market, and to the international creditworthiness of the country.

2. There is a very complicated network of financial relations between SOEs and the rest of the public sector. These relations are further obscured by differences in accounting procedures among SOEs and over time. An attempt is made to disentangle these complex relations in order to identify the actual financial impact of SOEs on the rest of the public sector, in particular, the central government budget and extra-budgetary funds (EBFs). Finally, the subsidies provided to, and/or through, SOEs and their ultimate beneficiaries are discussed.

B. Fiscal Performance

3. The borrowing requirement of the SOE sector has varied between 2.6%-6.5% of GNP in the 1985-90 period accounting for 38% to 72% of the entire public sector deficit (see Table A2.1). Graphs A2.1 through A2.4 show main aggregates for the sector as well as individual SOEs as averages for the 1985-90 period, and for 1990[1/]. The fiscal performance of SOEs and the sources of SOE deficits have shown three distinct patterns during 1985-90:

- Large and rising deficits (1985-87): SOE deficits rose from 3% of GNP in 1985 to 4.4% in 1987. This period is characterized by large investment expenditures, especially in energy, telecommunication, and petro-chemicals. Although investments by manufacturing SOEs had started to decline, total investment of the sector stayed around 6% of GNP. Stock-building added another 2% of GNP to SOE financing needs. The SOEs could, however, generate internal funds of only

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1/ PETKIM and Sumerbank are not included in annual data for 1988-90. However, they are included in the averages for the period 1985-90.

TABLE A2.1: BORROWING REQUIREMENT (% of GNP)

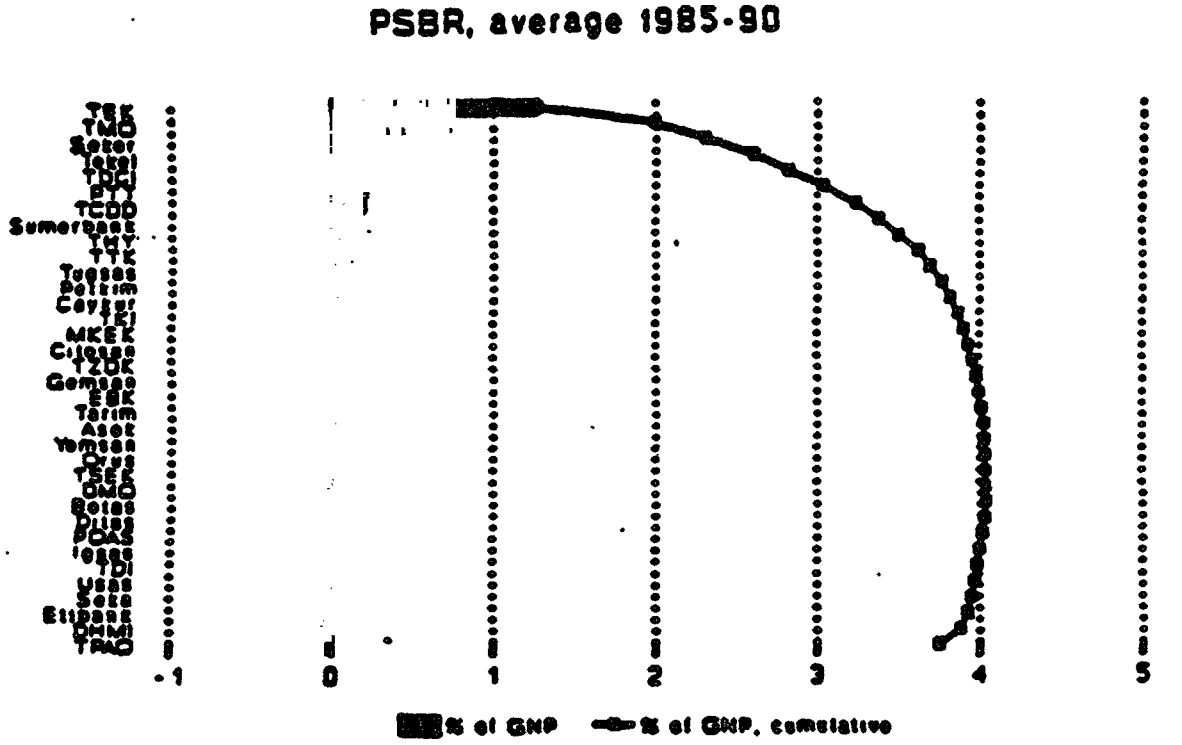
	1985	1986	1987	1988	1989	1990
A. Public Sector						
PSBR	4.6	4.7	7.8	5.2	7.1	11.2
Primary Deficit	1.1	-0.1	1.9	-0.7	1.0	6.0
Operational Deficit	..	4.1	5.6	3.7	4.3	7.1
B. SOEs						
PSBR	3.0	3.4	4.4	2.7	2.6	6.3
Primary Deficit	2.0	2.1	2.5	1.1	1.4	5.2
Operational Deficit	..	3.2	3.8	2.2	2.2	5.8
C. Share of SOEs in total (%)						
PSBR	66.6	72.1	56.6	43.6	37.0	57.5
Operational deficit	..	78.6	67.4	58.3	51.5	81.1
Memo Items						
Investments+Stock Build-up	8.1	7.6	8.0	7.2	8.3	7.8
Investments	6.2	6.1	5.7	5.1	4.1	3.4
Stock Build-up	1.9	1.5	2.3	2.1	2.2	4.6
Interest Payments	1.0	1.3	1.9	1.6	1.2	1.3
Internally Generated Funds	3.2	3.6	3.4	4.0	3.0	1.8

Source : Treasury

about 3.4% of GNP[2/]. The implementation of large investment and stock programs (generally imposed by the government, as in the case of TEK, PTT, Botas, TMO, and TEKEL) despite the lack of internally generated funds were the main cause behind the large borrowing requirements during this period.

[2/] Internally generated fund = retained earnings + depreciation + provisions + provisions for foreign exchange losses + unpaid dividends to shareholder other than Treasury, where retained earnings = profit/loss - duty losses (claimed) - corporate tax - dividends (paid) to Treasury.

Figure A2.1 Public Sector Borrowing Requirement by SOE



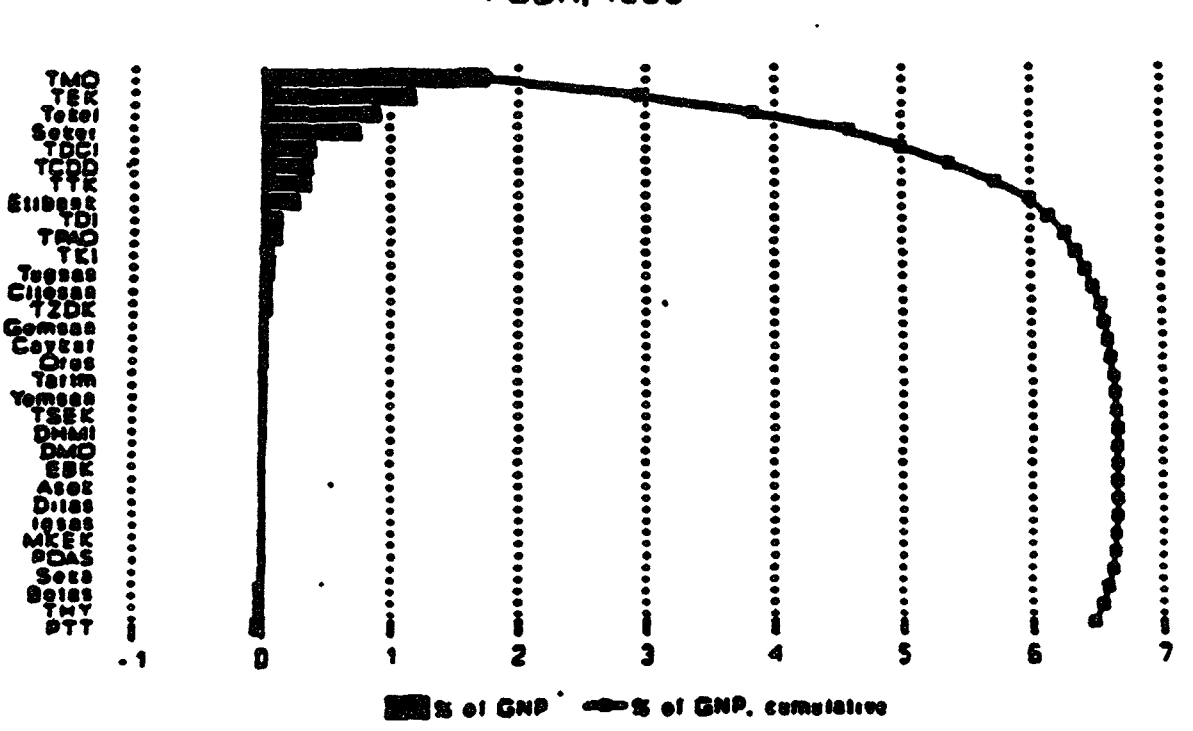
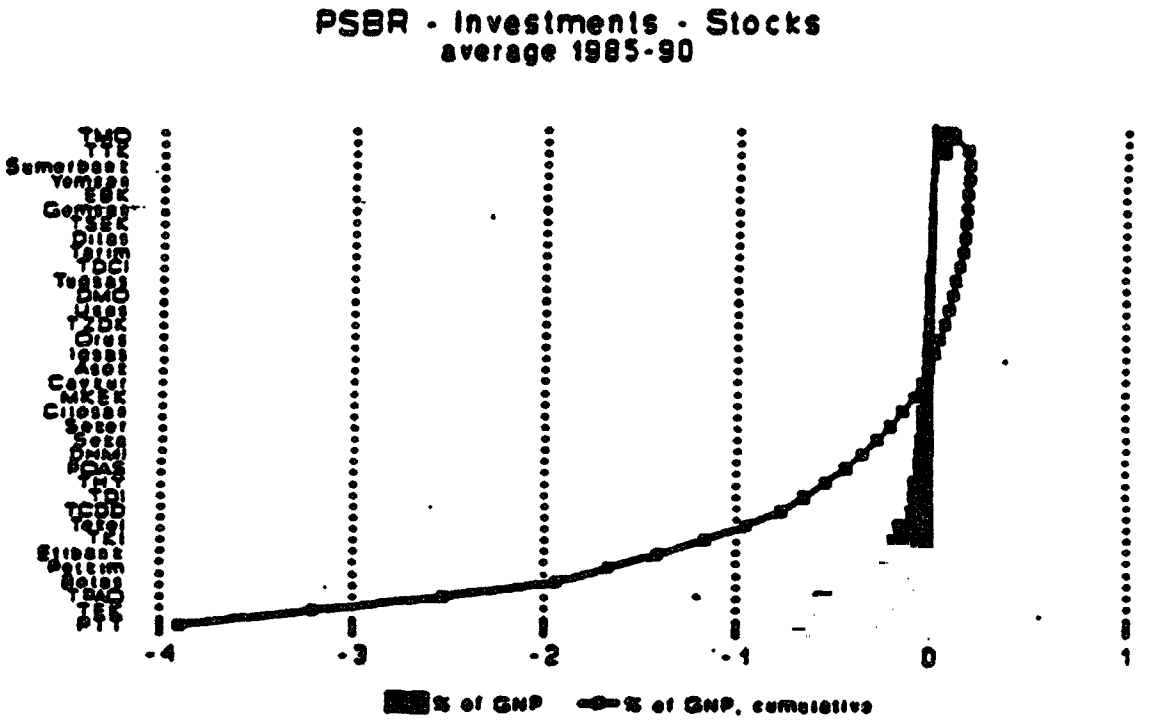


Figure A2.2 PSBR - Investment - Change in Stocks



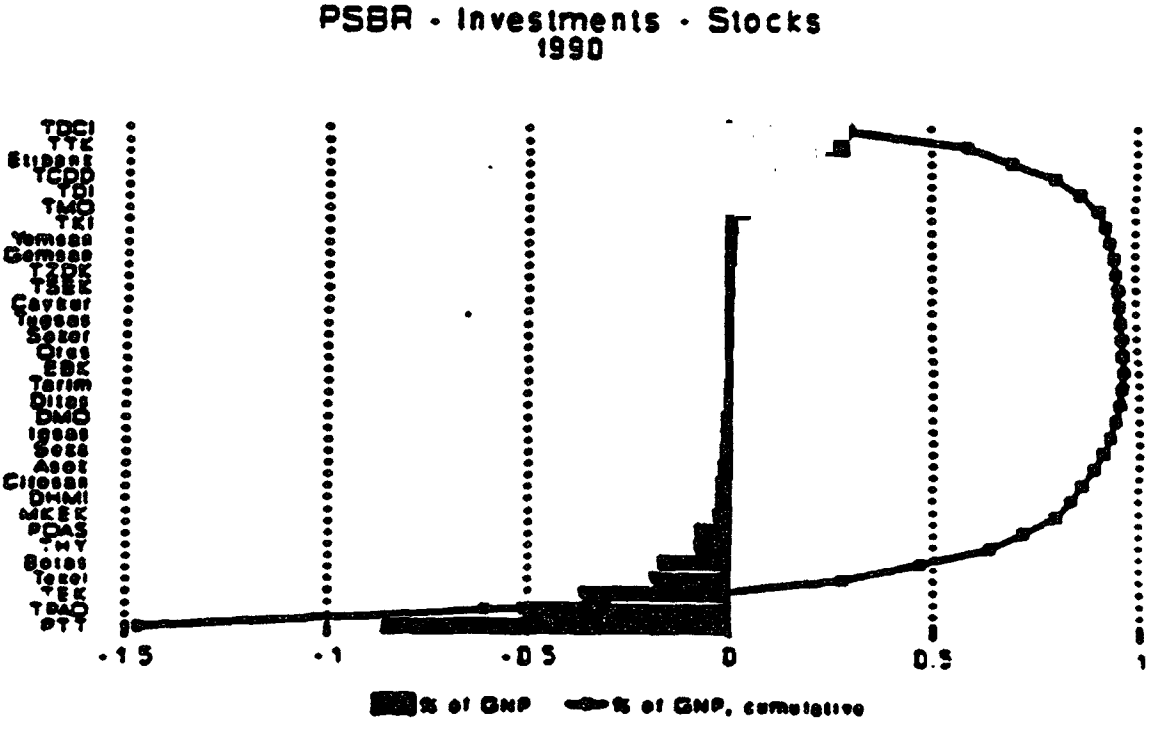
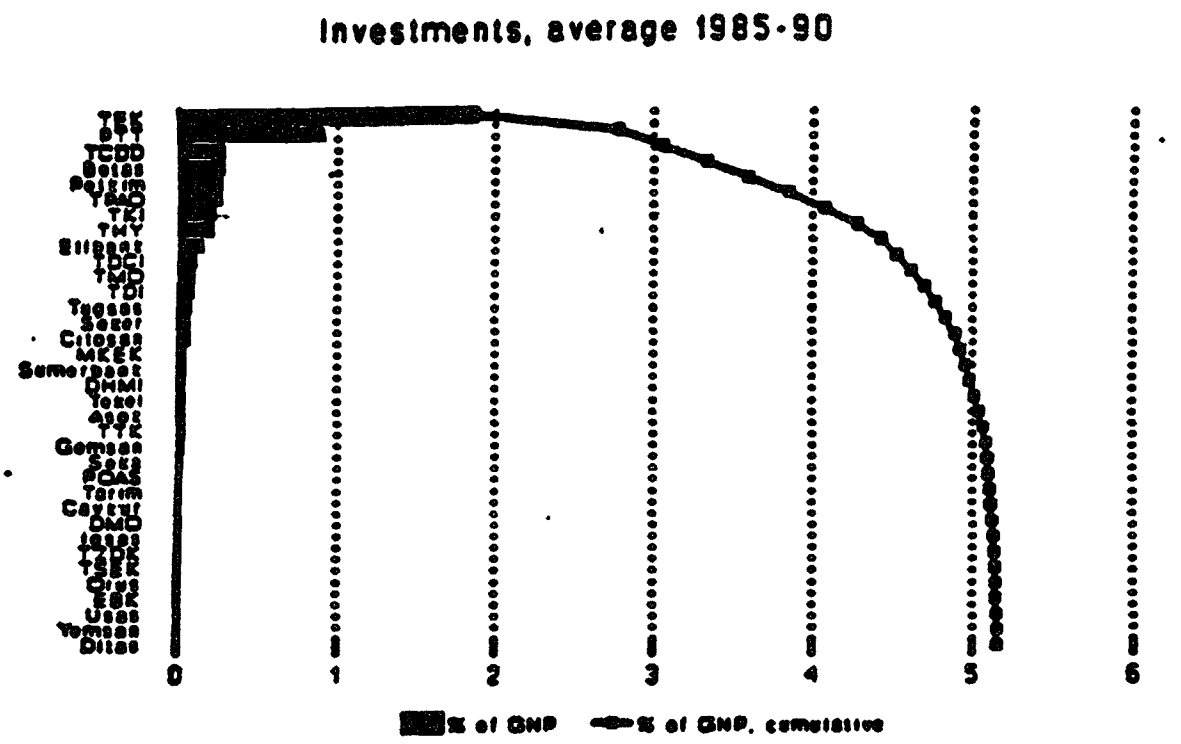


Figure A2.3 Investments



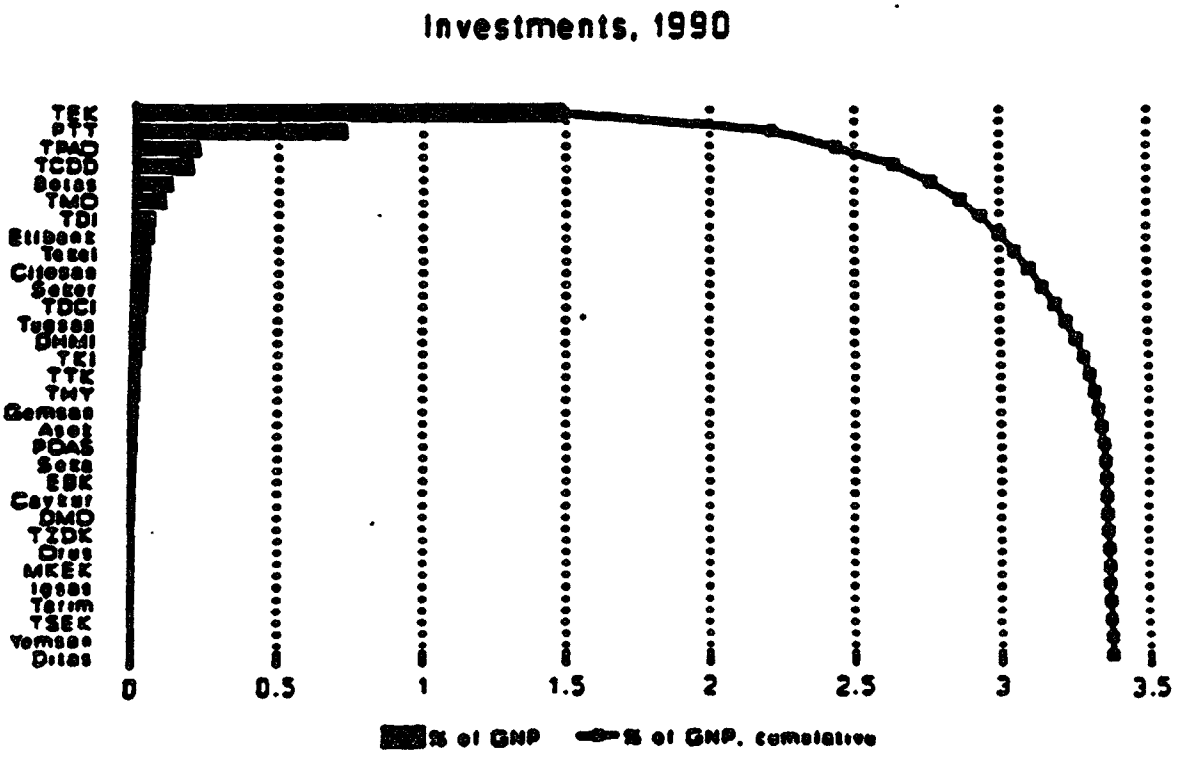
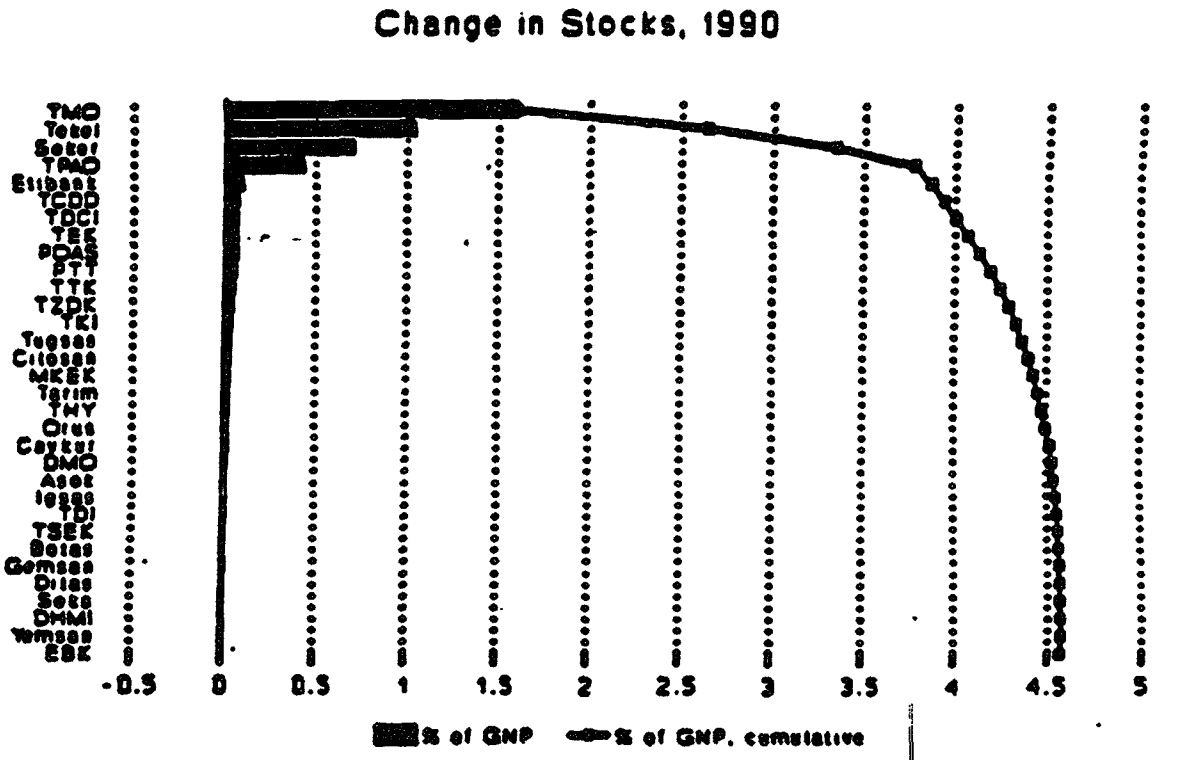
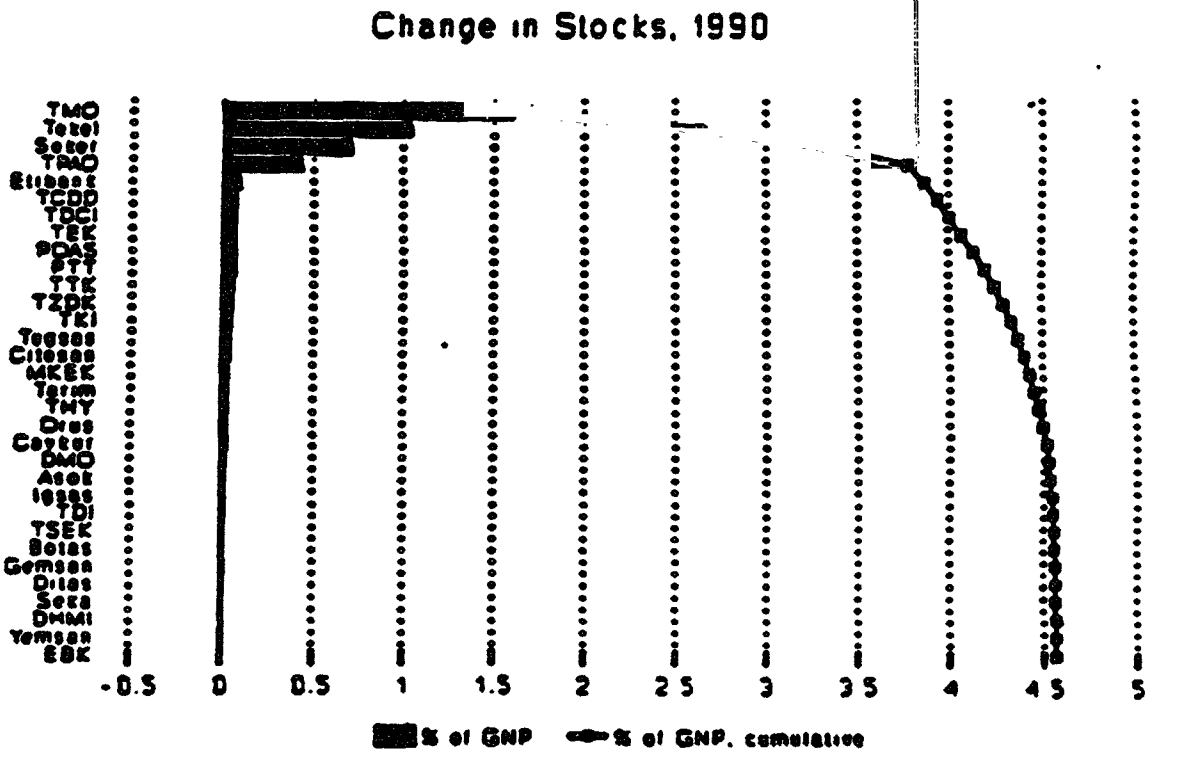


Figure A2.4 Change in Stocks





- Declining deficits (1988-89): SOE deficits declined to 2.7% in 1988 and 2.6% in 1989. They accounted for 44% of the total public deficit in 1988 and 37% in 1989 (lowest in the 1985-90 period). As part of the temporary fiscal adjustment program of the government in 1988, SOE investments were cut and SOE price adjustments were kept in line with inflation (even ahead of inflation). In 1988, investment expenditures declined to 5% of GNP while internally generated funds rose to 4% of GNP leading to a decline in the deficit from 4.4% in 1987 to 2.7%. Despite a further cut in investments expenditures, equivalent to 1% of GNP, the deficit declined only marginally to 2.6% in 1989 due to an erosion in internally generated funds.

- Drastic deterioration (1990): The SOE deficit exploded in 1990, reaching 6.5% of GNP and accounting for 58% of the total public sector deficit. The factors leading to this drastic deterioration were quite different. First, a generous agricultural support policy has led to a record-high increase in stocks; equivalent of 4.6% of GNP. Second, internally generated funds dropped to 1.8%. This was affected by large, and abrupt, increase in real wages, and by most of the SOEs being unable to adjust to higher real cost of labor and increased private and foreign competition following the trade-liberalization in 1989 and the continuing appreciation of the real exchange rate.

4. Deficits of SOEs have had different characteristics than those of the rest of the public sector, in particular the central government budget. Table A2.1 shows estimates of primary and operational deficits for the SOE sector and the entire public sector. The SOE sector have always run primary deficits contrary to the primary surplus for the rest of the public sector. SOE primary deficits were on average 2.2% of GNP in 1985-87, 1.5% in 1988-89, and 5.6% in 1990. This reflects high non-interest expenditures by SOEs, as well as low interest payments (on average 1.5% of GNP in 1985-90). The latter is mainly due to the fact that SOEs have relied more on foreign borrowing (especially during 1985-87) than on interest-bearing domestic financing, and partly due to data problems.[2/] Relatively more foreign borrowing leads to lower average nominal interest payments as with high inflation domestic interest rates contain a large nominal component which in fact is repayment of principal.

5. Mainly for the same reasons, the discrepancies between the PSBR and the operational deficit (meaning PSBR adjusted for the inflationary component of interest payments) for the SOE sector have not been as large as the discrepancies for rest of the public sector. SOE operational deficits were on average 0.5

[2/] Primary deficits are somewhat overestimated because some SOEs (TMO, SEKER, and TPAO) include interest payments in cost of goods and services sold. Due to lack of available data, this portion of interest payments was not included in the estimates.

percentage points of GNP lower than PSBRs in 1986-89. This was basically due to the low level of interest-bearing domestic debt. The difference has increased to 0.8 percentage points reflecting the increased reliance on domestic borrowing in 1989 and 1990. Operational deficits being close to PSBRs means that the SOE deficits have not been large (especially for 1988-90) just because of high inflation, but have required the transfer of real financial resources from the rest of the economy and from abroad.

6. From the above review of SOE deficits during the 1985-90 period it is clear that operational inefficiency is one of the key causes of the problem. The sector suffers from a multiple of operational inefficiencies to an extent that renders a significant number of SOEs financially unviable (see also Annex 1). In addition to the array of government interventions in pricing and employment, the SOE sector also has carried the burden of the government's development strategy and agricultural support policy. Since the mid-eighties, the government has withdrawn from investing in manufacturing and shifted the emphasis of the role of the public sector in development to providing enhanced infrastructure in energy, telecommunication, and transportation. It has chosen SOEs (TEK and PTT) and extra-budgetary funds (EBFs, mainly the Public Participation Administration (PPA)) as the instruments of this strategy. Hence, the burden of investments has been shifted out of the government budget to the SOE sector and EBFs. Consequently, SOEs have been forced to undertake large investment projects which could not have been financed from their own funds. Moreover, the government's agricultural support policy, reflecting mostly political patronage, has been implemented through SOEs (mainly TMO, TEKEL, and SEKER). These SOEs have been forced to accumulate large stocks, the bulk of which could not have been marketed without incurring large losses, for instance low quality tobacco purchased by TEKEL and wheat purchased at twice the world prices by TMO in 1990. Given the already poor financial performance of these SOEs, the only way for them to implement the government imposed duties has been to increase borrowing.

Distribution of Deficits

7. A closer look at the distribution of deficits among individual SOEs brings out an important observation: the deficits have been highly concentrated. Table A2.2 shows concentration ratios (CR) calculated for the largest (CR1), the largest four (CR4), and the largest eight (CR8) contributing SOEs to total borrowing requirement of the sector, and to other main aggregates[a/]. The SOEs listed (in the order of contribution) in each block are the largest eight contributors measured in terms of their contribution to the average for the period 1985-90. The averages are the averages of annual figures expressed as a share of GNP.

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a/ A "Concentration Ratio (CRn)" simply measures the share of the largest n companies in the aggregate considered. A higher CR indicates a higher concentration.

TABLE A2.2: CONCENTRATION OF DEFICITS, INVESTMENTS AND BORROWING

		Average 1985-90	85	86	87	88	89	90
A. [illegible]								
[illegible], [illegible], Seker, [illegible]	CR1	34	22	39	37	55	56	27
[illegible], [illegible], [illegible], Sumer	CR4	69	67	82	76	94	112	70
	CR8	90	105	115	87	110	143	82
B. Primary Deficit								
[illegible], [illegible], Seker, [illegible]	CR1	44	24	47	43	256	134	33
[illegible], [illegible], [illegible], [illegible]	CR4	103	80	123	102	475	285	84
	CR8	124	134	158	128	320	356	105
C. Investments								
[illegible], [illegible], [illegible], Botas	CR1	36	27	29	35	40	53	43
[illegible], [illegible], [illegible], [illegible]	CR4	65	58	64	73	68	78	78
	CR8	83	82	84	85	85	88	87
D. Stock Build-up								
[illegible], [illegible], Seker, [illegible]	CR1	*21	14	46	19	20	17	34
[illegible], Sumer, Ceylnur, [illegible]	CR4	69	51	82	57	53	54	81
	CR8	75	71	99	78	74	71	88
E. Net Borrowing from Banks[1]								
[illegible], [illegible], [illegible], Seker	CR1	34	28	46	34	35	33	83
[illegible], [illegible], [illegible], Sumer	CR4	63	77	82	63	105	80	90
	CR8	80	96	119	88	148	103	102
F. Net Foreign Borrowing[1]								
[illegible], [illegible], [illegible], [illegible]	CR1	27	27	34	28	51	74	30
[illegible], [illegible], Botas, [illegible]	CR4	63	80	72	81	87	157	107
	CR8	83	96	104	107	108	178	124

[1] A CR8 in excess of 100% indicates that the remaining SOEs are net repayers.

Source : Treasury and IBRD estimates

8. The SOE with the largest deficit (TEK for all the years except 1990 when TMO ranked the first) has accounted for 22%-55% of the total borrowing requirement in the years 1985 to 1990 (34% on an average basis). The borrowing requirements of the largest eight SOEs have been near the total for the sector, and have even been higher than the total for some years (1986 and 1989). MKE and TMO (except in 1988) have consistently ranked in the first four. TEKEL, Seker, TCDD, TDCI, and Sumerbank have ranked in the first eight for most of the years. Petkim, PTT, Botas, and THY have ranked in the first eight during 1985-87, and have either showed a surplus or a lower deficit during 1988-90. Conversely, TTK's performance has deteriorated after 1988, and since then it has ranked in the eight poorest performers. A similar concentration is observed in investment expenditures and stock build-up. Moreover, the set of SOEs with the largest deficits is almost a union (with a few exceptions) of the sets of SOEs with the largest investment and stock build-up programs.

Four Typical Performances

9. Performance has not been even across SOEs and over time. An analysis of main indicators for individual SOEs revealed the following four "proto-types" of performance:

- Heavily investing SOE: The typical example is TEK, which is the only SOE with such a large and sustained deficit and investment program. Table A2.3 illustrates the case of large deficits stemming from

TABLE A2.3: TEK - FISCAL INFORMATION

	1985	1986	1987	1988	1989	1990
PSBR	0.85	1.33	1.61	1.48	1.36	1.18
Primary deficit	0.47	0.87	1.18	1.15	1.11	0.78
PSBR-Investments-Stocks	-1.00	-0.50	-0.33	-0.68	-0.90	-0.37
Investments	1.85	1.74	2.00	2.15	2.21	1.48
Stock build-up	0.00	0.10	0.13	0.01	0.05	0.06
Interest payments	0.38	0.36	0.31	0.33	0.27	0.42
Internally generated funds	0.81	0.58	0.47	0.55	0.51	0.15
Investments+Stock in excess of internally generated funds	0.84	1.26	1.66	1.61	1.77	1.40

Source : Treasury and IBRD calculations

large investment programs. TEK, by itself, had a borrowing requirement of about 1.5% of GNP during 1986-89, and 1.2% of GNP in 1990. But, at the same time, it had to implement a very large (the

largest) investment program assigned by the government. Annual investment expenditures have been around 1.7% of GNP in 1985-86, in excess of 2% of GNP in 1987-89, and 1.5% of GNP in 1990. During this period, internally generated funds have been around only 0.5% of GNP (0.15% in 1990). TEK could have generated more funds to finance a larger portion investments if it had had more flexibility in employment and pricing decisions and been able to overcome operational inefficiencies. However, even a much better performance could not have matched the financing needs of such a large investment program which long gestation and recovery periods. More importantly, given the fact that Turkey needs to continue to invest in energy infra-structure, TEK is likely to be in a similar situation unless government can attract private and/or foreign capital investment in energy.

- SOEs with recently completed projects: PETKIM and PTT are two examples. Performance of these SOEs is characterized by: a) fairly large investment programs during the 1985-87, period fully or to a large extent completed by 1988-89; b) large deficits during the investment period that eventually turned into surpluses; and c) internally generated funds during the post-investment period (1988-90) on average noticeably larger than those during the investment period (1985-87) (see Table A2.4). The case of PTT differs from TEK as PTT's investment program has been completed, and more importantly, PTT has been more efficient in the areas of pricing and employment.

- Victims of agricultural support policy: Performance of TMO, SEKER, and TEKEL have mainly reflected the degree of generosity of the government in supporting agricultural producers, as well as consumers. Purchases of grains, tobacco, and sugar beat at subsidized prices and at amounts in excess of rational levels of buffer stocks have been the main cause of poor performance of these SOEs. As shown in Table A2.5, this is most pronounced in 1990. Aside from the financing of stock accumulation, purchases and sales at subsidized prices and physical losses due to purchases in excess of existing storage capacity, have led to operational losses. It is clear that any significant improvement in these SOEs is contingent on a change in government's agricultural support policy.

TABLE A2.4: PEMEX, PTT - FISCAL INFORMATION

PEMEX	1985	1986	1987	1988	1989	1990
PSBR	0.42	0.35	0.28	-0.15	-0.32	-0.17
Primary deficit	0.40	0.30	0.11	-0.35	-0.47	-0.20
PSBR-Investments-Stocks	-0.18	-0.20	0.07	-0.33	-0.47	-0.25
Investments	0.52	0.50	0.15	0.26	0.09	0.06
Stock build-up	0.05	0.05	0.08	0.13	0.06	0.02
Interest payments	0.01	0.06	0.18	0.41	0.15	0.03
Internally generated funds	0.12	0.17	0.21	0.34	0.48	0.28
Investments+Stock in excess of internally generated funds	0.45	0.38	-0.00	-0.15	-0.33	-0.18

PTT	1985	1986	1987	1988	1989	1990
PSBR	0.30	0.81	0.63	0.07	-0.26	-0.07
Primary deficit	0.21	0.48	0.40	-0.17	-0.42	-0.18
PSBR-Investments-Stocks	-0.56	-0.48	-0.81	-0.85	-0.78	-0.86
Investments	0.86	1.15	1.28	0.91	0.51	0.73
Stock build-up	0.00	-0.05	-0.04	0.01	0.03	0.06
Interest payments	0.10	0.13	0.23	0.23	0.16	0.09
Internally generated funds	0.38	0.50	0.63	0.83	0.86	0.87
Investments+Stock in excess of internally generated funds	0.28	0.80	0.81	-0.01	-0.43	-0.08

Source : Treasury and IEED calculations

TABLE A2.9: [illegible], [illegible], [illegible] - FISCAL INFORMATION

[illegible]	1985	1986	1987	1988	1989	1990
PSBR	0.29	0.85	0.78	0.02	0.81	1.75
Primary deficit	0.26	0.81	0.76	0.01	0.80	1.72
PSBR-Investments-Stocks	0.25	0.15	0.24	-0.17	0.18	0.85
Investments	0.02	0.02	0.11	0.18	0.12	0.10
Stock build-up	0.06	0.68	0.44	0.01	0.40	1.60
Interest payments	0.08	0.05	0.02	0.02	0.01	0.03
Internally generated funds	-0.24	-0.28	-0.26	0.01	-0.11	-0.10
Investments+Stock in excess of internally generated funds	0.33	0.90	0.81	0.15	0.62	1.60

[illegible]	1985	1986	1987	1988	1989	1990
PSBR	-0.04	-0.03	0.13	0.44	0.35	0.80
Primary deficit	-0.19	-0.03	0.13	0.44	0.35	0.80
PSBR-Investments-Stocks	-0.34	-0.35	-0.16	-0.04	-0.01	-0.19
Investments	0.03	0.02	0.02	0.02	0.03	0.05
Stock build-up	0.28	0.30	0.29	0.46	0.32	1.04
Interest payments	0.15	0.00	0.00	0.00	0.00	0.00
Internally generated funds	0.40	0.40	0.17	0.08	-0.01	0.22
Investments+Stock in excess of internally generated funds	-0.19	-0.08	0.14	0.41	0.37	0.88

[illegible]	1985	1986	1987	1988	1989	1990
PSBR	0.11	0.00	0.21	0.37	0.30	0.75
Primary deficit	0.11	0.00	0.21	0.37	0.30	0.75
PSBR-Investments-Stocks	-0.19	-0.12	-0.02	-0.07	0.02	0.00
Investments	0.06	0.06	0.08	0.07	0.05	0.05
Stock build-up	0.22	0.06	0.25	0.38	0.23	0.71
Interest payments	0.00	0.00	0.00	0.00	0.00	0.00
Internally generated funds	0.03	-0.01	-0.02	0.03	-0.04	-0.00
Investments+Stock in excess of internally generated funds	0.27	0.13	0.25	0.40	0.31	0.76

Source : Treasury and [illegible] calculations

- Genuine poor performers: TTK and TDCI (and TCDD to some extent) are typical examples. The borrowing requirement of these SOEs have mainly financed operational losses (see Table A2.6). These SOEs are characterized by outdated technology, lack of investment to upgrade efficiency, and over employment. These deficiencies have surfaced more as these SOEs faced stronger competition, increasing real wages, and an appreciating real exchange rate.

Financing of Deficits

12. Table A2.7 shows the sources of deficit financing. During 1985-88, the SOE sector relied heavily on foreign borrowing to finance on-going investment projects. Disbursements on foreign project credits were around $1.1 billion per year in 1985-88. A small number of SOEs accounted for a large portion of foreign borrowing (TEK, PTT, THY, TKI, TDCI, TCDD and Botas). During this period net foreign borrowing by SOEs accounted for more than half of total net foreign borrowing. More strikingly, SOEs borrowed about $1 billion in 1988 when the economy as whole recorded a net repayment of $0.4 billion (see Table A2.8).

13. Borrowing from commercial banks (including rediscount credits extended by the Central Bank) has been about 1.6%-1.8% of GNP during 1985-90, (except in 1988 when it was insignificant). The group of largest borrowers included TMO and SEKER (for agricultural support purchases) as well as SOEs with large investment expenditures such as TEK, PTT, and PETKIM. Borrowing from the Central Bank as reported in SOE accounts corresponds to direct credits from the Central Bank under Treasury guarantee. Since 1984, the Central Bank in principle closed this window for SOEs, except for TMO. Borrowings from Central Bank in Table A2.8 are mainly TMO's borrowing. Total net domestic financing has shown large fluctuations during 1985-88 (0.4% of GNP in 1986 vs 2.1% in 1987).

14. Finally, the size of net payment arrears also fluctuated strongly during 1985-88. While SOEs have consistently run arrears to Treasury and the private sector, the direction and size of payment arrears between SOEs and other public agencies have varied.

15. The financing of deficit has shown a different pattern in 1989-90, and even more so in 1990.

- The share of payment arrears in total financing has dramatically increased, reaching 3.8% of GNP or 58% of total financing requirement in 1990. Payment arrears to the private sector (mainly un-paid portion of support purchases by SEKER and TEKEL) amounted to 1.3% of GNP, while the bulk of the remaining arrears (1.9% of GNP) to other public agencies (see section C for details).

TABLE A2.8: TUK, TCHD, TDCI - FISCAL INFORMATION

TUK	1985	1986	1987	1988	1989	1990
PSBR	0.03	0.05	0.06	0.10	0.13	0.36
Primary deficit	0.02	0.03	0.04	0.09	0.12	0.35
PSBR-Investments-Stocks	-0.03	0.03	0.01	0.06	0.08	0.29
Investments	0.02	0.02	0.03	0.02	0.03	0.02
Stock build-up	0.04	-0.01	0.02	0.02	0.01	0.05
Interest payments	0.01	0.01	0.02	0.01	0.01	0.01
Internally generated funds	-0.04	-0.10	-0.12	-0.14	-0.19	-0.25
Investments+Stock in excess of internally generated funds	0.10	0.12	0.17	0.18	0.23	0.32

TCHD	1985	1986	1987	1988	1989	1990
PSBR	0.28	0.01	0.10	0.23	0.21	0.38
Primary deficit	0.26	-0.03	0.04	0.16	0.16	0.25
PSBR-Investments-Stocks	-0.18	-0.19	-0.23	-0.14	-0.11	0.11
Investments	0.38	0.19	0.20	0.35	0.26	0.20
Stock build-up	0.07	0.01	0.04	0.02	0.06	0.07
Interest payments	0.02	0.04	0.06	0.07	0.08	0.13
Internally generated funds	-0.04	0.03	0.01	0.00	-0.06	-0.03
Investments+Stock in excess of internally generated funds	0.50	0.18	0.32	0.37	0.38	0.29

TDCI	1985	1986	1987	1988	1989	1990
PSBR	0.30	0.20	0.01	-0.08	0.40	0.40
Primary deficit	0.36	0.13	-0.08	-0.18	0.27	0.28
PSBR-Investments-Stocks	-0.08	-0.01	-0.10	-0.25	0.06	0.30
Investments	0.22	0.17	0.07	0.04	0.04	0.04
Stock build-up	0.24	0.03	0.05	0.12	0.31	0.06
Interest payments	0.02	0.06	0.11	0.08	0.13	0.21
Internally generated funds	0.00	0.00	0.00	0.20	-0.08	-0.20
Investments+Stock in excess of internally generated funds	0.37	0.21	0.02	-0.12	0.42	0.40

Source : Treasury and IBRD calculations

TABLE A2.2: FINANCING OF THE DEFICIT

	1985	1986	1987	1988	1989	1990
I. PSBR (% of GNP)	3.05	3.42	4.41	2.70	2.84	6.47
II. Financing (% of GNP)	3.05	3.42	4.41	2.70	2.84	6.47
A. Net deferred payments	-0.08	0.80	0.18	0.75	1.44	3.76
a. Private sector	0.48	0.02	0.73	0.88	0.37	1.25
b. Public sector	-0.57	0.77	-0.55	-0.15	1.07	2.51
Treasury	0.85	0.76	0.41	0.33	1.11	0.63
Other public agencies	-1.13	0.28	-0.82	-0.38	0.07	1.80
Other SOEs	-0.10	-0.27	-0.03	-0.18	-0.12	-0.02
B. Net domestic financing	1.80	0.42	2.11	0.28	0.84	1.52
a. Change in cash/bank	-0.82	-1.28	-0.45	-0.48	-0.89	-0.18
b. Change in securities	0.02	0.00	0.17	0.08	0.02	0.04
c. Commercial banks	1.83	1.55	1.83	0.30	1.45	1.63
d. Central Bank	0.29	-0.00	0.31	0.31	0.00	0.00
d. Exim-Bank	0.07	0.14	0.25	0.05	-0.14	0.04
C. Net foreign financing	1.33	2.21	2.13	1.69	0.57	1.18
III. Financing (% of total)	100	100	100	100	100	100
A. Net deferred payments	-3	23	4	28	54	58
a. Private sector	16	1	17	33	14	19
b. Public sector	-19	23	-13	-5	40	39
Treasury	21	22	9	12	42	10
Other public agencies	-37	8	-21	-11	3	29
Other SOEs	-3	-8	-1	-7	-5	-0
B. Net domestic financing	32	12	48	10	24	24
a. Change in cash/bank	-28	-38	-10	-18	-26	-3
b. Change in securities	1	0	4	3	1	1
c. Commercial banks	60	45	42	11	35	25
d. Central Bank	9	-0	7	11	0	0
d. Exim-Bank	2	4	8	2	-5	1
C. Net foreign financing	31	65	48	63	21	18
Memo Items						
Net financing from private sector						
% of GNP	1.72	0.30	2.28	0.78	1.15	2.74
% of total	56	9	52	29	44	42

Source : Treasury and IBRD estimates

TABLE A2.8: COMMERCIAL BANK CREDITS AND FOREIGN DEBT

	1985	1986	1987	1988	1989	1990
I. Commercial Bank Credits (TL billion)						
a. Stock						
Total 1/	5,552	10,043	16,024	22,770	36,522	65,189
SOEs	938	1,415	2,550	2,856	5,329	10,000
SOEs % of total	16.9	14.1	15.9	12.5	14.6	15.3
b. Expansion						
Total	2,420	4,481	5,982	6,745	13,753	28,677
SOEs	400	477	1,135	305	2,474	4,670
SOEs % of total	16.5	10.6	19.0	4.5	18.0	16.3
II. Foreign Debt ($ million)						
a. Outstanding						
Total	25,478	32,181	40,228	40,722	41,751	48,035
Public Sector 2/	21,404	26,425	33,821	34,610	35,189	38,582
SOEs 3/	3,320	4,901	5,840	6,575	6,881	8,484
SOEs % of total	13.0	14.0	14.0	16.1	16.7	17.3
SOEs % of public	15.5	17.0	16.7	19.0	19.0	21.0
b. Net Foreign Borrowing						
Total	735	2,007	2,410	(329)	(306)	3,854
SOEs	719	1,182	1,138	935	416	1,181
SOEs % of total	97.0	57.2	47.2	-285.0	-82.2	31.0

1/ Includes Central Bank rediscount credits through the banking sector.
2/ Including Central Bank.
3/ Includes on-lending in foreign exchange from Treasury; for 1985-88 estimated using data on net borrowing and stock data for 1989.

Source : Treasury, Central Bank and IMD estimates

- The size and composition of foreign borrowing has also changed. While the disbursements on foreign project credits have slowed repayments have increased. Total net borrowing has declined to 0.6% of GNP in 1989 from about 2% in 1986-87. A new borrower emerged in 1989 and especially in 1990: TMO. TMO borrowed $0.3 billion in 1989 to finance wheat imports, and $0.7 billion in 1990 to finance support purchases of 1990 harvest. Net foreign borrowing by SOEs excluding TMO has declined from about $1 billion in 1985-88 to $0.2 billion in 1989 and $0.4 billion in 1990.

- Finally, TMO and SEKER have crowded out almost all other SOEs from commercial bank borrowing. In 1989, TMO and SEKER borrowed TL 1.1 trillion from the banking sector (partly rediscount credits from Ziraat Bank) which accounted for 50% of commercial borrowing by the

entire SOE sector. This crowding out was even more pronounced in 1990. They borrowed TL 3.9 trillion, which was 85% of total commercial borrowing (TL 4.6 trillion).

16. Regarding the macroeconomic consequences of SOE financing, the following conclusions emerge from the above patterns: (i) SOEs have significantly contributed to high foreign debt ratios of Turkey. Their share in total foreign debt of Turkey has increased from 13% in 1985 to 17% in 1990 mainly due to the fact that SOEs have continued borrowing from abroad after 1987 while the rest of the economy, reduced in foreign indebtedness; (ii) The contribution of SOEs to the crowding out of the private sector has increased during 1985-90. This happened more through indirect channels than through direct borrowing from the banking sector. The share of SOEs has stayed around 15% percent in total commercial bank credit stock. However, total financing from the private sector including payment arrears to the private sector has been increasing. Moreover, SOE arrears to Treasury and other public agencies have caused higher borrowing by those agencies and, hence, have indirectly contributed to the crowding out of the private sector from domestic financial markets; (iii) The contribution of SOEs to money creation is more difficult to assess due to the lack of available data on rediscounts to SOEs. However, for the 1988-90 period an analysis of the sources of money creation indicates that SOEs did not contribute directly to base money creation.

C. Burden of SOEs on the Rest of the Public Sector

17. Financial relations between SOEs and the rest of the public sector are quite complex. The issue is further complicated by the fact that financial flows reported in detailed SOE accounts correspond to actual cash flows in some cases, whereas in others they correspond to accrued claims and obligations. Hence, it is not possible to give a complete and comprehensive picture of the financial burden of SOEs on the rest of the public sector. This section attempts to identify major components.

18. Table A2.9 shows a matrix of flows between SOEs and other segments of the public sector. In the SOE accounting system financial relations with the rest of the public sector are reported in three groups : a) Treasury, b) other public agencies, and c) other SOEs. All government agencies other than Treasury are included in "other public agencies". There are basically three groups of financial flow/claims/obligation:

- Budgetary transfers: SOEs receive transfers from the central government budget in the form of equity, compensation for duty

TABLE A2.2: FINANCIAL FLOWS BETWEEN SOEs AND THE REST OF THE PUBLIC SECTOR

To / From	SOEs	Treasury						Other Public Agencies — EBFs		
		Equity	Dividends	Duty loss and aid	Taxes	On-lending	Other	Subsidies	Revenue shares	Other
SOEs	Net payment arrears		Payments : . current year . on arrears	Accrued duty losses	Payments : .current year .on arrears	Payments : .on arrears		Accrued subsidies	Payments : . current . on arrears	Change in receivables
Treasury										
Equity	Equity injections									
Dividends	Accrued									
Duty losses and aid	Payments : .current .on arrears									
Taxes	Accrued									
On-lending	Arrears									
Other	Misc.									
Other Public Agencies										
EBFs	Payments : .current .on arrears									
Subsidies										
Revenue shares	Accrued									
Other	Change in payables									

losses, and aid (see Annex 5 for details of duty losses). These transfers are actual payments received from Treasury and also reported in the government budget.

- Subsidies and transfers: There are three main subsidies/transfers: (i) Support and Price Stabilization (SPSF) subsidy to fertilizer producers (TUGSAS and IGSAS); SPSF subsidies reported in SOEaccounts are subsidies to the enterprises and exclude subsidies passed on to consumers through these enterprises. (ii) Development and Support Fund (DSF) transfers to TEK: Housing Development Fund (HDF) receives a share of electricity revenues, which TEK has failed to pay during the recent years. The un-paid amount is first recorded as a liability to HDF, and, then recorded as a transfer item from DSF, which presumably records it as receivables from HDF. The bottom line is that TEK uses the proceeds of tariff which actually belong to HDF. (iii) Financing of TEKEL's support purchases: TEKEL has the obligation to purchase low quality tobacco from producers at subsidized prices. TEKEL does not include these in changes in stocks since they are not marketable. Instead it records the sum as an increase in claims on "other public agencies"[3/].

- A variety of receivables and payables: In aggregate tables these items are included in advance and deferred payments. The accounting principle is that flows related to changes in liabilities are included in deferred payments, and those related to changes in assets are included in advance payments. This is the most complicated part of the flows between SOEs and rest of the public sector. The balance of these items have been in the order of 1.5%-2.5% of GNP in 1989-90. Main items in this group are: net tax arrears to Treasury, un-paid dividends to Treasury, un-paid debt service payments on on-lending in foreign exchange from Treasury[4/], payments by Treasury to SOEs on previous years duty losses, payments by SOEs to Treasury on accumulated arrears on on-lending and un-paid dividends, arrears to EBF on accrued revenue shares (HDF and PPA) and payments on accumulated arrears, un-paid premium to the Social Security Institution, and changes in ordinary receivables and

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3/ These are in reality claims from the central government budget. It appears that TEKEL has rarely been paid (in this regard it might be viewed as the burden of the rest of the public sector on TEKEL). In the revised 1991 financing program, TEKEL as surposed to receive a partial payment of TL 0.8 trillion in the form of duty losses.

4/ Treasury pays debt services due on foreign borrowing even if the debtor SOE fails to re-imburse. In SOE accounts, these arrears are included in increase in liabilities to "other public agencies" although the liability is to the Treasury.

payables related to purchase and provision of goods and services to other agencies.

19. SOEs also have receivables/payables to other SOEs. The balance of these for the sector should be zero provided that accounting of receivables/payables by the two SOEs involved is symmetric and equal. However, SOE accounts have always shown non-zero balances, indicating an accounting anomaly. One reason for non-zero balances could be that when an SOE is transferred to the PPA for privatization other SOEs might continue to include receivables/payable to this SOE in "receivables/payables to other SOEs". Another reason could be that a given transaction has two different values in the books of two SOEs involved. The balance of these items for the sector as a whole is disregarded in the estimation of the financial burden of SOEs on rest of the public sector.

20. For the purpose of this annex the sum of all payments and the balance of the changes in receivables/payables is taken as a measure of the financial burden of SOEs on rest of the public sector. This could be an overestimate in so far as receivable/payables bear market rate of interest and that the prospects for them being paid are high. However, neither seems to be the case. Some of the payment arrears carry high penalty interest. For example, penalty interest on un-paid taxes and social security contributions was 84% in 1990. In other cases payment arrears either carry no penalty interest, or penalty rates are much below the market interest rate. For instance, interest on over-due debt service payments on on-lending was 30% until 1990 when it was increased to 60%. More importantly, the prospects for accumulated arrears being paid have proven to be quite slim. In the past, accumulated arrears have been consolidated, or assumed by Treasury and converted into equity. For instance in 1989, accumulated arrears on on-lending and dividends equivalent to 1.7% of GNP were written-off by Treasury and converted into equity (note that this was on top of equity injection paid in cash and reported under "budgetary transfers").

21. Table A2.10 puts together available data on financial flows between SOEs and rest of the public sector. It should be noted that some of these items are above-the-line items (budgetary transfers, SPSF, DSF, and TEKEL support purchases) in aggregate financial tables (for instance, the PSBR table), while others are below-the-line items included in deferred/advance payments. The estimated burden turns out to be much higher than what has been reported under "budgetary transfers". It has reached 3.9% of GNP in 1990, clearly demonstrating how the so-called "soft budget constraint" bails out SOEs in financial distress and displaces the financial burden to the rest of the public sector.

22. The financial burden on the Treasury has been in the range of 1.2%-1.9% of GNP in 1985-90. SOEs have consistently received budgetary transfers (in the range of 0.4%-1.0% of GNP), have run arrears on taxes (0.1%-0.7% of GNP), and have rarely paid dividends to Treasury. The direction of net flows related to accumulated receivables/payables have varied.

23. Subsidies received (or claimed) from the EBF system have continuously increased as the EBF system expanded and the role assigned to EBFs in public

finance increased. Total subsidies started with 0.1% of GNP in 1985 and reached 0.9% of GNP in 1990. Transfers to TEK from DSF in 1989 and 1990 explain a large portion of this increase.

24. The sign of the change in net balance of receivables/payables to other public agencies has fluctuated during 1985-89. In 1990, however, net arrears of SOEs jumped to 1.9% of GNP. Moreover, the figures for the entire SOE sector hide an important development. A large number of SOEs have always had claims on public agencies, while a few of them have been notoriously accumulating payment arrears especially after 1987. For instance, in 1990 TEK had arrears of 1.1% of GNP on debt service payments on on-lending and on revenue shares of PPA and HDF. This is partly revealed in Table A2.10 in the steady upward trend in increase in liabilities (from 0.04% of GNP in 1985 to 1.9% in 1990).

TABLE A2.10: FINANCIAL BURDEN ON REST OF THE PUBLIC SECTOR (% of GNP)

	1985	1986	1987	1988	1989	1990
Total (I. + II.)	0.33	1.32	0.89	1.50	2.30	3.82
I. Treasury	1.36	1.18	1.00	1.08	1.94	1.12
a. Budgetary transfers	0.65	0.35	0.76	..02	0.72	0.44
Equity	0.48	0.00	0.48	0.06	0.00	0.30
Duty losses (paid)	0.16	0.26	0.28	0.35	0.11	0.13
Aid	0.00	0.00	0.00	0.01	0.01	0.00
b. Arrears on taxes	0.06	0.40	0.27	0.11	0.35	0.57
c. Un-paid dividends	0.05	0.07	0.00	0.31	0.20	0.14
d. Change in receivables/payables	-0.01	0.27	-0.03	0.04	0.38	-0.03
Decrease in receivables	0.02	0.37	0.00	0.00	0.23	0.03
Decrease in payables	-0.03	-0.10	-0.03	-0.05	0.25	-0.06
II. Other public agencies	-1.03	0.34	-0.71	-0.08	0.35	2.80
a. Subsidies and aid	0.18	0.06	0.21	0.21	0.27	0.90
Support and Price Stab. Fund	0.00	0.00	0.05	0.04	0.01	0.01
Development and Support Fund	0.00	0.00	0.00	0.00	0.22	0.20
Railway Co. aid	0.06	0.05	0.04	0.03	0.02	0.04
TEKEL Support Purchases	0.04	0.01	0.13	0.15	0.02	0.65
b. Increase in liabilities	0.04	0.01	0.48	0.08	0.08	1.82
c. Decrease in assets	-0.08	0.18	-0.02	-0.38	-0.34	-0.40
d. Others	-0.27	0.17	-0.78	-0.00	-0.27	0.38
III. Other SOEs	-0.10	-0.27	-0.03	-0.18	-0.12	-0.02
Memo Items						
Duty losses claimed	0.05	0.07	0.00	0.38	0.37	0.27
Consolidated arrears (equity)	0.00	0.00	0.00	0.00	1.73	0.17

Source : Treasury and IBRD estimates

B. Subsidies, Who Benefits and Who Pays?

25. It is clear that subsidies and transfers have been instrumental in the survival of the SOE sector. What is not so clear is what are the gains, if there are any, and who are the beneficiaries. For a balanced assessment the first step is to sort out the existing explicit and implicit subsidies and transfers made available to the sector and by the sector. The second step is to identify whether these subsidies and transfers compensate for the intrinsic losses of the recipient enterprises or they ultimately end up in other sectors of the economy. A complete and comprehensive assessment requires an enterprise and subsidy specific analysis which is neither in the scope of this annex nor possible with the available data.

26. During the 1985-90 period there have been basically five types of subsidies and transfers to the SOE sector from Treasury and other public agencies, EBFs in particular:

a. compensation for duty losses incurred in supplying goods and services at subsidized (or below the normal prices charged by the SOEs) prices upon the instruction from the government;
b. subsidies and transfers received from EBFs either to finance support purchases in agriculture, or as pure transfers to finance deficits;
c. equity injection by Treasury either through providing cash or writing off accumulated debts;
d. financing from the State Investment Bank (which was later turned into Exim-bank in 1987), the Central Bank in the form of direct credits or rediscount credit through public banks at subsidized interest rates; and
e. implicit subsidies attached to provision of financing by allowing payment arrears.

27. SOEs, in turn, have executed the following non-commercial duties and functions:

a. support producers in agriculture and consumers of agricultural products;
b. provide goods and services at below normal prices, such as cheap coal for residential heating in highly polluted towns, operating non-profitable railway and maritime lines;
c. create non-economic and redundant employment (more politically imposed rather than as part of well designed and targeted programs);
d. temporarily subsidize all customers by holding back price adjustments under "instructions" from the government (sometimes meant to be a measure to curb inflation!).

As was discussed above, some SOEs like TEK and PTT have also undertaken large infrastructure investments in energy and telecommunication which have long gestation and recovery period. Even if these enterprises had been financially strong and operationally efficient, and had adopted effective cost recovery programs, they would have been in need of financial support, at least during the

investment period. With this view, a part of the subsidies and transfer received by TEK and PTT should be linked to their investment portfolio.

28. Regarding the ultimate beneficiaries of the subsidies and transfer flowing into the SOE sector, and of simply the existence of some enterprises, tw groups emerge as the unquestionable net beneficiaries: farmers and employees o SOEs. Farmers receive income transfer through the support purchase program implemented by SOEs. Employees (may be not all of them) also receive incom transfers simply by being employed in SOEs.

29. There are, obviously, other groups which benefit from the existenc of SOEs and the way they operate. Businesses supplying goods and services t SOEs and their employees (especially, in towns like Zonguldak and Karabuk wher virtually the whole town depends on SOE related activities) and consumers o subsidized agricultural products are a few to name. However, it is not very clear whether they are net beneficiaries or not. Simply because, they pay, either directly and/or indirectly, for cost of the inefficiency of the SOE sector and the subsidy programs through taxes, inflation, and the lack in quality and quantity of public services and infra-structure enhancement due to the diversion of funds to the SOE sector which could otherwise have been invested in these areas.

E. Concluding Remarks

30. The SOE sector has been a major contributor to the worsening fiscal performance during 1989-90. SOEs have contributed to the fiscal deterioration not only through increasing deficits, but also through increasing their burden on rest of the public sector. Urgency of a fiscal course correction has increased as the deterioration continued in 1991. The review in this annex shows that a fiscal adjustment package which does not properly address the problems of SOEs will be short of producing desirable fiscal improvements. Moreover, it should be noted that the success of an SOE reform program crucially depends on: (i) the restructuring of the government's agricultural support policies and the role of SOEs in the execution of these policies, and; (ii) the redefinition of the role of SOEs in the implementation of public sector investment programs, especially in infrastructure development.

16. Evaluating the Effect Of A Performance Incentive Program

One of the major elements of public enterprise reform is changing the institutional framework. Among the tasks involved are assigning the functions of ownership, regulation, and management to the most appropriate spheres of authority. The sustainability of these reforms is likely to be improved when the internal reward structure in public enterprises is made consistent with the objective of operational efficiency.

The "signalling system" is a peformance evaluation system for industrial public enterprises. The system involves the designation of performance evaluation criteria, negotiating targets of achievement for the public enterprise, evaluating the results on operational efficiency, and providing bonuses to managers on the basis of performance. The report, Evaluating the Performance of Public Enterprises in Pakistan, in the Working Papers series (No. 160, 1989) provides a methodology for evaluating the impact of this performance evaluation system on the profitability and efficiency of public enterprises in Pakistan.

The evaluation relied on the use of quantitative measures and qualitative evidence from interviews with public enterprise officials. The evaluation results indicate that the incentive system had a positive impact on cost reduction, profitability, managerial motivation.

Because the objective of public enterprise reform is to improve operational efficiency by exposure to competitive forces or by performance incentive schemes such as the signalling system, a systematic approach is needed to assess their impact on profitability and efficiency. The value of this report is that it provides a methodology for doing so. The adaptability of the signalling system for use in other countries suggests that its expanded use would require an appropriate evaluation methodology that is provided in the report. Excerpts from Section III of the evaluation report, which discuss the methodology, are included below along with excerpts from a statistical appendix which has extensive financial data on public enterprises.

An assessment of the performance evaluation system has also been undertaken in the largest and most important group of Korea's public enterprises, the Government Invested Enterprises (See Shirley, Improving Public Enterprise Performance. Lessons From South Korea, Working Paper No. 312, 1989). The report defines and makes the case for using public profitability, rather than financial profitability, as an indicator of the impact of the performance evaluation system on operational efficiency. Excerpts from the analysis are included in the following appendix, along with the tables illustrating the scoring and performance evaluation process. (For a background discussion on PE performance evaluation see Performance Evaluation for Public Enterprises, Jones, 1991).

Pakistan Performance Evaluation System

A. Methodology

To judge the impact of the system on performance, we looked both at quantitative measures and qualitative evidence from interviews with managers and officials. The quantitative assessment relies principally on a detailed analysis of a sample of 12 enterprises chosen from the six larger corporations. (See Table 4 for background information on these companies). The original intention was to compare enterprises inside and outside the system. Unfortunately, the IPEs outside the system under the MOP are smaller and tend to be the worst performers. The mission was unable to gather sufficient comparable data on private enterprises to compare their performance with similar IPEs. Without this control group we were unable effectively to isolate the system's impact from other influences on IPE behavior. Instead we attempted to examine other plausable factors which could explain any improvement in performance and to determine whether these were sufficient to rule out the influence of the signalling system.

Source: Shirley, Mary M., Evaluating the Performance of Public Enterprises in Pakistan, Working Paper No. 160, 1989

Table 4: Pakistan: Background Information on Sample Enterprises

CORPORATION	Enterprise	Location	Main Products	Total Assets as on 6-30-86	Employment as on 6-30-86	Pre-tax Profit (Loss) in 85-86 (Rs. in mill)	Net Profit (Loss) in 85-86 (Rs. in mill)
FCCL.	Sind Alkalis	Karachi	Soda Ash	319.89	720	5.04	3.74
FCCL.	Ravi Rayon Limited	Kala Shah Kaku	Acetate rayon yarn	310.25	2875	17.17	6.20
NFC	Lyallpur Chemical and Fertilizer	Jaranwala & Faisalabad	Single super phosphate	188.09	348	6.65	3.34
NFC	Pak Saudi Fertilizer	Mirpur Mathelo, District Sukkur	Urea	1966.67	907	222.78	56.78
SCCP	Javedan Cement	Karachi	Ordinary cement	222.88	1134	63.71	63.71
SCCP	Zeal Pak Cement Ltd.	Hyderabad	Ordinary cement	464.65	1989	129.74	116.09
SCCP	Gharibwal Cement Ltd.	Gharibwal, District Jhelum	Ordinary cement	299.65	954	174.36	160.46
SEC	Heavy Mechanical Complex (HMC)	Taxila	Cement plants & sugar plants	1152.97	3102	3.06	3.06
SEC	Pakistan Engineering Co. (PECO)	Lahore	Machine tools, HSD & SSD engines, electric motors, [illegible]	626.08	4431	-40.20	-41.70
SEC	Pakistan Machine Tool Factory (PMTF)	Karachi	Machine tools units, transmission group, tractor components	926.41	2260	4.31	4.31
PACO	Millat Tractors Ltd.	Lahore	Tractors Group	624.75	1059	9.06	9.53
PERAC	National Refinery Ltd. (NRL)	Karachi	Lube I & fuel and lube II	3722.07	841	120.00	120.00

SOURCE: Annual Reports of SAC.

In judging the sample enterprises we looked at their performance in terms of the main target indicator -- private profits after tax -- and in terms of public profits in constant prices. Public profits in constant prices measures net real benefits -- i.e., efficiency improvements. It is the equivalent of a quantum index of outputs minus a quantum index of inputs and gives a trend similar to the trend in total factor productivity. This enabled us to isolate the influence of pricing on results and to judge whether there had been any efficiency gain in addition to any financial improvements. Thus we were trying to answer two questions: did the system have an impact on private financial profits (its explicit target)? and on efficiency (its underlying goal)?

B. Quantitative Evidence

Current Priced Profits. Incentives are awarded principally on the basis of private profits after taxes in current prices. On the basis of that indicator IPE performance generally has improved. Thirty three IPEs were in the system for its entire three years of operation, of which 19 (or about 58 percent) improved their private profits after tax, from [illegible] million Rupees in 1982/83 to 617 million in 1985/86. Fourteen showed a deterioration from 445 million Rupees to 67 million. Thus the majority of these IPEs show an improvement in the main indicator being measured by the targeting system. After 3 years the total profits of the 33 IPEs in the system was almost twice what it had been before the system began:

Table 5: Summary of Performance of IPEs in System for Three Years: Profits (Millions of Rupees)

	1982/83	1983/84	1984/85	1985/86
33 IPEs in system for three years.	344.14	467.16	937.81	684.00
19 IPEs with profit improvements.	-100.75	221.08	717.45	616.74
14 IPEs with profit deterioration.	444.89	246.08	220.36	67.32

Source: Table 3 of the Statistical Appendix.

The sample enterprises show a similar trend. Five of the 12 improved their profits after tax from the system's introduction in 1983-84 to 1984/85 and seven show an improvement to 1985/86 (based on unaudited data for 1985/86, see Graphs 1-12 of the Statistical Appendix.)[6] Moreover, the sample enterprises with passing grades increased from 6 in 1982/83 to 7 in 1984/85 to 9 in 1985/86 (See Table 3 of the Statistical Appendix).

Constant Priced Profits. Of course, if the aim is to improve efficiency and if efficiency improvements are defined in terms of increases in net real benefits, then increases in private profits are not a good

6/ The five IPEs are Lyallpur Chemicals, Javedan Cement, Zeal Pak Cement, Pak Machine Tool Factory (PMTF), and National Refinery Ltd (NRL). The seven are these five, plus Sind Alkalis and Charibwal Cement.

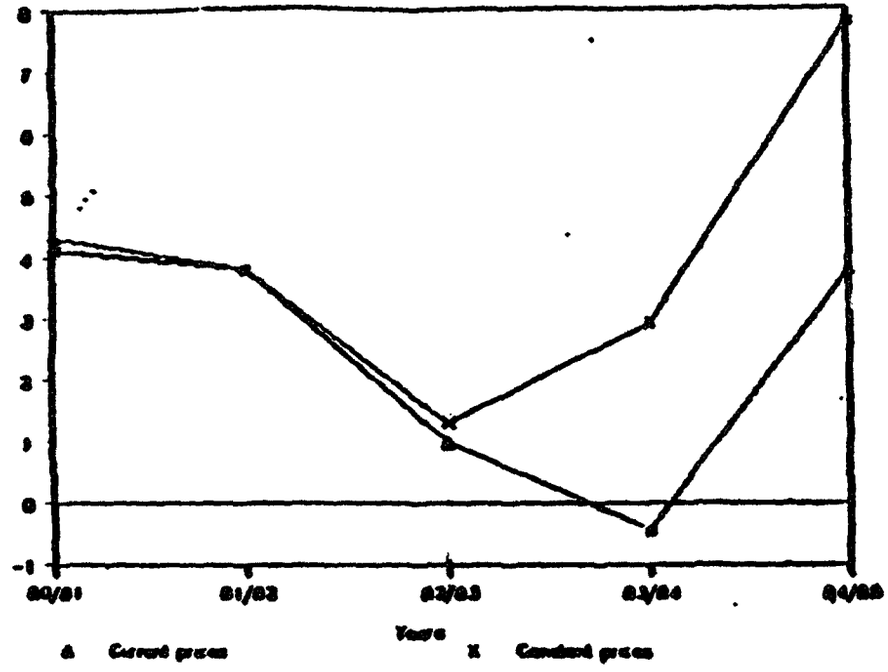
measure. Increases in public profits in constant prices come closer to indicating efficiency gains for most firms and that is used as a measure of efficiency improvement in this report. Data on public profits in constant prices are only available for all the sample for 1980/81 to 1984/85, which covers just the first two years of the system's operation.

In 7 of the 12 sample IPEs, public profitability in constant prices increased above the 1982/83 level in the first two years of the system (See Graphs 1-12). These seven include four for which the increase is also an improvement over past performance (borne out by comparing real value added for 1983/84-1984/85 with a trend line based on 1978/79-1982/83): Sind Alkalis, Lyallpur Chemicals, PMTF, and NRL. All four also improved private profits after tax. The other three enterprises in this group improved efficiency over 1982/83 but were still below their past trends (Pak Saudi, Javedan Cement and Millat Tractors). One company (Zeal Pak Cement) shows a sharp deterioration from past efficiency trends in the first two years of the signalling system. A scorecard on how the companies performed on the two indicators -- private profitability after tax and public profitability in constant prices -- is shown in Table 6.

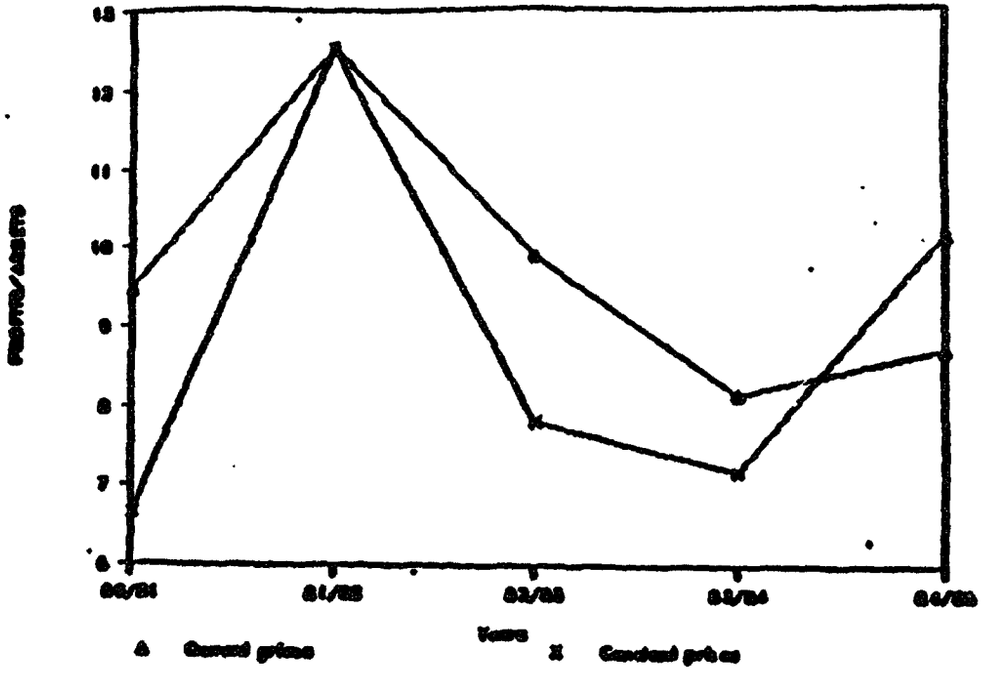
Some of the enterprises in Table 6 show opposite trends in private profitability and public profitability at constant prices. This occurs, first, because private profit contains items, such as nonoperating income, that do not move in parallel with efficiency gains and that are excluded from public profits, and second, because of administered prices

Graphs 1 - 4

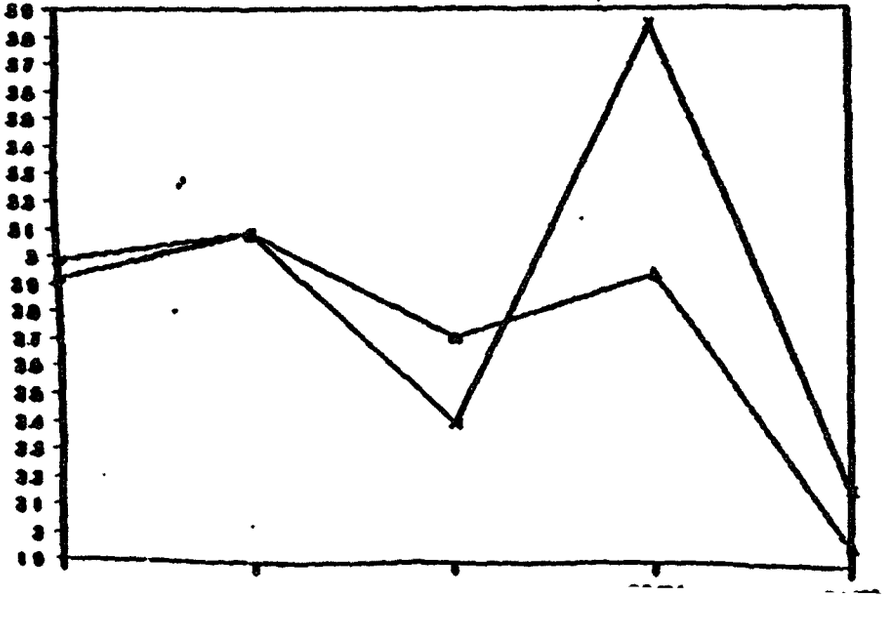
SIND ALKALIS: PUBLIC PROFITABILITY



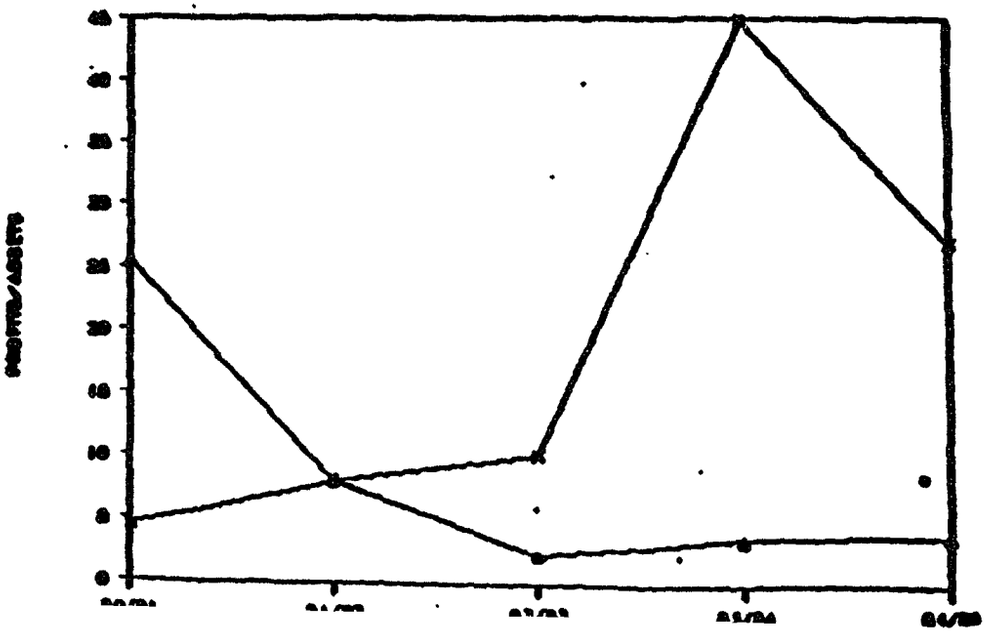
PAK SAUDI: PUBLIC PROFITABILITY



RAVI RAYON: PUBLIC PROFITABILITY

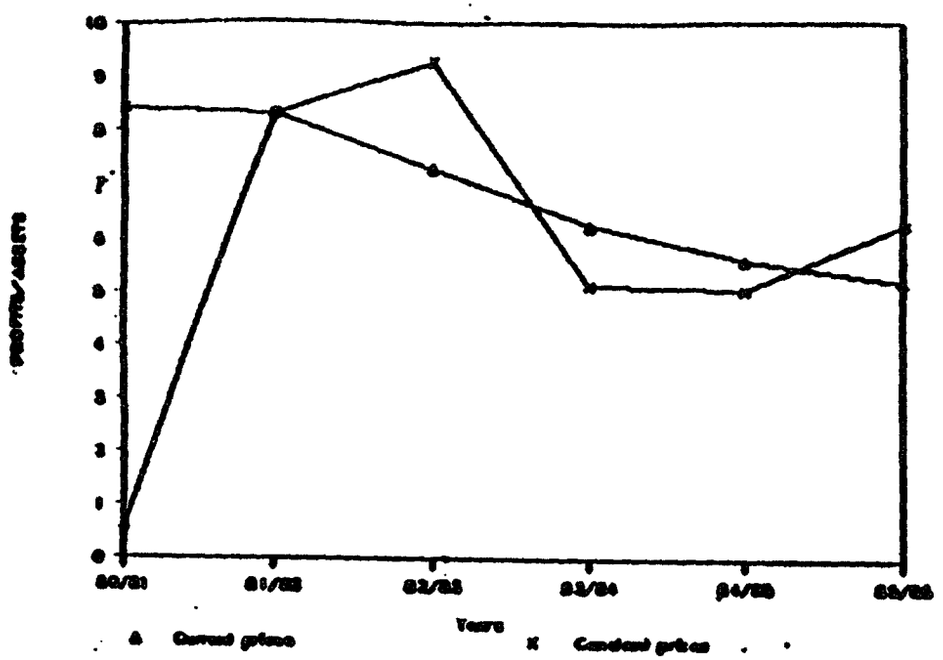


LYALLPUR FERTIL.: PUBLIC PROFITABILITY

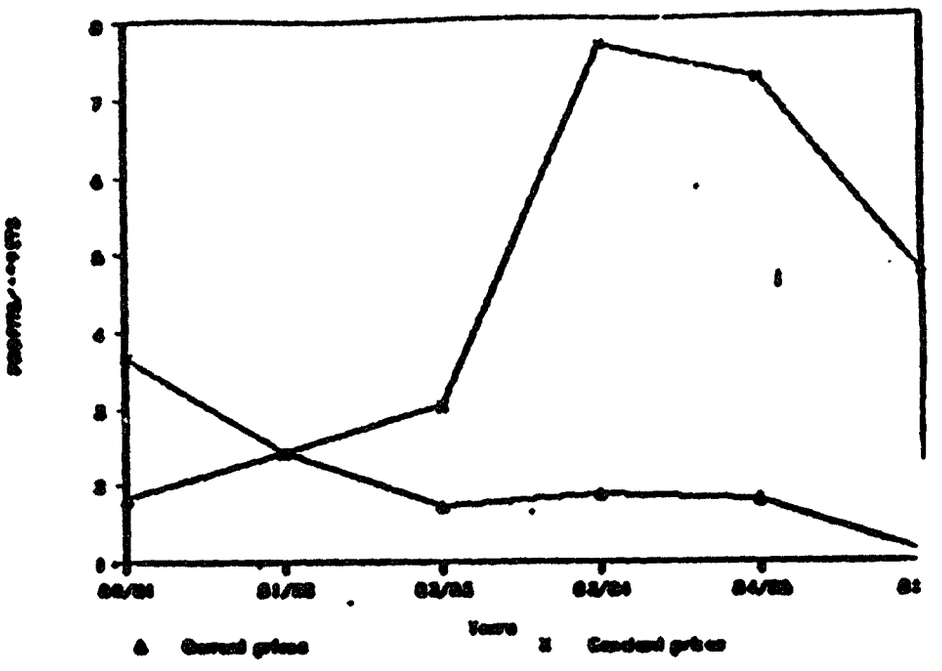


Graphs 5 - 8

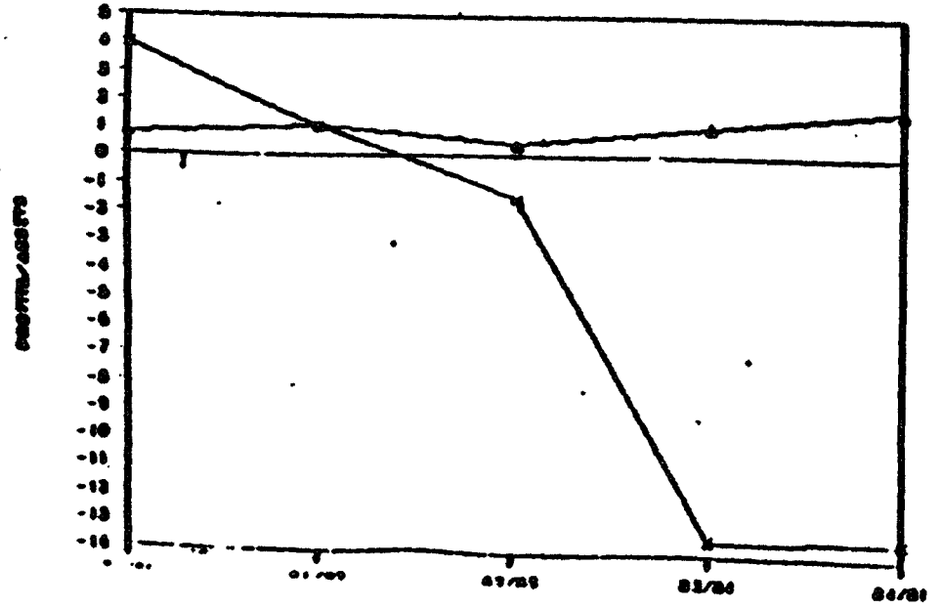
JAVEDAN CEMENT: PUBLIC PROFITABILITY



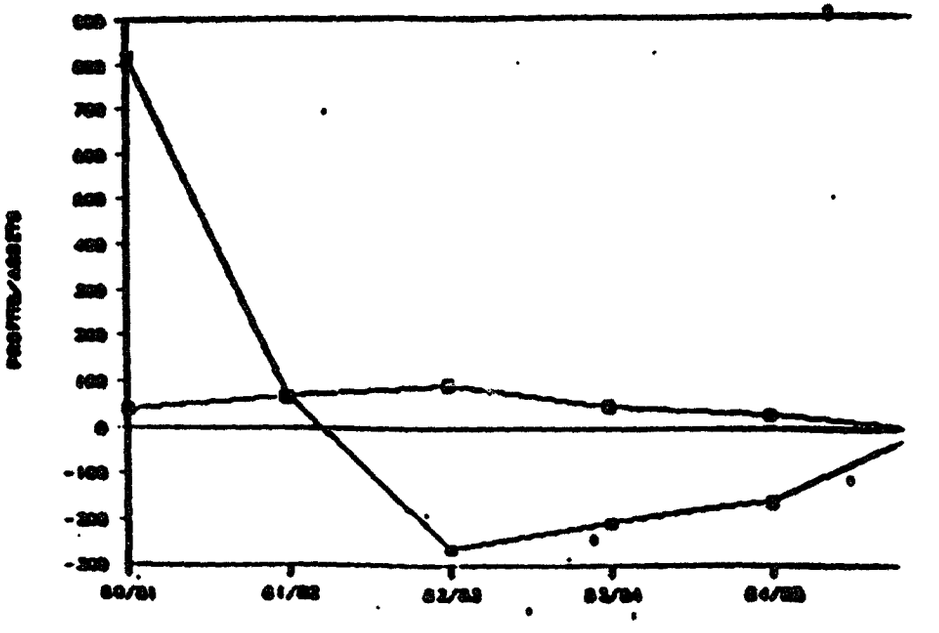
GHARIBWAL CEMENT: PUBLIC PROFITABILITY

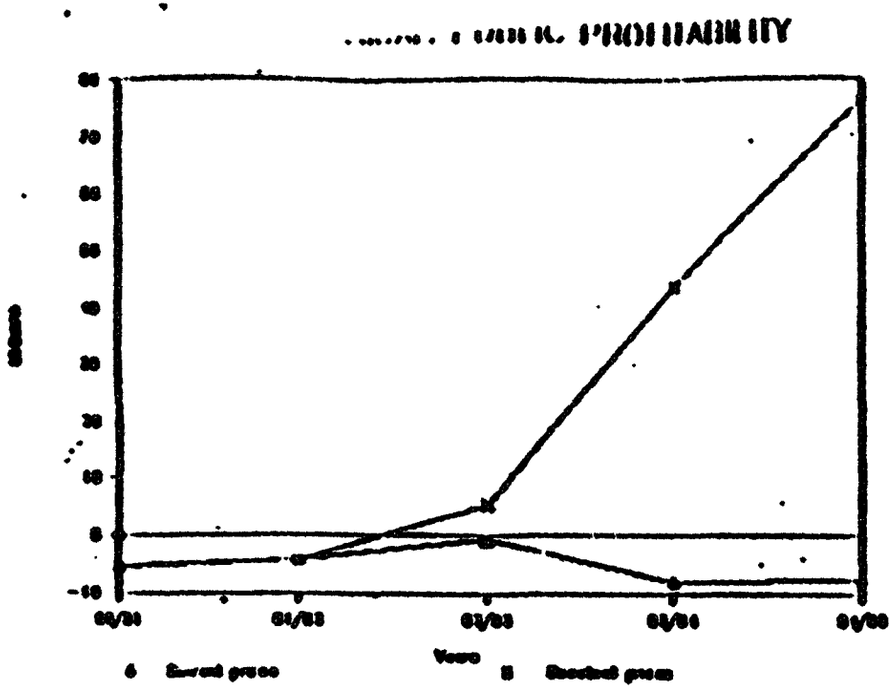


ZEAL PAK CEMENT: PUBLIC PROFITABILITY

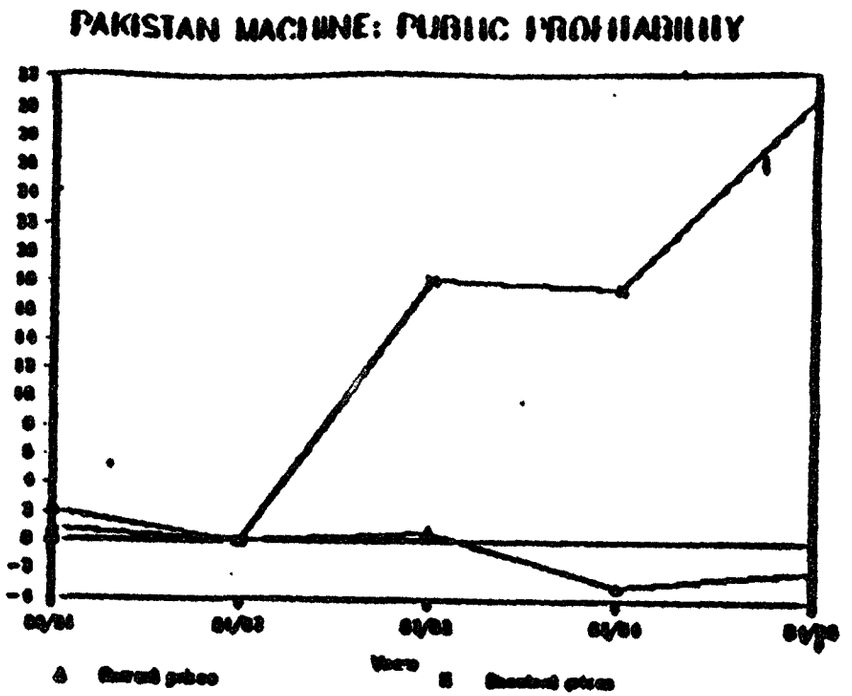


MILLAT TRACTORS: PUBLIC PROFITABILITY

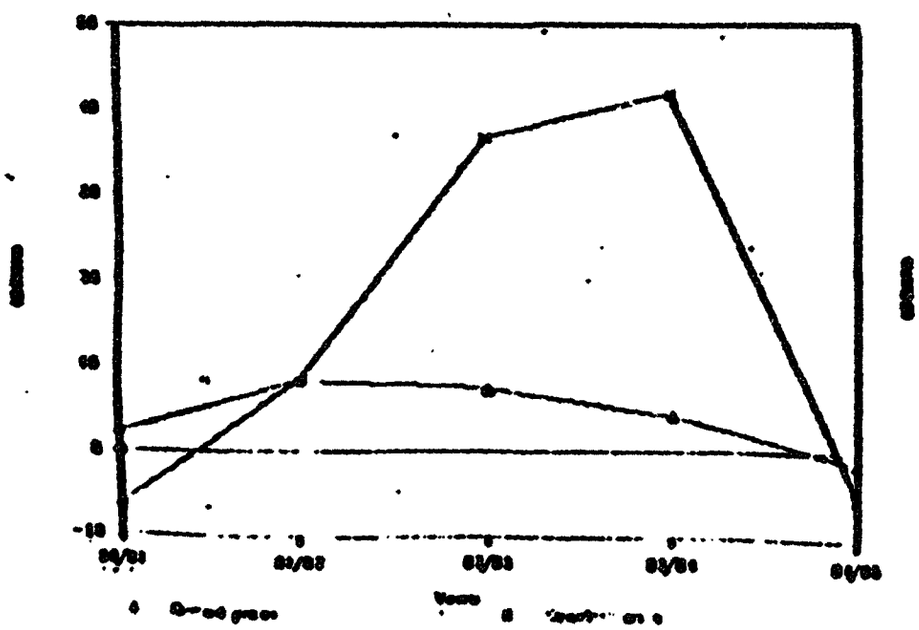




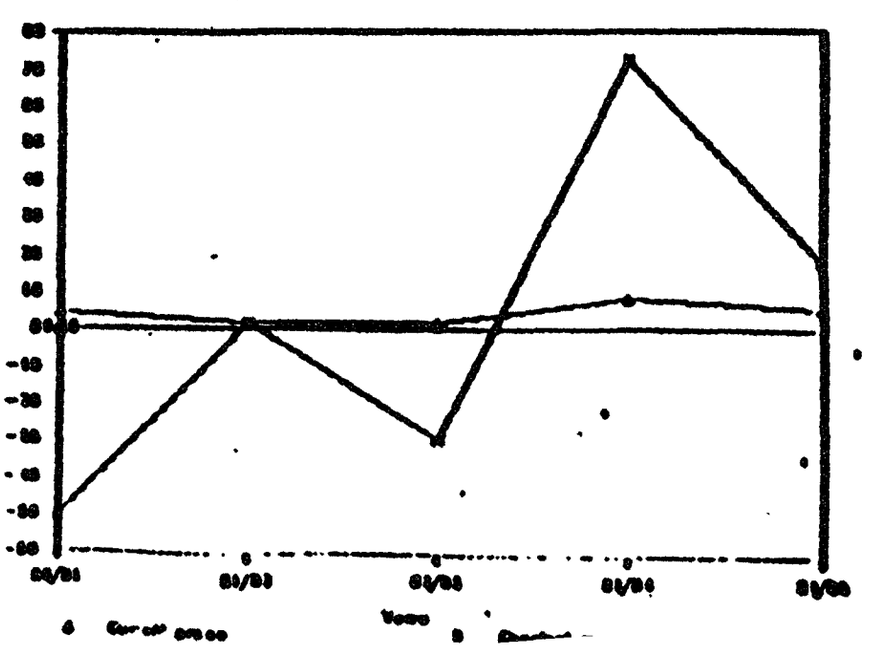
PAKISTAN MACHINE: PUBLIC PROFITABILITY



PAKISTAN ENGINEER: PUBLIC PROFITABILITY



NATIONAL REFINERY: PUBLIC PROFITABILITY



We can examine the first divergence -- that caused by the different definitions of public and private profits -- by comparing the two sets of profits in current prices. For most of the sample companies public profit is higher than private profit, principally because of interest and

Table 6: Trends in Performance of Sample IPEs Compared to 1982/83 Levels

Private Profitability After Tax	Passing Grades 83/84	84/85	85/86	Public Profitability in Constant Prices
Improvements:				Improvements:
Sind Alkalis*			x	Sind Alkalis
Lyallpur Chemicals	x	x	x	Lyallpur Chemical
Javedan Cement			x	Javedan Cement (below trend)
Gharibwal Cement*	x	x	x	
Zeal Pak Cement	x	x	x	
PMTF			x	PMTF**
NRL	x	x	x	NRL
Deterioration:				
Pak Saudi	x	x	x	Pak Saudi (below trend)**
Millat Tractors	x	x	n.a.	Millat Tractors (below trend)
				Dererioration:
HMC		x		HMC
				Gharibwal Cement
Pakistan Engineering	x			Pakistan Engineering
Ravi Rayon	x		x	Ravi Rayon

* Improvement in 1985/86 only.
** Improvement in 1984/85 only.

depreciation. Since most of the present managers had little influence over the initial investment decisions, private profit penalizes some managers for factors they cannot control. If the high capital charges resulting from government's investment decision make it impossible for them to earn a passing grade, the system will provide no incentive for them to improve factors they can control. At the same time private profit also fails to

motivate managers to use wisely factors they can control by not measuring these items, notably working capital. And the inclusion of non-operating income allows an enterprise to achieve its targets thanks to windfall income that has little or nothing to do with efficiency. For example, three of the 12 sample IPEs had public profits in current prices that were lower than private profits in 1984/85; in fact public profits were negative. In two cases (PECO, and PMTF) this was due to the opportunity cost of working capital, which exceeded profits even when interest payments and depreciation were added back in. In fact PECO went from E to C grade despite a large build up in accounts receivable, thanks to government debt relief in the form of other financial income. The most extreme example of the distortions that can be caused by using private profitability as a target occurred in the case of HMC, which made the A grade in 1984/85 only because of other income (principally, interest on deferred credits on sales overseas).

In most of the sample firms, the difference between public and private profits is in the <u>level</u> of profits not the <u>trend</u>. With the exception of PECO, the trends in public (current priced) and private profitability do not dramatically diverge. The trends in current and constant priced profits do differ sharply for most companies, showing that prices are the main reason for the differences in the first and last columns of Table 6 (see below).

<u>Explanation of the Sample's Performance</u>

As mentioned, since it is impossible to establish a clear causality between the performance changes and the signalling system

money or performing well below potential, however, targets based solely on past performance trends would usually be too lenient. Target setting would need to take into account international performance norms and benchmark indicators based on the performance of similar companies in other countries.

Assessment of the Performance Evaluation System

25. Overall, the financial picture of the GIEs has improved in the period since the system was introduced (Table 3). Profits net of government transfers grew by about 10% in real terms from 1983 (the first year of the reforms) to 1986.[8/] The real profits net of transfers of GEs also increased by 10% from 1983 to 1986. The improvement of GEs profits is related to the GIE reforms since the transformation of a government enterprise to a government invested enterprise (or even the prospect of such a change) is a major force for GE performance improvements.

26. Financial profitability is not very informative about the actual impact of the performance evaluation system on efficiency, however. Taxes, depreciation, nonoperating income, price controls, government mandated costs (to achieve certain social goals for example), all affect profits in ways that may have no relation to efficiency changes. Financial profitability is not a

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[8/] While most of the transfers consist of operating subsidies, primarily to the largely non-profit agriculture, mining and tourism promotion companies, part (about 10% in 1986) is capital transfers.

Table 3
KOREA: FINANCIAL PERFORMANCE OF GIEs
(1982 - 1986)

	1982	1983	1984	1985	1986	AVE. ANN. CHANGE
PROFITS						
NUMBER OF GIEs	18	18	22	22	22	5.1%
PROFIT (BIL WON)						
- CURRENT	409	484	612	610	794	18.1%
- CONSTANT	409	468	579	563	713	14.9%
LOSSES						
NUMBER OF GIEs	6	6	3	3	3	-15.9%
LOSSES (BIL WON)						
- CURRENT	49	48	13	14	17	-23.4%
- CONSTANT	49	46	13	13	15	-25.5%
NET PROFIT (BIL WON)						
- CURRENT	360	436	599	596	778	21.2%
- CONSTANT	360	422	567	550	698	18.0%

Source: Korea Development Institute.

target in the system and, for some of the promotional companies, profit maximization is not an objective at all.

27. A more meaningful measurement of operational efficiency is public profitability in constant prices, which is the equivalent of a quantum index of outputs minus a quantum index of inputs. Public profit is an indicator that is intended to increase only when society as a whole is better off. Public profits are standard financial profits adjusted as follows:

Private Profits

+ Taxes

+ Interest

+ Depreciation

- Nonoperating income (financial income and rent, capital gains and transfers)

- Opportunity cost of working capital

= Public profits

Taxes are added back in since this is a return from government's point of view; this avoids giving managers a reward for reducing taxes. Depreciation is added back in order not to penalize newer plants vis-a-vis older ones or reward enterprises for underdepreciating or changing their accounting practices so as to reduce depreciation charges. Interest is added back because changes in interest payments do not reflect changes in internal operating efficiency but transfers from one part of society to another. Interest does represent the cost of capital to the firm. The system assumes,

however, that (enterprise investment and debt decision are best handled through separate control systems designed to assure the most efficient allocation of capital and not through a system designed to assess operating efficiency.) Nonoperating income is excluded since it does not reflect operating efficiency. And, finally, a charge is added for the opportunity cost of working capital (the charge was 10% in 1986). The GIEs are charged for fixed capital by including fixed operating assets in the denominator, thus adjusting for changes due to expansion.

28. Public profits are then converted to constant prices using a Divisia index[9/]. Since the managers of GIEs cannot change their prices in most cases, constant-priced profits attempts to measure factors they can control. The Divisia index uses changing weights, so managers still have an incentive to seek lower costs or higher profits through prices changes where they have that option.

29. Some arguments can be raised against public profitability. One is that by, in effect, ignoring taxes, interest, depreciation and non-operating income, managers are not motivated to minimize their charges and maximize their income. While this is an important argument, in fact most public managers cannot control some of these items (debt and interest rates are often determined by government, for example). Others are easily manipulated to hide inefficiencies (depreciation or non-operating income, for instance). Public

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[9/]See Mary M. Shirley, "Evaluating the Performance of Public Enterprises in Pakistan" (World Bank, PPR Working Paper 160, March 1989) for an explanation of this index.

profitability is not an all inclusive measure and, other indicators, such as debt: equity, liquidity measures, or financial profitability where appropriate, can be added to assure that financial solvency is also improved.

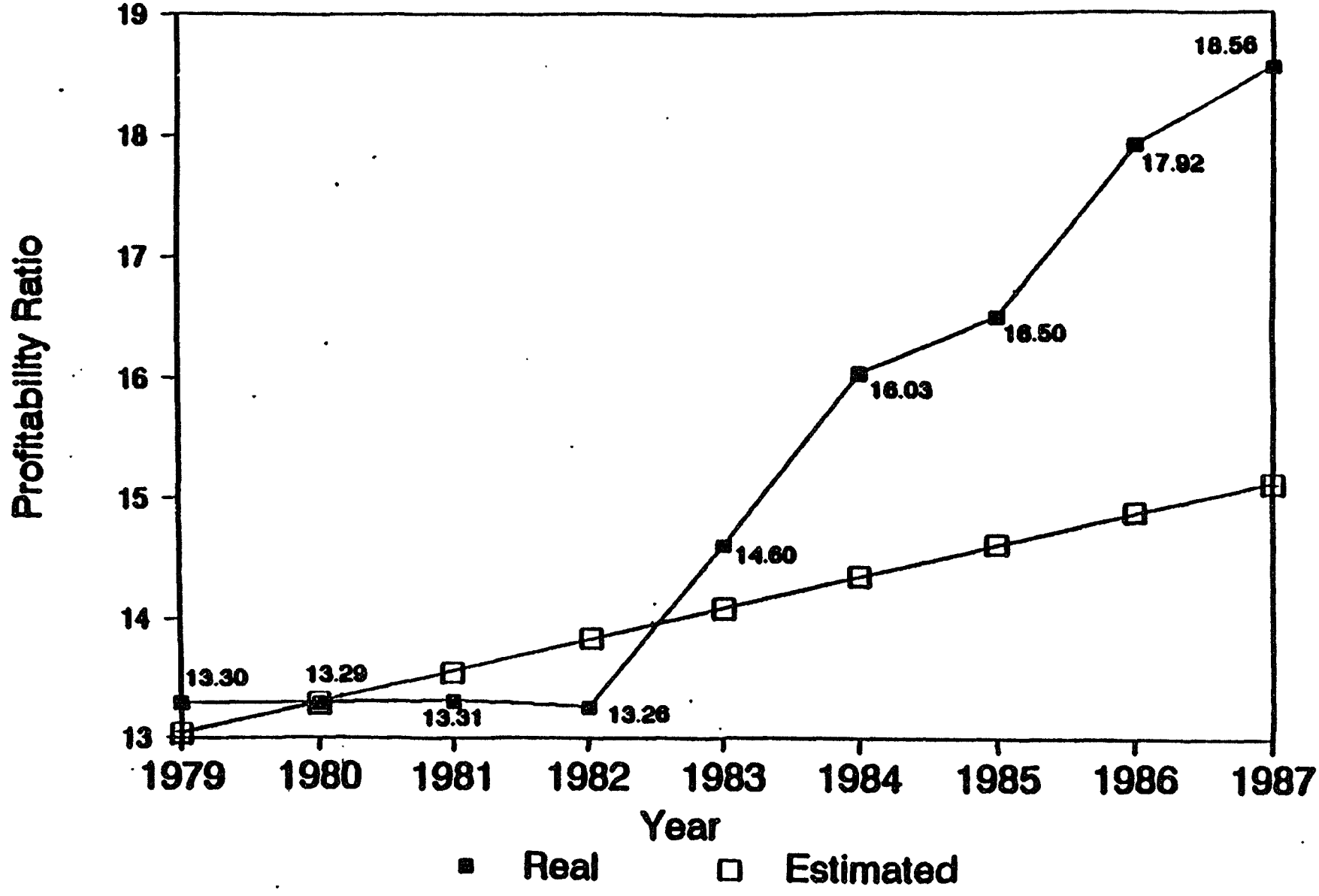
30. Despite its drawbacks, the easiest way to assess the impact of the system on operational efficiency is to evaluate its effect on public profitability. The public profitability concept was originally designed for manufacturing firms and is not as easily applied to nonmanufacturing[10/]. Since most of the GIEs are not in manufacturing, public profitability is currently used as a target for only five: Korean Power Corporation (KEPCO), Korea Telecommunication Authority (KTA), Korea Coal Mining Corporation (KCMC), Government Mint, and National Textbook Company (NTC). (Cost minimization and similar financial targets are used for most of the other GIEs.) This does not limit the sample as much as it might appear since these five companies are a significant part of the GIE group: they represent about one third of the total GIE assets and 45% of total GIE employment. Moreover, since they are the sort of firms most likely to be considered for performance evaluation schemes in other countries, their experience under performance evaluation is of particular interest.

31. Graph 4 compares the actual public profitability of the five firms with their trend in performance (extrapolated from their last five years' performance). The graph shows a dramatic improvement over the trend line in the period since the performance evaluation system was introduced in 1983.

10/ See Leroy Jones, "Towards a Performance Evaluation Methodology for Public Enterprises..." op. cit.

GRAPH 4

Korea: Public Profitability for 5 GIEs



This reflects major improvements in the two most important firms - KEPCO and KTA - which together control almost US$ 32 billion in assets and employ 76 thousand people (compared to US$ 763 million in assets and 18 thousand employees in the other three).

32. Two of the other firms, KCMC and the Mint, also initially improved their performance after the system was introduced but experienced a deterioration in public profitability in 1986 for reasons which have little to do with efficiency. (See Graphs One through Five of the statistical appendix to this annex for individual company performance). The Coal Mining Corporation's cost went up due to deeper mining as veins near the surface were depleted, labor unrest and higher than usual wage increases[11/]. The Mint experienced a drop in sales because government reduced its demand for paper money, while expenses grew because the company shifted to a better quality paper. The Mint began to export in 1985/86 which should make it less vulnerable to government buying decisions. Finally, the fifth firm, NTC, is a small company (less than 500 employees) which was adversely affected by government's decision in 1985 to allow students to buy used textbooks.

33. The two critical questions are: (i) are the improvements in the manufacturing companies representative of the other GIEs and, (ii) were the GIE reforms and, in particular, the performance evaluation system, the reason for the improvements. On the first question there is no single measure of

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[11/]To calculate public profits in constant prices labor costs are deflated using the government approved wage increase to discourage above norm wage increases.

efficiency that can be applied to the other GIEs, but, as mentioned, all of the enterprises face some sort of cost minimization/revenue enhancement target. A study comparing the ratio of cost of sales to total revenues in constant prices found that the cost ratio was below expectations (based on past averages and trends) in the three years after the system was introduced (see Table 4). In 1986, for example, costs were 67.7% of revenues for all the GIEs versus an expected ratio of 73.1% based on past performance. This indicator has less meaning for some of the enterprises (such as the financial enterprises) than for others. Nevertheless, the consistency of the improvement in the different sectors is striking. Furthermore, the evidence of efficiency improvement is borne out by the performance of the enterprises on their individual efficiency targets. Even though the initial level of the targets based on past performance may have been soft, as mentioned above, the targets have become progressively harder as the enterprises have been required to better their past improvements. Despite this most of the GIEs are still earning a B grade.

34. The second question--whether these efficiency gains can be attributed to the reforms--cannot be systematically tested since there are few comparable enterprises outside the system.[12/] There are factors other than managerial changes that could explain some of the efficiency gains. The year after the introduction of the system was a period of economy-wide recovery, which probably explains some of the initial buoyancy of the five sample enterprises, although not their sustained efficiency improvements.

[12/] A similar assessment in Pakistan also found that the incompatibility of data between public and private enterprises prevented comparison.

KOREA: COMPARISON OF ESTIMATED TO ACTUAL RATIO OF COST OF SALES TO TOTAL REVENUE 1/

	Average 1981 - 83	1984	1985	1986
1. Financial PEs				
Actual Ratio	82.0	80.5	76.8	76.9
Estimated Ratio	-	82.3	83.1	84.0
Differences	-	1.8	6.3	7.1
2. Construction GIEs				
Actual Ratio	81.2	80.3	76.2	76.3
Estimated Ratio	-	81.7	82.0	82.6
Differences	-	1.4	5.8	6.3
3. Manufacturing GIEs				
Actual Ratio	79.3	93.4	79.0	74.5
Estimated Ratio	-	77.7	81.1	79.0
Differences	-	4.3	2.1	4.5
4. Service GIEs				
Actual Ratio	65.1	54.1	59.9	64.7
Estimated Ratio	-	70.1	70.0	70.3
Differences	-	16.0	10.8	5.6
5. Energy and Communications GIEs				
Actual Ratio	73.1	68.2	67.0	62.0
Estimated Ratio	-	70.9	69.4	66.5
Differences	-	2.7	2.4	4.5
6. All GIEs				
Actual Ratio	75.9	71.7	70.2	67.7
Estimated Ratio	-	74.7	74.3	73.1
Differences	-	3.0	4.1	5.4

Source: Song, Dae Hee, "Korea Public Enterprise Performance Evaluation System (Korea Development Institute, November 1982, Processed).

1/. Estimates based on projected trends using linear regressions for ten older GIEs and average of 1981-83 for all others.

Enterprises such as KEPCO and KTA were also expanding throughout this period, however, both KEPCO and KTA show improvements in efficiency indicators (a drop in transmission losses in KEPCO and in the failure rate of local and long distance calls for KTA) not positively affected by expansion. Furthermore, there is qualitative evidence that part of the improvements can be attributed to the reforms.

35. First, the reforms have had a distinct impact on the way the GIEs do business. Government intervention has been sharply curbed; managerial appointments are made from within the enterprise; and performance evaluation plays an important role in the GIE's own assessment of its plans and personnel. Most GIE's have created an office for performance evaluation to develop objectives, negotiate targets, monitor achievement and write evaluations of the results. Since the evaluation has internal as well as external significance, this office has become an important part of the enterprise's operations and recently several executive directors have been appointed from the performance evaluation office. Many GIEs consulted had developed detailed targets for departments, divisions and offices based on the performance evaluation targets. KTA, for example, has an evaluation system to check on the performance of its twelve branch offices which compete among themselves for a good score. Promotions take into account the results of these internal evaluations. KEPCO does the same for its 290 branch offices, which also receive awards, such as medals or ribbons, based on their performance.

36. Second, opinions of those affected strongly favor the reforms. The managers and government officials consulted five years after the system was introduced, agreed that the reforms had a positive effect on performance[13/]. Furthermore, a 1987 opinion survey of 750 employees in all ranks of the GIEs 1987 shows that this positive view of the reforms is widespread. Ninety three percent of those consulted felt that there had been an improvement in management of the enterprise since the introduction of the reforms, about 55% saw a substantial improvement. Interestingly the confidence in the improvements increases with rank. About 94% of the executive directors surveyed saw substantial or significant improvements in management, versus 55% of the rank and file. (An additional 33% of the rank and file saw modest improvements, so a total of 88% were favorable).[14/]

Applying the Reforms in Other Countries

37. Countries interested in applying a system like that of Korea would want to know: (i) whether there are features of the Korea system that make it hard or impossible to replicate; (ii) what are the prerequisites for a successful performance evaluation system; and, (iii) how should the system be adapted to circumstances in other countries.

[13/] The GIEs consulted were: NHC, KEPCO, KTA, KMC and Small and Medium Industry Bank; the agencies were: KDI, EPB, Ministry of Finance, Ministry of Communications.

[14/] Song, Dae Hee, op.cit.

'88 Performance Evaluation Criteria

Korea National Housing Corporation

Index	Evaluation Criteria	Evaluation Method	Weight(%)
1. General Indicators			(20)
(1) Administration of Operating Expenses to Sales	Operating Expenses = f (Sales)	7 Year Trend Value	(15)
(2) General Management Efficiency		5 Grade Evaluation	(5)
	o Efforts for Responsible Management and Enhancing Public Welfare		3
	o Reasonableness of Wage Management		2
2. Criteria for Carrying Out Establishment Purpose			(41)
(1) Construction of Public Housing			(23)
o Housing Construction Units	For Sale : 15.000 Units	Target vs.Performance	1
	For Rent : 25.000 Units	"	2
o Total Floor Area of Housing Construction	Target : 2.430.000 m2	"	3
o Cost Administration of Rental Housing Construction	Rental Housing Construction Cost / Rental Housing Construction Area	6 Year Trend Value	7
o Ratio of Investment to Rental Housing Construction	Rental Housing = f (Total Assets)	5 Year Trend Value	4
o Land Procurement Administration		5 Grade Evaluation	2
o Improvement of Housing Construction		"	4
(2) Supply of Public Housing			(13)
o Housing Supply Units	For Sale : 16.590 Units	Target vs.Performance	1
	For Rent : 20.670 Units	"	1
o Administration of Housing Sales	Housing Units Sold Out / Housing Units for Sales	Target Assignment	5
o Housing Prices Stabilization Effects	Total Housing Sales Price = f (Total Floor Area for Sales)	7 Year Trend Value	6

TABLE D (cont'd)

Index	Evaluation Criteria	Evaluation Method	Weight(%)
(3) Housing Maintenance Administration			(5)
o Housing Maintenance Assignment		5 Grade Evaluation	3
o Numbers of Housing Management Right's Turnover to the Occupants etc.	Target : 38,400 Units	Target vs.Performance	2
3. Business Administration Criteria			(39)
(1) Efficiency Evaluation			(13)
o Administrative Expenses	The Rising Ratio of Administrative Expenses	Target Assignment	5
o Administration of Labour Cost	Labour Cost = f.(Administrative Assets + Costs of Sales)	7 Year Trend Value	5
o Efficiency of Fund Administration	Interest Received = f (Monetary Assets)	7 Year Trend Value	3
(2) Long-Term Business Administration		5 Grade Evaluation	(5)
	o Management Plan Modification Considering Changing Business Environments		1
	o The Efforts to Operate Long-Term Plan		2
	o Connection with Short-Term Plan and Sectoral Management Plan		1
	o The Reasonableness of Planning and Execution for Investment		1
(3) Improvement in Administration System		5 Grade Evaluation	(10)
	o The Efficient Operation of the Board of Directors		1
	o The Reasonableness of Personnel Administration and Organization Control		2
	o Reasonableness of Wage System		2
	o Efficiency of Budget System		3
	o Efficiency of MIS		1
	o Improvement on Energy Administration System		1

TABLE D (cont'd)

Index	Evaluation Criteria	Evaluation Method	Weight(%)
(4) Substantiality in Internal Evaluation		5 Grade Evaluation	(3)
	o Reasonableness of Setting Up Internal Evaluation Index		1
	o Appropriateness of Measurement Method and Application		1
	o Feedback and Application by Performance Evaluation		1
(5) Service Improvement		5 Grade Evaluation	(4)
	o Efforts for Enhancing the Quality of Service to Execute Establishment Purpose		1
	o Efforts for Development of New Service According to the Changing Demand Style		1
	o Efficiency of Management on Civil Service		1
	o Efforts for Customers-Oriented Service		1
(6) R & D		5 Grade Evaluation	(4)
	o Efforts for R & D		2
	o Application of New Materials for Construction and Moderateness of Materials Test		1
	o Efforts for Enhancing Productivity		1
Quantitative			40
Non-Quantitative			60
Total			100

Table E
Performance Score and Grade of 25 GIEs
(1984 - 1987)

Names of GIEs	1984		1985		1986		1987	
	Score	Grade	Score	Grade	Score	Grade	Score	Grad
1. Korea Development Bank	91.58	B	89.01	C	90.46	B	89.26	C
2. Small and Medium Industry Bank	91.59	B	90.11	B	90.87	B	92.33	B
3. Citizens National Bank	90.22	B	91.57	B	90.93	B	91.50	B
4. Korea Housing Bank	92.31	B	86.02	C	92.85	B	90.91	B
5. Korea Securities Exchange	92.15	B	88.23	C	89.15	C	-	-
6. Government Mint	90.28	B	90.25	B	93.58	B	87.25	C
7. Korea Electric Power Corporation	90.92	B	90.12	B	93.95	B	92.27	B
8. Korea Coal Mining Corporation	91.15	B	90.13	B	91.11	B	87.54	C
9. Korea Mining Promotion Corporation	90.47	B	90.06	B	90.65	B	91.29	B
10. Petroleum Development Corporation	92.48	B	88.66	C	90.99	B	89.84	C
11. Korea General Chemical Corporation	93.55	B	91.31	B	90.94	B	91.34	B
12. Korea Trade Promotion Corporation	89.60	C	92.53	B	94.36	B	94.48	B
13. Korea Highway Corporation	91.24	B	90.40	B	89.77	C	90.20	B
14. Korea Housing Corporation	83.55	D	90.30	B	93.53	B	94.63	B
15. Industrial Site and Water Resource Development Corporation	90.74	B	92.56	B	91.36	B	93.38	B
16. Korea Land Development Corporation	94.35	B	93.00	B	84.14	D	88.28	C
17. Agriculture Promotion Corporation	90.94	B	92.09	B	92.97	B	92.34	B
18. Agriculture and Fishery Marketing Corp.	88.78	C	86.92	C	91.37	B	90.06	B
19. Korea Telecommunication Authority	91.20	B	90.97	B	94.43	B	91.84	B
20. Korea Tourism Corporation	89.13	C	89.14	C	92.7	B	89.63	C
21. Korea Broadcasting System	90.44	B	88.07	C	90.12	B	-	-
22. National Textbook Company	89.67	C	89.77	C	88.06	C	87.12	C
23. Korea Overseas Development Corporation	85.37	C	86.17	C	91.09	B	84.01	B
24. Labor Welfare Corporation	92.72	B	91.58	B	90.28	B	86.27	C
25. Korea Gas Corporation	82.13	D	82.94	B	89.78	C	91.98	B
Average	90.26	B	89.68	B/C	91.18	B	90.34 /1	B

Source: Korea Development Institute.

17. Estimating the Costs and Benefits of Reform

Governments incur fiscal costs and benefits from implementing a reform program. Costs include administrative costs and labor restructuring. Fiscal gains include proceeds from the sale of enterprises, reductions in personnel expenditures from retrenchment, and lower budgetary burdens from operating losses and investments in unprofitable operations.

The Turkey State Owned Enterprise Sector Review (Report No. 10014-TU, 1991) includes an analysis for determining the net present value of implementing the state-owned enterprise (SOE) reform program in contrast to a scenario in which no reform is undertaken. Table 17.1 summarizes the results which demonstrate that the costs of the reform program are significantly less than the cost of continuing SOE operations without restructuring.

This analysis is important because it puts into perspective for borrowing countries the cost of implementing a reform program in relation to the cost of continuing under an existing framework. Positive results from the analysis may encourage governments to undertake reforms without undue delay.

The following is a four-page excerpt from the Turkey report which discusses the assumptions made for the valuation of assets, nominal wage increases, change in real fixed assets, real growth, and other factors.

If there are loss-making SOEs to be liquidated, the net present value of the reform program will always be higher, the sooner it is implemented. It may be that, given the cost of liquidation, labor restructuring and the social safety net, the necessary fiscal resources cannot be made available at once. Nevertheless, the program should be started as soon as possible.

Affordability

60. Except for the potential proceeds from the sale of SOEs and minority participations, all other components of the reform program require fiscal outlays, at least initially. There are, of course, also fiscal gains: labor restructuring reduces personnel expenditure; liquidation eliminates a flow of losses; sale avoids the need for investment outlays and restructuring of temporarily retained SOEs is likely to lower losses. There are also indirect gains (through tax revenues) from increases in efficiency and economic growth, but these will not be available to finance the reform program. Taken in its entirety the reform program has a positive net present value for the fiscal budget. It is even possible, with appropriate sequencing and timing of the components of the reform program to generate fiscal gains during the implementation of the program. Reforming agricultural support policies, which burden the Soil Products Office, the Sugar and the the Tobacco companies, would free a significant amount of fiscal resources. Increases in stocks alone in 1990 amounted to US$3 billion. Hence, a halving of net stock building (or no net stock building combined with targeted food aid) would already free US$1.5 billion to finance other components of the program.

61. In order to get an approximate estimation of the other fiscal costs and benefits of the reform program two polar scenarios were developed. In the reform scenario, it is assumed that labor restructuring, liquidation and sale/distribution of SOEs is completed over a two year period. This scenario does not include other rehabilitation (e.g. physical capital) as this is unnecessary in the case of companies to be sold or liquidated and will take additional resources and more time to accomplish in retained SOEs (TCDD and TEK). Clearly, the two year period is a minimum estimate of the time it would take to implement the reforms. The alternative "no reform" scenario assumes that no labor restructuring or sale of SOEs takes place for the remainder of the century and that it will take 10 years to liquidate unviable SOEs. Reality is likely to fall somewhere in between, but given the fact that many SOEs have difficulties maintaining an adequate capital stock, delaying the reform program is almost certain to raise the costs.

62. The reform scenario focuses especially on the costs involved in liquidation and labor restructuring. Unfortunately, the analysis does not include Petkim and Sümerbank for lack of financial data for 1990. It is assumed that DHMI, PTT, TCDD, TDI and TEK are temporarily retained in public hands, but undergo significant labor restructuring. The other SOEs were divided between liquidation and privatization candidates based on the best case scenario of financial viability (see Annex 1).

Source: Turkey State-Owned Enterprise Sector Review, Report No. 10014-TU, 1991.

63. For both scenarios three types of costs where estimated for each of the three components (liquidation, sale and restructuring of retained SOEs) of the reform program: administrative cost, labor restructuring cost and other costs. The results are reported in Table 4. Administrative costs are very roughly estimated at US$100 million for the liquidation component and US$300 million for the sale component. These costs reflect salaries of additional staff, valuation of assets and companies, labor restructuring studies and other miscellaneous items. If a share distribution scheme would be implemented, the administrative costs could be substantially lower as much of the valuation costs would be avoided. It is assumed that the administrative costs of liquidation would rise over time so that the present discounted value is the same across scenarios. In any case, this component is relatively small and does not significantly influence the overall costs and benefits. Labor restructuring, the most important component of the program, is described in detail in Text Box 1. In the case of liquidation, it is assumed that the net present value of the cost remains the same across scenarios. This implies that labor restructuring costs are likely to rise over time, mainly reflecting increases in seniority which raise severance payments. In the no reform scenario, it is assumed that no labor restructuring takes place in SOEs that are candidates for sale or that are retained in government hands.

64. Other costs reflect the net worth of the SOEs. They consist of two components: (i) the discounted stream of operating surpluses/deficits and; (ii) the terminal value of the firms either at the end of the 10 year period (in the no reform scenario) or at the time of liquidation or sale (in the reform scenario). The following common assumptions were used:

- real growth: zero for liquidation and privatization candidates, 10% for retained SOEs (per year);
- change in real fixed assets: zero for liquidation and privatization candidates, 10% growth for retained SOEs (per year);
- nominal wage increases in 1991 translate into an average real wage increase by 35%, which is added to personnel expenditure;
- valuation of assets: inventories and accounts payables/receivables at 80% of book value; fixed assets at 50% of book value for liquidation candidates and at 70%[1/] for privatization candidates;
- all figures are expressed in 1990 US dollars and in net present value terms using a (rather high) 13% discount rate (the real rate of return on equity of firms listed on the ISE).

For liquidation candidates and for retained SOEs the other costs are negative, reflecting a stream of losses and/or a negative net worth position of these enterprises. For sale candidates, other costs have a positive sign, reflecting a stream of profits and/or positive net worth of the firms. However, mainly due

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[1/] For ongoing concerns, if accounts are done properly, the book value of assets should represent their market value, but in the Turkish case two observations induced us to use only 70%: (i) fixed assets are revalued across the board with a government imposed inflator, reflecting the GDP deflator, and (ii) the rate of depreciation in the public sector is only 70% of that of the private sector.

to inadequate capital replacement and operation inefficiencies the value of these firms declines over time. Whereas in 1991 these firms could generate at least US$2.5 billion from sales, waiting ten years reduces this (net present) value to US$400 million.

65. As Table 4 below shows, the reform program compares very favorably: it will cost less than half as much as continuing the operation of the SOEs, even if the Government was to forgo the revenue of privatization (by implementing a share distribution scheme; see below). The major contribution to the losses comes from continuing operation of SOEs that better be liquidated. Postponing liquidation for another ten years might cost up to three times more (US$ 13 billion) than immediate closing down.

Table 17.1 NET PRESENT VALUE OF REFORM PROGRAM
(US$million, 1990 prices, 13% discount rate)

		Reform	No Reform
(1)	Liquidation		
	Admin. Cost	(100)	(100)
	Labor retrenchment	(1,600)	(1,600)
	Other Cost[1]	(2,000)	(11,300)
	Total	(3,700)	(13,000)
(2)	Sale		
	Admin. Cost	(300)	-
	Labor restructuring	(600)	-
	Other Cost[1]	2,500	400
	Total	1600	400
(3)	Restructuring of Retained SOEs		
	Labor restructuring	(490)	-
	Other Cost[1]	(1,800)	(5,300)
	Total	(2,290)	(5,300)
(4)	Total	(4,390)	(17,900)
	without privatization proceeds	(6,890)	(18,300)

Memorandum Item: Intra-public sector debt of SOEs[2]: US$1.9 billion

Source: IBRD calculations.

Notes: [1] Discounted stream of profits/losses and terminal value of the firm.
[2] Liquidation and sale candidates only.

66. Hence, one can perhaps better ask the question whether Turkey can afford not to reform the sector? Most of the assumptions used have a purposely built-in bias against reforms: the discount rate is higher than on Government paper, reducing the present value of future losses; restructuring of retained companies was limited to labor only, but other types of restructuring would improve their performance as well; the effect of employment services and training programs on the duration of unemployment benefits was not taken into account; SOEs owe a considerable amount to other public sector institutions, the resolution of which does not require immediate cash outlays for the Treasury. On the other hand, postponing the reforms will cost about US$1.8 billion per year (1990 prices).

67. Although the fiscal cost of the reform program looks impressive (about US$7 billion), additional financing needs would not be very large. If the reform program is implemented in a comprehensive manner, it is even possible that the program generates fiscal gains immediately. The following items would

significantly offset the outlays:

- reforms in the agricultural support program (US$1.5 billion per year),
- savings in personnal expenditure and losses of liquidation candidates (US$2.8 billion per year),
- proceeds from sales of minority participations (for a total of US$500 million),
- proceeds from sales of SOEs (a total of US$500, under share distribution scheme).

These reforms add up to a fiscal gain of US$9.6 billion in a two year period, exceeding the estimated costs. Moreover, writing off intra-public sector debt to Treasury and tax administration and converting obligations to the social security system into medium-term government paper would further lower actual financing needs by US$1.9 billion. There could be hidden liabilities and other costs which the mission could not estimate, but on balance it appears that the reform program could yield an immediate, modest fiscal gain. Of course, given the need for a stabilization program that requires a reduction of the primary fiscal deficit by 3 to 4% of GNP this may not be sufficient. However, since most of the deficit is located in the SOE sector it is implausible that fiscal reforms in other parts of the public sector will generate the required adjustment. Therefore, stabilization without reform of the SOE sector is unlikely to succeed. In this respect, the implementation of the complete reform program, perhaps with external assistance, could be a sufficiently strong signal to the domestic private sector to render a broader stabilization program credible, thereby easing its financing.

18. Estimating the Cost of Employee Retrenchment And A Social Safety Net

Governments are reluctant to reduce excess labor as part of PE reform not only because of possible adverse political consequences, but also because of high costs for severance pay. The Turkey State Owned Enterprise Sector Review (Report No. 10014-TU, 1991) estimates the cost of severance pay and a social safety net comprising of temporary income support and employment and training for retrenched workers. These costs are compared to the personnel expenditures that would be incurred in the absence of reform. The report concludes that the cost of labor restructuring is less than the cost of business as usual.

The usefulness of this analysis is its attempt to quantify the cost of retrenchment in relation to the cost of the status quo. In the case of Ghana, the costs of retrenchment resulted in delays in implementing the divestiture program. The analysis in the Turkey report provides a basis upon which short-term financial considerations can be balanced against the fiscal impact of reform.

Attached is a 30-page excerpt from the Turkey report that analyzes labor issues and the cost of a social safety net. The analysis incorporates extensive use of tables illustrating trends in state owned enterprise employment, personnel expenditures, wages, and estimates of severance pay and income support.

TURKEY

SOE SECTOR REVIEW

LABOR ISSUES AND SOCIAL SAFETY NET

Contents

List of Tables

Source: Turkey State-Owned Enterprise Sector Review, Report No. 10014-TU, 1991, Annex 6

TURKEY SOE SECTOR REVIEW
LABOR ISSUES AND SOCIAL SAFETY NET

A. Introduction

1. The existing employment regime in SOEs suffers from the following problems:

(i) higher level staff are civil servants with pay and promotion based on non-economic criteria and lifetime guaranteed employment;

(ii) contract employees are not compensated on the basis of economic criteria;

(iii) the level of employment of workers and their wages are determined through uniform collective bargaining with a centralized government agency, outside the autonomy of managers and independent of the performance of the individual SOE;

(iv) the level and trend in employment suggest that there may be significant overstaffing;

(v) while the evidence is not unambiguous, it appears that public sector pay at least for workers is higher since 1990 than in the private sector;

(vi) real wages in the public sector have risen faster than changes in labor productivity over the last two and half years, and faster than their private sector equivalents.

2. All components of the sector reform program will require a significant amount of labor restructuring. Trade unions can be expected to oppose the program and attendant dislocation, income losses and unemployment. To make the program socially acceptable the Government will have to address these issues up-front by establishing a social safety net. Aside from the payment of severance to workers, a legal obligation, the Government should anticipate targetting temporary income support, employment services and training to retrenched workers. Severance pay and income support might cost up to US$3.8 billion in a two year program, under reasonable assumptions. However, the program is estimated to save at least US$1.6 billion in personnel expenditure per year. The other components of the safety net will also engender fiscal outlays but will also generate savings as less income support will be needed if workers find a new job faster. If properly designed and implemented employment services and training will more than pay for themselves.

3. This annex provides a detailed analysis of these issues. It starts by discussing the existing employment situation. Then it describes severance pay,

income support, regional impact of reform and future labor policies in retained SOEs.

B. Labor Policies

Employment

4. Categories of Employment and Legislative Provisions. SOEs employed an estimated 596,180 people in 1990. This represents 3.1% of the Civilian Labor Force, 3.5% of Civilian Employment and 6.7% of Non-Agricultural Civilian Employment. There are five categories of employees in SOEs: civil servants, contract employees, unionized workers, non-unionized workers and temporary workers (see Table A6.1).

TABLE A6.1: EMPLOYMENT IN SOEs BY CATEGORY (1990)

SOE	Civil Servants	Contract Employees	Workers				Total
			Unionized	Non-Unionized	Temporary	Total	
NKEK	858	3273	10526	0	0	10526	14657
SEKA	118	1742	9546	0	0	9546	11406
CITOSAN	154	1592	7490	0	472	7962	9708
TDCI	675	3225	23133	0	784	23917	27817
ASOK	0	0	1899	691	3	2593	2593
ORLIS	335	560	2937	0	600	3537	4432
ETIBANK	168	6946	19070	595	74	19739	26853
TTK	100	2633	34349	0	0	34349	37082
TKI	530	3901	27855	0	0	27855	32286
TEK	997	23474	48839	113	0	48952	73423
TPAO	0	1534	7344	1360	0	8704	10238
BOTAS	0	2	998	477	360	1835	1837
DITAS	0	0	0	170	0	170	170
POAS	275	2267	4992	599	0	5591	8133
TUGSAS	44	1436	4036	0	437	4473	5953
IGSAS	0	0	602	106	0	708	708
SEKER	1449	3357	12589	0	12954	25543	30349
ESK	444	1123	3928	0	1345	5273	6860
TMO	1849	4961	1152	0	0	1152	7962
TSEK	423	314	1013	0	0	1013	1750
CAYKUR	392	1275	1611	0	11121	12732	14399
TEKEL	1491	4678	35404	0	8551	43955	50124
TARIM	788	676	5902	0	2322	8224	9688
YEMSAN	164	513	924	0	75	999	1676
TZDK 1/	2831	815	2857	0	479	3336	6782
DMO	208	906	680	35	0	715	1829
TCDD	9538	18899	26777	0	4309	31086	59523
PTT	2844	86624	431	0	18359	18790	108258
DMMI	51	3749	0	0	277	277	4077
THY	0	1137	6462	294	760	7516	8653
GEMSAN	0	1	3457	525	820	4802	4803
TDI	0	1	11450	480	225	12155	12156
TOTAL	26741	181614	318253	5445	66127	387825	596180
Percent of Total	4.5	30.5	53.4	0.9	10.8	65.1	100.0

Source: SPO and Treasury

Note: 1/ Discrepancies between data sources required an upward adjustment of Treasury data using SPO/Treasury ratio of 1989.

5. Civil servants who are permanent government employees allocated to SOEs, account for 4.3% of total employment. Under their terms of employment set out in Law 657 they are guaranteed tenure save for offenses against discipline or conduct rules. Under existing legislation they cannot be dismissed or retrenched for economic reasons. Law 399 effective from January 1990 enabled civil servants in the higher grades, in both government service and the SOEs, to be given contracts, which could pay up to six times the equivalent maximum civil service salary, while retaining civil service status and the employment guarantee.

6. Contract employees are now non-civil servants employed on a twelve-month contract and can be dismissed or their contract not renewed at the end of their contract period. In 1990, 30.6% of the total employees were in this category. The proportion in individual SOEs varied from none in ASOK and DITAS, to 80% in PTT and 92% in DHMI. A number of posts, often the more senior and higher-graded posts, in SOEs have been filled by civil servants employed under Law 657 and therefore paid civil service rates of pay.

7. Decree-Law 233 of 1984 allowed SOEs to employ people on a contract basis and determined the terms and conditions of employment of executives and similar grades in SOEs. In January 1985, a government guarantee was given that civil servants moving to contracts could maintain their civil service rights. DL 233 was amended in January 1988 to allow civil servants to change from civil service terms and conditions to contract employees. Many did so to obtain the higher rates of pay available to contract employees. However, the High Court subsequently ruled this practice unconstitutional based on Article 128 of the Constitution:

> "The fundamental and permanent functions required by the public services that the State, state economic enterprises and other public corporate bodies are assigned to perform, in accordance with the principles of general administration, shall be carried out by public servants and other public employees....".

The requirement that certain functions be carried out by public employees (or civil servants) means that those performing these functions must be civil servants within the coverage of Law 657 which provides them with security of employment. It also meant that those individual civil servants who had transferred to contract status would not under the then existing legislation (Law 657) be allowed to receive the higher pay from contracts but would be paid under the normal civil service provisions of Law 657. Six months notice of this decision was given and the ruling became effective in January 1990. The Government introduced Law 399 effective from January 1990 to deal with the consequences of the High Court's ruling.

8. Law 399 provides for two different types of contract employees with annual contracts. First, there are the civil servants referred to above. Second, there are other posts in SOEs which can be filled by non-civil servants on a contract basis. They have no employment guarantee beyond their annual contract. As a consequence of the marked shift from civil service to non-civil service contract status, there are now relatively few civil servants employed in the SOEs. Recently (August 1991), the High Court of Justice also ruled contracts of this nature illegal, citing abuses as the main reason. It is too early to see the implications of this decision.

9. Workers in SOEs are employed under the general labor legislation of Law 1475 which applies to private sector companies as well as SOEs. In this report this category of workers is referred to as "unionized". They can be dismissed and are entitled to compensation through seniority severance pay, based on length of service. In 1990 they accounted for 53.4% of employment, although none were employed in DITAS and DEMI and only 0.4% in PTT. While these workers can be dismissed there are legal restraints on employers hiring replacement workers within a six month period of the dismissal which may limit the freedom of a privatized or retained SOE to restructure its workforce.

10. Non-Unionized workers are senior employees who are prevented by Section 21 of Act No. 2821 (May 1983) from becoming members of a trade union.[1/] They occupy the more senior posts and are covered by the same legislation as unionized workers. In 1990 they were found in only 11 of the 32 SOEs and accounted for only 0.9% of total SOE employment, but for 100% in DITAS and BOTAS.

11. Temporary workers[2/] can be dismissed and are unlikely to qualify for statutory compensation. The employment statistics for SOEs distinguish temporary workers as a separate category which accounts for 10.8% of total employment in 1990, and as much as 77% in CAYKUR. It is possible that some of these individuals have been employed for more than 30 working days even though they are classified as temporary. However, in the absence of further information, it is assumed that the SOEs have no legal obligation to make seniority severance pay or provide compensation to this category.

12. Trends in Employment. Table A6.2 shows the trend in total employment in each SOE for which data is available over the period 1985-90. Total employment (excluding Petkim and Sumerbank, for which no data were available for 1990) has increased by 23.5% since 1979. Some of this is the result of expansion in individual SOEs since 1979, but an important part of the growth in employment is the result of new SOEs starting since 1979. TEK has expanded almost three-and-a-half times, and BOTAS by four times. Nineteen of the 32 SOEs had a decrease in employment in 1990. Eighteen of them had lower total employment in 1990 than in 1985, but total employment rose by 2.2% between 1985 and 1990. It declined 1% in 1990 from its peak in 1988-89.

1/ "It shall be unlawful for any of the following persons to constitute or to join any workers' or employers' trade union: inspectors, auditors, directors and any other persons carrying out similar functions in the establishments, institutions, administrative agencies, banks and insurance companies referred to in the second paragraph of section 40".

2/ "Employment which owing to its nature does not last for more than 30 working days shall be deemed to be temporary work and employment for a longer period shall be deemed to be permanent work".

TABLE A6.2: Indices of Total Employment by SOE (1979=100)

SOE	1985	1986	1987	1988	1989	1990
MKEK	93.6	93.0	90.6	87.4	78.7	77.6
SEKA	104.9	101.3	99.1	97.8	99.1	96.8
CITOSAN	199.0	194.9	145.1	145.6	138.4	159.2
TDCI	77.3	76.8	75.8	73.7	76.9	74.7
ASDK	757.8	837.1	988.6	984.8	951.4	926.1
GEMS	95.8	97.2	102.5	106.1	104.9	91.6
ETIBANK	88.9	86.3	86.0	85.3	83.9	84.3
TTK	101.5	106.1	108.2	107.5	104.8	102.1
TKI	44.1	46.0	46.4	46.7	46.6	45.5
TEK	245.2	312.7	308.6	320.2	330.0	341.7
TPAO	95.9	103.3	104.6	103.7	105.4	106.1
BOTAS	225.1	271.6	280.2	309.9	353.5	404.6
BITAS	178.0	196.0	200.0	216.0	304.0	340.0
PDAS	98.0	106.5	108.6	111.9	114.5	118.2
TUGSAS	96.0	96.7	91.8	83.2	84.7	94.5
IGSAS	103.9	102.8	98.5	95.9	100.3	99.5
SEKER	110.1	107.6	105.2	108.8	109.8	107.7
ESK	82.3	80.1	77.8	78.0	78.5	79.4
TMO	86.9	89.0	80.1	91.1	83.1	90.6
TSEK	48.1	44.6	46.4	45.4	44.5	51.6
CAYKUR	76.1	73.2	70.9	71.2	70.0	99.1
TEKEL	84.1	84.6	76.9	74.5	74.5	73.5
TARIM	108.7	100.8	87.5	92.6	90.0	82.8
TEKSAN	98.7	109.7	109.3	114.9	120.7	117.1
TZDK	93.5	92.1	90.3	91.1	87.5	84.6
DMO	103.2	99.9	94.6	100.7	106.2	104.6
TCDD	95.7	96.6	93.7	90.8	89.8	87.4
PTT	118.8	133.0	149.6	155.7	158.0	161.0
DMI	102.5	102.3	111.5	171.4	187.8	117.1
TMT	117.8	123:1	111.1	118.8	132.0	140.8
GEMSAN	100.8	101.4	98.3	94.9	89.3	91.1
TDI	97.7	101.6	99.8	93.3	86.1	86.5
Total	120.9	124.3	123.7	124.8	124.8	123.5

Source: Treasury

13. There has been a significant change in the distribution of employment among the five categories as shown in Table A6.3. The large increase in the share of contract workers in total employment is the result of a large shift away from civil servants and some reduction in the relative share of unionized workers.

TABLE A6.3: Evolution of Total Employment by Category
(percent of total)

	Civil Servants	Contract Workers	Unionized Workers	Non-Unionized Workers	Temporary	All Workers	Total
1979	31.4	8.0	39.3	8.6	8.8	48.6	100.0
1980	31.5	8.1	39.3	8.6	8.5	48.4	100.0
1981	31.8	8.1	40.1	8.7	7.3	48.2	100.0
1982	31.8	8.1	38.7	8.8	8.6	48.1	100.0
1983	33.0	8.2	37.7	8.4	8.5	46.8	100.0
1984	31.0	8.0	35.6	8.7	12.6	48.9	100.0
1985	29.5	8.6	39.7	8.6	9.6	48.9	100.0
1986	28.5	3.2	36.1	8.8	11.5	48.3	100.0
1987	20.2	12.7	34.7	8.8	11.6	67.1	100.0
1988	12.9	20.6	34.1	8.7	11.7	66.5	100.0
1989	6.4	27.8	34.0	8.7	11.1	65.8	100.0
1990	4.5	30.5	33.6	8.9	10.8	65.1	100.0

Source: Treasury

14. Changes in the numbers employed do not of themselves indicate whether present staffing levels are appropriate or whether there is any significant degree of overstaffing. Detailed examination of labor utilization and work organization at the establishment level are necessary before employment levels appropriate to the technology and production methods can be determined. However there are indications that significant overstaffing may exist in some SOEs. Reported discussions with managers suggest that overstaffing may be as high as 40% in TCDD and between 25-30% in other SOEs. If this is so then both privatization and the restructuring of retained SOEs may lead to significant retrenchment. On privatization USAS retrenched 50% of its workers. Indirect evidence of redundant labor stems from the observation that the capital-labor ratio in the largest 500 companies is similar for both public and private sector companies but the share of public companies is about 67% of capital and only 45% of value added. Assuming no decreasing returns to scale and no large differences in the industrial composition of the two sectors this suggests significant overstaffing.

Wages, Salaries and Benefits

15. Civil servants employed in SOEs are paid according to the rules set out in Law 657 and Law 399 which allows civil servants to be paid by contract. The civil service pay system is extremely complicated and a large amount of information concerning individual appointments and posts is necessary to calculate effective rates of pay. The various elements in total pay are: (i) basic salary; (ii) function allowance; (iii) supplementary allowance; (iv) flat-rate addition; and (v) additional payments. The basic salary has a range of only 3:1 and entry levels are determined uniquely by education. Twice a year the Council of Ministers sets the salary coefficient used to determine the TL equivalent of the corresponding entry in the scale. Special qualifications, extra responsibility, risk or geographical location are rewarded by the functional and supplementary allowances. Higher level positions receive additional payments and there are some other allowances (child, family) and an annual bonus. The complexity of the pay system allows government to change differentials easily. Since July 1989 differentials have been narrowed.

16. Civil servants with contract will receive individual payments rather than civil service scales and allowances. In 1991, the maximum contract payment for civil servants is TL7 million a month. The maximum for non-civil service employees employed on contract is TL6 million. The maxima are determined by the Government but no information was available to establish how the actual levels of contract payment for those not on the maximum are settled.

17. Details of the pay systems for workers in SOEs are not available. Broad principles set out in various documents are as follows: The pay of unionized workers and possibly temporary workers is determined by collective bargaining processes but the government seeks to establish common wage systems throughout SOEs. Non-unionized workers are not permitted to join trade unions and their pay is apparently determined within the guidelines established by government. Management of individual SOEs have little autonomy in determining wage levels. Recent trends seem to have gone towards a more rather than less centralized system of wage determination. Thus the pay system is SOEs appears to be strongly controlled by central governmental institutions rather than management of individual SOEs. Bonuses are paid but these are not directly related to output or performance in any economic or financial sense. The pay system reflects a civil service approach where uniformity is sought and in which there are no economic criteria against which to determine pay.

Trends in Personnel Expenditure and Wages

18. No direct information on average wages and salaries in SOEs was available. Details of total Personnel Expenditure for each of the five categories of employees in each SOE are available and these provide indications of the movements in total pay and other benefits such as employers' contributions to social insurance schemes, and social benefits as well as basic wages, bonuses and allowances. It is possible to estimate average wages from these figures.

19. Personnel expenditure includes all items of labor costs. There have been significant changes in the distribution of total personnel expenditure by category since 1979 (Table A6.4). Then civil service employees accounted for about one-fifth of all personnel expenditure, unionized workers for about 70%, temporaries for 6.6%, non-unionized workers for 1.0 percent and there were no contract employees. In 1990, civil servants accounted for only 4% of total personnel expenditure, unionized workers for 59.1%, contract employees for 26.5%, temporary workers for 8.8%, and non-unionized for 1.8%.

TABLE A6.4: Distribution of Total Expenditure by Category

	Civil Servants	Contract Workers	Unionized Workers	Non-Unionized Workers	Temporary	All Workers	Total
A. TL Million							
1979	27811	0	95330	1346	8821	105717	133528
1980	43358	67	154949	2891	15217	172248	215873
1981	53001	126	207497	3614	18408	229519	282646
1982	69474	279	238005	4630	23090	265725	335476
1983	94513	530	296416	5973	33236	336425	432688
1984	139395	721	457459	8138	63453	529250	669526
1985	183798	7821	618881	11879	76758	707518	896129
1986	242788	21718	812859	18896	98402	930157	1194443
1987	306276	156007	1198030	32731	168517	1399278	1861561
1988	342188	509358	1852828	44025	253918	2202771	3054317
1989	422680	1929055	4352253	119714	651441	5123388	7475123
1990	587210	3827489	8621726	279322	1268763	10169811	14584510
B. Percent of Total							
1979	20.8	0.0	71.5	1.0	6.6	79.2	100.0
1980	20.2	0.0	71.8	1.0	7.0	79.8	100.0
1981	18.8	0.0	73.4	1.3	6.5	81.2	100.0
1982	20.7	0.1	70.9	1.4	6.9	79.2	100.0
1983	22.3	0.1	68.5	1.4	7.7	77.6	100.0
1984	20.8	0.1	68.3	1.2	9.5	79.1	100.0
1985	20.2	0.9	69.1	1.3	8.6	79.0	100.0
1986	20.3	1.8	68.0	1.6	8.2	77.9	100.0
1987	16.5	8.4	64.4	1.8	9.1	75.2	100.0
1988	11.2	16.7	60.7	2.2	9.3	72.1	100.0
1989	5.7	25.8	58.2	1.6	8.7	68.5	100.0
1990	4.0	26.5	59.1	1.9	8.7	69.7	100.0

Source: Treasury, SPO

20. Differentials in average personnel expenditure among the five categories show large variations between 1979-1990, and also show that in 1990 the average personnel expenditure for civil service employees (81.1%) and Contract employees (77.8%) were lower than that for unionized workers (Table A6.5). This is somewhat surprising as it could be expected that contract employees, and civil servants with contracts, would be paid more than unionized workers, although the higher average personnel expenditure for non-unionized is to be expected as these are the higher-graded employees prevented from joining a trade union because of their senior positions. Although no details are available it is likely that the indirect labor costs for civil servants and contract employees are a smaller percentage of personnel expenditure than for unionized workers. If this is the case a lower average personnel expenditure differential could be consistent with a higher wage differential.

21. The very large swings in the differential for contract employees with large increases in 1984 and dramatic reductions in 1985 and 1986 are explained by the individual composition of the contract employees. In 1984, the number of contract employees fell from 805 to 152, rising very considerably in each succeeding year. Changes in the composition of the category have had a large impact on average personnel expenditure.

TABLE A6.5: Average Personnel Expenditure by Category

A. TL Thousand

	Civil Servants	Contract Workers	Unionized Workers	Non-Unionized Workers	Temporary	All Workers	Total
1979	190	-	341	516	215	326	284
1980	297	234	555	743	384	535	460
1981	376	362	769	1120	547	751	653
1982	483	607	885	1344	594	854	736
1983	587	685	1020	1845	789	999	863
1984	768	4743	1392	1923	863	1302	1138
1985	1008	2612	1848	3006	1259	1767	1537
1986	1431	1134	2408	4111	1434	2265	1993
1987	2358	2061	3461	6739	2445	3489	3121
1988	4433	4125	5674	14891	4038	5489	5074
1989	11067	11513	13571	27931	9751	12918	12410
1990	21959	21075	27091	51299	19785	26225	24463

B. Indices of Category Differentials

	Civil Servants	Contract Workers	Unionized Workers	Non-Unionized Workers	Temporary	All Workers	Total
1979	55.7	-	100.0	151.4	63.2	95.8	83.3
1980	53.5	42.2	100.0	133.9	69.3	96.5	83.0
1981	49.8	47.1	100.0	145.6	73.7	97.7	82.3
1982	54.5	68.5	100.0	151.9	67.1	96.3	83.2
1983	57.5	67.8	100.0	180.9	77.3	97.9	84.6
1984	55.1	340.7	100.0	138.1	62.0	93.5	81.7
1985	54.5	144.8	100.0	167.8	68.0	95.8	83.3
1986	59.4	47.1	100.0	170.7	59.6	94.0	82.7
1987	69.9	54.3	100.0	184.1	66.8	95.3	85.3
1988	78.1	72.7	100.0	262.4	71.2	96.7	89.4
1989	82.8	86.1	100.0	208.9	72.9	96.6	92.8
1990	81.1	77.8	100.0	189.4	73.0	96.8	90.3

Source: Treasury, SPO

22. Average personnel expenditure for all SOE employees rose by more than 5300% between 1980 and 1990. Average real personnel expenditure increased by 24.7% (Table A6.6). All categories of workers show real increases, the highest for contract workers (111%) and civil servants (74%).

TABLE A6.6: Average Personnel Expenditure by Category
(1980=100)

	Civil Servants	Contract Workers	Unionized Workers	Non-Unionized Workers	Temporary	All Workers	Total
Nominal							
1980	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981	126.8	134.6	131.5	130.7	147.5	148.3	137.4
1982	142.7	258.9	159.6	181.0	134.5	159.5	139.9
1983	197.8	291.6	185.9	248.4	205.3	186.6	187.5
1984	258.7	2024.8	251.1	258.9	224.6	263.2	247.1
1985	338.7	1140.6	332.7	414.7	326.7	350.1	333.7
1986	482.2	484.2	434.2	553.5	373.3	425.0	432.8
1987	841.9	879.6	640.1	907.2	636.3	651.8	677.8
1988	1495.6	1788.7	1025.1	2004.6	1050.8	1025.5	1102.0
1989	3729.8	4914.4	2410.8	3760.3	2537.8	2413.3	2695.1
1990	7399.3	8996.1	4884.7	6906.1	5149.2	4898.8	5313.0
Real 1/							
1980	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981	92.4	112.6	101.0	109.8	107.5	102.2	100.1
1982	92.6	147.4	90.9	103.0	88.0	90.8	91.0
1983	85.7	126.4	79.7	107.6	89.0	80.9	81.2
1984	75.5	591.2	73.3	75.6	65.6	71.0	72.2
1985	68.2	229.8	67.0	83.9	65.8	66.5	67.2
1986	72.1	72.4	64.9	82.8	55.8	63.3	64.7
1987	92.8	96.7	71.1	97.7	68.5	70.2	73.0
1988	91.7	108.1	62.8	123.1	64.5	63.0	67.7
1989	140.3	184.9	90.7	141.5	95.5	90.8	101.4
1990	173.7	211.1	114.6	162.1	120.9	115.0	124.7

Source: Treasury, SPO

Note: 1/ Deflated by urban areas CPI.

23. In the absence of information on average wages for the five categories in the SOEs the data for personnel expenditure have been used to estimate average wages. Basic wages as a percentage of total personnel expenditure for public sector corporations (a larger coverage than the 32 SOEs) have declined from 61% in 1986 to less than 50% in 1990. Adjusting this proportion for the two month bonus one can calculate nominal and real indices of wages (see Table A6.7). As wages have decreased as a proportion of total personnel expenditure the increase in average wages over the period is less than the increase in average personnel expenditure.

24. Real average wages for all employees rose by almost 30% between 1983 and 1990, but there had been a fall by one quarter through 1988, and the increases occurred only in the most recent years. The largest increase was for civil servants, almost 70%. Temporaries gained only 13% and unionized workers 20%. Nominal wages were further increased by 141% in 1991. While the effects of this cannot be included in the indices of real pay as these are calculated on an annual basis and the CPI for the full year 1991 is not yet known, it may be reasonable to conclude that there will have been a further large improvement in real pay in 1991.

TABLE A6.7: Average Wages by Category[1/]
(1983=100)(TL thousand)

	Civil Servants	Contract Workers	Unionized Workers	Non-Unionized Workers	Temporary	All Workers	Total
Nominal							
1983	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1984	131.3	497.0	137.0	104.6	109.8	130.8	132.3
1985	173.9	397.1	183.7	170.3	161.6	179.6	180.7
1986	249.1	169.7	241.3	227.7	185.8	231.7	235.9
1987	394.1	272.7	324.6	330.3	280.3	315.9	326.9
1988	683.1	546.0	503.2	729.9	462.9	492.0	531.6
1989	1670.1	1493.4	1161.8	1341.3	1095.5	1146.1	1274.0
1990	3123.2	2575.1	2217.4	2320.9	2093.9	2191.5	2365.7
Real							
1983	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1984	88.5	449.7	92.4	70.5	74.0	88.2	89.2
1985	80.8	184.6	85.4	79.2	75.1	83.5	84.0
1986	86.0	58.6	83.3	78.6	64.1	80.0	81.4
1987	98.0	67.8	80.7	82.1	69.7	78.5	81.3
1988	96.8	77.4	71.3	103.5	65.6	70.5	75.4
1989	145.1	129.7	100.9	116.5	95.1	99.5	110.6
1990	169.2	139.5	120.1	125.7	113.4	118.7	128.1

Source: IBRD Calculations
Note: 1/ Average wages estimated from Average Personnel Expenditure adjusted by the coefficient of Basic Wages plus two months Bonus to Total Labor Costs for wage-earners in the Public Sector.

25. There is no recent comprehensive wages or earnings survey for Turkey. Various comparisons between the public and private sector can be made using data from different sources. Table A6.8 presents indices of average real labor costs for the Public sector, SOEs, and the Private Sector for the period 1980-89. Over the full period average real labor costs in the private sector have risen while they have fallen in the public sector and remained roughly constant in the SOEs. SOE wages were lagging behind the private sector for most of the period 1980-89.

TABLE A6.8: Average Real Labor Cost in Total Public Sector SOEs and Private Manufacturing
(1980=100)

Year	Public[1/]	SOE[2/]	Private
1980	100.0	100.0	100.0
1981	105.0	100.1	105.8
1982	95.8	91.0	102.2
1983	93.2	81.2	95.1
1984	90.2	72.2	90.8
1985	88.8	67.2	84.2
1986	80.0	64.7	81.8
1987	75.4	73.8	80.4
1988	61.4	67.7	85.2
1989	65.1	101.4	110.9

Source: SPO
Note: 1/ Public: all public sector.
2/ Personnel expenditure for all workers.

26. Table A6.9 reports significantly larger increases in average hourly wages in public companies in manufacturing than in private companies since the beginning of 1988. Average hourly wages in public sector manufacturing rose tenfold over the eleven quarters while those for private sector manufacturing rose by less than half as much. The public sector average hourly wages were slightly less than those in the private sector in the first quarter of 1988 and twice as large by the third quarter of 1990. Changes in pay relationships of this magnitude are unusual and there may have been some shifts in the occupational composition of the data, but even so this evidence still indicates a relatively large improvement in the relative hourly earnings of workers in public sector manufacturing. The large increases in 1991 which raised real wages by some 35% will have widened the gap further.

TABLE A6.9: Average Hourly Wages in Public & Private Sector Manufacturing (TL)

Year		Public Amount	Index	Private Amount	Index	Public/ Private
1988	I	825	100.0	857	100.0	96.3
	II	960	116.4	994	116.0	96.6
	III	1067	129.3	1154	134.7	92.5
	IV	1275	154.5	1425	166.3	89.5
1989	I	1371	166.2	1600	186.7	85.7
	II	2411	292.2	1904	222.2	126.6
	III	2828	342.8	2403	280.4	117.7
	IV	3445	417.6	2673	311.9	128.9
1990	I	3981	482.1	3172	370.1	126.9
	II	6402	776.0	3417	398.7	187.4
	III	8254	1000.5	4120	480.7	200.3

Source: SPO

27. The available information suggests that since 1990 the public sector probably pays higher average pay to broad categories of workers. There is fragmentary evidence quoted in various reports that pay for higher-graded posts is considerably lower in SOEs than in the private sector but no firm statistical evidence has been produced to justify this conclusion.

C. Labor Restructuring

28. The reform program for the SOEs is likely to lead to retrenchment of labor. Civil servants employed in SOEs cannot be dismissed. However, for other categories dismissal is permitted and in the absence of general social security provisions for unemployment in Turkey there could be severe hardship unless special social safety net provisions are introduced. The impact of closure or retrenchment could be particularly severe in some localities where SOEs currently provide the main income-employment opportunities. There is also need for improved labor policies in SOEs that would, at least temporarily, remain in public hands. Once management of SOEs are held accountable for the financial performance of their enterprises they require autonomy in employment and wage policies. Further, improved efficiency and performance will be much more easily obtained if more appropriate pay systems and incentives are introduced at the enterprise level.

Dismissals and Severance

29. Civil servants cannot be dismissed for economic reasons. They can be dismissed for certain disciplinary offenses but this is not relevant to the issue of retrenchment. Under current legislation civil servants must be employed in certain posts to perform specified functions in SOEs. This provision will not apply to SOEs which are privatized. Civil servants employed in SOEs which are liquidated must be absorbed elsewhere in the civil service. While this could impose some cost the Government could allocate this staff to posts which would have been filled with new entrants. Those employed in SOEs which are to be privatized can remain civil servants and would then have to be absorbed elsewhere in the civil service. However, some of them may choose to remain with the privatized SOE and resign from the civil service.

30. Those employed in retained SOEs are currently required to have civil service status although this can be as a contract civil servant receiving higher pay than under the civil service provisions. It is proposed that the requirement of the Constitution that certain functions carried out by holders of posts in SOEs must be performed by civil service employees be amended. It will then be possible to employ non-civil service employees in all posts in the remaining SOEs. If the law is changed, the main possibilities are:

(a) civil servants will remain employed by the SOE but transfer from civil service to contract status as occurred after 1985.

(b) some individuals will not be required by the SOE and will claim their right of transfer to civil service employment elsewhere as in the case of closure or privatization.

(c) some individuals will not be required by the SOE and will voluntary terminate their employment subject to receiving compensation as discussed below.

31. Contract employees, non-civil servants, can be dismissed at the end of their contract by not renewing it and presumably before the end of the contract if compensation is paid. They have no entitlement to any compensation if their contract is not renewed. Many contract employees are former civil servants who transferred to contract status in order to obtain higher pay than was possible under the civil service system. They may have done so with the expectation that their employment would continue with similar security as the civil service though without a formal employment guarantee, and it may be thought that the 1988 government guarantee regarding the maintenance of civil service rights for those who transferred to contract status might still have some effect. While it might be argued that having obtained the higher pay by giving up civil service status, they should be prepared to accept the risks associated with non-civil service employment guarantee, it can also be argued that in the event of retrenchment contract workers might be given some compensation. They may be included in the income support component of the social safety net (see below). Note that the recent decision (August 1991) by the Constitutional Court in Turkey, finding the law permitting contract labor in the public sector (399)

unconstitutional has given these workers an unclear status.

32. Unionized and non-unionized workers are covered by the general Labor Law 1475. It is possible to dismiss or retrench these categories. Contracts under Law 1475 can be properly terminated by giving two weeks' notice to those employed less than six months; four weeks' notice for those employed more than six months but less than one-and-a-half years; six weeks notice to those employed for more than one-and-a-half years but less than three years; and eight weeks notice to those employed for more than three years. In the event of liquidation or retrenchment on privatization or restructuring at least eight weeks' notice will have to be given to some workers, but there will no doubt be longer periods of consultation and preparation for the changes so the eight weeks requirement should impose no significant burden. However, it will be necessary to ascertain whether any SOEs have made agreements to extend these periods of notice, as this could extend the time taken to close an establishment or retrench some workers.

33. The provisions of Section 24 of the Law may place restraints on the restructuring of employment within an SOE.[2/] While it is likely that most terminations will be aimed at shedding excess staff who will not need to be replaced, in some cases management may wish to replace existing staff by more experienced or better qualified individuals. This might fall afoul of article 24 which seemingly would require an offer to rehire. There will no doubt be legal precedents for guidance, but the importance of this provision is that the straightforward replacement of individual employees with new recruits who may be better qualified but who are demonstrably replacing the retrenched workers may not be consistent with Law 1475. One solution in such cases might be to make the receipt of benefits under the Social Safety Net provisions conditional on voluntary resignation, which would apparently not be subject to article 24 (this needs to be confirmed by national legal experts). It should be made clear, however, that by accepting voluntary resignation or agreed termination, the workers concerned would not lose their entitlement to notice, severance allowance and other components of the social safety net. In order to avoid legal complications, it may be necessary to replace the "severance" allowance by a "termination benefit", to make it clear that the laws on severance do not apply.

34. In the case of dismissal of ten or more workers, the employer is required to communicate their names and qualifications to the relevant office of the labor and employment service, at least one month prior to the date of dismissal, with a view to their placement in another undertaking. This imposes

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2/ "24. Effects of dismissal. Employers shall not employ any new worker in place of workers .....whose contracts are terminated under section 13 of this Act, for a period of six months, effective from the date of such termination. If an employer is obliged to engage new workers for the same jobs at the same workplace within this period, he shall give notice of the vacancies to the previously terminated workers. The right to claim reinstatement shall cease to be operative after 15 days have elapsed from the date of receipt of such a notice."

no significant restraint on an SOE and it is envisaged that there will be considerably more liaison with the Ministry of Labor and employment services than specified in the Law. It may well be that some collective agreements covering SOEs contain provisions regarding redundanc, and retrenchments relating to the selection of individuals, perhaps according to length of service, and the terms to be offered them. It will be necessary to ascertain whether any such agreements have been made and if so, their terms.

35. Section 14 of Labor Act No. 1475 provides that seniority severance pay shall be paid in the event of termination by the employer of the contract of employment of workers covered by the Act, unless the contract is terminated because of immoral or dishonorable conduct by the worker. Seniority severance pay has also to be paid if the individual terminates the contract for the purpose of qualifying for an old-age or disability insurance pension or lump-sum payment from an organization established by an Act. It is important to ascertain whether any contracts or collective agreements have been made which provide for additional payments over the 30 days per year of service as this could have significant effects on estimates of the potential cost of seniority severance pay by SOEs. For retrenched workers seniority severance pay will be determined by their length of service and the last level of wages of each individual. It is assumed in the calculations in this report that there are no additional payments above the legally specified amounts.

36. Section 14 of Law 1475 also states that the last public employer shall be liable to pay the seniority severance pay for the total period of service in cases where a worker was employed in several distinct public institutions. Section 14 also requires that the employer shall establish a fund in respect of seniority severance pay and covering old age, retirement, disability, death and lump-sum payments. However, it appears that SOEs have not established and regularly contributed to such funds. If this is the case the costs of providing seniority severance pay will be an additional item of expenditure to be met by SOEs or the Government.

37. In the absence of detailed data estimates of the cost of seniority severance pay for all workers have been made based on the average wage for each category in 1990. As the distribution of workers by years of service is not known estimates have been made for 5, 10 and 15 years of service. Table A6.10 shows for each SOE the average severance pay for unionized workers with different years of service in 1990 prices. It is assumed that the 1991 pay increase will lead to an increase of about 40% in real wages, so the amounts were adjusted accordingly.

38. The estimated average cost per unionized worker of seniority severance pay for workers with 10 years service (after the 1991 wage increase) is TL18.4 million and TL34.8 million for non-unionized workers respectively. For all SOEs the cost of severance pay for all workers, assuming an average of 10 years service, would be equivalent to 29.6% or three and one half months of total annual personnel expenditure. In DHMI there are no workers and in PTT there are so few that even if they have an average of 15 years service the cost would be no more than 0.4% of annual total personnel expenditure. If average length of

TABLE A6.10: Cost of Severance Pay
(TL thousand, 1980 prices)

SOEs	Average Years of Service 5	10	15
A. Per Unionized Worker			
MKEK	9758	19515	29273
SEKA	9842	19685	29527
CITOSAN	10267	20534	30801
TDCI	12501	25000	37500
ASCK	7293	14587	21879
GULS	7127	14253	21381
ETIBANK	7952	15904	23855
TTK	8735	17471	26205
TKI	8803	17605	26408
TEK	7589	15179	22768
TPAO	14695	33391	50086
SOTAS	8138	16276	24413
DITAS	0	0	0
PCAS	13419	26838	40257
TUGSAS	8781	17562	26342
IGSAS	17685	34968	52452
SEKER	7727	15455	23181
ERK	9862	19725	29585
TMO	6943	13887	20829
TSEK	13467	26933	40400
CAYKUR	8078	16157	24235
TEKEL	7571	15144	22715
TARIM	6402	12804	19207
YEMSAN	7895	15788	23682
TZDK	8290	16401	24601
DMO	6489	13320	19979
TCDD	8275	16549	24825
PTT	9404	18806	28210
DMI	0	0	0
TMY	17346	34692	52039
SEKSAN	8736	17473	26209
TDI	11785	23569	35354
TOTAL	9186	18373	27559
B. Per Non-Unionized Worker 1/			
ASCK	14850	29701	44551
ETIBANK	15408	30136	45205
TEK	13479	26960	40439
TPAO	22667	45334	68004
SOTAS	15491	30982	46472
DITAS	17207	34415	51622
IGSAS	23752	47505	71257
TMY	37162	74325	111485
SEKSAN	21066	42132	63197
TDI	17312	34624	51936
TOTAL	17395	34790	52185

Source: ISPO Calculations

Note: 1/ Other SOEs do not employ this category of labor.

service is 10 years, severance pay will cost almost half a year's total personnel expenditure in ASOK, TPAO, DITAS, ICSAS, GEMSAN and TDI.

39. The effects of the large wage increase in 1991 on the relation between wages and total personnel expenditure are not known. The two months bonus will rise by the same proportion as basic wages and it is possible that many of the other items will do the same. In the absence of detailed information it may not be too misleading to take the percentage personnel expenditure relationships as a broad guide. The requirement to pay 30 days wages has been taken as one month's wages, and the upper limit referred to in Law 1475 has been ignored. If these calculations were applied to the best case scenario (see Annex 1), the ensuing retrenchment would have a total severance pay cost of US$1.1 billion.a/

Social Safety Net

40. The anticipated retrenchments and closures could lead to high unemployment. Retrenching one-third of the total workforce would, for example, lead to about 190,000 unemployed. Approximately every one per cent dismissal or retrenchment creates 5,700 unemployed. In addition, some 90 civil servants could have to be absorbed in the public sector. Given the potentially large amount of unemployment from restructuring, closures and privatization and the absence of any income support system in Turkey other than the seniority severance payments, there is a case for providing additional social safety net payments targeted to these unemployed.

41. Essentially a social safety net should:

- provide income support to dislocated workers to ease their job search without discouraging active search and action to obtain new employment or self-employment;
- provide counselling and guidance to assist dislocated workers in adapting to a new activity;
- provide training and re-training support to enhance the occupational and job mobility;
- stimulate new economic activity by encouraging employment generation, self-employment or small scale enterprises;

42. These objectives are both socially and politically beneficial, and will also ease and speed the economic adjustment of the restructured public enterprises. They will facilitate the smoother introduction and acceptance of the transformation of the public sector.

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a/ US$780 million in SOEs to be liquidated, US$220 million in privatization candidates and US$140 million in retained SOEs.

Income Support Measures

43. An income support scheme should provide adequate compensation to those affected while encouraging individuals to seek and accept re-employment as quickly as possible. In the case of privatized or retained restructured SOEs it might be prudent to make payment of income support conditional on voluntary resignation from the enterprise in order to avoid possible consequences regarding re-hiring under Section 24 of Law 1475.

44. Special unemployment benefit for a specified maximum period can be paid to dislocated workers from SOEs. The level of unemployment benefit paid to dislocated workers should be based on the previous level of wages as defined for calculation of seniority severance pay, or some proportion of this. Experience shows that schemes which guarantee unemployment benefit for a specified period may discourage active job search. The arrangements should therefore include incentives to encourage individuals to find and accept suitable employment as quickly as possible. This can be done by paying dislocated workers a lump sum compensation based on the amount of "unused" unemployment benefit remaining in the specified maximum period for which unemployment benefit could be paid. This would not be the full amount of unemployment benefit but be reduced by some fraction.

45. The proposed income support would therefore, consist of two components: (i) unemployment benefit compensation equivalent to w% of previous monthly wages to be paid for a maximum of T months; and (ii) on becoming re-employed or entering self-employment a lump sum bonus L. The bonus L will be determined as follows:

$$L = z \cdot (T-t) \cdot w$$

where: z = the fraction of monthly wages to be paid as a lump sum, T = the maximum number of months for which wages will be paid in the event of unemployment, t = the months unemployed, w = the wage level paid as special monthly unemployment benefit.

46. Table A6.11 shows the total amount of unemployment benefit plus lump sum payment that could be received by a worker for various values of z and w for different periods of unemployment expressed in months of wages. For example if unemployment benefit was paid for (T=) 18 months at full previous wages (w=1) and "unused" unemployment benefit was converted to a lump sum at (z=) 75% of previous wages, a worker finding a new job immediately would receive 13.5 months wages as lump sum, and one who remained unemployed for the full 18 months would receive 18 months wages. Someone finding a job after six months would receive a total of 15 months wages. If unemployment benefit was paid at (w=) 75% of previous wages and "unused" months of benefit were converted to a lump sum at (z=) 50%, someone finding a new job immediately would receive 6.75 months wages and someone remaining unemployed for the full 18 months would receive 13.50 months wages over the 18 months.

TABLE A6.11: Total Amount of Income Support
(in months of wages, T=18)

z	w	Months Unemployed 0	3	6	9	12	15	18
0.75	1.00	13.50	14.25	15.00	15.75	16.50	17.25	18.00
0.50	1.00	9.00	10.50	12.00	13.50	15.00	16.50	18.00
0.25	1.00	4.50	6.75	9.00	11.25	13.50	15.75	18.00
0.75	0.75	10.13	10.69	11.25	11.81	12.38	12.94	13.50
0.50	0.75	6.75	7.88	9.00	10.13	11.25	12.38	13.50
0.25	0.75	3.38	5.06	6.75	8.44	10.13	11.81	13.50
0.75	0.50	6.75	7.13	7.50	7.88	8.25	8.63	9.00
0.50	0.50	4.50	5.25	6.00	6.75	7.50	8.25	9.00
0.25	0.50	2.25	3.38	4.50	5.63	6.75	7.88	9.00

Source: IBRD Calculations
Notes: z = conversion coefficient for "unused" months of unemployment benefit for payment of lump sum.
w = coefficient of unemployment benefit to previous wage level.

47. The fact that the total amount of benefits increases as the time of unemployment rises is not at odds with the notion of an incentive to find a jew job. A new job will provide for additional income. For example, if after 6 months (with z=0.75 and w=1) a worker finds a new job he will get total benefits of 15 months plus 12 months of actual wage. It will always be rewarding to find a new job. The incentive to find a new job quickly will be greater the higher is z and the lower is w, and the higher the rate of time preference of the worker, given that the rate of wages in alternative employment discounted for the disutility of the job is at least equal to w. If workers have a high rate of time preference and there is some positive net wage from other employment, the lump sum may provide a strong incentive to find new jobs. With regard to the appropriate value of w there may be a conflict between the provision of incentives to find new employment more quickly which suggest a relatively low value for w, and the realities of the labor market and the requirements of social policy which suggest a higher value of w to provide adequate income support in conditions when alternative employment opportunities may be severely limited. While a value of w=1 may be considered too generous, particularly if account is taken of the seniority severance pay that will be received by many workers, a value of .5 may be too low to provide adequate income support for those unable to find other jobs. A high value of z may be desirable to encourage speedy re-employment.

48. While financial support should be provided to those adversely affected by the restructuring this should not discourage speedy and effective readjustment of individuals. Safeguards are necessary to ensure that individuals receiving either special unemployment benefit or lump sum compensation do move into real employment or self-employment. The most important safeguard is to ensure that individuals enter real jobs when claiming the lump sum compensation. Any claim for lump sum payment can be taken as evidance that the individual has relinquished claims on further payment of the special unemployment benefit, but if the job should prove to be short-term there could emerge social or political pressures for further employment assistance.

49. Table A6.12A shows the actual average cost of income support for unionized workers in 1990 prices, taking into account the 1991 wage increase. If unemployment benefit at full wages is payable for 18 months, and z=0.75 the cost of lump sum payments for those finding a new job immediately would be TL24.7 million, and TL27.5 million for someone finding a job after six months. The cost of paying unemployment benefit for the full 18 months would be TL32.9 million. Table A6.12B gives the same details of cost for the average non-unionized worker.

TABLE A6.12 Average Cost of Income Support Worker
(T=18, TL thousand, 1990 prices)

z	w	Months Unemployed 0	3	6	9	12	15	18
A. Unionized								
0.75	1.00	24708	26081	27454	28826	30199	31572	32945
0.50	1.00	16472	19218	21963	24708	27454	30199	32945
0.25	1.00	8236	12354	16472	20590	24708	28826	32945
0.75	0.75	18531	19561	20590	21620	22649	23679	24708
0.50	0.75	12354	14413	16472	18531	20590	22649	24708
0.25	0.75	6177	9266	12355	15434	18513	21583	24708
0.75	0.50	12354	13041	13727	14413	15100	15786	16472
0.50	0.50	8236	9609	10982	12354	13727	15100	16472
0.25	0.50	4118	6177	8236	10295	12354	14413	16472
B. Non-Unionized								
0.75	1.00	44266	48356	51406	53977	56547	59117	61688
0.50	1.00	30844	35984	41125	46266	51406	56547	61688
0.25	1.00	15422	23133	30844	38555	46266	53977	61688
0.75	0.75	34699	34627	38535	40482	42610	44338	46266
0.50	0.75	23133	26988	30844	34699	38555	42610	46266
0.25	0.75	11566	17330	23098	28881	34644	40413	46266
0.75	0.50	23133	24418	25703	26988	28273	29559	30844
0.50	0.50	15422	17992	20563	23133	25703	28273	30844
0.25	0.50	7711	11566	15422	19277	23133	26988	30844

Source: IBRD Calculations

50. Applying these calculations to our best case scenario (see Annex 1) under the same assumptions about layoffs as in Appendix 1 of the main volume and with z=0.75 and w=1 (i.e. generous support) the total cost to the Government would vary between US$1.2 billion if all workers found new jobs immediately and US$1.7 billion if all of them remained unemployed for 18 months.

51. The safety net scheme provisions are designed to compensate those dislocated workers who have been employed for some time. It may be argued that the most recently recruited younger employees may actually be losing more by restructuring. They may have joined the SOE with the expectation of job security for the next 20 or 25 years. However, it does not seem appropriate to provide the same level of benefits to those who had been employed for only six months as for those who have been employed for 5, 10 or 15 years, nor does it seem proper to seek to justify the additional cost of providing full benefits to the more recent recruits. Hence, it appears appropriate to adjust the benefits in line

with seniority of the workers. Those with less than S, but more than, say one year of service could be granted a proportion of the full benefits. There are various possibilities to implement this scheme. Two examples are: (i) reduce the benefits in proportion with time served; or (ii) reduce the duration for which the income support is available in that proportion. For the first, total compensation would be calculated as:

$$C = t \cdot w(\underset{S}{1} \cdot s) + z \cdot (T-t) \cdot w(\underset{S}{1} \cdot s) \quad \text{for } t \leq T$$

where: S = total years defined as "less senior", e.g. 5, and s = actual years of service. In the second case, the formula becomes:

$$C = t \cdot w + z \cdot [(T - \underset{S}{1} \cdot s) - t] \cdot w \quad \text{for } t \leq T - \underset{S}{1} \cdot s$$

52. The selection of a minimum length of service for qualification for entitlement to full income support is essentially a matter of judgement. It can best be made after details of the distribution of workers by length of service have been obtained. There could be political and industrial relations consequences if the qualifying period is long enough to exclude a significant proportion of the workforce. The shorter the qualifying period, the greater the financial cost to Government. It may also be appropriate to make some small payment to those who have been employed for only a short period, say less than one year. They will not receive any significant seniority severance pay and payment of one or two months wages would help ameliorate financial hardship.

53. Contract employees have been employed in that form only since 1984 and most of them will have relatively short periods of seniority as contract employees. Contract employee status was originally designed to circumvent the civil service pay limits and provide higher salaries as incentives for civil servants employed in SOEs, as well as to offer more competitive pay to recruits from the private sector. While contract employees can be released at the end of their one-year contract those of them who were civil servants had expectations of job security. So too had many of those recruited from the private sector. It may be appropriate therefore to provide some special income support provisions for them. However, contract employees should generally have relatively higher skills and therefore may be unemployed for a shorter time and require less retraining. It might be appropriate to provide the same sort of unemployment benefit and lump sum provisions as for unionized and non-unionized workers but for a shorter period.

54. The cost of providing unemployment benefit on full wages (w=1) for (T=) 12 months with the lump sum payment converted at (z=) 0.75 would be TL12.8 million per contract employee if all found new jobs immediately and TL17.1 million if all remained unemployed for 12 months. Again, using our best case scenario (see Annex 1) the total fiscal cost would be between US$260 million and US$350 million.

55. It is possible that some temporary workers have been employed by the SOE for longer than 30 days or on a recurring basis. If this is the case it may be decided to make an ex gratia payment to them. As an illustration temporary workers who have a cumulative length of service of 12 months might be given two months wages. This would be consistent with the suggested payment of one-fifth of a years benefits for each year of service for those with less than five years seniority. Per temporary worker this benefit would amount to TL26 million. If all workers were granted the benefit in our best case scenario the total cost would be less than US$20 million.

56. With considerable variation among SOEs, the total average cost per worker in 1990 prices of the severance payment and income support system is about TL35 million or US$13,500 (see Table A6.13). Assuming that a maximum of 250,000 workers would have to be retrenched, the total cost would be about US$3.4 billion. In reality, as not all retrenched workers would stay unemployed for the whole duration of the unemployment benefits period, the fiscal cost will be lower. Moreover, it was assumed that unemployment benefit would be paid at the last wage, whereas in reality a somewhat lower wage may be warranted. Lowering w by 10% would save about US$300 million.

Employment Services

57. Labor Market Information. In each area likely to be affected by unemployment the local offices of the Ministry of Labor should have information on:

(i) vacancies in that locality. Extra efforts should be made to obtain details of all vacancies and not rely on existing arrangements for voluntary notification. It is not proposed that legislation be changed to require employers to notify vacancies or to require them to follow existing practice for SOEs and recruit firstly only through Ministry of Labor offices;

(ii) vacancies in other areas;

(iii) training and re-training schemes established elsewhere for the types of skills required by the vacancies or by the industries and activities which might develop in the locality;

(iv) self-employment opportunities;

(v) training for self-employment schemes which have been used elsewhere.

58. Advance Notification. SOEs should give as much advance notification as possible to the employment services and training agencies so that they can prepare special programs. It is expected that this will be longer notice than required under Law 1475.

TABLE A6.13: Cost of Severance and Income Support Per Worker[1]
(TL thousand, 1990 prices)

	Severance[2]	Social Safety Net				Total Average
		Workers[3]	Contract Employees[4]	Temporaries[5]	Average[6]	
MKEK	19515	35126	14744	0	30293	45179
SEKA	19485	35432	18713	0	32853	49500
CITOSAN	20534	36962	26187	3430	33309	49607
TDCI	25000	44999	24440	2587	41334	62642
ASCK	18619	33514	0	3457	33482	52079
ORUS	14253	25657	16480	1872	20918	31136
ETIBANK	16335	29402	26242	1422	28502	40540
TTK	17671	31447	21975	0	30773	47000
TKI	17805	31691	18838	0	30110	45353
TEK	15206	27371	13937	0	25017	35295
TPAO	35257	63444	1632	0	54199	84174
BOTAS	31022	55839	15849	7028	46250	71138
BITAS	34415	61950	0	0	61950	96367
PCAS	26838	43125	12752	0	38051	57146
TUGSAS	17342	31411	22303	780	27118	39113
IGSAS	34885	64321	0	0	64321	103146
SEKER	15435	27818	19498	2540	15330	22263
SEK	19725	35301	15371	514	24610	36722
TMO	13887	24995	15978	0	17678	20296
TSEK	26933	48480	11631	0	39760	60320
CAYKUR	16157	29083	26763	2624	7863	9721
TEKEL	15146	27258	19136	3005	22313	33400
TARIM	12806	23047	20429	2461	17472	25963
YEMSAN	15788	28419	15852	2440	22876	32526
TZDK	16401	29522	16409	2145	23498	34528
DMO	13320	25975	18534	0	20935	26810
TCDD	16549	29790	16811	2187	22502	31368
PTT	18806	0	16505	3145	14349	14326
DMI	0	0	20405	0	19185	19185
TMT	36617	65931	27737	1063	54918	85352
SEKBAN	20750	37305	20920	962	31095	48277
TDI	24014	41099	4883	1127	40356	62764
TOTAL[7]	18973	33410	17149	2684	24902	35170

Source: IBRD Calculations

Note:
1/ excluding civil servants
2/ assuming 10 years seniority, workers only
3/ T=18, u=1, z=0.75.
4/ T=12, u=1, z=0.75
5/ 2 months
6/ weighted

59. Rapid Response and Local Involvement. Experience in other countries shows that programs to assist dislocated workers are likely to have more success if there is widespread local involvement, particularly of employers and trade unions, in the preparation and implementation of special measures. Once it is known which SOEs are likely to be affected by closure or retrenchment local advisory committees should be established with members of the local employers associations and trade unions. Public authorities as well as representatives of the Ministry of Labor also should be involved together with management representatives from the SOEs concerned. These bodies can advise on the types of labor which might be needed and suitable job opportunities.

60. It is important that the Ministry of Labor and other bodies involved in job counselling, job placement and training provisions be able to respond quickly when retrenchment is anticipated. The local advisory committees should therefore be established as soon as retrenchment is anticipated and local officials of the Ministry of Labor should be trained in the special duties required for dealing with large numbers of dislocated workers as early as possible. The longer the delays in initiating placement and training programs for those affected by the first round of closure or restructuring the greater the opposition to subsequent reform.

61. On-site Counseling. Counseling on job search and re-training should be provided on an individual basis for every dislocated worker who wishes it, and they should be encouraged to do so. It is better to hold the individual counselling sessions at the place of work. Joint teams or pairs of Ministry of Labor officials and SOE executives can provide counseling which combines knowledge of opportunities for other activity and knowledge of the individual's aptitudes, skills and motivation. Preliminary discussions between the managers and the Ministry of Labor officials will be necessary to clarify the types of skills which occupations in the SOE may have and the types of other occupations to which they might be adapted.

62. Considerable resources are required for the counseling stage. The cost of the managers time will presumably be borne by the SOE and government will find the civil servants. Even so some additional Ministry of Labor advisers will probably be needed. It is not possible to provide an accurate estimate of the cost of this until decisions have been taken as to which SOEs are to be affected by which measures, and analyses of their workforce, other job opportunities locally, and the type of re-training which might be suitable made. Providing employment and counselling services through the 102 offices of IIBK was estimated to cost US$27 million. If this project is implemented the additional direct cost of providing special counselling for dislocated SOE workers should not be high. The main additional element will probably be the time of the executives from the SOEs who take part in the counselling team. This has a high opportunity cost, yet British experience in the steel industry shows that it can be a crucial factor in a successful program. Executives and managers of the enterprise will have more knowledge of the individual workers than Ministry officials and will be better able to assess the worker's suitability for different types of work or re-training program.

63. Mobility Assistance. In some localities relatively few alternative employment opportunities may be found. Assistance to workers to move to other areas may be necessary. Hence, the Government may consider providing temporary housing subsidies and special relocation grants in addition to the income support measures. If they induce workers to move and find other jobs rather than remaining unemployed there will be savings of unemployment benefit payments which can finance them. Grants of TL1 million, for example (approximately US$400), would still lead to considerable saving on unemployment benefit if workers found a job within a few months.

Training and Employment Generation

64. For some individuals further training may be unnecessary. They possess skills which are marketable and the main assistance to be provided is in job search. Others may have low, poor or out-dated skills with little prospect of finding other jobs without training. If employers in the locality have vacancies individuals can be selected for training with the participation of the employers.

65. The choice of the type of skill/occupational training provided and the selection of individuals for appropriate courses in the absence of potential job offers by employers necessarily injects uncertainties into the decisions. The Ministry of Labor in association with other economic Ministries will have to decide which skills are needed. The selection of individuals for training courses is best done by groups with experience of training and of employment of the skills in question. Once decisions about the type of training have been taken the selection of individuals would be best done by committees which included representatives from the SOE, the providers of training, and private sector employers from the industry or sectors concerned.

66. Employment Guarantee Scheme. The Employment Guarantee scheme already operating whereby employers enter into an agreement with the Ministry of Labor to train school-leavers and guarantee to employ those who complete the training course successfully, can be extended and targeted to the retrenched workers of SOEs. The training would be provided on employers' premises with special financial support to meet at least some of the costs. .It will be necessary to ensure that employers do not abuse the scheme by converting the intended training period into productive activity by unpaid labor. Employers would take part in the selection of individuals for training.

67. Cost of Training. Estimating the cost of training is difficult without some indication of the type of training to be provided. With the package of measures proposed for income support there will be no cost of support for workers receiving training other than the unemployment benefit payments. The items of cost are therefore, the actual provision of training -instructors, equipment, premises, materials, and any payment to employers if they provide the facilities. There will also be secondary indirect costs of the government employees preparing the training programmes or advising on employment placement.

68. Costs of training programmes in other countries even when expressed in terms of the previous wages of the trainees are seldom a useful guide. There are widely differing methods of training in different countries, the initial skill levels of the workers vary, as do their experience and age. It is preferable therefore to make rough estimates of the possible costs of training based on such material as is available on Turkey, although the type of training required by dislocated workers from large scale SOE closure or restructuring will not be the same as that provided in most existing training schemes. In general, training schemes in Turkey may cost about US$400 per worker if there is a sizeable re-training in new skills involved. This is about the mid-point of a range of costs found in ILO training schemes. It was also estimated that IIBK

could provide contract training for 100,000 workers over the next five years at a cost of about US$40 million.

69. If unemployment benefit is paid at full wages for 18 months an average unionized worker who found a job after six months training would receive a total of TL27.5 million. Unemployment benefit for the full 18 months would cost TL32.9 million. The "saving" as a result of unemployment lasting only six months would be about US$2,000. Hence, even if training programs cost significantly more than the estimated US$400 per worker, if they are effective in reducing the duration of unemployment, the Government will even save in net terms. In fact, even if it takes 15 months for the worker to find a job with the training (at US$400), the program still breaks even.

70. Self Employment. The provision of lump sum compensation in addition to seniority severance payment will provide some individuals with the financial opportunity to start some self-employment activity. British experience shows that it is essential to provide training in business methods, book-keeping, financial matters such as cost control and pricing, as well as in the technical aspects of the activity. Local employers and businessmen can provide valuable assistance in this training. Co-operation between them and the Ministry of Labor through the local advisory committees can ensure that the training for self-employment/small business activity is realistic. If training for self-employment is provided there could be a rule that the worker would be regarded as having begun self-employment on completion of the course, or say one or two months after. The lump sum payment would then be paid on a declaration by the worker that he had begun self-employment. It would then be possible to calculate the saving from transfer from unemployment to self-employment and payment of the lump sum. The variable t would be the length of the training plus any extra one or two months allowed for setting up the activity. The amount that would be saved from the possible maximum unemployment benefit for the full period would be known and so a decision regarding the amount that could be spent on training and still lead to the Government breaking even could be determined.

71. Small Collective Businesses. A group of unemployed workers seeking to establish a small firm on a collective basis may need training in technical productive aspects. Most if not all of them will require training in business organization, legal matters regarding company activities, accounting, finance and marketing. The same approach as suggested for self-employment regarding payment of the lump sum and calculating the cost of training can be adopted.

72. The combined severance pay and lump sum compensation may not be enough to finance a venture. The Government should consider providing special temporary assistance in the form of help towards the initial cost of obtaining premises, equipment and working stocks. This could be low-interest loans for a specified period, providing that the proposed project has been properly costed and assessed. Where closure of the SOE takes place there may be opportunities to provide premises to small ventures on specially favorable terms for a fixed period. In other cases it may be feasible to sell some of the equipment from the SOE to the venture on special terms.

73. In all these cases there could be a conflict between the desire to assist the unemployed start up small ventures which are economically viable in the longer-run and the proper assessment of the project to ensure that public funds are responsibly disbursed. As an international generalization civil servants are not normally well equipped to assess commercial ventures. Their training and background tends to make them cautious in assessing risks.

D. Regional Impact

74. The share of SOEs in total non-agricultural employment in Provinces in 1985 is shown in Table A6.14. The figures are for Provinces and the effect of closure of SOEs on a locality may be more severe than indicated by the Provincial percentages. There may be considerably greater concentration of employment in some towns. Even so, in some provinces SOEs account for more than 10% of the total employed population excluding agriculture. Lack of detailed data prevent any further analysis. It does appear, however, that when SOEs have been identified for closure or serious restructuring of employment, a detailed analysis of the impact on employment in the locality should be made.

75. Although it was not possible to obtain data on collective agreements it is understood that collective agreements often include provisions for family assistance and education funds. It will be necessary to obtain details of all the collective agreement provisions in each SOE affected by restructuring. If medical care or some aspects of education are provided under collective agreements the closure of an enterprise, particularly if it is a major employer in the locality, can have serious impact on the local social services and infrastructure. It may be appropriate for government to make a special payment to the municipality to meet costs of transition from SOE provision to community provision of some of these essential social services. Such a guarantee could remove some of the justifiable fears and opposition to restructuring.

TABLE A4.14: Regional Distribution of SOE Employment 1985
(share of non-agricultural employment)

Province	Percent	Province	Percent
1 ADANA	3.84	35 IZMIR	8.47
2 ADIYAMAN	1.09	36 KARS	2.15
3 AFYONKARAHISAR	5.96	37 KASTAMONU	5.22
4 AGRI	3.76	38 KAYSERI	2.98
5 AMASYA	4.65	39 KIRKLARELI	4.10
6 ANKARA	9.35	40 KIRSEHIR	1.31
7 ANTALYA	2.02	41 KOCELI	4.12
8 ARTVIN	11.58	42 KONYA	5.29
9 AYDIN	2.01	43 KUTAHYA	9.70
10 BALIKESIR	4.54	44 MALATYA	10.35
11 BILECIK	1.48	45 MANISA	2.36
12 BINGOL	0.37	46 KAHRAMANMARAS	3.21
13 BITLIS	5.86	47 MARDIN	1.36
14 BOLU	1.99	48 MUGLA	3.92
15 BURDUR	3.43	49 MUS	6.56
16 BURSA	1.99	50 NEVSEHIR	0.24
17 CANAKKALE	0.36	51 NIGDE	1.78
18 CANKIRI	8.46	52 ORDU	0.26
19 CORUM	3.48	53 RIZE	12.76
20 DENIZLI	0.18	54 SAKARYA	5.09
21 DIYARBAKIR	6.09	55 SAMSUN	11.26
22 EDIRNE	2.08	56 SIIRT	9.52
23 ELAZIG	11.84	57 SINOP	2.42
24 ERZINCAN	3.24	58 SIVAS	16.98
25 ERZURUM	9.45	59 TEKIRDAG	0.56
26 ESKISEHIR	6.69	60 TOKAT	5.01
27 GAZIANTEP	1.99	61 TRABZON	6.44
28 GIRESUN	2.35	62 TUNCELI	0.58
29 GUMUSHANE	8.14	63 SANLIURFA	2.42
30 HAKKARI	1.18	64 USAK	1.46
31 HATAY	8.85	65 VAN	7.32
32 ISPARTA	4.42	66 YOZGAT	0.88
33 ICEL	1.28	67 ZONGULDAK	15.95
34 ISTANBUL	2.31		
All	4.38		

Source: SPO

E. Terms and Conditions of Employment in Restructured SOEs

76. Some SOEs will remain, at least temporarily, in public ownership. They will need to be restructured in terms of employment and pay determination. It is assumed that they will operate under market conditions requiring them to maximize profitability within constraints of strong financial discipline subject to appropriate regulations to prevent abuse of monopoly power. If the Board of Directors of an SOE is responsible for the performance and profitability of the SOE it requires the autonomy to determine employment and remuneration levels. It will not be possible to judge the performance of the Board or senior management if they are compelled to follow outside decisions regarding staffing and pay levels.

77. With the existing article 128 of the Constitution restructured SOEs will be required to employ civil servants to perform certain functions. Certain higher positions will therefore continue to be filled by civil servants on civil service conditions, although they may be given civil service contract status.

This is not conducive to the efficient operation of the SOEs nor is it compatible with the autonomy of SOEs. This difficulty can be removed only by modifying the constitution. If this is done restructured SOEs will not be required to employ civil servants. They will therefore be free to select their own staff on the basis of efficiency, competence and qualifications. Many restructured SOEs will, in the pursuit of profitability, wish to reduce existing staffing levels and replace some of the current employees with more suitable staff. Staffing levels should be determined on the basis of work study and it will undoubtedly help the smooth transformation to a successful, autonomous and viable SOE if trade unions are fully involved in the processes of determining staffing levels and establishing work study standards.

78. Pay and terms of conditions of employment should be determined by the usual processes of collective bargaining for all employees except non-unionized workers. Incentive payments and bonuses should be determined by the management of the SOE and related to actual measured performance against specified criteria. The existing general labor legislation will continue to apply to restructured SOEs without the complications of civil service employees subject to different legislation. Management should have autonomy to negotiate terms and conditions of employment appropriate to the enterprise, its financial position and prevailing collective bargaining and market circumstances.

F. Recommendations

79. Despite the enactment of a hiring freeze and a replacement ratio of 70%, employment (excluding Petkim and Sumerbank) rose by 2.2% since 1985, but fell 1% in 1990 from its peak years of 1988-89. Compared with 1979, SOEs employed 23.5% more people in 1990. There has been a significant shift out of civil service employment, still 30% in 1985, but only 4.5% in 1990, and into contract employment (up to 30% of total in 1990, from zero in 1985) because of more attractive pay conditions. Average real wages during the period 1980-90 rose by 18%, but were still 25% below their 1980 levels in 1988, indicating that these wage increases are a recent phenomenon. Labor negotiations in the first half of 1991 resulted in increases by 140% in nominal terms, leading to continuing real increases. The current wage and employment levels are unsustainable in the long-run.

80. Any future reform program of the sector will necessitate retrenchment of labor. For such a restructuring to be successful the labor issue needs to be dealt with up front in co-operation with all affected groups (workers, management, local community). Aside from the legal requirement of providing severance pay (for workers), we recommend the implementation of a social safety net consisting of income support, employment services, training and employment generation. Income support should be designed in a way that provides workers with an incentive to find new employment or become self-employed. Counseling and advisory services will have to be expanded and targeted to the dislocated workers. Local managers and executives of SOEs could play a crucial role in this process. The package of measures should be enhanced in cases where the SOE is the sole income-employment provider of the region. Civil servants will have to

be absorbed in the public sector while workers and contract employees can benefit from the safety net. The cost of such a program are not excessive compared to the gains.. If training services are effective and workers find new jobs quickly, the public sector may already break even in the first year of the program (as less income support would be required). The implementation of this safety net does not require changes in the legislation provided that workers resign voluntarily to avoid a complication on re-hiring as a result of the labor law (1475).

81. For SOEs that will be retained by the State, at least for the time being, considerably more autonomy and flexibility in personnel management will be needed. It would be highly desirable to amend Article 128 of the Constitution so as to permit non-civil service employment in management positions. Management would also need the power to determine employment levels as well as to negotiate the wages of its workers.

19. An Analytical Framework For Assessing The Impact of Divestiture

As more data and experience accumulate on the results of public enterprise reform, more assessment will be undertaken to determine whether the financial performance of restructured or divested firms improves and whether financial improvements have an impact on a country's economic performance.

A Bank Working Paper, Does Divestiture Matter? A Framework for Experience (WPS 475, 1990), provides an analytical framework for assessing the impact of divestiture. It suggests that future studies incorporate comparisons between:

- the same firm before and after divestiture;
- divested and undivested firms in the same sector and country;
- the performance of a divested firm and the hypothetical performance of a firm had it remained public
- the performance of divested firms in competitive and noncompetitive markets in the same country; and
- the performance of divested firms in the same industry in different countries.

The paper is useful in providing an approach to analyze divestiture more rigorously. The results from such analyses will enable reform planners and borrowing country governments to shape planning and implementation in accord with achieving maximum outcome.

Attached is a 19-page excerpt from the paper that describes the proposed analytical framework.

countries.[20/] This literature does not directly address divestiture per se. Nonetheless, its view of the performance of private versus public ownership is relevant; Milward's conclusion is generally shared by the other authors who have made the attempt: "There is no evidence of a statistically satisfactory kind to suggest that public enterprises in LDCs have a lower level of technical efficiency than private firms operating at the same scale of operation" (Milward, 1988).

PROPOSED FRAMEWORK

To go beyond, or avoid the shortcomings of the above studies, we need to ask three questions about divestiture. The first is factual: What are the changes in economic efficiency and fiscal incidence, if any? The second is hypothetical: What are the possible factors explaining divestiture outcomes? The third is analytical: What is the causal link between divestiture outcomes and their hypothetical determinants?

Measurement Issues

Economic Efficiency The hypothetical cases in Figures 1 and 2 identify the expected changes in economic efficiency. The underlying premise of the two simplified cases is that, for reasons mentioned above, divestiture will

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[20/] For surveys of this literature, see, for example, Milward, 1988; Domberger and Piggott, 1986; and Sveinar and Hariga, 1987.

Source: Does Divestiture Matter? A Framework for Experience, Ahmed Galal, WPS 475, 1990.

lead to a reduction in average costs (Cp<Cg). For purposes of simplification, we can assume the following:

- The marginal, and consequently average, costs are constant under public (Cg) and private (Cp) ownerships.

- The firm operates at a given short-run capacity before and after divestiture.

- Under public ownership, the firm is assumed to break-even (Pg=Cg).[11/]

Under perfect competition (Fig. 1), the consumers are only willing to pay the market price, whether the commodity is produced publicly or privately (Pg = Pp). The PE is merely able to recover its total costs (revenue = cost = ABQgO). In contrast, private producers are able to make profits equal to ABCD (revenue ABQpO - cost DCQpO).[12/] The consumer's surplus remains unchanged. Therefore, the expected net gain to society is captured by the change in the producer's surplus (ABCD).

[11/] Many of these assumptions need not hold. Private owners may, in addition to cost reduction, be able to increase output through greater capacity utilization even in the short run. Marginal costs could be increasing or decreasing. Market structures may be oligopolistic. Firms may enjoy a monopsony power in input markets. These variations are likely to complicate the story considerably, however, without substantially altering the basic notion to be illustrated here.

[12/] Profit, as defined here, is the same as producer's surplus or quasi-rent. Therefore, these terms will be used interchangeably, unless specified otherwise.

Fig. 1: Divestiture of PEs under Competition

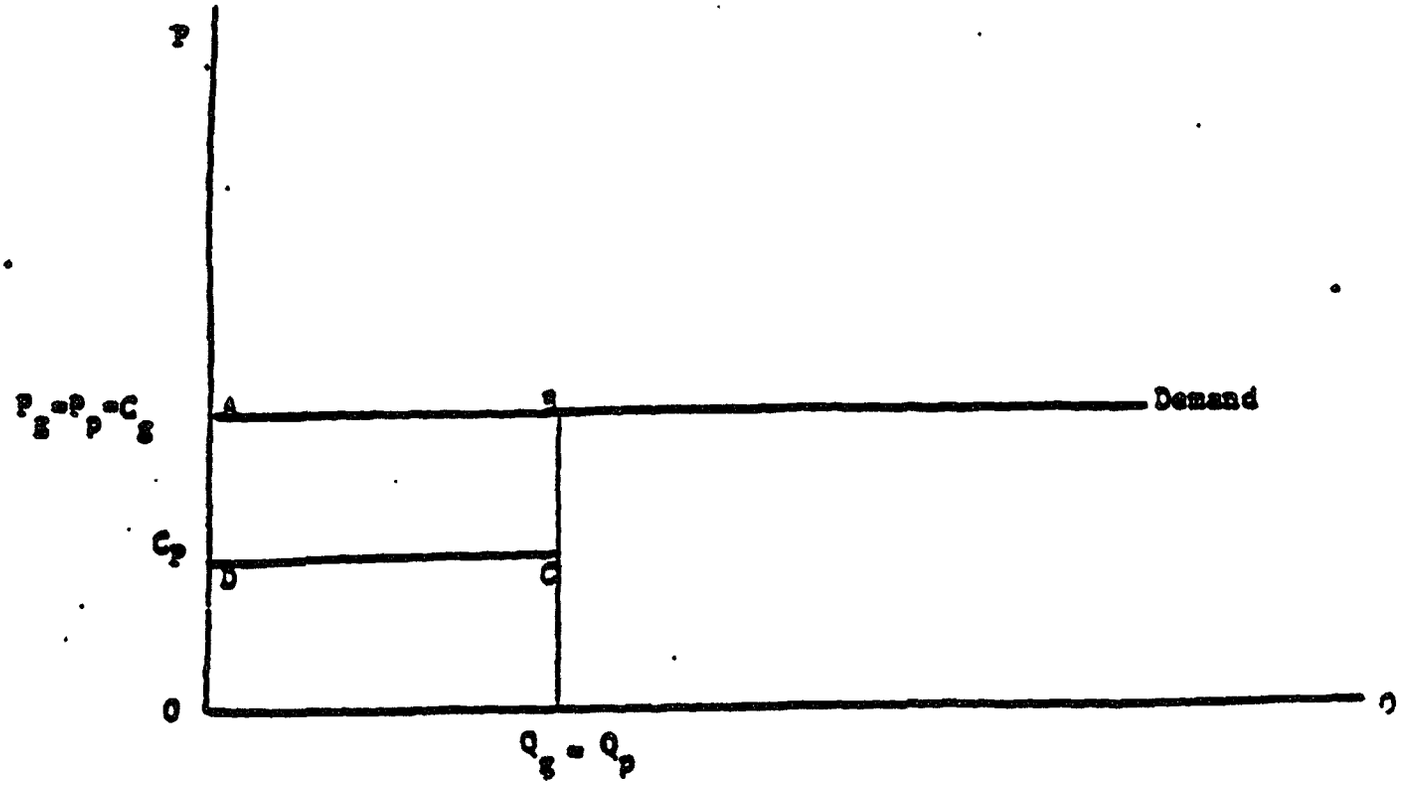
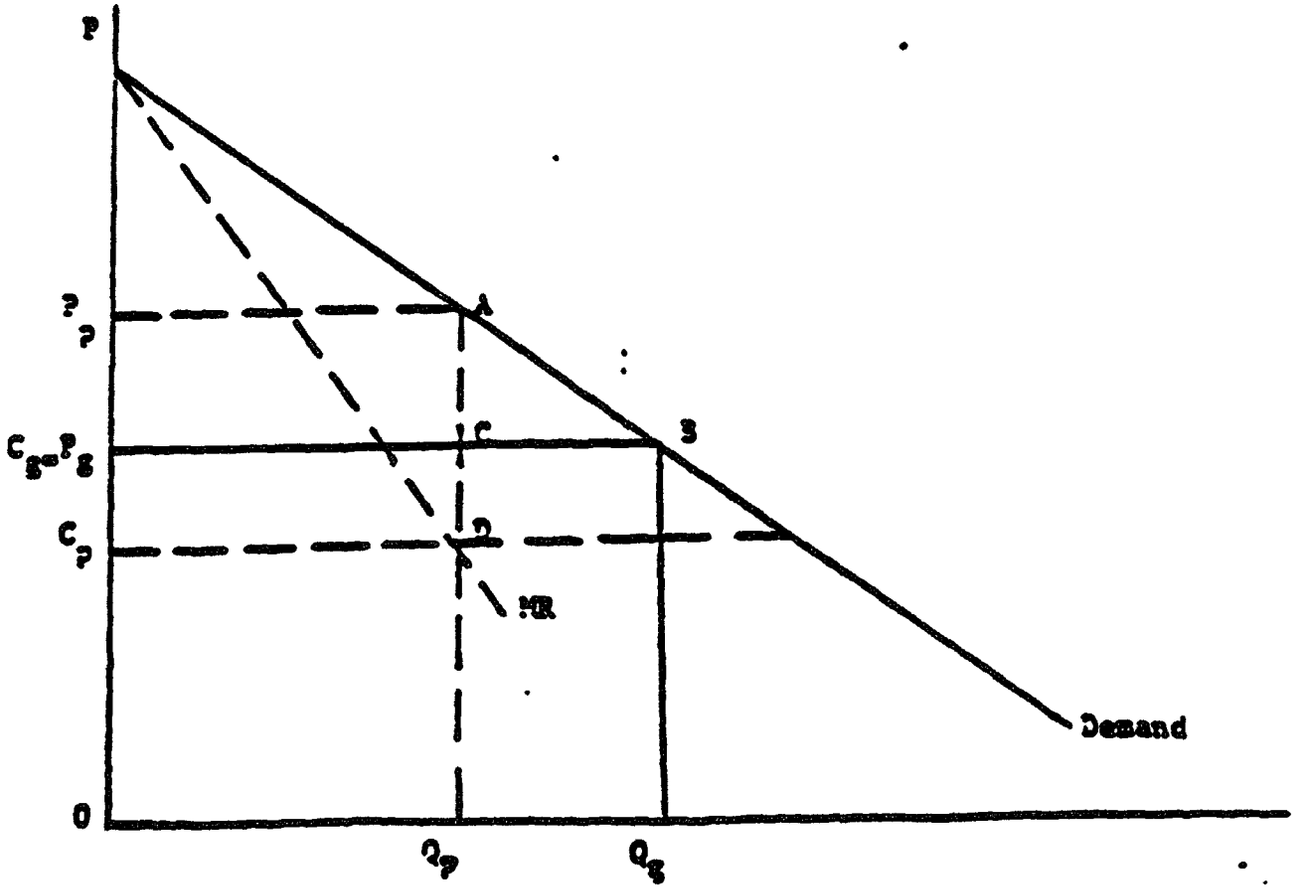


Fig. 2: Divestiture of PEs under Monopoly



Under a monopoly (Fig. 2), the effect of divestiture is not as straightforward. To maximize their profits, the new owners are expected to reduce output (from Qg to Qp) and raise the selling price (from Pg to Pp).[13/] Compared with a zero producer's surplus under public ownership (revenue = cost = CgBQg0), profits under private ownership are expected to go up to PpADCp. Because average cost is expected to decline (from Cg to Cp), part of the increase in profits is attributed to efficiency improvements (CgCDCp), while another part is attained at the expense of the consumers (PpACCg). Traditionally, the latter is assumed to be a mere transfer from the consumers to the producers.[14/] Therefore, the net gain in productive efficiency is the area CgCDCp. Consumers would have lost the area ABC, without making anybody else better off. Therefore, the expected net gain to society depends on the magnitude of the efficiency gains (CgCDCp) minus the loss in consumer's surplus (ABC).

The above analysis compares the operation of an enterprise for one period under public ownership versus another period under private ownership. Clearly, this view is inadequate. A firm's lifetime goes beyond one period; losses in one period could be recovered in another. Moreover, the benefits from divestiture could only materialize after private entrepreneurs have enough time to adjust. Therefore, static changes in the producer's and

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[13/] Two assumptions are necessary for this outcome to attain: (1) government exercising price control over the output of the PE, and (2) no or ineffective price regulation following the transfer of assets to the private sector.

[14/] Unless, of course, distributional effects are taken into account and various transfers are valued differently, depending on their recipients.

consumer's surplus should be extended to span a firm's life cycle. Indeed, that is why Jones et al. (forthcoming) suggest that the desirability of divestiture should be judged on the basis of the value of the sum of the discounted changes in the producer's and consumer's surplus compared to their level under public ownership.[15/] If the sum is higher than zero, then divestiture is advantageous to society.

The analysis of the producer's surplus, when undertaken in constant prices over time, will reflect the effect of static as well as dynamic changes within the firm; the latter may include introducing new products and penetrating new markets. It will be useful nonetheless to supplement this analysis by estimating TFP and financial profitability. The reason is that TFP analysis distinguishes the contribution to the growth rate of real output of various inputs from the contribution of productivity improvements.[16/] Financial profitability (which is defined as the percentage of profits, before and after taxes, to net worth, sales, and capital employed) is useful because it captures--short of subsidies--the degree of responsiveness of the private owners and managers to market signals compared to their public sector predecessors.

[15/] This statement leaves aside from the formulation of Jones et al. (forthcoming) the shadow multiplier for government revenue. The fiscal impact of divestiture is addressed separately below.

[16/] This is so since TFP is calculated, in one variant, by subtracting the contribution of factor and intermediate inputs from total output growth; in turn, the contribution of factor and intermediate inputs can be derived by calculating a weighted average growth using the respective share of inputs in cost as weights. If the residual is positive, this implies a TFP improvement.

We can find much of the information required to calculate the above measures in the firm's income statement and balance sheet. However, this information must be augmented by information on prices and quantities of major inputs and outputs, and on capacity utilization. Equipped with this information, we can calculate the producer's surplus by subtracting from the sum of production at factor cost and net non-operating income, the costs of intermediate inputs, employee compensation, and rental expenses. We can then derive the changes in the producer's surplus as the difference between the absolute values of two periods. Changes in the consumer's surplus (otherwise known as the deadweight loss) can be approximated by multiplying the change in observed selling prices times the change in observed sold quantities and dividing the outcome by two.[17] Summed together, the changes in the producer's and consumer's surplus provide a measure of the change in economic efficiency.

In calculating all measures, we might have a problem finding enterprises that have been divested for an average lifetime. Therefore, our estimation has to proceed in two steps. First, we should calculate the measures for the period for which actual data are available. And second, we should estimate the measures for the rest of the firm's lifetime, based on experience and some expectations about future policy shifts and expected responses by enterprises and consumers.

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[17] Fortunately, only the change in the consumer's surplus, not the magnitude, needs to be measured. Otherwise, the shape of the demand curve (or its elasticity) has to be estimated.

The Fiscal Incidence. To judge whether the fiscal incidence of divestiture is positive or negative, we must compare the net present value (NPV) of (1) the funds that would have flowed between the Treasury and the PE, if public ownership had continued, and (2) the funds that flow between the Treasury and the divested firm.

To make this comparison, we must identify the flows that would have occurred under continued public ownership, project them for the rest of the PE's lifetime, and then discount them. In general, these flows are either explicit or implicit, capital or operational.[18/] Explicit transfers from the Treasury to the PE may include: unrequited transfers (subsidies and grants), increases in arrears of tax payments, equity injections, and long-term lending, including foreign capital. Implicit transfers, also from the Treasury to the PE, may include: tax exemptions and capital subsidies (e.g. grants, lower interest rates) and import duty exemptions. Mirroring this classification, explicit transfers from the PE to the Treasury may include: taxes and royalties, increases in government arrears for the enterprise's goods and services, dividends, repayment of equity (if applicable) and long-term borrowing, including foreign capital. Assuming a finite firm lifetime, these flows should also include a scrap value. Implicit transfers, from the PE to the Treasury, may include: the cost of fulfilling non-commercial objectives,--e.g., lower selling prices, excess employment, and provision of social services.[19/]

[18/] These flows have been identified in details in Floyd, et al., 1984.

[19/] The assumption here is that had PEs not rendered these services, the government would have had to do so.

We can use the same framework to estimate the NPV of the flows resulting from divestiture. However, we should use this framework as a checklist to which additional items should be added and subtracted. For example, following divestiture, explicit transfers from the Treasury to the divested firm are not likely to include operational subsidies or capital injections. Yet, they should include the budgetary outlays necessitated by divestiture (the cost of the administrative process, financial and physical restructuring, labor severance payments, re-training schemes, etc.). Similarly, implicit Treasury transfers to the divested firm are not likely to include tax and import duty exemptions and capital subsidies, unless concessions were made when the deal was struck. Explicit transfers in the opposite direction (i.e., from the divested firm to the Treasury) will include the selling price, which corresponds in some sense to the scrap value under the above framework. Similarly, divested firms will not remit dividends to the Treasury, unless of course the government had decided to retain some equity following divestiture. Under both frameworks, corporate taxes will appear as a transfer to the Treasury, provided firms were making profits.

We can get most of the information we need to calculate the two NPVs largely from the accounts of the enterprise and the government budget records. We must also estimate three parameters: the lifetime of the firm, the relevant discounting factor in a given country, and the shadow multiplier for

government revenue.[20] These parameters are specific to the firm and the country. Therefore, we should consider them on a case-by-case basis.

As explained under the previous section on economic efficiency, we will most likely have trouble finding enterprises that have been divested for an average lifetime of a firm. Therefore, the estimation of the fiscal impact should follow the same two steps outlined above.

Hypothetical Determinants of Divestiture Outcomes

Measured outcomes aside for the moment, several factors can affect the performance of divested firms. These are: (1) the changes the private sector may introduce in the firm after divestiture, (2) the characteristics of the sector, (3) the macroeconomic environment (insofar as it directly affects divested firms), and (4) changes in any of these three factors resulting from the sale negotiation.[21]

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[20] It has been argued that one dollar in the hands of the private sector is worth more than one dollar in the hands of the government. Browning (1987) has shown, for example, that in the U.S. a dollar in government revenue costs about $1.30 to $1.50 in terms of real resource costs. Therefore, the net budgetary impact of divestiture has to be multiplied by a conversion factor, which should be estimated in each country separately.

[21] A fifth factor is whether the divested PE was restructured prior to divestiture. Should that be the case, improved performance may be due to the restructuring effort and not to divestiture. The counter-argument is that without divestiture, restructuring may not have taken place. There is another issue, beyond the scope of this paper, as to whether the government should restructure prior to sale, to unravel the marketability of the enterprise or accept a lower sales price and leave the restructuring to the new owner.

Private Ownership. To maximize profits, the new private sector owners would be expected to introduce observable changes within the firm. These changes may include: production of new products and penetration of new markets; better selection, monitoring, and motivation of managers; more appropriate mix of labor skill and productivity-based compensation schemes; technological rehabilitation, replacement, and expansion; higher capacity utilization; reorganization and financial restructuring; better mix and quality of outputs; more reliable and cheaper sources of inputs; and more appropriate techniques for managing inventory. The null hypothesis is to observe fewer or none of these changes.

Sector Characteristics. The characteristics of the divested firm's sector can cripple or boost its performance, irrespective of any changes within the enterprise. The most critical of these include market structures, the effectiveness of any relevant regulating agencies and the appropriateness of applied regulatory formulas (if warranted), and the nature of sector technology. The expectation is that the more competitive the market structures (or the more effective the regulatory arrangements of non-competitive markets) and the more cost-saving the technologies, the greater the likelihood that divestiture will induce greater efficiency improvements. The converse is also expected to hold.

Macroeconomic Environment. Several macroeconomic variables are also likely to directly affect the performance of divested firms. These include: the state of economic activity, the state of capital market development, and corporate tax and exchange rate policies. For example, a booming economy would

increase demand, thus improve the performance of all firms, divested or not. Conversely, a recession would shrink demand, thus limiting the opportunity for domestic sales of most, if not all, firms. Similarly, well-developed capital markets, a neutral corporate tax system, and more realistic exchange rate policies are expected, in turn, to impose financial discipline, promote efficient allocation of resources, and stimulate the activities of exporting firms, including divested ones. Alternative policies and underdeveloped capital markets are expected to have the opposite effects.[22/]

Negotiated Terms. Finally, the specific details negotiated during the divestiture transaction can shape the firm's performance. For example, in striking the deal, the new owners may have had to agree to limitations to their ability to respond flexibly to market environments (e.g., the transaction agreement may restrict firing redundant workers, closing plants, or developing different markets and distribution channels). Conversely, the deal is expected to have a positive impact on the firm's performance if it permits the new owners to turn their enterprises around as necessary. Similarly, divestiture transactions are expected to hurt overall economic performance if they reduce competition--that is, if they involve concessions to sweeten the deal (e.g., granting monopoly rights, protection from imports, tax exemptions, and preferential access to credit and other inputs). Conversely, divestiture transactions can have a positive influence if they are used to increase competition (e.g., by breaking up monopolies, facilitating

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[22/] Evidence of divergence between economic efficiency and financial profitability would uncover how these policies might have affected divestiture outcomes.

exit and entry, regulating private monopolies, and providing equal treatment between PEs and divested firms).

Many of these factors can and should be quantified. For example, GDP growth rates can be used as a proxy to describe the state of economic activity, and economic concentration ratios can be used to classify market structures. Other factors have to be assessed qualitatively. These include the quality of the new managers and terms of their contracts, the effectiveness of inventory management techniques, the appropriateness of the regulatory formulas and the effectiveness of their implementing agencies, and the detailed transaction story (e.g., the role played and concessions won by trade unions, the national origins of buyers, and modality of divestiture).

Issues of Attribution

The next critical question is: to what extent are observed changes in performance due to the divestiture itself, as opposed to exogenous concurrent factors? For example, if a divested firm's sales increase and profits grow in a time of macroeconomic expansion, is it due to better management, to exogenous expansion of demand, or to both?

Analytically, the answer hinges on the selection of cases and the choice of a "counter-factual"--that is, what would have happened in the absence of divestiture? The choice of cases involves a trade-off between studying one firm in one country in detail and studying many cases, sectors, and countries in much less depth. The choice of an appropriate counter-

factual, in a small sample setting, admittedly involves as much art as science.[23/] It inevitably entails subjective interpretation of outcomes and their causal factors, thus implying room for error and allegations of special pleading.

To reduce these limitations and reach even tentatively generalizable policy conclusions, we need to strike a balance between depth and coverage. We should attempt to control for the various sets of competing explanatory factors, and to tease causality out of limited data. Errors in interpretation should be fully recognized through sensitivity analysis, with an open data matrix allowing others to examine how the conclusions were reached. These issues are addressed below under the headings "case studies without apology", "sample selection", and "comparative assessment".

Case Studies Without Apology. The alternative to following the case study approach is undertaking rigorous econometric analysis. Such analysis is infeasible or inferior in the present context for several reasons. First of all, it is extremely demanding, requiring a larger number of observations with a sufficiently lengthy history than exists in most countries, because divestiture is a relatively recent phenomena. It further requires a complete specification of the divestiture phenomenon, which has yet to be developed. But even if these requirements are satisfied, econometric analysis will still miss detailed and valuable information that can only be captured through carefully constructed interviews with the owners, workers, rivals, and

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[23/] The problem of attribution, encountered here, is common to any study that adopts the case-study approach.

bureaucrats. Obvious examples include an assessment of the transparency and fairness of the transaction process, the effectiveness of the regulatory agency, and the appropriateness of the regulatory formulae applied (e.g., output pricing). Given the present state of theoretical development, there appears to be no alternative to a case study approach; moreover, this approach will provide valuable contextual information that would neither be revealed nor analyzed in an econometric study.

To be sure, the case study approach has its own disadvantages. At one extreme is the well-known problem of generalization, i.e., a story of one firm in a given sector and country is not necessarily relevant to other cases. Further, the approach is incapable of testing statistically the sign, relevance, and significance of the independent variables individually. But we can reduce these limitations by: (1) deliberately (rather than randomly) selecting the sample to ensure a wide coverage and (2) explicitly conducting various performance comparisons in an attempt to establish causality.

Sample Selection. In trying to select a sample that represents the universe as much as possible at a reasonable cost, the following criteria may be useful:

(a) The sample should include cases from both developed and developing countries so that performance could be contrasted under radically different circumstances.

(b) The cases should be selected from competitive and non-competitive market structures to permit inter-sectoral variations.[34/]

(c) The cases should be sufficiently large to warrant their investigation, but not too large to affect the whole economy substantially. Otherwise, the partial equilibrium analysis proposed here would be inadequate.

(d) Selected firms should have as much post-divestiture history as possible, so that private entrepreneurs would have had an opportunity to introduce whatever adjustments they deemed necessary.

(e) For obvious reasons, preference should be given to divested firms with sufficient documentation.

Comparative Assessment. Various performance comparisons can be useful in trying to tease causality out of limited data. (Five such comparisons are summarized in the table below.) Each of the comparisons is designed to control for certain variables, permitting the other(s) to vary. The first three are intended to tackle the question of whether the change of ownership makes a difference, while the fourth and fifth are intended to explore whether variation in sectors and macroeconomic settings affect outcomes significantly.

[34/] Alternatively, the sample could be selected narrowly from one sector (e.g., transport) in a set of developing countries. While more manageable, this alternative precludes the possibility of capturing the effect on divestiture outcomes of sectoral variations and differences between developed and developing countries.

The first performance comparison is for the same enterprise before and after divestiture. It builds on the notion that the enterprise most similar to the divested firm is the enterprise itself before divestiture. Therefore, any changes that may be observed within the firm following divestiture could be largely attributed to the change in ownership. This conclusion would particularly hold when associated with stable macroeconomic conditions and similar sectoral characteristics before and after divestiture.

Performance Comparisons and Most Likely Related Explanatory Variable

	PERFORMANCE COMPARISONS				
VARIABLES	Same Firm Before/ After (1)	Divested/ Undivested Firms, Same Sector, Same Country (2)	Same Firm With/ Without Divest. (3)	Divested Firms, Diff. Sectors, Same Country (4)	Divested Firms, Diff. Sectors, Diff. Countries (5)
1. Ownership	x	x	x		
2. Sectoral Charact's				x	
3. Macroeconomic Conditions		x			x
4. Transaction	(Likely to influence outcomes through its influence on 1-3)				

The second comparison corresponds to the Bishop and Kay study, cited above, with one basic difference. That is, the comparison proposed here is between divested and undivested firms in the same sector (e.g., in the textile sector, rather than in the textile and electricity sectors) and the same country (e.g., Chile). This comparison would further substantiate the conclusion of

the previous one if it were to reveal a superiority in the performance of divested firms in comparison with their counterparts that remained public. If the comparison alternatively revealed insignificant differences in performance, as happened in the Bishop and Kay study of the U.K., several competing explanations are possible: the economy was booming so that all firms were doing well, performance improvements of undivested firms were the result of the threat of divestiture, or a combination of the two.

To sort out the effect of the change of ownership from other exogenous concurrent factors, such as the effect of a booming economy, we can make a third comparison between the performance of the divested firm and an explicit counter-factual (i.e., the hypothetical performance of the divested firm had it continued public). The counter-factual can be constructed on the basis of knowledge about the operation of the enterprise before its divestiture, the actual operation of the enterprise once divested, and additional independent knowledge (e.g., the state of economic activity, the income elasticity of demand).

The fourth comparison is between the performance of divested firms in competitive and non-competitive markets in the same country (e.g., Chile). By permitting sectoral variations (e.g., textile and electricity), this comparison should uncover the extent to which market structures, regulatory arrangements (if warranted), and technologies made a difference.

The fifth and final comparison is between the performance of divested firms in the same industry (e.g., textile) but across countries (e.g., the

U.K. and Chile). This comparison should shed some light on whether inter-country variations (macro-settings) made a difference.

The conclusion of the five comparisons would be most compelling if they were to uncover a systematic pattern such as the following. Divested firms performed consistently better than they did under previous public ownership, than did similar undivested public firms, and than their hypothetical performance had they continued public. In this case, the evidence would unequivocally support the notion that society would be better off leaving that activity to the private sector. Should the analysis further uncover that the performance of divested firms was superior when they operated in competitive (or, alternatively, effectively regulated) markets, it would have further strengthened the position that competition and effective regulation are important determinants of divestiture outcomes. Finally, should the analysis reveal that divested firms operated more efficiently in countries with well-developed capital markets and sound exchange rate, tax, and credit policies, the analysis would have further supported expected predictions. Findings in the opposite direction would call into question the current wisdom. In both instances, however, a credible story of causality would have been established.

In the process, substantial knowledge would have been accumulated--for example, what were the conditions that led to observed outcomes, and whether they had to do with the nature of ownership, sector characteristics, the macro environment, or the terms of the deal. The analysis would have provided a piece of evidence in which the assumptions are made explicit, rather than buried implicitly in rhetoric, thus inviting others to objectively contradict

or support the findings. The ultimate beneficiary of all would have been policymakers, especially those embarking on divestiture programs.

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