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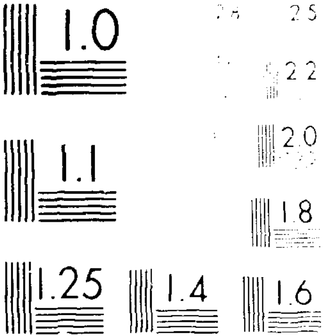

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THE ROLE OF THE PUBLIC SECTOR IN THE INDUSTRIALISATION OF AFRICAN DEVELOPING COUNTRIES*

by

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CONTENTS

Summary

1. Part 1 draws attention to the rapid growth of the public sector in the economies of sub-saharan Africa and the consequential importance of the performance of this sector for overall economic development. The paper is based on case materials from Ghana, Senegal, Tanzania and Zambia and information is provided on the history, size and structure of the industrial public enterprise (PE) sector in each of these countries. It is pointed out that this sample, although selected simply on the basis of data availability, nevertheless does have some claims to be representative.

2. Part II (beginning page 14) surveys the evidence on the economic performance of PEs in these countries. It commences by considering the objectives with which they were created, drawing attention to the multiplicity of these and to the importance of non-economic goals. It then examines economic performance under various headings: financial; output and productivity; balance of payments; employment, Africanisation and distributional effects. It concludes that it is difficult to point with any confidence to any substantial achievements, except in the area of

Africanisation, and also points out that the establishment of state industries (usually by means of nationalisation) has probably discouraged the growth of private industry.

3. Part III (beginning page 46) examines the determinants of economic performance. These include the general economic environment; project planning; financial considerations; over-manning; shortages of managerial and other skills; corruption; and the political milieu. Some emphasis is placed on the latter aspect. A 'trivialisation of political control' is regarded as being rather common, in which governments fail to provide adequate guidance on issues of general policy but involve themselves excessively in the everyday running of enterprises.

4. Part IV (beginning page 56) offers conclusions, of which there are two chief ones: (a) if the case materials reflect the general case then there are better ways of stimulating industrialisation than by the creation of PEs; but (b) that the data are too weak for confident generalisation and there is an urgent need for better information.

I - Introduction

5. One of the most distinctive features of post-Independence Africa has been the growth in importance of public enterprises in the productive structures of its economies. Colonialism itself laid the foundation, for while colonial administrations did not generally invest directly in agriculture and industry they participated actively in distribution - through marketing boards and the like - and other service activities. More importantly, they promulgated the view of the central government as the most important agent of change and economic progress. Far from being laissez

faire, as is sometimes supposed, colonialism was highly interventionist. It was thus a simple step further for the leaders of the newly-independent states to extend the realm of the state to mining, manufacturing and agriculture, both through the acquisition of previously foreign-owned concerns and through investments in newly created state enterprises.

6. By no means was this movement confined to governments which in some serious sense described themselves as socialist. In varying degrees, it has been a near-universal tendency. Specific examples will be given shortly; suffice it here to give the example of Kenya. This is generally regarded as having a pro-market, private enterprise orientation yet its national accounts reveal the total public sector to have contributed 22% of GDP in 1977 and state investments are widely dispersed through the industrial sector.

7. The efficiency of the public sector, and of state industry, has thus become a matter of the greatest importance to the overall performance of the economies of Africa. The principal objective of this paper is to bring together as much evidence as is available on the performance of public enterprises and its determinants. The primary focus is on the manufacturing sector and upon wholly state-owned public enterprises (PEs). 'Mixed' enterprises (MEs), where ownership is shared in varying proportions between the state and private (usually foreign) shareholders will receive less attention, except as points of comparison with PEs.

The case materials

8. This paper is based upon case material drawn from four countries of

sub-saharan Africa: Ghana, Senegal, Tanzania and Zambia.[1] We make no pretence that this is a carefully selected sample designed to be representative of Africa as a whole. These were, quite simply, the only countries about which a reasonable body of relevant information could be found. A diligent search was mounted for published materials on other African countries, including recourse to computerised bibliographical search facilities, but with few results. Africa provides a particularly acute example of the conclusions of the 1979 Expert Group Meeting that,

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1. To avoid frequent and repetitious acknowledgements of sources we will at this point summarise the chief sources used for each country. The following text is based heavily on the following publications, to whose authors we are greatly indebted.

<u>Ghana</u>: Tony Killick, <u>Development Economics in Action: A Study of Economic Policies in Ghana</u>. London, Heinemann Educational Books, 1978, especially chapter 9.

Tony Killick, 'The state promotion of industry: the case of the Ghana Industrial Development Corporation'. <u>Ghana Social Science Journal</u>, Vol.2, No.1 (1972) and Vol.3 No.1 (1976)

<u>Senegal</u>: World Bank, <u>Senegal - The Para-public Sector Report</u>. Washington, mimeo, June 1977, Report No. 1619 a - SE (a classified document).

<u>Tanzania</u>: John Wilton, <u>The Role of the Public Sector in Tanzania</u>. A report specially prepared as background to the present study, available separately, July 1981. See this paper for detailed information on sources used.

<u>Zambia</u>: World Bank, <u>Zambia - The Basic Economic Report, Annex 2: The Parastatal Sector</u>, Washington, mimeo October 1977, Report No. 1586 b - ZA (a classified document).

Unless the contrary is stated, all the country tables and other information are taken from the above sources.

> "At present, statistical data are either not available at all or are out of date, not accurate and in some cases conflicting". 2

Far more primary research is needed before anything approaching an authoritative account could be prepared. Even for the four countries studied below the available information leaves much to be desired. Much of it, especially on Ghana, is badly out of date. On Senegal much of the data relate to PEs generally and it has often not been possible to disaggregate the manufacturing enterprises from the general picture. On Tanzania the data are subject to a variety of limitations, as can be inferred from the special report on Tanzania made available with this paper. Moreover, for all four countries the information on PE performance is heavily skewed towards profit-and-loss statements, despite the serious limitations of such information for the purposes of economic evaluation.

9. Before proceeding to the evaluation, however, we will briefly describe the nature of manufacturing PEs in each country and their importance in their respective national economies. The sources utilised in each case are set out in footnote 1 above.

GHANA:

10. In this case state participation in manufacturing dates back to the colonial period, during which time an Industrial Development

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2. UNIDO, Report by the Executive Director on the role of the public sector in industrial development, Vienna, mimeo, March 1980, ref. ID/B/238, p.4.

Corporation was set up to invest public money in industrial enterprises. Under the impulse of both the nationalism and the socialist rhetoric of the Nkrumah government, the process was much accelerated during the first half of the 1960s, in parallel with a much wider expansion of state participation in the productive system. As can be seen from Table 1, by 1966 (roughly the end of the Nkrumah period) wholly-state-owned PEs accounted for nearly a fifth of total manufacturing output, with another eighth emanating from MEs. Although the proportions as between PEs and MEs had shifted by 1970, the combined share of the two was about the same (about a third of total manufacturing output) as in 1966 and well above the 1962 level. As a more general indicator of the increased role of the state, there were estimated in March 1966 to be 53 state enterprises, 12 MEs and 23 public boards; for 1968 it was estimated that the public sector contributed 26% of GDP. Although the governments that have followed Nkrumah's have been avowedly more favourable to private enterprise and part-ownership, and a few minor PEs were sold to private owners in the later 1960s, new PEs have been added, so that the number of PEs in manufacturing is today rather larger than fifteen years ago. Most of these are grouped in the Ghana Industrial Holding Corporation (GIHOC). This, however, is more than a 'holding' corporation, for it involves itself directly in the detailed management of the enterprises for which it is responsible.

Table 1. Ghana: Manufacturing Output by Type of Ownership, 1962-70

Type of Ownership	Percentage of Gross Output 1962	1966	1970
Ghanaian			
Private	13.0	9.7	6.0
State	11.8	19.5	15.6
TOTAL GHANAIAN	24.8	29.2	21.6
Mixed			
Private/Foreign	4.8	8.7	20.9
State/Foreign *	7.1	12.7	17.3
TOTAL MIXED	11.9	21.4	38.2
Foreign	63.2	48.3	40.2

Source: Central Bureau of Statistics, Industrial Statistics.
NOTE:
* Based on assumption that private partners with government are all foreign.

SENEGAL:

11. In Senegal too state participation in the manufacturing sector dates back to colonial times but much of it is of more recent origin. Associated with a decline in the real value of private-sector investment in the early 1970s, there commenced an accelerating expansion of state involvement, largely in the form of MEs. In 1975 alone (the last year for which complete information is available), 19 new MEs were set up. By that year 97 such enterprises were in operation, of which half were less than four years old. In manufacturing alone, there was a total of 20 PEs and MEs by 1974, contributing a quarter of the total turnover

of the sector and over a fifth of value added (see Table 2) - a contribution which had grown rapidly during the 1970s.

Table 2. Senegal: Contribution of Public Sector to Turnover and Value Added, 1974.

	Manufacturing	All Sectors
Turnover (CFAF bn.)		
1. Public Sector *	37.5	169.4
2. Private Sector	107.5	305.7
3. (1) as % of (2)	34.9%	55.4%
Value-added (CFAF bn.)		
4. Public Sector *	8.4	67.6
5. Private Sector	31.4	90.7
6. (4) as % of (5)	26.8%	74.5%

* including MEs

12. To give a fuller impression of the importance of the public sector in the economy, its large contribution to total national production can be guaged from the 'all sectors' column. In the same year, public sector investment comprised nearly half (48%) of total investments in the modern sector. Government participation is, however, heavily concentrated in a small number of large MEs. In 1974 94% of the total value added in the public sector emanated from twenty enterprises. The largest of these are in phosphate mining and groundnut marketing, not in manufacturing; public sector value-added in manufacturing comprised 12.4% of total public sector value-added in 1974.

TANZANIA:

13. What has become known as the 'Arusha Declaration' of 1967 proved to be a turning point in the role of the public sector in the industrialisation of Tanzania. Until then the government had relied mainly on the indirect encouragement of industry through the provision of infrastructure and of incentives for private investment. As is recorded in the special paper on Tanzania, however, there was a growing impatience with the quantity and nature of the private investment resulting from this relatively passive policy stance, and the Arusha Declaration shifted the orientation of policy towards 'socialism' and 'self-reliance'. This quickly resulted in the nationalisation of several industrial concerns and the compulsory acquisition of up to 60% of the shares of a number of others. A National Development Corporation was given control of these investments and was encouraged to establish further new PEs and MEs. So great was the emphasis on the public sector that the plan published in 1969 intended that only 12% of total manufacturing investment should come from private enterprise, and only slightly larger proportions of new manufacturing output and employment.

14. The actual results did not fully measure up to the planned intentions but there was nevertheless a very rapid expansion in the years after 1960, as can be seen from Table 3. Between that year and 1972 the share of PEs and MEs in the total value added of the industrial sector rose 6.6-fold; an index of the growth of public sector industrial output by 1972 stood at 339 with 1966 as base; and public sector

industrial employment rose 6.6-fold in 1967-74, by which latter year it accounted for a half of all industrial employment and over 7% of total recorded employment in the country. From about 1972-74, however, the hectic pace of expansion came to a rather abrupt halt, for reasons to be explored later (see Table 3).

Table 3: Tanzania: Indicators of the Growth of the Public Sector in Industry, 1966-78.

	Contribution of PEs and MEs to total industrial value-added (%) (1)	Index of public sector industrial output (1967=100) (2)	Industrial employment in public sector (numbers) (3)	Index of value-added per man in public sector (1967=100)* (4)
1966	5.0	76	...	...
1967	14.4	100	5302	100
1968	17.8	139	8792	84
1969	22.5	168	12350	72
1970	25.6	210	15454	72
1971	29.1	259	24836	53
1972	33.2	257	25387	54
1973	31.5	290	29595	52
1974	35.0	325	34778	50
1975	39.2	323	35278	49
1976	38.5	358	35300	54
1977	39.0	314	36450	46
1978	33.6	...	38381	...

* This index is computed by dividing the index in Column (2) by the index implicit in Column (3).

ZAMBIA:

15. Of the countries studied here, the public sector has attained the greatest importance in Zambia, relative to total economic activity. As in the Ghana and Tanzania cases, there is a continuous history of state involvement from the colonial years and the immediate post-Independence

years showed little marked change of basic strategy, although there was an acceleration of state involvement in industry. In 1968, however, President Kaunda made an important speech announcing what became known as the 'Mulungushi reforms'. In essence, these and later reforms implied a policy whereby large-scale enterprise would be the reserve of the state and small-scale industries would be open to the private sector. Since nationalisation was forbidden by the constitution, 24 foreign-owned concerns were "requested" to "invite the Government to join their enterprise" to the extent of 51% of their shareholdings. There were further take-overs a little later, most notably of copper mining companies and financial institutions. However, there have been few new take-overs since 1974.

16. As a consequence of these policies, the public sector has come to dominate the productive sectors of the economy other than agriculture and construction. Well over half of GDP is estimated to originate in the public sector, and at least a third of total national wage employment. Table 4 summarises some key statistics for the manufacturing sector for the period of most rapid expansion, 1969-72. As can be observed, by the latter year the public sector was responsible for nearly two-thirds of total fixed assets in manufacturing, over half of value-added and over a third of total employment. However, the indications are that there may have been some relative decrease since 1972. Thus, public sector employment was static in 1970-75, the last year for which data are available.

Table 4. Zambia: Indicators of the Share of the Public Sector in Manufacturing, 1969-72.

(Kwacha mn.)

	Turnover (1)	Fixed assets (2)	Value-added (3)	Employment (numbers) (4)
1968				
Public sector *	45	...	...	4,600
Zambia total	270	...	...	37,000
Share of Public sector	17%	...	...	12%
1972				
Public sector *	200	117	95	17,000
Zambia total	440	182	182	45,000
Share of public sector	45%	64%	52%	38%

* Indeco enterprises only.

17. Most, if not all, state enterprises in the manufacturing sector are the responsibility of the Industrial Development Corporation (INDECO) which is a holding company in form, although it has increasingly involved itself in the detailed management of its various subsidiaries. It also makes decisions about cross-subsidisation, short-term financing and, to a lesser extent, about the allocation of investible resources. In turn, Indeco is a subsidiary of the Zambia Industrial and Mining Corporation (ZIMCO), an umbrella organisation responsible for most public enterprises in all sectors of the economy.

18. The four cases described above, while self-selected on the simple criterion of data availability, do nevertheless provide quite an interesting sample. They straddle Eastern and Western, and Anglophone and Francophone Africa. They include at least one economy which must be considered as essentially based on private enterprise (Senegal) and two in which PEs have assumed dominant roles outside agriculture (Tanzania and Zambia). In the latter two countries publicly-owned manufacturing is based largely on enterprises taken over from private ownership, whereas in Ghana there has been little nationalisation and many PEs were created wholly by public investments. Two of the countries (Ghana and Zambia) must be considered relatively well endowed with natural resources; the other two much less so. All, interestingly, have gone through periods of rapid expansion of the public sector, which periods, however, came to an end some years ago. Three of them have enjoyed political stability since Independence, being governed today by the same leaders who led them to Independence; only Ghana has been marked by serious political instability and even there there has been much continuity of policy.

19. While there can be little scope for generalisation on the basis of four incomplete case studies they do nevertheless provide an interesting basis for study, with some claims to be representative of sub-Saharan Africa as a whole. What, now, is the evidence concerning the economic performance of public enterprises in these countries?

II. - Evidence on Economic Performance.

Policy Objectives

20. On the principle that PE performance should be appraised by reference to the goals they were set up to achieve, rather than by mere external criteria of the observer's, we must commence by considering the objectives of the four governments. But this immediately brings us to the nub of our problem, for the state's objectives are rarely articulated with much precision.

21. The most fully described set of objectives of our four cases relates to Senegal, where the following have been listed as among the reasons for the establishment of state enterprises:

(i) to establish national control over key sectors especially those involving important national resources (groundnuts and phosphates), infrastructure and essential services;

(ii) to create high quality job opportunities for Senegalese in the modern sector of the economy;

(iii) to maximise foreign currency earnings for reinvestment within Senegal by taking large equity positions in major export enterprises;

(iv) to promote development in promising areas (tourism, cotton, sugar) where private initiative has proven insufficient;

(v) to provide infrastructure, credit, research, promotion and other vital factors in order to promote faster economic development, especially in partnership with the private sector;

(vi) to acquire new technology and managerial expertise from abroad and from the domestic private sector.

(vii) to attract foreign financing which sometimes prefers to channel its funds through para-public institutions rather than through the public administration; and

(viii) to develop an organizational structure which is more flexible than Government's administrative services.

However, the World Bank report from which this list is taken (see footnote 1) goes on to say that Senegal has not yet developed an overall philosophy for the economic role of the public sector, approaching the issue on a case-by-case basis.

22. Government objectives in Zambia, as set out in the Mulungushi reforms and subsequently, emphasised economic independence, Zambianisation, employment creation, economic diversification and rural development. In practice, PEs have also been used as instruments of regional policy, providing uneconomic services to remote areas and a wider spread of employment opportunities. PEs have also been used as means of holding down the cost of living, i.e. of protecting consumer welfare.

23. We have no fully articulated statement of government objectives in Tanzania but the Arusha Declaration emphasised the central principles of socialism and self-reliance. Private enterprises were to be nationalised in order that the means of production could be brought under public control. The principle of self-reliance stressed the importance of employing local skills and resources to satisfy the domestic market

and to reduce dependence on foreign resources and technology.

24. For Ghana during the Nkrumah period, when most of the present-day PEs were created, the primary motivations were to create PEs (a) as development projects and (b) as instruments of political power. Under the former heading, expansion of the public sector was seen as a means of reconciling the desire to modernise the economy with a wish to increase the degree of economic independence. State investments were seen as filling a vacuum that the private sector could not occupy. They were to generate surpluses for reinvestment in further growth, to introduce improved techniques of production and to capture economies of scale.

25. But PEs were also seen as instruments of political power and control. They provided substantial sources of patronage by bringing within the state sector a considerable number of higher-level managerial appointments and a much larger number of manual jobs. They provided the possibility of subsidising consumers through pricing policies and they provided a means of spreading physically impressive projects through most of the country. That there were conflicts between the political and developmental objectives just mentioned is too obvious to need further elaboration. This is a theme to which we will return more than once.

26. Despite the multiplicity of objectives, however, all four governments have placed particular emphasis on financial results when monitoring the performance of their PEs and have paid particular attention to the profit criterion. In Ghana, for example, all governments,

including the present one [3], have employed the profit criterion and have implicitly agreed with the policy set out in the 1964 seven-year plan:

> "The projects chosen for state investment must include a large proportion with high rates of return and short pay-off periods .. .. State enterprises will be expected to make a contribution to the public revenues within a reasonable time, and they should not be allowed to become a permanent liability to the economy: enterprises which make losses permanently represent a waste of both capital and current labour resources".

President Kaunda of Zambia has also stressed the profit criterion. While industrial PEs should show a greater consideration of social factors than would be expected of private businesses, they must nevertheless "operate in a business-like manner, become ever more efficient and profitable, and stand on their own in a ruthlessly competitive economy". They are expected to yield an annual rate of profit of 12-16%, depending on the riskiness and expansion plans of the enterprise. [4]

27. Since in certain clearly defined conditions profitability can be a useful summary indicator of economic efficiency, and an enterprise's ability to generate surpluses certainly affects its ability to make an on-going contribution to industrialisation and, since, in any case, governments tend mainly to apply the profitability criterion in their own judgements about PE performance, we can begin our own evaluation by examining the financial record.

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3. See report of statement by Vice-President of Ghana stating the government's commitment to making PEs "viable and profitable". West Africa, 30 March, 1981, p.681

4. From report by President Kaunda on the economic situation in Zambia, 30 June 1975, p.16

Financial performance

28. Of our four countries, the data on Zambia are the fullest. During the first five years of growth and expansion into diverse manufacturing activities, Indeco maintained a fairly steady record of profitability, as can be observed from Table 5. During 1970-74 there was an average net profit equivalent to 6.14% of turnover and a return on net assets of 7.74% - a modest rate of return and below the target range specified by President Kaunda but nevertheless a reasonable foundation upon which to build financial strength. In 1975, however, there was a short-fall and in the following year (the last for which data are available) the corporation recorded its first net loss, equivalent to 3.2% of net assets.

Table 5. Zambia: Net Profits (Losses) of Indeco Group.

FY	Turnover %	Net Assets %
1970	7.5	7.7
1971	6.2	7.8
1972	5.8	8.5
1973	5.4	6.9
1974	5.8	7.8
1975	1.0	1.5
1976	(2.1)	(3.2)

29. The results summarised in Table 5 are, of course, merely the consolidated results of the several subsidiaries operating under the Indeco umbrella and conceal wide variations as between the various enterprises. Data on individual subsidiaries are therefore provided in Table 6 We should note first the inclusion there of a real estate subsidiary which has consistently made losses and a trading concern

which yielded relatively large rates of return until 1974. Both, of course, belong outside of manufacturing, with which this paper is concerned.

Table 6. Zambia: Indeco and Divisional Consolidated Accounts, % Profit on Net Assets, 1970 to 1976.

Division	1970	1971	1972	1973	1974	1975	1976
	%	%	%	%	%	%	%
Breweries	34.0	29.5	25.8	18.4	16.0	9.8	8.3
Chemicals	—	4.2	6.9	5.7	8.2	0.3	5.1
Industrial Holdings	—	—	(5.6)	2.0	21.1	30.5	2.9
Real Estate	(2.9)	(1.1)	(1.1)	(1.4)	(1.4)	(0.7)	(9.0)
Trading	5.3	6.3	12.6	7.5	12.4	—	—
Rucom Holdings	(12.3)	(33.8)	4.2	7.9	15.9	/a	/a
Steelbuild Holdings	23.1	38.7	18.0	5.0	2.2	9.8	(19.4)
Indeco Group	7.7	7.8	8.5	6.9	7.8	1.5	(3.2)

— = Group not yet formed or no longer part of Indeco

/a Net assets are negative

30. We should note, secondly, the large variations in the results of individual subsidiaries over time. This is partly due to delays in getting projects into normal product cycles and changes in the internal composition of the subsidiaries (several of which are themselves holding companies). The breweries and Steelbuild companies, which ironically were nationalised precisely because they were highly profitable, have shown rather dramatically deteriorating returns over the period as a whole, whereas the Industrial Holding and Rucom groups showed general improvements until the last year or two. These varying trends tended to

cancel out until 197' to provide the rather stable returns recorded in Table 5. In 1975 and 1976, however, profitability declined across the board, for reasons to be discussed later. Even in the earlier years, however, no dividend was ever paid on the government's shareholding in Indeco.

31. This brings us to the issue of financial flows between the PEs and central government budget. It is perhaps because of the implications of the profit-and-loss results for the public finances which cause governments to emphasise the profitability criterion, rather than because of a belief in profitability as an indicator of economic efficiency. The financial flows between Indeco and the government are summarised in Table 7, from which it can be seen that there was a net flow to the government in all except the first and last years recorded, with a net flow for the whole period of K 19.1 mn. From 1972 on, however, there was a clear declining trend, with a particularly sharp deterioration in the last two years. Moreover, the overall surplus of K 19.1 mn. must be set in the context of the flows that could have been expected had the various companies been left in private ownership. It is not improbable that the sum of profits would have been larger, resulting in larger income and withholding tax receipts, whereas there is no reason to expect there to have been any major expenditure by the government. Depending on the assumptions made, it is likely that the public finances would have been better off by K 40 to 60 million for the period as a whole had the companies remained in private ownership, although against this one must set the productive assets acquired by the state and the government's increased capacity to realise its socio-economic goals through control over PEs.

Table 7. Zambia: Relationship of Indeco to the Government

(Actuals in K 000)

	1970	1971
Government Revenues from Indeco Ltd. and its Subsidiaries		
On Current Account:		
Income Tax	4,957.0	7,466.0
Withholding tax on Dividends	-	423.0
Dividends	-	-
Interest Payments	1,575.0	1,750.0
Total	6,532.0	9,639.0
On Capital Account:		
Capital Repayments	116.0	1,925.0
Government Expenditures on Indeco Ltd. and its Subsidiaries		
On Current Account:		
Subsidies and Grants	518.0	307.0
On Capital Account:		
Grants	450.0	-
Investments	6,402.0	2,145.0
Loans	3,544.0	-
Total	10,396.0	2,145.0
Balance of Government Revenues (+) and Expenditures(-)		
On Current Account	+6,014.0	+9,332.0
On Capital Account	-10,280.0	-220.0
Overall	-4,266.0	+9,112.0

Budget, 1970-1975

1972	1973	1974	1975
8,628.0	9,202.0	6,324.0	3,753.0
1,072.0	1,520.0	919.0	149.0
-	-	-	-
1,728.0	1,293.0	1,107.0	70.0
11,428.0	12,015.0	8,350.0	3,972.0
7,100.0	1,736.0	1,618.0	28.0
2,013.0	553.0	250.0	11,994.0
960.0	924.0	1,748.0	3,323.0
396.0	1,150.0	2,723.0	-
200.0	451.0	1,788.0	3,552.0
1,556.0	2,525.0	6,259.0	6,875.0
+9,415.0	+11,462.0	+8,100.0	-8,022.0
+5,544.0	-789.0	-4,641.0	-6,847.0
+14,959.0	+10,673.0	+3,459.0	-14,869.0

32. One other factor is that, while modest, the returns to government capital investments in Indeco were larger than was the case with the rest of the public sector. During 1970 - 74 returns on government loans to Indeco averaged 5.5% while returns from the remainder of the public sector were in the range of 0.9% to 4.2%. In 1975, however, the return from Indeco fell to 1.3% which was well below the average for the remainder of the public sector.

33. The availability of information is less satisfactory for the other countries in our sample, although there is something to be said on all of them. As regards Senegal it is impossible to disaggregate manufacturing concerns from the remainder of the public sector and the summary information in Table 8, which in my case is only for 1974, relates to the public sector as a whole (excluding phosphate mining). On the other hand, the table is of some interest because it facilitates comparisons with the private sector and makes a direct connection between financial performance and the financing of investment.

34. As can be seen from the lower lines of Table 8, the public sector incurred a substantial loss in this year - a loss of about CFAF 8.5 billion if we adjust the net surplus figures in line 7 for the effect of government subsidies (line 10). Even this under-estimates the deficit because of a variety of hidden subsidies not included in line 10. The public sector was hence unable to finance any of its

new investment from its own resources and there was an overall resource deficit (line 11) of CFAF 17.5 billion. One puzzling aspect of this record is the very large public sector divided payments (line 6), which alone absorbed virtually all the current after-tax surplus. It does not seem that such generosity in the matter of divided payments (many of them to private shareholders in MEs) could have been in the public interest, given the overall financial results.

Table 8. Senegal: Financial Results and Investment Financing of the Public and Private Sectors, 1974 [a].

(CFAF million)

		Public Sector	Private Sector [b]
1.	Revenue	42,208	95,029
2.	Costs		
	(a) labour costs	13,673	30,369
	(b) indirect taxes	13,778	35,588
	(c) other	4,381	6,472
	(d) total	31,832	72,429
3.	Direct tax payments	3,634	2,065
4.	Surplus after tax	6,742	20,535
5.	Depreciation	4,810	5,357
6.	Dividends	6,651	2,036
7.	Net investible surplus	-4,719	13,142
8.	Actual investment	8,887	10,022
9.	Resource surplus or deficit	-13,606	+3,120
10.	less government subsidies [c]	-3,869	-1,569
11.	Overall resource balance	-17,475	+1,551

Notes: (a) The following data relate only to the modern sector of the economy excluding phosphate mining.
(b) Derived as a residual
(c) Rough and incomplete estimate.

35. By contrast, the private sector appears to have followed a more prudent dividend policy and this helped it to yield an overall resource surplus even after financing all its new investment. Seen in the context

of the objective of economic growth this ability to generate an investible surplus is important. The public sector's failure in this regard hampered the growth of the public sector and, therefore, the overall economy, as well as creating a large, unwelcome call on the public finances.

36. Table 8 refers only to 1974 but there is evidence that it illustrates a more persistent tendency for public sector deficits. This may be partly guaged from data showing that the central government has consistenly had to finance the public sector by means of advances and loans, presented in Table 9. In fact, the statistics there show that transfers to the public sector were below average in the calendar year 1974, and that the financial performance of the public sector may well have been worse in the years immediately before and after.

Table 9. Senegal: Treasury Advances and Loans to Public Sector, 1963/64 to 1976/77

(CFAF million)

	Public enterprises	Mixed enterprises	Total
Total 1963/64 - 1969/70	2,394	5706	8,100
1970/71	0	1,000	1,000
1971/72	307	2,833	3,140
1972/73	4,266	707	4,973
1973/74	50	300	350
1974/75	0	2,015	2,015
1975/76	900	5,013	5,913
1976/77	0	1,108	1,108
Total 1970/71 - 1976/77	5,523	12,976	18,499

No clear trend is apparent in the totals for the individual years 1970/71 to 1976/77 but for that period as a whole it appears that the public sector was considerably more dependent on the Treasury as compared with 1963/64 to 1969/70, even allowing for the distorting effects of inflation. It is also interesting that MEs have absorbed more than twice as much of the Treasury's resources as PEs. Evidently, a policy of partnership with private capital offers no assurance of profitability.

37. However, only part of the losses of Senegal's public sector show up in the government's budget for the government has also used its control over certain banks and over price stabilisation funds to channel credits to the public sector in addition to those of the Treasury. That this has been a highly effective way of making additional resources available to the public sector may be inferred from the following figures on the short-term credit liabilities of the public sector, although they do not reflect well on the financial health of the public sector. The following are annual average short-term credit liabilities in CFAF billions:

1971	7.36	1974	24.65
1972	12.39	1975	49.30
1973	14.44	1976	73.00 (est.)

The very large increase in liabilities recorded here quite overshadows the magnitude of transfers in Table 9. There was a total increase in liabilities of about CFAF 66 bn. and an annual growth rate in these of 58% compound - over 5 times as rapid as the expansion of private sector liabilities.

38. Given this evidence, it is not surprising that the World Bank has expressed concern over the deteriorating financial position of the public sector. Even PEs "of a conventional industrial nature" are not self-financing. Although there is no complete data on the financing of MEs it was reported by the Financial Controller of the Presidency that in 1974 fourteen MEs alone posted losses of CFAF 3.3 bn. Only five MEs had ever paid dividends to the government.

39. Only much more rudimentary information is available for Tanzania and there is considerable disagreement in that country about the reliability and interpretation of the accounts. According to the 1979 report of the Tanzanian Audit Corporation, 81 out of a total of 196 parastatal organisations involved in trading activities made losses. Some identifiably manufacturing PEs were among those making particularly large losses, including four sugar companies which between them recorded a deficit of almost Tshs 50 million, a fertiliser company (Tshs 13.7 mm.), a textile corporation (Tshs 17.1 mm) and a company engaged in sisal spinning (Tshs 5.5 mm). Others, of course, showed profits.

40. Perhaps the most useful figures are those showing the aggregate resource balance of PEs, similar to the presentation for Senegal in Table 8. These are set out in Table 10. This shows that in all years the public sector was able to generate a substantial operating surplus but that, with the minor exception of 1972, this could only partially meet investment financing needs, so that there was a net resource inflow from the remainder of the economy (much of it, no doubt, from the Treasury).

Table 10. Tanzania: Operating Surpluses and Investment Financing in the Industrial Public Sector

(T shs million)

	Operating surplus	Fixed capital formation	Resource balance
1967	24.2	62.2	-38.0
1968	35.6	44.5	-8.9
1969	55.6	59.7	-4.1
1970	58.0	203.2	-145.2
1971	78.2	176.4	-98.2
1972	132.0	128.1	+3.9
1973	76.1	152.2	-76.1
1974	68.1	159.2	-91.1
1975	191.6	202.3	-10.7
1976	259.7	453.0	-193.3
1977	393.1	431.0	-37.9
1978	356.3	504.0	-147.7
1967-72	383.6	674.1	-290.5
1973-78	1344.9	1901.7	-556.8
1967-78	1728.5	2575.8	-847.3

41. The figures reveal a tendency for the absolute size of the resource deficit to increase over time, although with large variations from year to year, but when the deficit is expressed as a proportion of capital formation the movement is in the other direction. The penultimate two lines of the table provide aggregations for two sub-periods: 1967-72, which were the years of rapid expansion of the industrial public sector, and 1973-78, years of relative stability in the composition of the public sector. In 1967-72 the total deficit of Tshs 290.5 mn. was equivalent to 43% of fixed capital formation, while the 1973-78 deficit of Tshs 556.8 mn. was 29% of capital formation. The overall proportion for the entire period was 33%. While we should hesitate to talk of an improving trend on the basis of such data, the change between the two sub-periods was certainly in the desired direction.

42. We turn finally to the evidence on financial performance from Ghana. Table .. presents profit-and-loss data on various PEs for 1964-65 and 1968-70. If we take all the units recorded there it is evident that the public sector was highly unprofitable in both periods (line 25), although to a lesser extent in the later years. The results appear even worse if we bear in mind that most of the figures are before provision for depreciation and taxation (see note (a) of the table). Clearly, the resource balance of the public sector was heavily negative during the 1960s. We unfortunately do not have comparable data for later years, which would, in any case, be badly distorted by the hyper-inflation experienced in Ghana during much of the 1970s.

Table 11. Ghana: Profit and Loss Record of Selected State Enterprises, 1964-5 and 1969-70 [a].

		(₵ thousands) 1964-5	1969-70
A.	GIHOC ENTERPRISES		
	1. Fibre bag factory	-318.8	+109.5
	2. State boatyards	- 8.4	+ 90.4
	3. Brick and tile factory	- 18.7	- 31.3
	4. Tema steelworks	-295.4	-203.8
	5. State cannery	+ 15.3	+548.2
	6. Metal products	+ 24.4	- 67.7
	7. Paper conversion	+ 2.1	+123.3
	8. Sugar products - Asutsuare	-983.3	-1526.8
	Komenda	-208.5	-1212.5
	9. Cocoa products, Takoradi	-506.6	+1039.4
	10. Paintworks	+117.9	+246.3
	11. Vegetable oil mills	-323.8	-208.5
	12. Marble works	+ 41.6	- 40.3
	13. State distillery	+953.4	+857.5
	14. Electronic products	+ 29.8	+100.3
	15. SUBTOTAL of above (net)	-1,479.0	-176.0
B.	PUBLIC CORPORATIONS, etc.		
	16. National Trading Corp.	+6514.5	+2668.0
	17. State farms Corp.	-12,732.5	-1361.0
	18. State fishing Corp.	-239.5	-338.3
	19. State Construction Corp.	+353.9 b	-614.7
	20. State Gold Mining Corp.	-2689.2	-6754.1
	21. StateHotels and Tourist Corp.	-137.4	+51.5 c
	22. Ghana Airways	-3573.2	-2857.4
	23. Food Marketing Corp.	-133.6	-237.9
	24. SUBTOTAL items 16-23 (net)	-12,637.0	-9,443.9
	25. GRAND TOTAL (net)	-14,116.0	-9,619.9

Notes (Table 11).

a All commercial-type public enterprises are recorded here for which financial data exist for both 1964-5 and 1969-70. The figures are 12-monthly averages of available data falling within the two-year periods. In most cases it is believed that the figures are for profits/losses before provision for depreciation and taxation. In some cases, however, the figures are after depreciation and/or taxation, and in others the figures are trading results only, i.e. before provision for overheads, etc. It is possible that some of the figures are after provision for government subsidies but subsidies have been netted out whenever possible.

b 1963 figure

c Consolidated results of corporations responsible for hotels and tourism.

That the basic situation may not have improved can, however, be concluded from the following recent comment on a claim by the Vice-President that some PEs make profits: [5]

> "So far as it is known, this is true of only a few. The losses made by the majority completely swamp the meagre profits made by the few, thus making it incumbent on the government to allocate millions of cedis every year to keep the state enterprises afloat. Some of the state enterprises that declare profits do not take all the circumstances into consideration. For instance, whilst no private enterprise would rush to declare profits without first considering the depreciation on both movable and immovable assets as well as allowing for interest on initial or current capital, the tendency is for the state enterprises not to provide for these factors."

43. When we confine ourselves more narrowly to manufacturing PEs, unprofitability is still the general rule. This was so even in the years immediately before and after Independence in 1957. Thus, an Industrial Development Corporation accumulated an operating deficit of ₵ 4.0 mm. in 1950/51 to 1960/61 and for the manufacturing enterprises that were subsequently transferred to GIHOC the upper part of Table 11 records deficits for both periods. There was, however, a considerable

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5. West Africa, op. cit. p.681

reduction in the deficit between the two periods. GIHOC's best performers were a cocoa processing factory, a liquor distillery and a fruit cannery; in common with those in Tanzania, its two sugar factories made enormous losses. In contrast with Senegal, MEs did significantly better. All but one of the 14 MEs for which figures are available were making profits in 1966-67.

44. We should also note from Table 11, as also from Table 6 on Zambia, what is undoubtedly a general feature of all the countries studied, that there are very large differences in financial performance as between individual enterprises. This is not surprising, for we would expect there to be large differences in the competitive situations of enterprises operating in different industries, including differences in the degree of state protection. One of the issues thrown up by large differences in financial performance of PEs is the inefficient resource allocation that tends to result from cross-subsidisation. There must be a tendency in such situations for the more efficient (or anyway the more profitable) enterprises to be 'milked' in order to keep inefficient enterprises alive, especially when PEs are organised into holding companies like GIHOC and Indeco.

45. Finally, we must question the economic significance of the financial performance of PEs in our four countries and elsewhere. This issue is raised explicitly in the literature on Ghana, where it is pointed out that profitability is a reasonable efficiency indicator only in competitive market situations but that many PEs do not operate in a freely competitive milieu. The monopoly power of Ghana's PEs

was illustrated by the fact that in 1969 83% of the total gross output of PEs was produced in industries in which state concerns contributed 75% or more of the total output of the industry. In six industries PEs accounted for total output. Estimates revealed no correlation between social and commercial rates of return of PEs; and some of the apparently most profitable enterprises (including the distillery and cocoa products factory in Table 11) owed their existence wholly to very high levels of protection from foreign competition and had negative value added when valued at world prices. Other limitations on competitive freedom pull in the opposite direction, towards unprofitability, as in cases where PEs are forced to maintain artificially low prices without adequate compensatory state subsidies. As will be mentioned later, this has had a particularly adverse effect on agro-based PEs in Zambia.

46. The universal tendency for governments to apply the profitability test, the implications of financial performance for the public finances and for the resources available for productive investment require us to take this criterion seriously but we should also hold firmly in mind the severe limitations of profit-and-loss as an indicator of economic efficiency. We therefore proceed next to examine such limited evidence as is available on alternative performance indicators.

Productivity and growth.

47. We start by examining the levels of, and trends in the productivity of labour and capital. In the absence of the data needed for econometric

estimates of marginal productivities of the two factors separately, it must suffice here to speak of productivity in the sense of average value added (or output or turnover) per man or per unit of capital. Our best evidence on labour productivity, so defined, is on Ghana and is summarised in Table 12.

Table 12. Ghana: Comparative Labour Productivities and Costs in Manufacturing Enterprises by Type of Ownership, Selected Periods (means of two-year periods)

	1962-3	1965-6	1969-70
Value-added per person engaged[a] (₵)			
1. Private enterprises	1,635	1,775	1,424
2. Joint state/private	4,503	4,415	2,871
3. State enterprises	748	690	784
4. State as % of private	45.7%	38.9%	55.1%
5. State as % of joint enterprises	16.6%	15.6%	27.3%
Total wages and salaries as percentage of total value-added(b) (%)			
6. Private enterprises	23.4%	23.4%	23.9%
7. Joint state/private	14.0%	13.5%	17.4%
8. State enterprises	51.0%	46.1%	30.6%

NOTES
(a) Calculated in constant, 1962, prices
(b) Calculated in current prices

48. Looking for the moment at the last sub-period, 1969-70, it can be seen that labour productivity in PEs was well below that in private concerns and even further below the rather exceptional figure for MEs. The contrast with the private sector ocurred despite the fact that the

structural composition of the state and private manufacturing sectors were similar. And the finding that average productivity in PEs was only 55% of the private sector figure in 1969-70 was almost exactly the same as the result (56%) of an independent comparison of productivities in industries inhabited by both private and state concerns. It was also consistent with a study of PEs in the 1950s, which also found sub-private productivities. The adverse result for the public sector in Table 12 is all the more noteworthy because, as will be shown later, it is generally the more capital-intensive, which should result in higher rather than lower labour productivities.

49. However, Table 12 does show an improvement in the relative performance of PEs during the later 1960s (see lines 4 and 5). By this measure, they remained less efficient than other manufacturing firms but they were at least catching up. Various steps were taken after a change of government in 1966 to strengthen PE managements and there may also have been improvements resulting from the results of the newer enterprises overcoming their teething troubles. It would be particularly interesting to discover whether this relative improvement was sustained in the 1970s.

50. The outstandingly high productivities in joint state-private firms should also be noted from the table, although there was a fall in the second half of the 1960s. This is probably influenced by the fact that a higher proportion of MEs was in the heavier industries but probably also by more efficient management.

51. These contrasts in average labour productivities were naturally likely to give rise to differences in cost levels, and lines 6-8 of Table 12 permit some inferences to be drawn. As can be seen, wages absorbed substantially higher proportions of value added in PEs than in the other two groups, creating a likelihood that unit costs were higher in PEs. However, it appears that productivity grew more rapidly than average earnings in PEs, while they moved roughly together in the private sector, so that the relative disadvantage of the PEs (or the relative advantage of their workers) had been considerably reduced by the end of the decade.

52. Data on the average productivity of capital in Ghana, similar to the data in Table 12, are unfortunately not available and we are forced to use information on capacity utilisation as a rough indicator of the efficiency of capital use. Such evidence implies a low productivity in PEs, although the information is very scrappy. There is an estimate for 1963-64 - years of considerable economic dislocation - that the actual output of PEs was only 29% of rated capacity. There is also evidence on a number of individual manufacturing PEs, mainly for the late 1960s, indicating very low levels of utilisation - in enterprises as diverse as footwear, sugar, copra, oil, alcohol distilling and fibre bags.

53. Of course, this information is almost absurdly out of date but it is known that industrial capacity utilisation generally remained extremely low throughout the 1970s and to the present time. What we

do not know about is the relative achievements of the public and private sectors during these years.

54. The evidence on Tanzania is also unsatisfactory, not the least because of special uncertainties about the reliability of the data, but there are nonetheless some lessons to be learned. Refer first to column (4) of Table 3 (page 10) which provides an index of value-added per man in industrial PEs. This shows a marked decline in 1967-71 and a more gradual downward drift thereafter. The figures for the earlier years should probably be discounted because it was during this time that the public sector was being rapidly expanded by nationalisations and the industrial structure underlying the index series was thus undergoing large changes. The downward drift from about 1972 is probably more meaningful and indicates a roughly 15% decline in productivity.

55. We can, moreover, compare these figures with estimates for the industrial sector as a whole, thus allowing an indirect comparison with the private sector. Recalculating both series to a 1972 base, the comparison is as follows:

	All industrial enterprises	Public enterprises only
1972	100	100
1973	93	96
1974	92	93
1975	79	91
1976	86	100

If these figures can be taken as reliable, they indicate a productivity performance in the private sector considerably worse than among PEs. There are, however, widely differing estimates for the industrial sector as a whole and it would be unwise to place too much weight on the above results.

56. Estimates of the productivity of capital, based on calculations of incremental capital-output ratios, also yield unreliable results. Most observers believe there to have been a deterioration among PEs in the 1960s and 1970s but there is disagreement on this as well. It is agreed, however, that there is much underutilisation of industrial capacity, although the comparative incidence of this across the public and private sectors is not known.

57. The information on Tanzania also permits a discussion of the contribution of the public sector to the industrialisation of the economy. Statistically, industrialisation can be indicated by a rising share of industrial activities in GDP and in Tanzania the share rose from 8.1% of GDP in 1966 to a peak of 11.4% in 1972. Thereafter it drifted down again and was 9.3% by 1978. The period of rapid industrialisation was also the time in which the public sector was being rapidly expanded by means of nationalisation (see Table 3, column 1). It thus cannot be said that nationalisation disrupted industrialisation, at least in the short term. While it is true that there has been some de-industrialisation since 1972 (in the statistical sense of a declining contribution to GDP) this appears to be largely attributable to exogenous and internal factors making for a general economic slow-down rather than a result attributable to the public sector alone. Indices of public and private manufacturing value-added have values of 121 and 123 respectively for 1978 (with 1972=100), with the series for the private sector lagging behind for all except the final year. What would be particularly interesting to know is the internal growth record of individual PEs but this information is not available for any of our countries.

58. There is little to be said under this heading regarding Senegal, except that there appears to have been a decline in the contribution of the public sector. Total sales of all non-agricultural PEs in 1973/74 were a little under the 1966/67 level, which must have meant a considerable decline when adjusted for the effects of inflation. There was a substantial rise in the nominal value of sales in 1974/75 but this appears to have been largely a price effect. This information, however, relates to all non-agricultural PEs and is not confined to manufacturing.

59. Finally, there is information on Zambia which may allow us to draw some inferences concerning productivity trends in industrial PEs. We have information on the turnover of INDECO subsidiaries (although bear in mind that not all of them are in manufacturing) and of the number of employees. To adjust for the effects of inflation, we deflate by the Zambian wholesale price index and obtain the following constant (1975) price estimates of turnover per worker (in K 000s):

1969/70	11.05	1973/74	13.12
1970/71	9.27	1974/75	12.70
1971/72	15.12	1975/76	13.16
1972/73	15.09		

We should bear in mind that for the first few years INDECO was in the process of acquiring a number of new enterprises, so that only from about 1972/73 do the series relate to a fairly settled mix of activities. From then, as is apparent, there has been some tendency for a downward drift in turnover per man, which might indicate a similar trend in average productivity, although such an inference can only be tentative.

Balance of payments effects

60. It is almost impossible to say anything substantial about the balance of payments effects of PEs in our four countries, which is particularly to be regretted given the critical nature of the payments constraint in much of sub-saharan Africa. There is evidence from Ghana that in the late 1960s PEs were inefficient earners or savers of foreign exchange, in terms of domestic resources used per unit of foreign exchange, but no more so than the private industrial sector. Domestic resource cost calculations for individual PEs revealed a wide spread, as might be expected, including a number with negative value added at world prices, but there were others with more favourable locations on the spectrum of efficiency.

61. In the case of Tanzania, the data show that manufactures have contributed a declining share of total exports in recent years, falling from a peak of 21.9% in 1971 to 14.7% in 1978, but this decline may have more to do with the erosion and ultimate collapse of the East African Community than with the structure of ownership of the industrial sector. Dependence on imported consumer goods has diminished very considerably since the early 1960s, with a corresponding increase in the share of imports of intermediate and capital goods. PEs have no doubt contributed to this process of import substitution but a number of them are known to be highly dependent on imported inputs and it is impossible to say what the net foreign exchange effect may have been. In making such a calculation it would, of course, be important to include the outflow of compensation payments as a result of nationalisation but also the diminished flow of dividend repatriations (the same applies to the other countries as well, of course, although Ghana has made little use of nationalisation). The paper on Tanzania draws attention to the fact that the government's policy of extending state industry into

the production of intermediate and capital goods will tend to have adverse payments effects in the short run, because such industries tend to be particularly dependent on foreign technology and know-how. In the longer term, of course, the expectation is that this pattern of industrialisation will result in net savings of foreign exchange but the paper points out that the success of this strategy relies on enough foreign exchange being earned by the remainder of the economy in the interim to permit the realisation of the long-term goal. Tanzania's well-known balance of payments problems suggest that this condition is not being met at the present time.

62. Estimates have also been made purporting to show the net balance of payments effects of the public sector in Senegal. Excluding petroleum and phosphates, these show that in 1974 the public sector resulted in a net loss of foreign exchange of CFAF 14,883 million, with modern sector private activities recording a net loss of CFAF 26,957 million. However, these estimates do not include provision for foreign exchange saved through import substitution, nor do they include any items relating to investme income and capital flows, so they are seriously incomplete. One particular feature of this country's record has been the major involvement of PEs and MEs in the accumulation of foreign debt. By 1975 their external indebtedness ammounted to $163.5 million, 67% of total external debt (against only 16% ten years earlier). The servicing of this debt cost $23.4 million in 1975, or 62% ot total external debt servicing - a considerable outflow of foreign exchange. At that time there was no serious balance of payments constraint. If the debts of the public sector have continued to grow since that time they may now constitute a more serious factor in the much more difficult payments environment of the early 1980s, and we note in this context that debt servicing absorbed 13.7% of total export earnings in 1979.

Employment and distributional effects

63. We might distinguish four aspects of the employment effects of PEs, although this results in an analytical framework stronger than the evidence to put inside it! One desired effect throughout the continent is the Africanisation of employment opportunities - a policy which particularly relates to managerial, professional and skilled positions but which spreads rather further through the labour force in the Francophone countries. There is secondly the creation of productive new employment opportunities through the organic growth of existing PEs or the creation of new enterprises (as distinct from the take-over of existing private enterprises, which may result in no new net employment). There is thirdly the 'creation' of non-productive employment through over-manning. Finally, there is the choice of production techniques and the factor proportions these embody, which have an influence on the other three aspects.

64. The extremely limited evidence available suggests (a) that substantial Africanisation has indeed been achieved; (b) that there has also been a good deal over-manning (see page 50); (c) that less success has been achieved in the creation of new productive employment; and (d) that PEs have not generally pursued a policy of choosing labour-intensive techniques. On this last point, there is evidence suggesting that Ghana's public sector is particularly prone to capital-intensity. Documented examples of this include two sugar factories and a state footwear factory (which installed conveyors to undertake tasks which were not even mechanised in the U.S.). Related to this was a consistent tendency for the state to opt for project designs emphasising grandeur rather than economy, with a particularly strong bias towards the over-design of factory and ancillary buildings. The evidence points in a similar direction in Tanzania.

Here too there are a number of examples of capital-intensity and one suggested reason for this is that the government has been content to leave the choice of technology to foreign contractors who may have strong pecuniary interests in drawing up designs which result in large orders for equipment. There may also be a prejudice within governments against the adoption of labour-intensive technologies which are regarded as technologically backward. Thus, the contract for a (financially disastrous) fertiliser factory specified that the foriegn contractor should "select the most modern processes corresponding with the latest technical development in the chemical industry".

65. It goes without saying that any bias towards capital-intensity can only subvert the employment-creation objective, which is one reason for fearing that PEs may not have resulted in a great deal of new productive employment. Another is the absence of any strong evidence of strong growth of output within individual PEs. Most of the growth of the public sector has simply been the result of take-overs (except in Ghana, where many new enterprises were created in the earlier 1960s) and it was shown earlier that the public sector tends to quickly level off once the period of nationalisation is over.

66. There is little doubt, however, that the growth of state enterprise has been associated with an accelerated Africanisation of industrial employment, especially at managerial levels. This has certainly been the case in Zambia. Particular emphasis has been placed there on training programmes for Zambian personnel and on replacing foreign managements with local ones. As a result, 96% of the total INDECO labour force was Zambian in 1974/75, although the proportions were, of course, lower for technical and executive posts. A similar trend is observable in Senegal, where there was probably greater

initial scope for Africanisation. It was reported that by 1977 70% of all managerial and technical personnel in the public sector were Senegalese, against only 32% in the private sector. The proportion of nationals in total public sector employment was the same as that just reported for Zambia, at 96%, against 92% in the private sector. Although precise data are not available, similar results have certainly been secured in Ghana and Tanzania. For none of the countries is there any precise evidence on the possible efficiency losses resulting from accelerated Africanisation, for this is a subject too sensitive for investigation.(6) There are, of course, good a priori reasons for expecting such losses to be significant. The absence of evidence is regrettable because it would be desirable for governments to relate the speed of Africanisation to the efficiency costs of alternative approaches.

67. Accelerated Africanisation also has distributional consequences, of course, which is one of the chief motives for it. Above all things, it is likely to result in a shift in the total wage bill away from foreigners and towards nationals, which would be universally regarded as desirable within African states. However , it may also widen income disparities among the African labour force, since a high proportion of the jobs formerly occupied by foreigners were in high-pay occupations. There would be much less unanimity about the desirability of this change.

68. There are at least two other ways in which the growth of public enterprise has tended to affect income distribution. First, it has sometimes been used to achieve a wider dispersion of economic activity across the country, as has been done in Ghana and Zambia. Second, it is possible for governments to use their control over PEs to subsidise consumers.

6. There is evidence from Ghana's publicly-owned gold mines, however, where an official report inculded over-rapid Ghanaianisation as among the reasons for low efficiency.

Zambia also provides examples of this, including the maintenance of artificially low prices for the products of agro-based industries (especially vegetable oil products). If the products in question are particularly important in the consumption patterns of low-income groups, such a policy may be used as a rough-and-ready way of reducing (or preventing an increase in) disparities in real incomes across socio-economic groups. The qualifying clause is an important one, however, and for a wide range of products the net effect of this form of subsidisation is ambiguous. In Ghana (where PEs have also been used in this way), for example, it was found that price controls designed to reduce inequalities actually operated in ways which tended to increase inequalities.

69. So while we can be confident that PEs do have distributional consequences, it is impossible to say whether the general effect of these is to reduce or increase the skewed distribution of real income. Public enterprise does not necessarily have much direct connection with those approaches to socialism which emphasise the importance of reducing inequalities.

Conclusions on economic performance

70. The evidence on economic performance considered above is obviously unsatisfactory: incomplete, anecdotal and unreliable. It is also probably biased towards negative findings because unsatisfactory performance is more likely to be investigated and reported than the records of successful enterprises. Nevertheless, it is the best evidence we have and we should therefore ask what general conclusions are suggested.

71. Of the four countries studied, only in Ghana has there been an attempt

at an overall evaluation and it may be worth quoting from this at some length (p.227)

> In the end, it has proved harder to use a single criterion of comparative economic performance, which is analytically satisfying and amenable to empirical testing, than it has been to characterise the general standard of economic performance of Ghana's public sector. Despite measurement problems, the spotty nature of the evidence and substantial variations between specific enterprises, it may fairly be concluded that the comparative economic performance of the public sector was poor in the sixties.
>
> State enterprises were unprofitable - absolutely, by comparison with public enterprises in other developing countries and by comparison with private enterprise in Ghana - and they were unprofitable despite considerable monopoly powers. While profitability is an unsatisfactory yard-stick, data on relative productivities, unit costs and balance of payments effects also point fairly unambiguously in the direction of poor comparative performance.

If we were in a position to write a comparable verdict on PEs in our other three countries, it would probably be less negative than for Ghana, whose public sector faces particularly severe problems. Nevertheless, it is difficult from our evidence to point with confidence to any substantial achievements, except in the area of Africanisation. It is certainly the case that governments or ministers themselves often express dissatisfaction with the results achieved by state enterprises, as in the case of President Kaunda, who very sharply criticised parastatal manufacturing companies for their inefficiency and went so far as to praise companies with larger private shareholdings and expatriate managements for achieving greater efficiency (which he characteristically equated with profitability).

72. We are particularly concerned here with the ability of PEs to contribute to industrialisation and the results reported above are not encouraging in this respect. Of special significance is the evidence showing that public sectors generally have negative resource balances, as reported in Tables 8 and 10. This means that PEs are unable to generate the surpluses needed

to meet their own investment requirements. In the absence of large government subsidies or injections of funds from outside, this necessarily limits the contributions they can make to an on-going process of industrialisation. Such evidence as we could bring together on trends in real output and in productivity reinforce the impression of an undynamic public sector, failing to display those improvements that would normally mark an expanding industrial sector.

73. There is also a consideration which we have not referred to so far: the impact on private industry of policies which favour a large public sector. In three of our four cases, the public sector was largely created on the basis of nationalisation or compulsory acquisition of part-ownership. This was not true in Ghana but nevertheless the policies which led there to the rapid growth of state industries in the first half of the 1960s also discouraged private investment, which has since remained at very low levels. If, as seems likely, the creation and maintenance of a large proportion of state industries has the effect of discouraging private investment - by creating uncertainties about the future security of ownership, about the state's attitudes towards private enterprise and profit, about the extent to which private concerns will be allowed to compete fairly with public enterprises, and so on - then it seems exceedingly unlikely on our evidence that public ownership has contributed positively to industrialisation.

74. This does not necessarily mean that state industry has been a mistake, however, for we showed earlier that governments have had a number of objectives in setting these up, in addition to the promotion of industrialisation. More particularly, we would like to stress that all the criteria applied above have related to <u>economic</u> performance, as if governments give most weight to economic objectives. This is far from necessarily the case,

however. Political and social goals may carry greater weight in practice. So while governments frequently grumble about "inefficiency" in PEs it is very rare indeed for any of these to be closed down or sold off, which suggests that they must be perceived as satisfying some (albeit non-economic) objectives.

III - DETERMINANTS OF ECONOMIC PERFORMANCE

75. Having surveyed the evidence related to economic performance, the next step is to examine the determinants of this. Here too, the evidence is extremely incomplete but nevertheless suggestive. In undertaking this task, it is useful to draw a distinction between the influence of economic conditions tending to impair industrial performance generally and those factors bearing particularly upon the performance of PEs.

The economic environment

76. In the circumstances of most African economies a number of factors act as a drag on industrial efficiency in general. These include the often very small size of the local market; unreliability of local sources of supply; shortages of foreign exchange; inadequate infrastructure; and a variety of uncertainties which make forward planning very difficult. Of these, shortages of foreign exchange appear to have been particularly serious in three of our four countries (there was no balance of payments problem in Senegal during the period in question). Thus, in Tanzania industry has suffered seriously from shortages of raw materials resulting from inadequate foreign exchange allocations and the same is true of Ghana and Zambia. Even though the import licensing authorities in Ghana discriminated actively in favour of the public sector, PEs nevertheless experienced difficulties in obtaining adequate allocations at the right times, so that factories

have been subjected to frequent and prolonged stoppages. In all cases, these types of shortage have contributed seriously to the under-utilisation of capacity, reported earlier.

77. In landlocked Zambia transport problems are cited as creating particularly severe difficulties. Port congestion has led to prolonged project completion times, interruptions in production, and higher financial charges to maintain abnormally large inventories. The extended pipeline, and fairly frequent re-routing, for getting goods from the ports into the country have also contributed to increasing costs, although these problems may be eased as a result of Zimbabwean independence.

78. The Ghana study draws attention to the adverse effects of the disintegration of economic organisation and decision-making that became apparent in the first half of the 1960s and has persisted in varying degrees ever since. Examples are provided of how the inadequacies of some parts of the public sector impose costs on other parts, thus tending to create a vicious circle situation. In Zambia, various PEs have been much affected by the fluctuating fortunes of the copper mining industry, partly because these have a powerful impact of total consumer demand but also because the industry is itself a large purchaser of certain manufactured products.

79. In addition to such general economic considerations, however, there are other factors more specific to public enterprise which have an important bearing upon their economic efficiency, to which we now turn.

Project planning

80. There is evidence that deficiencies in project planning have contributed

substantially to sub-standard economic performance. Thus, one observer of PEs in Tanzania has commented that "Each project mushroomed in its own way without taking into consideration the loca. resources, linkages to other industries and not even considering the development needs of the country. For example, the linkage between cement and fertiliser industries in the use of sulphuric acid was never conceived of". Another study of the fertiliser factory has demonstrated the disastrous results that can follow when an inadequate feasibility study, undertaken by contractors with a pecuniary interest in the outcome, is scrutinised by an inadequately staffed government agency.

81. The study on Senegal reports in similar vein: The rapid growth of the public sector took place in an "uncoordinated and unplanned fashion", sometimes without sufficient consideration for the impact on the economy or the public finances. Procedures for the evaluation of proposed investments in PEs were not followed, resulting in agreements with commercial sponsors over which the Ministry of Finance had no effective say.

82. In the study of Ghana a wide range of planning deficiencies is discussed and many examples provided. Poor planning resulted in the choice of excessively capital-intensive techniques, in poor technical designs, in serious mistakes on the location of projects, in major construction delays (as have also occurred in Zambia) and in very poor coordination of the agricultural and industrial aspects of the projects intended to process locally-grown raw materials. As in the Tanzanian case, examples are also given of the negative effects of relying upon inadequate feasibility studies, often conducted by consultants with pecuniary interests in the outcome of their studies, resulting in a systematic bias towards

over-optimism in predicted results.

Financial considerations

83. There are actually two rather different factors to consider under this heading. The first is the tendency for governments to use their control over PE policies to hold prices down and thus subsidise the final consumers. Our chief example of this relates to various agro-based industries (largely producing vegetable oil products, detergents and soap) in Zambia. Stringent government control over the prices of refined oils and fats contributed heavily to large financial losses by the companies because the government was reluctant to make adequate financial provision for subsidies to cover the effects of its pricing policies. The result was not only to worsen the profitability of the enterprises, so that they even had difficulty in covering the cost of their factory operations; it also lowered morale and led to a shift in athe product mix away from the production of oils and fats, which was precisely the opposite of the government's apparent social priorities. There are similar examples of such situations in Senegal and Ghana, although these happen not to relate to manufacturing enterprises.

84. A second factor to consider here is the frequent complaint that PEs tend to be under-capitalised and to be badly affected by shortages of working capital. Thus, it has been complained that the Senegal government has in some cases over-extended its financial means with its ambitious programmes of investments in the public sector, with the result that many enterprises are inadequately capitalised and hence unable to realise their objectives. (It is also reported in this case that the government often does not pay its bills to PEs, thus also undermining their financial strength). In Ghana, GIHOC (and before it, the Industrial Development Corporation) has complained that it was funded with inadequate working capital.

85. The difficulty with this type of complaint is to disentangle cause from effect. Under-capitalisation can undoubtedly be a cause of poor economic performance, but poor performance can equally be a cause of under-capitalisation, in the sense of inadequate stocks of working capital. We have already noted that the public sector tends to be associated with a negative resource balance and this not only reduces its ability to self-finance fixed capital formation but also working capital needs as well. Careful and detailed research into the IDC came to the conclusion that its real difficulty was not shortages of funds but its inability to find paying investments and to administer its projects. As its managerial weaknesses became increasingly evident, government confidence in IDC diminished and ministers were increasingly tempted then to interfere in its day-to-day operations, which made matters worse. Poor performance, shortages of funds and deteriorating relationships with government became a mutually reinforcing vicious circle. The overall conclusion on the alleged under-capitalisation of Ghana's public sector was that this represented an example of what Schatz has termed a 'capital shortage illusion' and that a more serious problem was the low productivity of those public sector investments which did occur.

Over-manning

86. A tendency to engage larger labour forces than is necessary to achieve given levels of output is a further source of weakness. There are documented complaints about over-manning in Senegal and Ghana but this is so pervasive a problem that we strongly suspect that it features in Tanzania and Zambia as well. In the case of Senegal the financial consequences of over-manning are compounded by the pursuit of a high-wage policy. Thus, in 1974 the average salary in the public sector was 14% higher than in the private sector

and 10% higher than in the civil service. With more Senegalese nationals in the higher paid jobs, the average earnings of Senegalese employees of the public sector were 39% more than for Senegalese in private activities.

87. That inflated labour forces are a serious problem in Ghana is suggested by a 1966 report by the State Enterprises Secretariat complaining that "Overstaffing is one of the major problems of state corporations. There is hardly any enterprise which is not overloaded with redundant staff". Various examples are available of specific manufacturing PEs which suffered from this problem, including the extreme example of a bamboo processing factory which was found in 1966/67 to have spent just ₵219 on raw materials while wages and salaries amounted to ₵16,184 !

88. This tendency must clearly be related to government's employment creation objectives. Even though it is easy to show that forcing PEs to employ more people than they need is an absurdly inefficient and inequitable way of providing unemployment relief, there is no doubt that much over-manning is at government insistence. On the other hand, it is too easy to blame it all on the politicians: the Ghanaian evidence suggests that some of the problem is also due to weak, inefficient managements only too happy to pass the blame on to the government.

Shortages of managerial and other skills

89. Under this heading, it is convenient to begin with the findings of the World Bank study of Senegal. This breaks down the management problems of the public sector into four aspects: (a) the number of trained managers and middle-level technicians; (b) accounting; (c) relations with supervisory ministries; and (d) the role played by boards of directors. It focusses particularly on the

second of these: "The lack of proper accounting and accurate data is probably the single greatest impediment to reform of the para-public sector". Accounting standards are low; budget rather than analytical accounting is employed; managements and the government lack data essential for monitoring and efficient operations.

90. There is also a complaint of a general shortage of managerial and skilled workers. The private sector was apparently still attracting the best managers and some PE managerial posts were filled on grounds other than proven ability. Training schemes were inadequate and not well suited to meet enterprise needs. Boards of Directors were unable to carry out their proper functions, being too large, disparate and inexpert. As a result, Board meetings tended to "become disputes among enterprise management, supervisory ministry representatives and the enterprise control agencies". In other respects too relationships with supervisory ministries tended to be unhelpful and to result in excessive interference with day to day management.

91. Accounting weaknesses are also evident in Tanzania. Thus, the 1979 report of the Tanzania Audit Corporation notes that,

> Approximately 100 parastatals were in arrears in the preparation of their accounts for one year or more ... out of 247 accounts of parastatals certified during the year, only 76 got unqualified audit reports; 138 got qualified reports, 15 received Negative Opinion reports and 18 Disclaimer of Opinion results.

However, the potentially valuable role of the TAC was apparently undermined by indifference in PE managements, many of whom simply ignored what it had to say. The TAC also states that some Boards rarely meet, even on an annual basis, and are thus unable to exercise any overall control and guidance. More generally, there are complaints in Tanzania about the calibre of PE managements. In Zambia too INDECO suffers from a dearth of experienced Zambian managers, a problem which has become more acute as Zambianisation is extended to an ever-widening range of posts.

92. A similar pattern of complaints also holds true for Ghana. Thus, in manufacturing PEs, the State Enterprises Secretariat complained of shortages of skilled and supervisory personnel, resulting in haphazard planning and budgetary control, and the Auditor General lamented the dearth of qualified accountants. There are many illustrations of poor management in industrial enterprises and again one symptom of this was the conclusion of the Auditor-General that "Generally, the accounts of the Corporations, with but few exceptions, were improperly kept and there was undue delay in the production of final accounts." Echoing the earlier comment on Senegal, he also complained of a politicisation of managements, where "the primary consideration for the selection of a Chairman of a Corporation was his party affiliation ..." Some attempts were made to overcome manager weaknesses by entering into contracts with foreign concerns but these were often poorly designed and produced indifferent results. The use of managerial appointments as sources of political patronage, of course, represents one of the chief ways in which the political and economic motivations for the creation of PEs conflict with each other. When such a conflict becomes apparent, our evidence suggests that it is often resolved in favour of political advantage, notwithstanding the economic costs.

Corruption

93. Only two firm statements are possible about this: (i) that corruption is both a potential and actual source of sub-standard PE performance, but (ii) that it is impossible in the nature of the case to obtain the evidence necessary for any balanced appraisal of the relative importance of this factor. There is

surely no doubt that in each of the countries studied corruption has had adverse effects on some decisions relating to investment, purchasing, marketing and personnel hiring policies, and so on. There is equally no doubt that there are honest men as well as corrupt, and that many decisions are uninfluenced by considerations of illicit gain. Beyond that it is difficult to go, except to note that the issue of corruption was rather thoroughly investigated in Ghana after the overthrow of Nkrumah and that this included examination of a number of PEs. Various malpractices were uncovered and it would be possible to take a 'tip of the iceburg' view of these to argue that corruption had a most serious impact on PE efficiency. On balance, however, the Ghanaian evidence (for that period) suggested that corruption was only a secondary reason for sub-standard performance. The position may be different in Ghana today because what has become known as 'kalabule' has almost been legitimised as a necessary means of supplementing what otherwise would be quite inadequate wages and salaries. In this as in various other respects, however, Ghana represents a rather extreme case.

The political milieu

94. Of all the factors considered in this section, many would place the greatest weight on political factors tending to undermine PE performance. Thus, an early comparative study of the performance of various public corporations in Ghana, Nigeria and Uganda found performance to have been best in the latter country because they had not at that time been politicised to the extent that had occurred in the West African countries. It concluded that the political milieu was far the most important determinant of economic efficiency. (7) The work on Ghana which we have been utilising reinforces this conclusion. It talks

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7. C.R. Frank in G.Ranis (ed.) Government and Economic Development (New Haven, Yale U.P., 1971), p.117

of a "trivialisation of political control", meaning a general disinterest of governments in matters of general policy combined with frequent interference in the everyday operation of the enterprises. This, of course, is entirely contrary to the theoretical model, based on the British concept of a public corporation, in which managements have responsibility for day-to-day operations within general policy guidelines laid down by the responsible minister.

95. In the case of Ghana, the most fully studied industrial example is the IDC. There was an almost complete lack of clarity about what the government wanted IDC to do. When the government became dissatisfied with its performance and wished to formulate a new policy, it left it to IDC and an outside expert to formulate this policy. When what was submitted turned out not to be new at all it was accepted by the government just the same, and there were further examples of a lack of effective policy guidance. Similarly and subsequently, GIHOC also stated that it received no policy directives from responsible ministers; detailed research on Ghana's state gold mines revealed a similar governmental disinterest in general policy.

96. That this is by no means a problem peculiar to Ghana is indicated by the World Bank study of Zambia. This reports much concern in government about bringing PEs "under control" but no clear idea of the purposes for which such control might be exercised:

> In order to bring parastatals into line with policy objectives there has to be a clearly articulated policy with guidelines for its implementation. Government has not provided such guidelines: until August 1977, there was no Investment Code and national planning is weak. Even on a project-by-project basis, many Ministries are not well equipped to provide supervision... In some cases policy guidelines simply do not exist, in others there are contradictory policies, and in still other cases guidelines exist only on paper and are dealt with quite differently in practice.

Information on Senegal illustrates another aspect of the trivialisation of political control, namely a great deal of governmental intervention in detailed operational decisions. The evidence on this aspect is the fullest for Ghana, however. Thus, an early independent report on the IDC complained of outside interference from politicians and others, expecting appointments to be made irrespective of merit, redundant staff to be kept on the pay-roll, disciplinary measures to be relaxed on behalf of constituents, businesses to be purchased at inflated prices, loans to be made irrespective of security and so on.

97. There is also a different, but probably also rather pervasive, problem to mention under this heading, which is the difficulty which PEs often discover in developing satisfactory working relationships with the civil service. Quite apart from the problem of detailed interference, there is a frequent complaint that civil service procedures are too cumbersome to meet the needs of commercial operations. This tends to be particularly true of budgetary procedures - an important matter because we have seen earlier that many PEs are dependent on budgetary support for investment financing and sometimes for working capital requirements too.

IV - CONCLUSIONS

On the role of the public sector in the industrialisation of Africa

98. If, for the time being, we assume that the case materials considered here are representative of the general situation and if we accept the often tentative interpretation placed upon these materials, then a clear conclusion emerges. To an African government contemplating the creation of a substantial public sector as a means of promoting industrialisation our advice would have to be: don't do it; there are better ways of stimulating industrial growth. On our

evidence, a large industrial public sector will contribute little to dynamic industrial growth, will tend to become a drain on the public finances, will require a net inflow of resources to cover its capital requirements and will discourage the growth of private industry.

99. It may well be protested that this conclusion is too negative and that the sources of sub-standard economic performance surveyed in Part III point clearly to ways of strengthening performance. Project planning should be improved; PEs should be instructed to keep their labour forces down to commercially justifiable numbers; under-capitalised concerns should be provided with sufficient funds to permit efficient operation; training facilities, salary levels and hiring policies should be changed so as to permit the recruitment on merit of adequate numbers of experienced managers, technicians and skilled workers; corruption should be severely punished; ministers should provide clear policy guidance but desist from detailed intervention in everyday operations. But such a list of reforms is naive. Among other things, it disregards the multiplicity of motives which lead governments to set up PEs in the first place, and the large de facto weight which they frequently give to non-economic goals.

100. On the principle that PE performance should be assessed according to the objectives they were intended to promote, it is incorrect simply to assess them in terms of their contribution to industrialisation (or economic development generally), which is why our conclusion is so negative. Indeed, it is wrong to confine the evaluation of performance simply to economic criteria, in the way that has been done above. Very frequently there is a trade-off between economic and socio-political objectives, which makes

unreasonable the common government practice of judging PE performance by a simple profitability test. The point has been well expressed in an official report on Ghana's state gold mines:

> the basic cause of the present weaknesses of the Corporation is political in nature. Since it was formed in 1961, no Government has provided the Corporation with the conditions necessary for its success. One reason for this is that Governments have tried to pursue contradictory objectives. Governments have tended to speak with two voices about the duties of the Corporation. With one voice they justify the necessity for the Corporation on social, non-commercial grounds ... With the other voice, however, they talk of the Corporation in commercial terms, stressing the need to obtain profits and criticising the management for having to depend on budgetary subsidies.

A contrast has also been drawn between the generally poor economic performance of Ghana's PEs with its Volta River Authority. On its own terms, this Authority has been successful in achieving what it was intended to achieve, the reason for which being a lack of ambiguity about its objectives and an absence of detailed interference with management - conditions resulting from a strong World Bank involvement in the project.

101. If we take a multiplicity of government objectives (which, however, are rarely articulated with any clarity) to be a pervasive feature of state enterprise and if socio-political motives are often given primacy, then we must predict a continuation of poor economic performance. On this view, sub-standard economic performance (including an unsatisfactory contribution to the process of industrialisation) may be seen, in part at least, as the cost of achieving socio-political goals. In such situations, there is little more that the economic analyst can do than to quantify and draw attention to these costs and to ask ministers whether the costs are regarded as reasonable in relation to the non-economic benefits that may be derived.

On the need for more information

102. The fairly strong conclusion just presented does, however, depend upon the assumption that our case materials are generally representative but we would like to stress again the weakness of the data base upon which this paper has been prepared. A careful search of published sources served mainly to reveal that there was hardly any such information. Our four cases were 'chosen' simply on the basis that these were the only tropical African countries for which materials were available. Even so, it is by now apparent to the reader that much of the material on these four is badly out of date, incomplete and unsystematic. Of course, much more information is available to individual governments than can be found in public libraries and the archives of UNIDO, the World Bank, etc. Nevertheless, we strongly believe that the following judgement on Senegal applies with equal, probably greater, weight to many other African countries:

> The present lack of data on the para-public sector also makes Government supervision extremely difficult. There is no organisation with a data bank sufficient to assure continuous Government monitoring of those mixed enterprises supervised directly by the state. The information collected thus far by Governments departments is incomplete and inadequate. The lack of data is less obvious in the case of public enterprises since the CEP regularly draws up statements of account for each one. However, these statements are primarily accounting documents and only respond to the concerns of the Treasury and budgetary expenditures. Moreover, they do not provide the statistical information needed by managements to improve operations or by governments to judge performance.

Indeed, the evidence presented earlier (pp.52-3) on the accounting deficiencies of many PEs suggests that the Senegalese position may be a relatively favourable one.

103. Notwithstanding the rather strong conclusion stated on page 56, we therefore suspect that this study is too weak for any confident generalisations to be drawn. Working from secondary sources on a small number of cases far from the countries to which they refer simply does not permit an adequate investigation. Before that is possible far more primary, on-the-spot research is essential. If the topic is regarded as of sufficient importance, it is suggested that UNIDO might approach the governments of African countries with substantial industrial public sectors with a view to collaborating on further research and an examination of the data base.

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ANNEX

THE ROLE OF THE PUBLIC SECTOR IN THE INDUSTRIALIZATION OF TANZANIA

by

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Introduction:

Any analysis of the economic performance of Public Enterprises (P.E.'s) must begin by clearly stating the objectives against which performance is to be judged. Furthermore, given the multiplicity of objectives set for PE's to achieve and the interdependent (often conflicting) relationship existing between these variables, a meaningful assessment of performance must cover a number of different performance indicators. In the analysis which follows we have attempted to assess the performance of PE's in Tanzania by their own objectives and by as many tests as the available statistics will allow.

The Objectives of Public Enterprise.

The economic literature which addresses the problems of imperfect markets, externalities, time preference rates and technology gaps has produced a number of theoretical justifications for direct state intervention in the economy. Most economists would agree that the African developing countries face these theoretical anomalies to the traditional trade model in an acute form. For example, the recent U.N.I.D.O. "World Industry Since 1960: Progress and Prospects" [1] report lists the following reasons for direct public investment in the industrial sector:

a) To ensure the rapid expansion of the industrial sector.
b) To develop certain industrial activities that the government desires to promote and that private enterprises do not or cannot enter.
c) To ensure national control of key industries, e.g. the exploitation and processing of natural resources.
d) To prevent the domination of the industrial sector by private entrepreneurs.
e) To import needed technology and to stimulate research and development to build up indigenous industrial technologies.
f) To ensure a balanced regional development.
g) To rescue and revitalise ailing industrial enterprises for economic or social reasons.
h) To bring foreign-owned enterprises into domestic hands and thus accelerate the process of indigenization of the industrial sector.
i) To create greater and better opportunities for employment and for training in new industrial skills.
j) To provide industrial goods that satisfy basic social and economic needs.
k) To control prices of specific industrial goods.

Exactly which objectives prove to be of paramount importance within a particular country is dependent upon the unique historical circumstances which shape the government's reasons for, and attitudes towards intervention. For example, the rate of government investment in manufacturing activities in both Nigeria and the Ivory Coast appears to have increased substantially after the previously satisfactory rates of foreign private investment began to fall.[2] With declining or stagnant growth rates in the traditional product sector and foreign investors being reluctant to move into new areas both governments decided that direct public investment was necessary in order to restructure and revitalise their economies. Thus the PE's were established with the objective of initiating investments in perhaps marginal or supportive industries in the hope that this would encourage private entrepreneurs to step-up their own investment activity and thereby stimulate industrial growth.

In the Kenyan [3] case there appears to be two forces which have shaped the government's objectives in making public investments; firstly there is a growing demand by the emerging indigenous capitalist class for a more effective share of the manufacturing sector - and the state provides a very powerful and rich ally in that struggle; secondly, foreign capital has often encouraged public participation in their investments because not only does state finance and fiscal power significantly reduce the risk inherent in any investment activity, but also such participation is a painless way of accepting a degree of africanisation. As a result of these two commercial forces it has been said that the various parastatal investment organisations stress the objective of profitability, via controlled prices and import protection, to the detrement of distributional consideration and allocative efficiency.

In turning to consider Tanzania it would appear that no such narrow sectional interests guided their change of policy in the mid sixties to a mo. radical form of state involvement. From independence in 1961 until the adoption of the development strategy outlined in the Arusha Declaration in 1967, Tanzania followed a similar industrialisation path to that of Kenya and Uganda. In the first Five Year Plan the role of public investment was defined as merely supportive to local and foreign private investment. The government offered the usual range of tax and depreciation incentives, restricting its own direct investments to agriculture and infrastructural services.

However, the government became increasingly disappointed with both the level and type of private investment occuring within the country and the economic benefits derived from its international trading associations[4]. This disillusionment coupled with a strong widely based political party resulted in the radical policy shift outlined in the Arusha Declaration of 1967 which stressed the two central principles of 'Socialism' and 'Self-Reliance'. The policy of socialism entailed that the major means of production would be brought under state control in order to facilitate central planning and to prevent the exploitation of man by man, whilst the policy of self-reliance stressed the importance of employing local skills and resources to meet local needs as opposed to being dependent upon foreign goods produced with foreign capital and technology. Thus the change of policy was made on political/ideological grounds as well as being a response to purely economic objectives.

As M.A. Bienefeld[5] comments, "... from 1967 onwards the Tanzanian states objectives were restated so as to give a greater than ususal weight to equity and to political stability not based on overt repression. At the same time it was announced that the achievement of its objectives, thus restated, would require a significant shift away from the reliance on private capital acting on the basis of market signals, and towards a more direct social (state) control of resources in the context of socially/ politically determined priorities".

The immediate result of the Arusha Declaration was the nationalisation of eight milling firms, the compulsory acquisition of up to 60% of the shares in seven industrial firms involved in the manufacture of beer, cigarettes, cement, metal box and shoes, plus a little later nationalisation of 60% of the sisal industry. The National Development Corporation (NDC) was given control of these public investments and encouraged to establish new state enterprises which would be either wholly government financed (e.g. Friendship Textile Mill) or in partnership with private firms (e.g. Mwanza Textile Mill).

In the longer term the importance which the government attached to this new policy in terms of invested resources and the anticipated output and employment benefits can be seen from the Table 1.

Table 1.

Planned Allocation of Projects by Ownership Pattern 1969-74 in Percentages.

Ownership Pattern	No. of Projects	Investment	Output	Employment
Parastatals	43	84	79	77
Workers & Cooperatives	21	4	5	7
Private	36	12	16	16

Source:- Government of Tanzania. Second Five Year Plan for Economic and Social Development 1969-74.

As can be seen the government anticipated that for the manufacturing sector only 12% of total investment would be in the private sector with 79% of output and 77% of employment being generated in the public sector. As a paper prepared by the staff at the Economic Research Bureau of the University of Dar es Salaam [6] comments, it is "...notable that for the first time a plan document contained arguments explicitly in favour of the expansion of the public sector. It was pointed out in the Second Five Year Plan that considerable benefits will accrue in the long run from the expansion of public ownership because -

a) it will be possible to create a genuine Tanzanian industrial 'know-how' faster than under conditions of unrestricted private investment;
b) it will be possible to pursue a more effective industrial strategy;
c) the profits made in industry will be reinvested in Tanzania".

In addition to these initial objectives the government went on in the Third Five Year Plan (1975-80) to stress the importance of - (i) establishing industries which cater for the basic needs of the majority of Tanzanians, and (ii) giving priority to the "core" industries (such as iron and steal, metalworking and engineering, chemicals etc.) that supply the inputs to a large number of other industries. That is, emphasis was placed on pushing the import substitution policies backward toward the capital goods producing sector, but bearing in mind that the productive capacity of the country should relate above all to the basic demands of the people. Thus in turning to consider how well PE's have performed it is necessary to bear the objectives outlined above in mind.

Contribution of PE's to National Economic Growth.

Before presenting the statistical evidence relating to the economic performance of PE's, one has to stress the unreliability of much of the data. As the U.N.I.D.O.'s 'Progress and Prospects' report states[7], "An in-depth analysis of the public industrial sector is hampered from the outset by the scarcity of data and the incompatibility of data that exists".

(a) Growth of Outp...

In order to correctly evaluate the contribution of P.E.'s to the expansion of national output one should initially place the discussion in the context of the performance of the manufacturing sector as a whole. However, the statistical prob... ...tioned above is compounded in the Tanzanian case due to the ava... ...ility of different statistical series which attempt to measure the same variable (in this case the growth in the output of manufactured goods) but yield different results.[8] The figures presented in Table 2 are based upon one particular series and should, therefore, be interpreted as useful only to the extent that they correctly indicate the overall trend.

Table 2. Industrial Sectors Contribution to G.D.P. (1967-78).

Year	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
Industrial Sectors Contribution %	8.1	8.5	9.0	9.9	10.1	10.7	11.4	11.0	10.6	10.4	9.9	9.3	9.3
Industrial Parastatals Contribution %	0.6	1.2	1.6	2.2	2.5	3.1	3.8	3.5	3.7	4.1	3.8	3.6	3.1
Parastatals as % of Industrial Sector	5.0	14.4	17.8	22.5	25.6	29.1	33.2	31.5	35.0	39.2	38.5	39.0	33.6

Source: Economic Research Bureau Paper.[9]

As we can see the manufacturing sector expanded quite rapidly up until 1972 when it accounted for 11.4 % of G.D.P. After 1972 the rate of growth of the manufacturing sector fell behind the rates experienced in the rest of the economy, hence its declining share. M. Bienefeld, who has conducted the most extensive review of the statistical evidence to date, (see appendix 1 for Bienefeld's comparison of different estimates of the growth rates for the manufacturing sector), concludes his analysis by stating: "The dominant features of these series are the following: a substantial dynamism apparent in all the series (except handicraft production) until 1973; this is followed by a substantial slowing of growth in Manufacturing and Handicrafts where the consequent declining trend is marked by troughs in 1975 and 1979 and a fair recovery between 1975 and 1977, meanwhile the S.I.P. index for larger scale industry (where most P.E.'s operate) shows a much greater resilience with its growth rates showing no significant trend over the entire period if the two extraordinary years of 1965-66 and 1974-5 are excluded". The point which Bienefeld wishes to emphasise is that the manufacturing sector as a whole appears to have performed very well after the change of strategy embodied in the Arusha Declaration and that it was not until the mid-70's crises that a downturn occured.

Focussing on P.E.'s we see much the same phenomenon. The evidence presented in Tables 2 and 3 demonstrates both the growing importance of public enterprises within the manufacturing sector and the rather patchy performance of P.E.'s after 1973.

Table 3.

Annual Growth Rates of Manufacturing Sector 1966/67 - 1977/78 (Percentage)

Year	66/67	67/68	68/69	69/70	70/71	71/72	72/73	73/74	74/75	75/76	76/77	77/78
Total Manufacturing and Handicraft	8.95	6.81	9.98	6.54	9.49	8.41	4.47	1.69	0	1.44	9.39	3.39
Public Sector	3[illegible].0	32.0	39.0	21.2	24.4	23.7	-1	13.0	12.0	-.4	10.8	-12.5
Private Sector	2.0	2.6	3.6	2.2	4.4	2.1	7.1	-3.5	-6.5	2.6	8.5	13.6

Source: Economic Research Bureau Paper.[10]

The very high growth rates registered in the Public Sector between 1966/67 and 1971/72 do, of course, reflect the transfer of ownership from private to public through nationalisation as well as real output growth. However, Silver and Kwietowics[11], who have conducted a very sophisticated (chained Laspeyres) measure of the growth of the manufacturing sector for the period 1967–1977 conclude that, "... industrial production increased by 176.4% during the period ... the growth is particularly marked in the second half of the period covered and is closely related to the conscious expansion of the parastatals ... following the 1967 Arusha Declaration". Thus P.E.'s appear to have made a major contribution towards the increasing share of the manufacturing sector in total G.D.P. up to 1972/73 when both external (rising cost of industrial inputs) and internal (drought in 1973/74 plus difficulties of further import substitution) forces led to a significant reduction in the rate of growth of both P.E.'s and the manufacturing sector in general.

Employment.

Depending on which statistical source one uses employment in the industrial sector as a whole rose from appraximately 10% of all employees in 1967 to 16% in 1978. As Table 4 shows, between 1967–1978 the industrial sector generated 47,059 new jobs which represented approximately 29% of the total new jobs created during the same period.

Table 4. Employment in the Industrial Parastatal Sector 1967–78.

Year	Industrial Sector Employment	Percentage of Total Employment	Industrial Parastatals Employment	Percentage Industrial Parastatal to Total Industrial
1967	34,157	9.9	5,302	15.5
1968	42,387	11.7	8,792	20.7
1969	43,396	11.8	12,350	28.5
1970	48,314	12.9	15,454	32.0
1971	53,516	13.6	24,836	46.4
1972	62,118	15.3	25,387	40.9
1973	63,355	13.4	29,595	46.7
1974	69,974	14.5	34,778	49.7
1975	73,218	15.6	35,278	48.2
1976	75,003	15.7	35,300	47.1
1977	78,090	15.7	36,450	46.7
1978	81,216	15.9	38,381	47.3

Source: Economic Research Bureau Paper.[12]

The industrial parastatals employment share rose from 15.5% to 47.3%. However, it is incorrect to conclude from these figures that, "Out of total new employment generated within the industrial sector, 70.2% occured in the public enterprises between 1967 and 1978". (Economic Research Bureau Paper, pg 12)

This is an incorrect deduction because a proportion of the growth of P.E. employment will have been due to transfers of ownership rather than the public sector initiating new ventures. Thus until we have the figures for employment transfers we will not know what proportion of the increase in total employment was due to the expansion of P.E.'s.

Turning to the micro-studies one suspects that there has been a gap between the stated need for the use of labour-intensive techniques and the actual technology used. H.P.B. Moshi [13] argues,

> " On implementation, most of the established parastatal industries were capital intensive, except for one mill - The Friendship Textile Mill supplied by China on very soft loan terms. Mwatex, a plant owned jointly by Tanzania (80%) and a French firm (Amenital (20%) emoloyed only 100 workers and produced 24 million square yards of cloth per annum, while the labour intensive Friendship plant employed over 3,000 workers and produced 24 million square yards of cloth and 1000 tonnes of yarn per annum. In the case of the cement factory, its capital/labour ratio was higher than those of Kenya and Uganda."

One of the most important reasons for this contradiction between what was intended and what actually happened is that although the government may be the major financier, the parastatal organisation often leaves the choice of technology to the foreign contractors due to the government's real or imagined technical inadequacies. For example, the contract for the building of the disasterously inappropriate Tanzania Fertilizer Company contained the clause, "Kloeckner (the German contractors) will select the most modern processes corresponding with the latest technical development in the chemical industry" [14] With this degree of loss of effective, rather than financial, control over a project it is not surprising that public enterprises on the whole have adopted technologies more suited to their western supplier than the resource availability of Tanzania.

<u>Productivity Changes.</u>

Measures of changes in capital and labour productivity are difficult enough at tha level of the firm with perfect data, at the level of the manufacturing sector in total or the parastatal sector with aggregate statistics the figures have dubious validity. In addition, when measuring labour productivity for the manufacturing sector of Tanzania one has to choose between four output and two employment series.

One author [15] has reviewed the statistical literature as well as offering his own estimate of the underlying trend in labour productivity - see Table 5.

Table 5.

Indices of Real Value Added per Employee in Industrial Production (constant prices) 1964–78.

Year	Survey of Industrial Production Based Indices (1966=100)		National Accounts and Employment and Earning Based Indices (1966=100)	
	A	B	C	D
1964	-	-	95	86
1965	89	100	99	98
1966	100	100	100	100
1967	113 (103)	102	104	101
1968	104 (93)	98	98	90
1969	110	102	95	85
1970	111	94	93	83
1971	116 (109)	104	81	86
1972	121 (107)	126	87	90
1973	113	-	85	62
1974	111	-	79	75
1975	96	-	69	76
1976	104 (103)	-	72	86
1977	-	-	74	86
1978	-	-	75	-

Source: M.A. Bienefeld. For explanation of data bases used see Appendix 2.

Whilst Bienefeld argues in favour of accepting the trend indicated in column A or B it would seem that given the range of values indicated any definitive conclusion seems impossible. However, a number of more specific points can be made; firstly, whatever the overall trend of labour productivity since 1964 there is a marked decline in all measures since 1973; secondly, the figures presented above are for the manufacturing sector in total, given the micro-economic data on particular parastatal enterprises it does seem likely that if the same series were to be calculated for P.E.'s alone the result would be less favourable; thirdly, measures of labour productivity for the manufacturing sector will obviously be affected by structural changes within the sector. A disaggregated study by Silver [16] at the two digit sectoral level for 1965 to 1972 indicated that changes of output per worker varied from increases of 869% (Machinery), 289% (Metal Products), 137% (Textiles), 135% (Drinks), through slight declines of 11% (Tobacco and Printing) to significant downward trends of 78% (Footwear), 81% (Rubber) and 90% (Pulp and Paper). As those sectors where productivity increased most also increased their share of total manufacturing value over the period it follows that a proportion of the increase in average productivity was due to structural change.

In relation to P.E.'s one should note that not only does the state have a significant interest in sectors at both ends of the scale (and not, as some authors would suggest, only at the bottom, e.g. 80% of the output of the Textile sector is in public hands), but more generally the explicit policy of restructuring the economy, embodied in the Arusha Declaration, must have had an effect on the extent of this transfer of resources into the more productive sectors. However, on the negative side, such a shift may have its cost if, as Bienefeld points out, the new structure generates foreign exchange demands which cannot be supported in the medium term, i.e. once foreign exchange became a major constraint after 1972/73.

Estimates of the trend in capital productivity via the I.C.O.R. method seem just as problematic as the measures of labour productivity. Once again Bienefeld [17] has undertaken a detailed analysis of the question and part of his conclusion is that,

> " When the National Accounts figures are used, along with National Accounts statistics on value added, the evidence for the manufacturing parastatals reveals a roughly constant I.C.O.R. between 1969-71 and 1973-75 with highly unstable results for 1967-68 and 1968-70."

However, most other commentators would not share Bienefeld's reservations, all other estimates point to a deteriorating I.C.O.R.

Perhaps one explanation for this poor performance is the low (and declining) level of capacity utilisation which shows up in micro-studies of individual firms. For example, in Wangwe's [18] study of the capacity utilisation in 39 manufacturing firms in 1974 and 1975, he found that 80% of the firms sampled suffered from raw material shortages which were caused primarily by an inadequate foreign exchange allocation. The point to note is that as capital is embodied in plant, whereas labour inputs are more variable, one would expect short-falls in supply to effect capital productivity more than its labour counterpart. With reference to P.E.'s one should note that the important role which supply side constraints play in determining overall performance indicates that it is the particular industrial activity one is involved in rather than the question of ownership which is important.

Investment and Profitability.

As the table below indicates the percentage of total investment in the manufacturing sector accounted for by public enterprises in Tanzania has grown from 13% in 1966 to 39% in 1972.

Table 6.

Investment in the Parastatal Sector.

Year	1966	1969	1972	1975
Total Investment of Parastatal Sector (T.Shs. Millions)	20	50	128	202
As % of Manufacturing Sector	13	38	39	n.a.

Source: A. Coulson [19]

It has also been estimated that over the period 1966-1972 the industrial parastatal sector received 34.9% of total public enterprises fixed capital formation, making it the principal recipient of public enterprise investment.[20] This is as one would expect given the emphasis placed on industrialisation and direct government participation in the Second and Third Five Year Plans.

However, assessing the return on this massive investment presents more of a problem. Firstly, up to date reliable figures for net profits are difficult to get due to the state of a number of parastatal's accounting procedures. The Tanzanian Audit Corporation [21] (T.A.C.), which is entrusted under Act No. 1 of 1968 to provide audits for all government parastatals, made the following remarks in its report for the year 1979,

> "Approximately 100 parastatals were in arrears in the preparation of their accounts for one year or more...out of 247 accounts of parastatals certified during the year, only 76 accounts got unqualified audit reports, 138 got qualified reports. 15 received Negative Opinion reports and 18 Disclaimer of Opinion Results."

Secondly, the profits which have been recorded are difficult to assess in terms of an efficiency criterion because not only are many state enterprises monopolies with import protection and price control to back them up, but also commercial profit may not be the paramount objective of the management. As explained earlier, given the weight that the government of Tanzania places on both producing for basic needs and restructuring the economy, current profitability may be a poor guide to the long term development contribution of the project.

Bearing these points in mind we may now consider the figures which are available:-

Table 7.

Fixed Capital Formation and Surplus Generation in the Industrial Parastatal Sector. (Million T.Shs.)

Year	1967	1968	1979	1970	1971	1972	1973	1974	1975	1976	1977	1978
Fixed Capital Formation	62.2	44.5	59.7	203.2	176.4	128.1	152.2	159.2	202.3	453.0	431.0	504.0
Net Operating Profits	24.2	35.6	55.6	58.0	78.2	132.0	76.1	68.1	191.6	259.7	393.1	356.3

Source: Analysis of Parastatal Accounts. Economic Survey 1979.

In absolute terms between 1967 and 1968 the industrial parastatals generated a surplus (net operating profit) of approximately T.Shs. 1,728 million while absorbing T.Shs. 2,576 million in capital formation. That is, there was a net inflow of funds of approximately T.Shs. 848 million to the industrial parastatal sector. As with other performance measures, the financial gap between investment and surplus appears to widen significantly from the early 1970's.

One further indication of the profitability of the parastatal sector is provided in the T.A.C. report for 1979. The auditors [22] comment that,

> "Out of the total 247 audited accounts during the year, there were about 196 trading parastatals and the remaining were non-trading and service institutions. Out of 196 trading parastatals, the accounts of 81 such parastatals disclosed losses."

The list of parastatals which incurred losses exceeding T.Shs. 5 million during the year of audit is given below:-

Name.	Accounting Year	Loss (T.Shs. Million)
Tanzania Cotton Authority	30/6/76	98.68
Cashewnut Authority of Tanzania	30/9/76	18,78
Kilombero Sugar Co. Ltd.	30/6/77	18.57
National Textile Corporation	31/12/78	17.15
Tanzania Sisal Corporation	31/12/76	16.57
Tanzania Fertilizer Co. Ltd.	31/12/77	13.69
Kilombero Sugar Co. Ltd.	30/6/78	12.27
Mtibwa Sugar Estates Ltd.	30/6/78	10.62
National Cold Chain Operations	31/12/76	8.61
National Agricultural and Food Corporation	31/12/77	8.60

/...Cont.

Name	Accounting Year	Loss (T.Shs. Million)
Kagera Sugar Ltd.	30/6/77	8.44
National Bus Service Ltd.	30/6/78	8.34
Tanzania Dairy Farming Co. Ltd.	31/12/77	6.48
Mount Meru Hotels Ltd.	31/12/77	6.17
Serengeti Safari Lodges Ltd.	31/12/77	5.81
Sisal Kamba Spinning Co. Ltd.	31/12/77	5.49
Tanzania Livestock Marketing Co. Ltd.	31/12/77	5.31

Source: T.A.C. Report 1979

The point to note is that earlier figures on total net operating profit for the industrial parastatal sector as a whole must obviously conceal large inter-sectoral discrepancies if the rather large losses made by the industrial parastatals included in the list above are to be more than equalised on the profit side. As we commented when discussing capacity utilisation, blanket statements about industrial parastatals performance based on aggregate figures are not very useful if the actual problems faced by particular industries are to be fully understood.

Lastly, the level of investment and profit performance of the Tanzanian parastatal does not compare unfavourably with other african countries. For example, it has been estimated [23] that in Ethiopia practically all new investments in 1975/76 were in the public sector, in the Ivory Coast public investment represented 65% of all national investments between 1971-75, and even in Kenya over 15% of the total issued share capital of the 253 manufacturing firms with 50 or more employees was in government hands and over half of all Kenya's industrial firms employing more than 200 people have government financial participation. On the profitability side performance varies enormously and any assessment cannot be done without relating the figures to the overall industrialisation strategy. For example, the Kenyan Parastatal Panafrican Paper Mills made a financial profit of K.Shs. 28 million in 1977/78. But as has been pointed out, this cannot be divorced from the fact that it was able to charge prices that ranged from 72% to 113% higher than the prices of the landed equivalents from overseas suppliers.

Balance of Payments.

No figures exist for the net contribution of P.E.'s to the balance of payments. Table 8 provides some indication of the way in which the manufacturing sector as a whole has performed.

Table 8.

Tanzania 1964-78: Foreign Merchandise Trade Trends and Composition.

Year	Export T.Shs. Million	Imports T.Shs. Million	Balance of Merchandise Trade:T.Shs. Million.	% of Exports which are Manufactured	Consumer goods as % of imports
1962	1193	1127	+66		
1963	1417	1153	+264		49
1964	1597	1259	+338		46
1965	1465	1405	+60		43
1966	1878	1691	+187		43
1967	1761	1625	+136		36
1968	1717	1834	-117		40
1969	1795	1710	+83		38
1970	1852	2274	-422	18.2	30
1971	1989	2725	-736	21.9	25
1972	2277	2879	-601	21.6	29
1973	2581	3479	-898	17.0	30
1974	2861	5258	-2397	20.2	37
1975	2765	5694	-2929	19.4	31
1976	4109	54[illegible]	-1312	17.7	21
1977	4536	6199	-1663	13.2	19
1978	3553	8118	-4565	14.7	20

Source: Bienefeld.

Two points can be made; firstly, the percentage of total exports accounted for by manufacturing goods has declined since 1971 and given the large state share in the manufacturing sector this must imply that the foreign exchange earnings of P.E.'s is falling; secondly, there is a marked decline in the percentage of imports accounted for by consumer goods, from 49% in 1963 to 20% in 1978. This would indicate that intermediate and capital goods, i.e. industrial inputs, are absorbing larger amounts of the limited foreign exchange earnings of the country.

Individual instances of the negative balance of payments effect of P.E.'s are easily found. The infamous Tanzania Fertilizer Company is based almost entirely on imported rock phosphate, sulpher ammonia and potassium despite rich potential local sources of the raw material being available. The cement manufactured at Wazo Hill is critically dependent upon foreign know-how and spare parts for maintenance and its output price is extremely sensitive to changes in the cost of imported oil. Less capital and knowledge intensive methods for the manufacture of cement are certainly available as are large reserves of coal in Southern Tanzania.

Thus the overall statistics would indicate that P.E.'s are a drain on the very limited amount of foreign exchange which is increasingly being earnt by the non-manufacturing sector. This may well be a 'temporary' result of the state's strategy of trying to push import substitution policies back into the capital and intermediate goods industries. Such a structural change may raise the demand for foreign technology, and hence foreign exchange, in the short and medium term, however it is hoped that a turning point will be reached where domestic production of capital goods offsets the need to import. However, the whole strategy is critically dependent upon sufficient foreign exchange being earnt elsewhere in order to reach the long-run position. Unfortunately, given the drastically worsening balance of payments position since the early seventies, this 'bottleneck' has proven to have a severe effect on P.E.'s and the manufacturing sector in total.

Determinants of Economic Performance.

From the evidence given above one can piece together a picture of how well the P.E.'s in Tanzania have achieved their set objectives. In terms of output and productivity the aggregate performance was quite acceptable up until the early seventies but from then on the vulnerability of the whole sector was clearly exposed by the degree to which both external and internal events affected their performance. On the financial side the evidence strongly suggests that P.E.'s have represented a drain on both domestic investment resources and foreign exchange earnings. The figures for employment creation are inconclusive and it would seem that the choice of technology employed has not strayed much from the path previously followed by private entrepreneurs.[24] Looking beyond the narrow economic measures of efficiency it would seem that whilst P.E.'s have achieved a degree of success in restructuring the industrial sector, they have not achieved the objectives of self-reliance and the production of goods to meet basic needs to anything like the extent originally planned. We now ask what are the constraints and contradictions which have affected the parastatals performance.

At the level of particular enterprises many of the familiar problems faced by public undertakings in Africa are evident. A.Coulson's[25] analysis of the

Tanzanian Fertilizer Company clearly demonstrates the disasterous results that can follow when an inadequate feasibility study, which is undertaken by the foreign contractors who stand to profit from the investment, is scrutinized by an inadequataly staffed government parastatal. Even when initially viable projects are undertaken the problems of management and control must still be solved. One of Wangwe's [26] conclusions from his study of 39 firms in Tanzania was that,

> "Increased attention should be devoted to the quality of management and manpower in general at the enterprise level, especially in the subsidaries of parastatal organisations."

As for financial control, the Tanzanian Audit Corporation (T.A.C.) appears to be a step in the correct direction. Aside from issuing certified financial statements the T.A.C. is also empowered to,

> "review internal controls, operating procedure, adequacy of record keeping, management practices resulting in any fractuous or extravagant use of public funds,"

and to report its findings to the parent ministry and State House if necessary. However, even this theoretically powerful independent body may have little practical effect. As the T.A.C. [27] comments in its report for 1979,

> "Our experience, however, shows that very few parastatals acknowledge our reports and implement our suggestions. Out of 220 management audit reports issued during the year 1978/79, only 91 reports were stated to have been tabled before the Board of Directors. Some 66 companies only acknowledged the receipt of our reports .... In certain parastatals the Board of Directors do not seem to appreciate the significance of audit reports ... some Boards are inactive and do not hold formal meetings, sometimes even for one year, to review and appraise the performance of their organisations ... Many parastatals do not employ competent personnel to write the books and prepare the accounts in an acceptable form."

Thus there is strong evidence that problems related to inadequate project appraisals, shortages of qualified manpower, and inefficient financial controls need to be solved if P.E.'s are to improve their level of performance. But such problems are not unique to Tanzania. Critical manpower shortages and inadequately trained civil servants were given as principal reasons for the disappointing performance of P.E.'s in U.N.I.D.O.'s Country Industrial Development Profiles for Zambia, Mozambique, Ivory Coast, Mali, Ethiopia and Nigeria. However, whilst such criticisms are valid up to a point, those that reject the use of P.E.'s purely on the above grounds would find it difficult to explain either the generally acceptable performance of the P.E. sector in Tanzania until the early seventies or the individual successes which continue to generate substantial returns. Thus we may ask whether there are any particular determinants of the performance of P.E.'s in Tanzania which result from the specific set of objectives adopted.

Frank [28] concludes his review of public and private enterprise in Africa by suggesting that,

"the political milieu in which state enterprises operate is probably (most) important."

Indeed, from our review of the general literature it would seem that P.E.'s need to be independent of the government for two reasons, (a) the firm must be insulated from persistent government interference as this can result in frustrated management, unecessary inefficiency and the elevation of purely political or personal objectives to unacceptable levels (e.g. the early experience of both Nigeria and Ghana), (b) the government must insulated from firms as the latter can use the state's financial commitment in order to protect their inefficiency by pushing for higher import protection, further government concessions and higher prices (e.g. C.Leys suggests that this may be occuring in Kenya). No doubt both these criticisms have some validity in Tanzania, but one should note that on the one hand given Tanzania's commitment to 'socialism' and 'self-reliance', political objectives will always play a significant part in parastatal decisions and that if one rejects such influence this is not so much a criticism of P.E.'s as a rejection of the whole strategy and set of objectives, and on the other hand from the evidence presented above,it would seem that in the case of Tanzania it is the 'general economic milieu' that is of paramount importance in determining P.E.'s performance levels rather than what has proved to be a very stable political environment.

The major economic reason for the declining performance of P.E.'s seems to centre around the growing foreign exchange constraint which became critical after 1972-73. Due to increases in the price of industrial inputs (especially oil), the declining real price of its major exports (tea, coffee), the drought in 1974 and the war with Uganda, the weaknesses inherent in Tanzania's overall strategy came to the surface. P.E.'s had been used to push the policy of import substitution too far too quickly along the wrong path. That is, not only had the growth of P.E.'s outstripped the countries' financial and manpower capacity to effectively run and absorb the new enterprises, but also the industrial activities upon which the state concentrated did not restructure the productive capacity to suit the resource endowment or needs of Tanzania. As J. Rweyemamu [29] comments,

> "Nationalisation of the major means of production does not, therefore, signal an end to dependence ... (it) permanently reinforces dependence .... because the introduction of new products or processes from the centre will always require more sophisticated techniques and higher levels of accumulation than can be sustained by Tanzanian type economies".

By nationalising existing industries, P.E.'s started from the inappropriate base (inappropriate with reference to their own objectives) which existed before 1967. The parastatals then went on to view each new project in isolation from either the general economic situation or the domestic resource and skill base of the country. As H.P.B. Moshi [30] has commented,

> "Each project mushroomed in its own way without taking into consideration the local resources, linkages to other industries and not even considering the development needs of the country. For example, the linkage between cement and fertilizer industries in the use of sulphuric acid was never conceived of. Just like (the) oil refinery was never linked to synthetic industries. The ultimate outcome was individual projects, very impressive but not integrated".

The end result, as we have seen, is that as the economic system could not support the cumulative demands being made upon it by each individual project, performance began to decline dragging morale and commitment down with it. Thus the disappointing performance of the P.E. sector in Tanzania stems from their neglect of the demand for foreign exchange which would be generated in relation to their earning capacity, their inability to concentrate investment in those industrial activities which suited their own resource base and product needs, and finally their failure to establish an institutional framework which could co-ordinate each parastatal's activities with a central industrial and technology policy as well as closely monitor each enterprise's performance against the targets set for it.

As for the future, the above analysis suggests its own remedies. Firstly, there must be a thorough assessment of the domestic resources available coupled with a clear statement on which industrial activities are to be taken into public control. Thus the rush to nationalise or to import-substitute should not be done for its own sake but with reference to whether it is an important part of the basic industrial strategy. The recent attempt to shift the concentration of P.E.'s into 'core industries' such as steel, engineering and chemicals is a sign that the government recognises the fundamental structural weaknesses of the economy. However, and this brings us on to our second point, whether this move into capital goods production will succeed hinges on how successful the government is at re-stimulating the performance of the agricultural sector. This is important in order to both increase export earnings and to satisfy the consumption demands of its own people who are steadily becoming more discontented with their present position. Whether the government can meet the immediate demands of its population, engage in long term restructuring of the economy, as well as adhere to the principles of socialism and self reliance, given the international context within which Tanzania finds itself, is a complex question. But it is the interaction of these variables which will ultimately determine the role and performance of P.E.'s in Tanzania.

July 1981

Appendix 1.

Bienefeld's Estimates of Annual Rates of Growth in Manufacturing Value Added 1964-78 (1966 Prices).

	National Accounts: Manufacturing and Handicrafts. %	National Accounts: Estimate of Handicraft Production.% Implicit	Actual	Survey of Industrial Production: Firms with 10 or more employees.	Silver and Kmietowicz's Index of Industrial Production.
1964-65	13.2		6.0		
1965-66	17.7	5.0	14.2	30.0	17.7
1966-67	9.0	10.0	5.0	8.1	4.0
1967-68	6.8	0.4	3.6	11.9	18.3
1968-69	10.0	-4.7	0.6	20.7	8.9
1969-70	6.6	-5.1	2.3	12.5	4.5
1970-71	9.5	10.4	3.3	9.1	19.3
1971-72	8.4	-1.6	5.4	13.2	28.7
1972-73	4.5	-3.2	4.1	7.7	
1973-74	1.4	-18.1	3.9	8.9	
1974-75	0.3	35.2		-9.6	
1975-76	6.4	-1.5		9.6	
1976-77	5.4				
1977-78	4.8				
1978-79	-7.5				

Source: Bienefeld M.A. Mimeo 1981 pg. 11.

Appendix 2. - Explanation of data base used in Table 5.

Column A = Based on Manufacturing Value added and average employment from the surveys of Industrial Production 1966 to 1974. The figures for 1975 and 1976 are from Hali ya Uchumi ...., 1977/78 Table 48. The figures in brackets are alternative estimates based on alternative employment figures which appear in various original sources.

Column B = This is the index calculated by M.S. Silver (Silver 1978) from SIP firm returns. It is based on an Industrial Production Index and employment estimates which are adjusted in so far as was possible for length of shifts.

Column C = This is based on value added estimates for Manufacturing and Handicrafts in the National Accounts and Manufacturing employment figures taken from Surveys of Employment and Earnings.

Column D = This is the "Industry" Index presented by Jedruszek (Jedruszek, 1967 pg. 19) and based on National Accounts and Employment and Earnings data for Manufacturing, Mining, Construction and Public Utilities.

Above definitions given in Bienefeld, 1981 Mimeograph, pg. 36.

Notes.

1. U.N.I.D.O. "World Industry Since 1960: Progress and Prospects" (New York: U.N. Publication, 1980).

2. See U.N.I.D.O. 'Country Industrial Development Profile' for both Ivory Coast and Nigeria (UNIDO/ICIS. 145, Feb. 1960 and UNIDO/ICIS. 78, 25 July 1978.)

3. See various articles by C.Leys concerned with State Capitalism in Kenya.

4. See Nyerere J.K. speech June 1965 when dissolving parliament.

5. Bienefeld M.A. "Evaluating Tanzanian Industrial Development between 1961 and 1978" (Mimeograph, I.D.S. 1981)

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J. Wilton. July 1981

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