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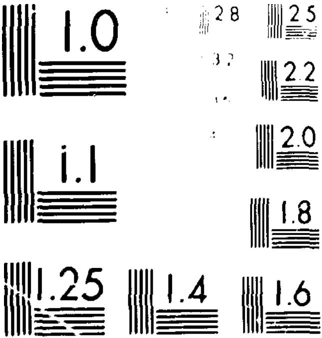
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THE ROLE OF THE PUBLIC SECTOR IN THE INDUSTRIALIZATION OF THE UNITED REPUBLIC OF TANZANIA *

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in co-operation with
Regional and Country Studies Branch
Division for Industrial Studies

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PREFACE

This study was undertaken within the framework of the research and studies programme on the role of the public sector in the industrialization of developing countries conducted by the Regional and Country Studies Branch of the Division for Industrial Studies, UNIDO. Through this research programme, an attempt has been made to analyze the role and function of the public industrial sector in developing countries and to examine the crucial issues surrounding their operations.

The country studies have primarily focussed upon the role of public industrial enterprises as instrument of industrial policy and strategy; their contribution to growth and development of the industrial sector and national economy; their operational performance as well as their organizational framework and institutional infrastructure. By examining the role of public industrial enterprises and identifying the major constraints facing these enterprises in various developing countries the uncertainties surrounding their operational performance may be reduced and a basis laid for improving their efficiency and enhancing their contribution to industrial growth and national development.

In this country study the role and function of the public industrial sector in Tanzania is analyzed. The study was carried out by Mr. J. Wilton Research Assistant to Tony Killick, UNIDO consultant, in connexion with the study on "The Role of the Public Sector in the Industrialization of African Developing Countries" (UNIDO/ID/WG 343/7).

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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.

I. 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 more 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 steel, 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.

II. Growth of Output

Before presenting the statistical evidence relating to the economic performance of PE's and their contribution to National economic growth, 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".

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 problem mentioned above is compounded in the Tanzanian case due to the availability 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	2.6	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	313.0	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 Kmietowics[11], who have conducted a very sophisticated (chained Laspeyres) measure of the growth of the manufacturing sector for the period 1967-1972 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.

III. Employment.

Depending on which statistical source one uses employment in the industrial sector as a whole rose from approximately 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 23% 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%) employed 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.

IV. Productivity Changes.

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 genarates 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 reveal 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.

V. 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	60	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 1978 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	8.04
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 pe[illegible] have government financial participation. On the profitability side [illegible] 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.

VI. 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	5421	-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.

VII. 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 inadequately 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 out 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.

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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		9.8	
1976-77	5.4				
1977-78	4.3				
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 (S. 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. 1980 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)

6. Wangwe S.M. et al. "Public Industrial Enterprises in Tanzania" (E.R.B. Paper under I.C.P.E./UNIDO Con - 79/139, 1980/81)

7. U.N.I.D.O. op. cit. (1980)

8. See Bienefeld M.A., op, cit. 1981, for full discussion of the statistics available and associated problems of interpretation.

9. Wangwe S.M. et al, op cit 1980/81

10. *Ibid*

11. Silver M.S. and Kmietowicz Z.M. 'An Index of Industrial Production for Tanzania 1965 to 1972' (University of Aston Management Centre Working Paper, No.83, December 1977)

12. Wangwe S.M. et al, op cit 1980/81

13. Moshi H.P.B. "Industrialisation and Technological Policy in Tanzania: an Overview."

14. Coulson A.C. "Tanzania's Fertilizer Factory" (Journal of African Studies, Vol. 15, 1977 pg. 119-125)

15. Bienefeld M.A. op cit 1981

16. Silver M.S. 'Labour Productivity Trends in Tanzania's Manufacturing Sector 1965 to 1972' (University of Aston Management Centre Working Paper, No. 91, April 1977.)

17. Bienefeld M.A. op cit 1981 Mimeograph pg. 45

18. Wangwe S.M. "Excess Capacity in Manufacturing Industry: A Case Study of Selected Firms in Tanzania" (E.R.B. Paper 76.2 University of Dar es Salaam, 1976).

19. Coulson, A. "State Capital and Industrialisation in Tanzania" (Project Planning Centre, University of Bradford, Mimeograph.)

20. Wangwe S.M. et al op cit 1980/81 pg. 12

21. Tanzania Audit Corporations 11th. Annual Report. (Dar es Salaam, 1979) p. 7.

22. Ibid. p.9.

23. U.N.I.D.O. Various "Country Industrial Development Profile" Reports.

24. See Moshi, H.P.B., op cit. and Rweyemamu, J. 'The Formulation of an Industrial Strategy for Tanzania' (Africa Development, vol.6, no.1, Jan-April 1981).

25. Coulson, A. op cit 1977.

26. Wangwe, S.M. op cit 1976.

27. T.A.C. op cit 1979, pg. 10-11.

28. Frank, C.R. "Public and Private Enterprise in Africa" in Ranis, G. (ed.), Government and Economic Development (New Haven, Yale UP, 1971).

29. Rweyemamu, J. op cit.

30. Moshi, H.P.B. op cit.

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14. UNIDO "World Industry since 1960: Progress and Prospects". New York: UN Publication, 1980).

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16. Wangwe, S.M. "Excess Capacity in Manufacturing Industry: A Case Study of Selected Firms in Tanzania" (ERB Paper 76.2 University of Dar es Salaam, Tanzania, 1976.)

17. Wangwe, S.M. et al. "Public Industrial Enterprises in Tanzania" and Addendum (E.R.B. paper under UNIDO/ICPE Con - 79/139 - 1980-81.

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