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**UNITED NATIONS ECONOMIC COMMISSION FOR AFRICA
PUBLIC ADMINISTRATION, HUMAN RESOURCES
AND SOCIAL DEVELOPMENT DIVISION**

**MOTIVATION AND PRODUCTIVITY IN THE PUBLIC SERVICE IN
AFRICA: A REVIEW OF THE IMPACT OF THE ECONOMIC CRISIS
AND REFORM MEASURES IN SELECTED AFRICAN COUNTRIES
(COUNTRY CASE STUDIES OF GHANA AND ETHIOPIA)**

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FORWORD

1. The impact of economic crisis on the performance and productivity of the public service in Africa could be appraised from the trend of several factors including the motivation of public service personnel. The prevalent shortages of essential commodities, especially food and social welfare items, has adversely affected both private and public sector employees as well as the whole population. Public sector employees, tend to spend more time in search of the wherewithal to feed themselves and their families and less time on the public service jobs for which they are employed. The result is that there has been all-round deterioration in the productivity of the whole society.
2. The purpose of this publication is to review the impact of the economic crisis and reform measures on motivation and productivity in the public service with a view to enabling African countries to evaluate the magnitude of problems that impinge upon economic recovery, sustainable development and transformation. The study also raises issues that are significant for civil service reforms to enhance productivity. It should provoke instructive dialogue on strategies of administrative reforms that would boost motivation and productivity across the whole spectrum of the public service.
3. The externalities of the economic crisis have, no doubts, rekindled interest in the conceptual perspectives of management terminology such as motivation and productivity. In this regards, motivation connotes the willingness to work or not to work, induced by forces within each person and forces associated with the work and work environment in which the employee operates. These intrinsic and extrinsic forces influence the behavioural level, magnitude, direction, determination and commitment which each person is prepared to put into whatever work he/she is doing. In the context of this study, productivity refers to output per person in a specific occupation. The composite nature of productivity must, nonetheless, be appreciated. Thus, measurement of both motivation and productivity in the public service is fraught with technical problems. The latter is much more complex in the traditional areas of central and local government functions than in public enterprises that produce and commercialize products which the private sector and individuals can also produce. In effect, because of the heterogeneous nature of the public service, it is essential to be explicit about the scope of activities to include in a study on motivation and productivity in the public service. In this regard, the Ghana country case study, unlike the one on Ethiopia, excludes public enterprises from the analysis.
4. In the case of Ethiopia, the public service has been much more pervasive and includes activities and employees in large and small scale enterprises and services. This wide ranging coverage of the public service could be attributed to

Ethiopia's apparent ideological orientation toward socialism beginning in the early 1970s. In the context of this technical paper, therefore, motivation and productivity cover the country as a whole given that the activities which are not included in the definition of the public service are very few and relatively insignificant from the analytical perspective.

5. The country case studies^{1/} underline the fact that motivation is more complex than most managers and policy makers really care to understand. It is even much more complex to analyse as evidenced by the Ethiopian country case study. The lesson is that workers/personnel in whatever occupation, must be understood and accepted for who they are and efforts made to discover how best to encourage them to increase productivity both from the perspective of intrinsic human nature, that of the requirements and nature of the job or institutions/organizations and the shocks of the environment in which they operate. Economic crisis is one of the external shocks that have impacted upon the motivation and productivity of the public service in Africa. The impact and the implications of economic crisis are, however, not limited to public services. They affect the socio-economic fabric of the whole society. The retrenchment of public service personnel, for instance, means that job security is no longer one of the pillars of public service employment. Insecurity of employment does not motivate workers nor does the deterioration in the quality of life give any person in society the confidence to increase productivity.

6. The impact and implications of the economic crisis and reform measures on motivation and productivity in the public service in Africa have been succinctly articulated in ECA-OAU document on Social Trends and Major Social Development Problems in Africa (Addis Ababa, 1985). As pointed out, "the review of the social conditions and trends over the past decade, and especially over the past four years, gives cause for much alarm and dismay. As a result of the rapid escalation of the socio-economic crisis, Africa finds itself in the grip of a human tragedy and social and economic difficulties of unprecedented proportions. Serious losses of human life, widespread famine and hanger, increased and massive replacements of populations have become the order of the day. Overall, the impact of the current economic and social crisis on African countries, the main issue at stake, has not been one of economic and social development, but one of sheer survival".

7. The ensuing country case studies provide ample evidence of the serious problems which public administration and management are having in sustaining

^{1/} Based on the work of Kwasi Anyemedu (Ghana) and Wondimneh Tilahun (Ethiopia).

the motivation of public service personnel and the consequential decrease in productivity. Measures to remedy the situation are underway in virtually all African countries. Given that the economic crisis does not show any signs of abating, it is difficult to pass conclusive judgement on the status of measures to stimulate motivation in order to boost productivity in Africa's public services. The fact that these measures are in place at all means that African countries have identified the problem of motivation and productivity and are taking action to overcome the problems. The country case studies provide specific lessons of experience in this regard.

I. GHANA

INTRODUCTION

8. "Public service" as used in this report on Ghana refers to central government ministries, non-ministerial departments and "subvented organisations", that is, government organizations outside the civil service but which are supported by the central government budget. In Ghana, the term "public service" is sometimes used to include public enterprises or state owned enterprises engaged in the production of goods and services for sale. These "commercial" public enterprises are excluded from the definition of "public service" in this report.

OVERVIEW OF MOTIVATION AND PRODUCTIVITY MEASUREMENT CONCEPTS IN THE PUBLIC SERVICE MOTIVATION

9. Although different theorists explain employee motivation in different ways, there is universal agreement that motivation is a very complex process, and that both extrinsic and intrinsic factors influence worker effort. Extrinsic factors relate to such considerations as the nature of the work itself and the possibilities it offers for responsibility, recognition, self-esteem and self-actualization. Intrinsic factors refer to factors that are personal to and can influence the behaviour of employees. It is also generally acknowledged that in societies in which the survival needs of workers are met effectively in the economic system, the "higher-order" needs of recognition and self-actualization may play a relatively more important role in stimulating motivation. Conversely, in societies where the basic needs of survival such as food, clothing, shelter, have not been generally guaranteed, the considerations of pay and promotions will have a greater weight on the motivation of workers.

10. There are also some well grounded generalizations which would suggest that public sector employees are less motivated than their private sector

counterparts. It has generally been true that public employees enjoy a relatively high level of job security. A number of procedural protections make it relatively difficult to terminate the employment of public service employees. Although in many parts of Africa, frequent changes of government, and especially the prevalence of non-constitutional governments, have eroded this traditional protection that public servants have enjoyed, it is still generally true that public servants enjoy a greater degree of job security than their private sector counterparts. Job security is seen by many analysts as detrimental to worker motivation because security tends to make workers complacent. The thought that one's job could be in danger if adequate effort was not forthcoming is most likely to energize workers to produce, at least, adequate performance.

11. Another accepted generalization is that the public sector provides fewer incentives to their employees than the private sector. In Ghana, as in most African countries, public sector salaries and benefits are fractions of those paid in the private sector for similar occupations. The tight budgetary situations in which many African countries find themselves have accentuated this situation as have some of the conditionalities of international financial institutions which stipulate that public sector payrolls should not exceed specified proportions of the Gross Domestic Product or the Central Government budget.

12. Given that in poor societies such as exist in Africa, considerations of pay are likely to be very influential with regard to employee motivation. Are there some general principles which govern the pay of public employees? Robert Klitgaard (1989) in his very interesting article - "Incentive Myopia" has attempted to answer the question - how much should a public employee be paid? "Economic theory suggests the social value of his or her long-run marginal product. In other words, society should compensate the employee at the margin for the long-run social benefits his or her efforts produce. In theory, the level of such compensation will depend on a host of factors, such as the characteristics of the particular employee and the rest of the public and private labour force, opportunities in the private sector, and the social evaluation of various public goods and services. From where should the money for public employees come? 'Citizens will pay for public services, through non-disturbing taxes and user charges' is the theoretical answer. If the present generation is unable to pay enough to finance projects that also benefit future generations, the theoretical solution is to finance them by borrowing. In a perfectly functioning capital market, creditors will be happy to finance projects whose social benefits outweigh their costs". Although Klitgaard concedes that in the real world, practical problems stand in the way of this theoretical solution, he makes the firm point that "conceptually, the solution is to assess the long-run social marginal products of objective performance and pay government employees accordingly". Klitgaard emphasises the importance of strengthening the links between performance and

rewards for public officers, and makes some recommendations in this direction which will be looked at later.

13. There have been other formulations of the principles which should guide the pay of public employees. The Anderson Committee (United Kingdom) on the pay of State Servants (1923) stated categorically that "in our view there is only one principle in which all factors of responsibility, cost of living, marriage, children and social position are included - the employer should pay what is necessary to recruit and to retain efficient staff". This requirement has generally been held to mean that public employees salaries should be comparable to those of their private sector counterparts. Thus, again in the United Kingdom, the Tomlin Commission of 1931 laid it down that Civil Service remuneration should be based upon broad general comparisons with the remuneration of equivalent outside employment, considered on a long term basis. This principle was upheld in the U.K. Royal Commission on the civil service in 1951-53 which elaborated the so called principle of "fair comparison" which stipulated that the first principle of civil service pay should be "fair comparison with current remuneration of outside staffs employed on broadly comparable work, taking account of differences in other conditions of service."

14. The principle of "fair comparisons" was said to take care of the interest of the community in general, of those administering the Civil Service, and of the individual Civil Servants themselves - "the community must feel that it is getting an efficient service and is not being asked to pay an excessive price for it. Heads of department must have sufficient suitable qualified staff to carry out the tasks demanded of them, the individual civil servant must feel that his remuneration is not unreasonable". The requirement that public servants should feel that they are being justly treated if they are to give off their best is central to the whole question of employee motivation in the public service for as E.N. Gladden (1967) has observed - "A person who devotes himself to the service of the state knows that he is inevitably sacrificing certain marginal opportunities. He will not grow rich, and even if the risk of utter poverty is absent, to sacrifice such a chance of wealth has a discouraging effect upon the spirit of the energetic person".

15. To be really efficient, the public official must, therefore, believe in his life's work with almost religious devotion. But if this high endeavour necessarily springs within the soul, it can be maintained and nurtured, except in the heart of exceptional individual, only by a system that proffers justice to its servants." The public service is not exactly the priesthood, and while more than conditions of service motivated public employees, it is unlikely that public servants will be efficient unless they have reasonable good conditions of service.

PRODUCTIVITY

16. The concept of productivity is perceived differently by different people. To industrial workers, it may be associated with the physical units of output which must be produced in a given period. For the economic analyst, productivity measures the efficiency with which resources - men, equipment, knowledge etc are used to produce goods and services. This efficiency concept of productivity reflects a relationship between inputs and final product. It is a somewhat narrow concept for it deals with the quantity of goods and services produced but does not include product quality. Production data generally will indicate for instance, how many pairs of shoes have been produced with the resources available, but will not give an indication of the quality of the shoes.

17. The most common indicator used to measure productivity is expressed as the ratio of output to the number of employees - labour productivity. But this measure of productivity does not necessarily isolate and measure the effort of workers or the specific contribution of labour alone. Paradoxically this so called measure of labour productivity sometimes reflects more the "productivity" of the machine and equipment and other complementary factors rather than productivity of labour per se. For instance, a farmer equipped only with a hoe and cutlass will clear only a fraction of the acreage that a farmer equipped with a tractor can clear even though the physical exertion of the former may be greater than that of the latter.

18. The traditional measure of labour productivity runs into serious problems when applied to government employees. This is principally because the performance of public workers cannot usually be measured quantitatively, and so many of government's activity such as in defence and regulatory activities are not explicitly bought and sold in the market place. In the absence of market valuation, national accounts statisticians estimate output change in terms of movement of employment, and the output attributed to the government sector is made equal to the value of wages paid in the government sector. Since output in these circumstances, is by definition equal to input, productivity must remain constant. Because of this measurement problem, the government sector is often excluded from productivity statistics.

19. The difficulty in measuring the productivity of public employees stands in the way of linking the pay of public employees closely to performance. Merit-pay systems have not been popular in the public services of even the advanced industrialized countries. The injustices that may result from rewards based on inappropriate or imperfect measures of productivity is one of the principal reasons for resistance to merit pay systems even though the threat they pose to the public

service norms of teamwork has also been cited as a disadvantage. In spite of the disappointments which the system of merit pay has generated in some advanced countries, one writer has called it "an expensive, complicated and inequitable system". Klitgaard is of the view that the breakdown of incentives in the public services of many developing countries requires that an attempt be made to do a better job of measuring and rewarding productivity in public services while remaining attentive to the measurement problems.

20. A practical consideration in this regard is that given the budget constraints under which many developing countries labour, it is not possible to raise everyone's level of remuneration. To some, this would not be desirable even if it were feasible. As Ledivina Carino has recommended, "provide incentives to do good - reward faithful, innovative service not by general systemwide increases in salary scales - that is a humanitarian gesture not a reward - by providing merit increases and promotions to deserving people. Across the board increases confirm the notion that government pay is independent of performance."

21. Klitgaard argues that it may be possible to link at least part of public employees' compensation to performance even if this is imperfectly measured. He suggests that it may be best to begin with such agencies as revenue - raising agencies where results are specific and reasonably easy to measure. For such agencies bonuses could be paid contingent on meeting performance targets. For instance it could be decided that if the customs service generated 20% more revenue, then 10% of the additional amount would be paid out as bonus and 90% would go to the treasury. In Ghana, the revenue agencies - the Customs Services and the Internal Revenue Service have been subjected to this kind of incentive system over the past four years, and the experiment appears to be working quite well.

THE IMPACT OF SOCIO-ECONOMIC CRISIS OF THE 1980S ON MOTIVATION AND PRODUCTIVITY IN THE PRIMARY, SECONDARY AND TERTIARY SECTORS OF THE ECONOMY

22. The Ghanaian economy declined throughout the 1970s and early 1980s, but the pace of decline was particularly sharp after 1972. The result of this cumulative downward trend of the economy was that in 1982, per capita real income was only two-thirds of that of 1972, import values had dropped by a third over the same period, and inflation averaged 44% per year over the period.

23. This deterioration in the economy in the 1970s and early 1980s resulted from a combination of inappropriate economic policies, political instability, and exogenous shocks both at home and abroad. Large budget deficits financed

principally by borrowing from the central bank, led to a marked acceleration in inflation which reached triple deficits in the early 1980s. Given the reluctance to adjust the nominal exchange rate, the real exchange rate appreciated significantly and acted as a disincentive to the production of export commodities, with the result that real export earnings fell by 52% between 1970 and 1982. The decline in export earnings, together with a dry-out of external inflows caused by donor disenchantment with Ghana's economic management, led to a severe shortage of foreign exchange which further constrained production and growth and meant that the populace found it difficult to obtain even the most basic consumption needs.

24. The decline in tax due to the reduction in exports and imports and the related drop in economic activity forced major cuts in government recurrent and capital expenditures. This generated a very significant deterioration in the social infrastructure and further reduced the productive capacity of the economy. Government controls and rationing which worsened the problem by eroding production incentives, and created a vast black market with related corruption, smuggling and tax evasion.

25. In addition to the inappropriate economic policies, political instability also contributed to the economic deterioration. Between 1970 and 1983, there were three successful coups d'état in Ghana (1972, 1979, 1981) and one palace coup in (1978). In addition, there were numerous unsuccessful attempts at violent overthrow of government. The political instability led to a considerable discontinuity in policies and prevented policy measure from having enough time to take effect and for the usefulness or otherwise of policy measures to be evaluated. The political instability also led to a rapid turnover of personnel not only at the political level but also at the top of the public bureaucracy. This by itself adversely affected performance, but it also increased the risks attached to high public office, reduced managerial initiative and created a situation under which some of the best people were reluctant to accept high public office. The political instability also generated timidity on the part of successive governments. Governments have been understandably reluctant to take measure with considerable short-term unpopular consequences irrespective of their probable long-term benefits. The exchange rate stayed overvalued as long as it did partly because of the perceived political and security risks of a currency devaluation.

26. Finally political instability could not have produced an environment attractive to direct private foreign investment. Ghana's economic problems were aggravated in the early 1980s by a series of internal and external shocks. These principally relate to a severe drought in 1982-83 which caused the worst food shortages in living memory, a sharp deterioration in the terms of trade following increases in petroleum prices and lower prices for cocoa and gold, and by the sudden return of over a million Ghanaian expelled from Nigeria in 1983.

27. The deterioration in economic and social conditions and the inappropriate economic policies had a devastating effect on motivation and productivity in all sectors of the economy. In the primary sector, the reluctance to devalue the cedi led to a very sharp decline in the local prices paid to cocoa producers. This generated a reduction in cocoa production and increased smuggling of what was produced. The diminishing availability of inputs such as insecticides and insecticide sprayers also contributed to a decline in yields and productivity. In addition, the unavailability of even the most basic commodities reduced the incentive and the motivation to produce. In the case of mining, shortages of foreign exchange to maintain and rehabilitate the mines, lack of capital investment for exploration and development, and the absence of consumer goods on which miners might spend their earnings eroded motivation and productivity in the mining industry. In the manufacturing sector, the shortage of foreign exchange denied manufacturing enterprises of the needed imported raw materials, spare parts and equipments and led to widespread underutilisation of capacity. The decline in real wages, and the unavailability of consumer goods also reduced the motivation of the labour force to work.

28. In the tertiary sector, especially in the government sector, the main focus of this study, the economic deterioration wrought considerable havoc on motivation and productivity. The shortages of basic commodities meant that many public servants had to spend official working hours searching for basic consumption items for their families and themselves. The hardships also created a situation in which many public servants spent official working hours to do second jobs and private business to supplement their incomes. The budgetary difficulties also meant that the necessary tools, supplies and materials with which public servants worked were often unavailable. Shortages of paper, duplicating material, typewriters often frustrated work in many government ministries and departments. Schools without books or even chalk, hospitals without drugs or dressings, created frustrating working environment for many teachers and doctors and other medical personnel. The result of the economic hardships and the loss of job satisfaction produced by the shortages of working tools and materials produced a very considerable exodus of teachers and other professionals to some of Ghana's neighbouring countries and farther afield.

THE REFORM AND STRATEGIC MANAGEMENT MEASURES TO IMPROVE MOTIVATION AND PRODUCTIVITY

29. As part of the Economic Reform Programme launched by the Ghana Government in 1983, there has been a public sector management improvement programme with two related sub-programmes -

- (i) a Civil Service Reform Programme and
- (ii) an Economic Management Support Programme.

THE CIVIL SERVICE REFORM PROGRAMME

30. The Civil Service Reform Programme was based on the recognition that the Ghana Civil Service's effectiveness had declined as a result of real low wages, particularly for senior staff, substantial vacancy rates at higher levels, overstaffing at junior levels, inadequate institutional and legislative framework, and an imbalance between wages and salaries and non-wage outlays. The Government accordingly sought the assistance of external consultants in a programme to strengthen the management of the civil service in five related areas - salaries policy, training and staff development, management services, personnel management, and a functional review and redeployment study. The external consultancy services were procured from Coopers and Leybrand Deloitte in association with the Royal Institute of Public Administration. Funding was provided by the Overseas Development Agency (ODA) of the United Kingdom. Logistics support (cars, computers etc) was provided by the World Bank). Detailed terms of reference were drawn up for the external consultants with respect to:

- i. Civil Service Personnel Management Review
- ii. Salaries Review
- iii. Management Service Division
- iv. Functional and Redeployment study and
- v. Civil Service Training and Staff Development Programme.

These terms of reference are reproduced below because they give a very good articulation of both the objectives of the reforms and the detailed mechanisms by which it was intended to achieve the objectives of the reforms.

CIVIL SERVICE PERSONNEL MANAGEMENT REVIEW

31. In the light of the importance which the Ghanaian authorities attach to the establishment of a modern civil service properly trained, graded and motivated to achieve public sector elements of the Economic Recovery Programme (ERP), the Consultants would review all aspects of the civil service personnel function within

the office of the Head of the Civil Service (OHCS) with special reference to the following:

- (i) The legislative framework within which the OHCS exercises its authority for all personnel actions, in particular control over staff complements and grading, the conduct of staff inspections and organization and methods reviews including the authority to approve and co-ordinate all internal and external civil service training, to prepare and administer schemes of service, to carry out performance appraisal reviews, to determine salary policy, including allowances and superannuation arrangements. In relation to the above, to make recommendations for the modification of the Public Service Act to ensure that statutory authority for such action is clearly defined.
- (ii) To review the need for a pragmatic civil servant manpower plan covering 3-5 years establishing priorities for filling unknown vacancies, and recruitment and training priorities consistent with the implementation of the ERP.
- (iii) To review the personnel function, the Consultants will take specific account of the revised civil service structures and operating relationships reflected in the Government's decentralization programme, and the organizational relationships within the OHCS and the Cabinet Secretariat.
- (iv) To review procedures for staff performance evaluation and to make recommendations.
- (v) To examine the need for a Staff Relations Unit as an integral part of the OHCs responsive to civil service morale and welfare issues.
- (vi) To carry out such duties related to the foregoing as the Overseas Development Agency (ODA) may, in consultation with HOCS, determine.

Salaries Review Phases 1 and 2

32. In the light of the importance which the Ghanaian authorities attach to the need to establish a rational civil service salaries system, taking into account movements in cost of living, the consultancy will operate in two phases:

Phase 1 - Senior Level Interim Adjustment

- (i) The consultant will examine existing salary scales of posts falling within the grades, Category C to Category A with the objective of adjusting salary levels to compensate for the loss of purchasing power relative to comparable managerial and professional posts in the parastatal and private sectors subject to the capacity to pay.
- (ii) In proposing salary adjustments, account will be taken of the arrangements which now exist for the absence of private practice opportunities for serving professional offices and the need for the introduction of allowances to reflect market scarcity values. In recommending salaries increase, the consultants will set out detailed cost estimates of such increases in a full financial year.

Phase 2

- (i) To review existing machinery for the determination of salary and allowances policies and to make recommendations for assigning responsibility for the development of such policies to a specific department; and to indicate appropriate arrangements for consultation with other departments, where necessary.
- (ii) To review existing grading arrangements with a view to rationalizing the grading structure, including the abolition of consolidation of grades, aimed at removing existing salaries anomalies.
- (iii) In relation to i) and ii) above to carry out a detailed study of the salary and grading structure using job evaluation techniques with the objectives of rationalizing the existing pay structure and deciding grade and pay levels on a "rate

for the job" basis as opposed to grading the individual officer.

- (iv) To examine the feasibility of introducing some form of merit rating system based on performance and out-put and to review existing incremental formulae with special reference to the reduction of long or overlapping incremental scales.
- (v) To carry out a detailed analysis of pay, grading and allowances in the parastatal and private sectors with a view to providing realistic comparability data against which revised salary levels for the civil service may be determined.
- (vi) To develop a comprehensive set of Conversion Tables necessary for the implementation of proposed levels of salaries and to consider the need for some form of Standing Anomalies Committee.
- (vii) To develop cost estimates of proposed changes in salary levels and allowances for a full year and to recommend dates either for direct implementation or an interim awarded arrangement or on a phased basis taking into account the performance of the economy.
- (viii) To carry out such other assignments related to the foregoing as the ODA may, following consultation with HOCS, determine.

Management Services Division

33. In the light of the crucial role played by the OHCS in the restoration of the Ghana civil Service, to enable it to play its full part in the ERP the Consultants will:-

- (i) review the operation of OHCS with special reference to the improvement and expansion of the Management Services Division to achieve full control over staff complements and grading.

- (ii) examine the legislative framework within the OHCS, in particular, the Management Services Division, operates with a view to ensuring that its authority to execute its responsibilities is legally defined in the Civil Service Act.
- (iii) review the need for an Organization and Methods Unit to be established as an integral part of Management Services Division specifically concerned with the development of comprehensive systems and procedures, including procedures manuals, in the Accounts, Personnel, Stores and Audit Departments.
- (iv) examine the suitability of existing procedures for collecting and maintaining reliable data on civil service personnel and to propose arrangement for the integration of personnel statistics with payroll data so as to be susceptible to computerization.
- (v) examine existing Schemes of Service with a view to ensuring that these fully reflect the current needs of civil service covering staff development, grading, training, recruitment and promotion strategies and to devise such additional Schemes as HOCS may direct.
- (vi) develop a short and long term staff development programme for the specialist personnel in the Management Services Division with a view to defining an appropriate establishment and the local and external training programmes necessary to equip such offices with the skill needed for optimum performance.
- (vii) carry out such other duties related to the foregoing as the ODA may, in consultation with HOCS, determine.

34. The Civil Service Reform Programme is still on-going but after 3-4 years, it is possible to make some assessment of what has been achieved so far. The Civil Service Reform Programme has produced outputs in seven core areas, and the summaries below, based on consultants' evaluation reports, provide the main highlights.

STRENGTHENING OF THE MANAGEMENT SERVICES DIVISION

35. At the beginning of the reform programme, the management services division consisted of seven staff members in run down of offices, undertaking almost no assignment work. By the end of 1990, over 30 jobs inspectors had been trained locally and abroad to form a core team to scientifically assess manpower needs and develop staffing norms. Over 350 inspections had been conducted in Ministries and Departments and the recommendations of the inspection teams were being implemented. Information management in the Civil Service in such areas as records processing and registry practices was in the process of being improved. Overall, the management Services Division has developed an enhanced capacity to undertake major management reviews and other analytical studies.

IMPROVEMENT IN PERSONNEL POLICY AND MANAGEMENT

36. There has been a full review of the Civil Act and the Administrative Instructions. A new Performance Appraisal System is to be introduced to link with merit pay, and a model scheme of service is being developed to be used in Ministries. New management Units are being created in all Ministries and departments and a centralized personnel database is being established to enable effective manpower planning and produce regular staff lists.

STRENGTHENING OF TRAINING AND MANPOWER DEVELOPMENT

37. A Cadre of Management Development Officers has been established to conduct training needs analysis in all Ministries and to assist with staff development. A series of Staff Management Improvement Programme have been run at the Ghana Armed Forces Staff college, over 90 fellowships have been arranged for specialist training abroad, and a national training policy developed and local training institutions, notably the Ghana Institute of Management and Policy Administration, the Management Development and Productivity Institute, have been strengthened.

REVIEW OF INCOMES POLICY AND SALARY ADMINISTRATION

38. The review provided objective evidence that civil servants are underpaid as compared with their parastatal and private sector counterparts. A simpler grading structure for all levels of the civil Service has been recommended and the

Prices and Incomes Board with the help of the consultants is nearing the end of a job evaluation of all senior posts to introduce a revised structure for those levels. The current multiplicity of grades, functional groups and grade points has been identified to be inhibitive of sensible deployment of staff and effective career development. The review aims eventually to establish a rational public service pay system within which salaries and benefits are seen to be fair, reasonably competitive and performance related.

FUNCTIONAL REVIEW AND LABOUR REDEPLOYMENT

39. Job inspections reveal that overstaffing levels of up to 20% existed in some non-critical occupational groups. About 35,000 civil servants have been redeployed over the period 1987-90, with a full compensation package and an option for training.

STRENGTHENING OF THE OFFICE OF THE HEAD OF CIVIL SERVICE

40. The office of the Head of Civil Service has been restructured and three new Divisions, Management Services, Personnel Policy & Management and Training and Manpower Development established to spearhead the reform programme.

REFORM/STRENGTHENING OF ECONOMIC MANAGEMENT

41. In addition to the programme to reform the general Civil Service, there has been a special programme aimed at key public agencies directly involved in the management and implementation of the Economic Recovery Programme. The government realized early in the implementation of the Recovery Programme that the long period of economic decline had its toll on some of the key public agencies involved in the implementation of the Recovery Programme and that management capacity in these institutions was weak. Measures to strengthen this capacity were therefore planned and supported by a World Bank financed Structural Adjustment Institutional Support (SAIS) project. The SAIS project has subsequently been replaced by an Economic Management Support (EMS) project devoted to the same purposes as SAIS. The key public institutions to which the two projects have been directed are:

The Ministry of Finance & Economic Planning (MFEP),
The Ghana Statistical Service (GSS),

The Office of the Controller and Accountant-General (CAG) and
The National Revenue Secretariat (NRS).

THE MINISTRY OF FINANCE & ECONOMIC PLANNING

42. The Ministry of Finance & Economic Planning is the key government agency responsible for the formulation, implementation and monitoring of economic policies and accordingly, and has a pivotal role in the management of the Economic Recovery Programme. It has been recognised that partly due to the Ministry's limited capacity for policy formulation and analysis, outside institutions, principally the International Monetary Fund and the World Bank, have had too heavy a role in the design of the Economic Recovery Programme. The Ghana government and these outside institutions have felt that the country should strengthen its own capacity for design and analysis of economic policies and in pursuit of this desire, a new unit, the Policy Analysis division, was created within the Ministry of Finance & economic Planning in 1989. The Policy Analysis Division is responsible for monitoring and analyzing economic data; making recommendations in the areas of monetary, fiscal, agricultural, and industrial policies, social issues and poverty alleviation.

43. It was originally envisaged that Ghanaian professionals resident overseas would be attracted back to this Division and paid close to internationally competitive salaries. This scheme, however, ran into problems and the Division has experienced difficulties in recruiting sufficient numbers of experienced staff. The EMS has provided funds for the engagement of local consultants as well as for contracting studies to assist in the formulation of policy and in the evaluation of the impact of the Economic Recovery Programme. Another aspect of the work in MFEP which has been the object of reform and strengthening is the debt management function. The EMS project is financing equipment and training for the staff of the debt Monitoring Unit of the MFEP to enable them discharge more effectively their function of monitoring and projecting data on Ghana's external debt and advising government on debt strategy.

44. Central government budgeting and fiscal management in general have also attracted the attention of the reforms aimed at strengthening economic management capacity, and some progress has already been made in this area. In 1989-90, some computerization of the budget process was carried out designed to facilitate more analysis, better integrate information, and speed up the preparation and publication of the budget. The EMS project aims at strengthening various aspects of budget preparation and implementation. Budget documents are to be made more comprehensive and published on time. A well reformed computerized

system is to be set up to facilitate the integration of data on the development budget and external assistance.

THE GHANA STATISTICAL SERVICE

45. The Ghana Statistical Service is the principal agency for the collection, analysis and dissemination of social and economic data. Although the need to monitor the programme of the Economic Recovery Programme has increased the demand for timely information on the economy, the Statistical Service's capacity to deliver data on a timely basis has been limited. The EMS project accordingly aims at strengthening the capacity of the GSS by providing technical assistance to improve methodologies, expanding and speeding up printing and by providing computers and appropriate software.

THE CONTROLLER & ACCOUNTANT SERVICE DEPARTMENT

46. The Controller and Accountant General's Department is responsible for the receipts, custody and disbursement of public moneys. It is also responsible for keeping, rendering and publishing Public Accounts of Ghana. In view of the acute shortage of accounting personnel in the public service, it has to rely mainly on non-professional accountants. A training programme has been devised to upgrade the knowledge of skills of the existing staff in the areas of accounting, auditing, public sector finance and administration and computer management. The EMS would also provide funds to enhance and expand the computer system to enable the Accountant General's department to bring up to date government accounts, provide timely information on actual government expenditure and aid in more effective budget implementation.

THE NATIONAL REVENUE SECRETARIAT

47. Domestic resource mobilization plays a very crucial role in the economic recovery efforts, and particularly important with regard to the funding of government activities and employees. In 1985, the National Revenue Secretariat was established to formulate tax policy and to supervise the two revenue collection agencies the Internal Revenue Services and the Customs, Excise and Preventive Service. As a result of stronger administration and also as a result of the adoption of a realistic exchange rate, tax revenue has risen from about 5.5% of Gross Domestic Product in 1983 to above 14% in 1990. Government now wants to shift emphasis on tax policy from revenue generation to an even greater focus on ensuring that taxes are raised in a manner which promotes economic growth

through a more favourable climate for investment and creates incentives for activities making the most efficient use of Ghana's resources.

48. In furtherance to this shift in emphasis, the tax system is being analyzed to assess the impact of the tax structure on incentives to save and invest. The EMS project accordingly aims at strengthening the National Revenue Secretariat in its role of implementing the recommendations arising from the tax reviews. Emphasis is being placed on the training of tax personnel in tax policy formulation, tax administration and effective utilization of computerized systems.

CONCLUSIONS

49. In previous sections of this paper, the interactions between deteriorating economic conditions and declining performance in the public services were noted. The decline in revenue collections in Ghana, for instance, was not due only to inappropriate policies, or solely due to circumvention and corruption, but also due to the inability of the government agencies responsible for revenue collection to operate their systems effectively. The reduced government revenues, of course, made it more difficult to recruit and retain efficient staff. Difficulties in budgeting, financial planning and data collection, major problems in managing external debt and exchange rates, and in keeping track of aid and foreign investment flows all reflected diminished public service effectiveness. These deficiencies in turn worsened the economic situation. In view of these interdependencies, the Ghana public Service reform programme has been seen to be an integral part of the general economic reform programme. In fact, the reforms aim at improving the general economy and living conditions preceded the Civil Service Reforms.

50. There have been some suggestions that public servants have been twice victimized, first by the economic decline which reduced their real wages and denied them the tools with which to operate effectively, and then by the adjustment measures aimed at containing the economic crisis which have involved retrenchment of staff among other adverse impacts. Thus James Nti (1989) observes that "as a means of containing the economic crisis, and on the insistence of the I.M.F; which always prescribes reduction in the size of the public service as one of its conditionalities, many African government have resorted to mass retrenchment of staff". Apart from the human suffering that this mass retrenchment may cause in view of the absence of social security systems that provide unemployment benefits, another possible adverse consequence of the Civil Service retrenchment is highlighted by Nti. He writes, "Certain individuals join the public services and are prepared to receive lower remuneration because it provides security of service. Retrenchment shatters this belief, and creates a sense

of insecurity, especially because of the stop-and-go manner in which many African countries carry out retrenchment exercise. A feeling created among those not retrenched in that lightning does not strike twice in the same place.

51. This sense of insecurity created diversion of energies and of time, with public servants using official time to seek alternative jobs as a contingency measure. This implies that they have divided attention and do not perform their duties full time or properly. In effect, morale and the relationship between management and staff could be very adversely affected. It could result in a significant drop in productivity". The aim of the retrenchment or "deployment" programme has, however, been exactly the opposite; it has been aimed at improving the levels of productivity through better management of the manpower resources in the country. It has aimed at reallocating the excess labour force in the public sector in more productive sectors of the economy such as the informal and agriculture sectors. It has also been hoped that the reduced numbers of public servants would enable those who remain to be better remunerated. There is no hard information, however, as to how many of the 35,000 or so retrenched staff have been absorbed in other occupations. There are also reasons to believe that the net budgetary impact of the civil service retrenchment exercise has been modest. It has been estimated that the gross fiscal impact of the staff reduction amounts to less than 1% of the central government total recurrent expenditure. If one takes into account severance payments, the net budgetary impact is likely to be very small indeed. In any case, it has so far not been possible to improve substantially the levels of remuneration of those civil servants who remain, and there has consequently been some questioning as to whether staff reductions per se deserve a central position in civil service reform programme.

52. Given that the prospects of providing adequate incentives to the whole public service are not bright in view of central government budgetary difficulties, suggestions have been made for critical skills required for the successful implementation of the economic programme to be isolated and given special treatment. Schemes along these lines have included special duty allowances for Civil Servants working in the structural adjustment programme, and improved incentives for local consultants and returning Ghanaians undertaking special assignments. There has been very considerable resistance within the Civil Service to these special schemes and most of the planned schemes appear to have been abandoned.

53. The Ghana Civil Service reform programme has been cited as an example of a reform approach which starts from the premise that nothing effective can be done until fundamental issues of numbers, pay and grading a civil servant are tackled and improved. This is said to be the "basic administrative reforms first" approach as opposed to the "basic administrative capabilities first" approach such

as has informed the Ugandan reform programme. This latter approach is said to be based on a recognition that many administrative systems have declined too far and the basic administrative capacity must be restored before the fundamental problems of numbers, pay grading and motivation can be tackled successfully. The Ghana programme has, however, so far dealt in some way only with numbers and grading, not much so far has been done in the areas of pay and motivation and it is too early to tell, therefore, whether the reforms will result in a more productive public service.

REFERENCES

1. C.B. Graham Jnr, and S.W. Hays: Managing the Public Organisation: Congressional Quarterly Inc. 1986.
2. Buddy R. Silverman: "The Merit Pay System: A Prognosis." Review of Public personnel Administration Summer 1982.
3. Sar A. Levitan and Dianne Werneke: Productivity, Problems, prospects and Policies, The John Hopkins University Press.
4. Robert Klitgaard: "Incentive Myopia", World Development, Vol. 17, No. 4, 1989.
5. James Nti:- "The Impact of the Economic Crisis on the Effectiveness of Public Service Personnel". in M.J. Balogun and G. Mutahaba ... Economic Restructuring and Africa Public Administration, Kumarian Press, 1989.

II. ETHIOPIA

INTRODUCTION

54. In most countries, the public service includes those engaged in governmental employment, normally in ministerial or regulatory agencies created to monitor the various administrative action fronts relevant to the country. Under this conception, the public service is more or less what is generally referred to as the civil service. In countries which espouse socialism/communism as their guiding economic and social philosophy, all the means of production and the resultant services from the production to the consumption processes and activities are the exclusive province of the state. Consequently, practically all labour, be it engaged in the primary, secondary or tertiary sector, falls under the rubric 'public service' employee. The term 'public service' in Ethiopia therefore connotes a much wider coverage both in terms of the activities subsumed and the types and number of employees involved.

55. In Ethiopia, which is the concern of this country case study, the public service has this wider meaning and includes activities and employees in all sectors-primary, secondary and tertiary. Indeed, the coverage in Ethiopia is so wide ranging that even economic activities in the range of running small bakeries and coffee and tea shops have not escaped government involvement. It is therefore true to say that all areas, with the possible exception of informal sector activities, constitute the public service as far as Ethiopia is concerned. This, as noted earlier, is on account of the country's orientation toward communism beginning in the early 1970s.

56. In dealing with the subject 'motivation' and productivity in the public service in Ethiopia, therefore, attention is called to the fact that motivation and productivity are dealt with in the country as a whole since the activities not covered by the term 'public service' are very few and relatively insignificant. As regards the concept of 'motivation', in the sense of the worker reacting to a natural and freely felt inner drive to exert himself/herself to higher job performance in anticipation of the reasonable returns, the ideological orientation of the country left little scope for individual initiative of any sort.

57. It is, therefore difficult, if not impossible, to conceive of motivated behaviour especially at the level of the individual. The system produced the conformist par excellence because workers realized, sometimes after bitter experiences involving public disparagement, imprisonment and even execution,

that under socialist control of the type practised in Ethiopia, it did not pay to stick one's neck out either in favour or against practically anything. Workers were therefore not known to perform exceptionally well for this would involve breaking the performance picket line that was considered customary and normal. Lagards were treated no better as they were often accused and dealt with for failure to be committed to socialism and socialist production objectives. As a result, an informal agreement emerged where no visible differences were to be seen between workers in terms of job performance.

58. Under these conditions, individual motivation to work lost all possible significance since, motivated behaviour brought out the worker's individuality to the forefront and this entailed being noticed with all the attendant negative consequences to the person concerned. The 'productivity' concept likewise had its peculiar features as far as Ethiopia was concerned. The term is not understood to signify the commonly held notion of increases in the rate of output given the same inputs or that of stable outputs complemented by progressively declining inputs. Over the years, it came to nothing more than either doubtful claims as could be seen from Table 1,

Table 1 : Value of Production at Constant 1971 price by industrial branch (in 000 Birr)

No.	Industrial Branch	1979	1978	1981	1982	1983	1984
1	Food industry	331,038	363,456	391,810	400,494	449,733	377,419
2	Beverage industry	135,929	146,795	164,423	176,130	190,590	203,832
3	Tobacco industry	38,543	41,118	41,811	49,498	57,804	61,683
4	Textile industry	262,360	302,953	324,133	331,484	340,475	343,638
5	Leather & Shoe indus.	68,936	88,144	87,591	91,332	96,647	109,835
6	Wood & Wood products	17,121	17,898	20,246	20,617	25,116	25,534
7	Paper, Printing, Publishing Industry	43,573	53,864	58,570	65,470	68,793	75,060
8	Chemical industry	71,929	83,195	90,922	101,133	114,060	131,063
9	Non-metallic mineral-products industry	19,217	28,027	29,243	36,245	34,316	29,589
10	Metal products	78,649	87,278	92,671	95,718	106,139	113,914
	TOTAL	1,067,295	1,212,728	1,301,420	1,368,121	1,483,673	1,471,567

Adapted from : PHAC, Ministry of Industry, Statistical Bulletin II, 1985.
Interviews with Ministry of Industry personnel responsible for
the preparation of these data informed the writer that they
themselves have no means of verifying their accuracy.

or simply how many top party officials the public service organization could invite to ceremonies deliberately staged for them to vet claims of the organization having achieved higher and higher productivity. The state of affairs in most cases revealed that productivity could not increase, as noted earlier, without those responsible for it being held accountable, in a negative sense, for the individual initiative which alone can bring it about.

59. The virtual impossibility of attaining growth in production and productivity in the Ethiopian public service can be derived from a review of key economic indicators shown in Table 2. These key economic indicators uniformly depict the difficult conditions in which the country found itself in 1980 to 1985.

Table 2: Key Economic Indicators

	Indicator	1980	1981	1982	1983	1984	1985
1	GDP growth (% p.a)	5.5	3.0	1.1	5.3	-3.7	-6.5
2	Growth in Agriculture (%p.a)	4.8	2.4	-1.1	4.7	-9.9	-16.0
3	Domestic Savings (% GDP)	4.8	3.1	2.2	2.7	2.8	-0.6
4	External Current Account Deficit (% of GDP)	-4.5	-5.2	-7.2	-6.9	-8.9	-8.8
5	Overall Fiscal Deficit (% of GDP)	-4.5	-4.1	-5.0	-13.8	-6.0	-8.1

Adapted from: World Bank, Ethiopia: Recent Economic Developments and Prospects from Recovery and Growth, p.5.

This overview was given to improve the perspective on what is considered the public service in Ethiopia. Focus is now turned to a review of motivation concepts as they apply to the Ethiopian public service.

Motivating Public Service Employees to Work

60. One of the main tasks of an organization or a service (including the public service) is to motivate its workers to exert themselves to the achievement of its pre-determined objectives. Among the many orientations resorted to in motivating employees to work is an organizational bent that may be labelled, in general, the "be nice" approach. Although variations in how it is precisely exercised are noticed from place to place and from leader to leaders, a general drive to raise employee morale through the provision of good working conditions, including competitive wages, fringe benefits and fair supervision is the main feature of this approach.^{1/}

61. This technique of motivation, although highly paternalistic in outlook and considered too traditional and of limited efficacy nowadays, does have its strengths when applied particularly to lower income groups. In the Ethiopian situation, the very sparse means at the disposal of public service organizations which are aggravated by excessively disproportionate expenditures on sectors like the military, make this option non-practical. The means are simply not there to enable splurging on employee welfare programme on any meaningful scale to induce improved morale and motivation.

62. If this approach were at all feasible, the provision of fringe benefits and employee services could bolster the employer's reputation and serve to attract better workers. Further, the general feeling of security reflected in the paternalistic approach can serve reduce turnover and tension among employees who, in due course, are expected to contribute to higher productivity. A further scheme for improving morale and motivation is through use of the worker's natural competitive bent to excel. Leaders who rely on this system peg pay increases and promotions, ends to which most workers aspire, to how well each worker has met the requirements of the job.

63. Unfortunately for the advocates of the system, there are a number of obstacles, which together, reduce the value of the system. There is, for instance, the question as to whether everybody is interested in promotions and some such advancements. Many people, who are reasonably satisfied with their present earnings and position, avoid the extra effort required to win advancement.^{2/} Excessive competition has also been known to be disruptive to overall

^{1/} Sayles and Strauss, p.144.

^{2/} Ibid. p. 149.

organizational objectives as each tries to get ahead of colleagues even at the risk of stepping on other's feet. There is also the problem relating to the ability of supervisors to measure which of their employees have been more successful in as much as many job outputs do not lend themselves to precise measurements.

64. Such a system hardly carries any relevance to Ethiopia where ideological arguments have been resorted to in assailing this very system. Opponents of the system in Ethiopia, and this includes the party hierarchy as a whole, condemn such competition as tainted by die-hard capitalistic notions incongruous with the "comradely" spirit of moving "Forward and Upward" in unison.

65. A final approach to improving employee morale and motivation to work is the 'authoritarian' principle. At its unembellished form, this system maintains the practicability of forcing people to work through threats such as pay reduction or outright dismissal if they do not work. In the Ethiopian case, the coercive measures in the system included being sent to prison as a saboteur of socialist progress. This system, due to the fact that it did not require much leadership insight or ability, was the most prevalent form of the motivational devices resorted to in Ethiopia. What little success is attributable to the system emanates from the fact that workers and their families lived on the fringe of starvation in the majority of cases, that the needs for food, shelter and job security constituted an overwhelming drive to submit to arbitrary and roughshod leadership styles.

66. The logical consequence of this method of improving the motivation to work has been rather negative, to put it mildly. Workers who were not either by nature or aptitude prone to high performance exerted concerted effort against those who excelled on the job to force the latter not to cross the maximum output level informally set by the larger group. Crossing over meant facing trumped up charges, accusing the good performer of crimes against socialism of one genre or another with limitless consequences to the welfare and even to the life of the non-conformist.

67. In general, very little is done by way of providing incentives to public service employees in whatever sector they may find themselves -- agriculture, industry or the services. There is no uniform system of incentives applicable to all public service personnel. The main incentive for all categories of work is only the prospect of promotion which, in the nature of things, is only a rare occurrence. And since promotion is based more on political loyalty to the socialist system than on work performance, even the efficacy of this limited incentive scheme is very much compromised in terms of its ability to reward superior performance. Since the onset of the socialist revolution in 1974, salaries have been frozen for workers earning 450 Birr (US\$ 215.00) or more a month. For those earning less than this amount certain incentives apply. If production

and profitability go up in a plant, the workers in that plant earning less than 450 Birr, get a salary increase. This increase is limited to 5 per cent of their total wage bill and is distributed such that those earning lower wages get the higher percentage increase and those with the higher wages get smaller percentage increases. The rationale behind this is to progressively reduce wage differentials to attain the ideologically acceptable income equality in the end.

68. While such an incentive system caters to the general welfare aspect of the public service employee, its effectiveness as a motivating device for the individual employee is limited. Under this system the worker can obtain a salary increase even though he had nothing to do in causing the increase in production and profitability. Improvements in production and profitability can come about as a result of a variety of factors which may not necessarily be attributable to better performance of lower paid workers. These other factors affecting the level of output can include improved managerial effort, for example. If this is in fact the case, the freezing of salaries for the management group and providing increases for low-paid labour goes contrary to the normal workings of incentive systems and their efficacy in producing a labour force motivated to work.

69. Complicating matters further in terms of the public services inability to provide workable incentives is the drastic decline in the real monthly income of public service employees. This is illustrated in Table 3 which gives the decline in monthly incomes of civil servants due to the rampant inflation afflicting the economy as a whole.

Table 3: Real Monthly Income of Civil Servants in Administration/Professional Grades 1975-1984.

Grade/Level	1975	1976	1979	1980	1982	1984
a) <u>Level XIV</u>						
i) 5th step	672	522	338	323	288	267
ii) Maximum	880	684	442	423	377	349
b) <u>Level XV</u>						
i) Base salary	600	466	301	288	257	238
ii) 5th step	790	614	397	380	339	314
iii) Maximum	1,035	805	520	498	444	411
c) <u>Level XVI</u>						
i) Base salary	710	552	356	341	304	282
ii) 5th step	930	723	467	447	399	396
iii) Maximum	1,220	948	613	587	523	485
d) <u>Level XVII</u>						
i) Base salary	835	694	419	401	358	332
ii) 5th step	1,090	848	547	524	468	433
iii) Maximum	1,440	1,120	723	692	619	572

Source: World Bank, Ethiopia: Recent Economic developments and Prospects for Recovery and Growth, p.103.

70. In addition to the scant attention given to questions of improving morale and the motivation to work in the Ethiopian public service, other policy measures have been adopted by the government and rigorously implemented, the net effect of which has been the progressive reduction in production and productivity. It will be beyond the scope of this paper to give a rundown of all governmental policy measures and notions that militated against productivity improvements. For this reason, only two propositions or policy orientations and their implications

on the productivity of the public service establishments have been highlighted in the section that follows.

**PRODUCTIVITY IMPLICATIONS OF TWO ECONOMIC
PROPOSITIONS IN THE MANAGEMENT OF ETHIOPIAN PUBLIC
ENTERPRISES**

71. Economic propositions have been preferred regarding the type of industrial equipment appropriate to Ethiopian conditions and the extent to which use must be made of industrial equipment. The basic thrust of these economic propositions may be summarized as follows:

- a) Operating in a developing country with serious capital scarcity, Ethiopian manufacturing public enterprises have no use for what might be described as capital-intensive technology. They could attain the same level of output and productivity using labour-intensive technology. Labour-intensive technology is preferred because the country is endowed with abundant and inexpensive labour which, because it is not for the most part yet in effective employment, entails an opportunity cost or a shadow price approaching zero. Therefore, technology that relies heavily on physical labour as the basic motive force for the running of industry tends to be more compatible with productivity and growth of Ethiopian manufacturing public enterprises. Industrial equipment with heavily built-in automatic features, not only tends to militate against desired productivity and growth objectives; but is precluded as a practical proposition by the stubborn constraint of capital scarcity which a developing country, such as Ethiopia, can do little within its means to relax. This argument appears to be in harmony with the Heckscher-Ohlin Theory of factor endowment as the basis of international production specialization. This theory, it may be noted, had been superseded by the Leontief Paradox.^{3/}
- b) As a sequel to this first argument, an economic proposition/policy is also maintained to the effect that maximum use of industrial equipment accords with higher productivity and industrial growth.

^{3/} For a complete review of the meaning and significance of the factor endowment theory and the Leontief Paradox see R. Findly, International Specialization, Trade and Specialization, (Middlesex, England: Penguin, 1970), pp. 87-107.

If developing countries are typified by limited endowment of capital resources, then, whatever little importation of industrial equipment they make implies a proportionately greater capital-resource-sacrifice on their part. It, therefore, follows that, to mitigate this capital-resource-sacrifice, maximum production mileage must be extracted, from the imported industrial equipment. This means that a production-use level of industrial equipment approaching the theoretical ceiling, or the rated capacity of the equipment, becomes desirable for the labour-abundant but capital-scarce economy of Ethiopia. Without attempting to go into an involved elaboration of the pros and cons of the above-given propositions on industrial productivity, it is intended in this paper to provide a brief sketch of the productivity implications of each stand.

The conceptual perspectives of the two economic propositions on productivity and the management of Ethiopian Public Enterprises .

72. Although output per man hour is the sense in which productivity is usually defined, such a definition omits equally important inputs and ratios to productivity. These other ratios consist of, without limitation, output per machine hour and output per unit of capital invested.^{4/} In its broadest sense, productivity is "... the quantitative relationship between what we produce and the resources we use. There is a clear and distinct difference between production and productivity. It is quite possible to increase the actual volume of production and yet decrease productivity. In seeking higher productive efficiency, therefore, the concern is not simply with increasing output, but with increasing output from the same or smaller use of resources of all kinds.^{5/}

73. As thus defined, the factors that affect and influence the level of productivity are:

- (a) The nature and quality of the raw materials used for production.
- (b) The nature of the production process employed.

^{4/} International Labour Office., Higher productivity in Manufacturing Operations (Geneva, ILO, 1965).

^{5/} R.M. Currie, Working Study (London: Pitman, 1967).

- (c) The amount of plant (that is, industrial equipment) employed in the production process.
- (d) The efficiency of the plant employed.
- (e) The volume, continuity and uniformity of production.
- (f) The extent of effective utilization of manpower.^{6/}

74. Having identified the factors that bear upon and influence the level of productivity as above, it is now left with specifying the action fronts toward which productivity campaigns must be directed. These managerial action fronts consist of:

- i. Improvement of basic manufacturing processes by means of continuing product research and development
- ii. Acquisition and installation of improved manufacturing plant.

75. The foregoing two management action areas obviously involve a heavier commitment of capital, and as such, fall under the long-term measures to be implemented in order to improve productivity.

- iii. Simplification and improvement of the products and trimming down the product lines.

76. This management action line, while not necessarily a long-term proposition, can not be effected easily in the short-run either. It represents what one might consider an intermediate-time-span objective which may require a moderate amount of capital outlay.

- iv. Improvement of methods of operation.
- v. Improvement of the organizational set-up and of the planning and control functions.
- vi. Improvement in the effective utilization of manpower.

^{6/} Ibid., pp. 12-13 The factors that influence the level of productivity are more fully reviewed here.

The last three management action fields are in the nature of managerial routines to be performed continuously and reacquiring little or no capital outlay.^{7/}

77. The second range of production terms that need to be defined before progressing further are those that relate to types of manufacturing plant: their degree of specialization and automaticity, their layout patterns and the extent of utilization of their production capacity.

- a) Manufacturing plant may be subdivided into general-purpose or special-purpose according to the range of operations for which it is built. A general-purpose machine would be one which is used to perform a number of production operations. By contrast special-purpose machinery usually perform one particular manufacturing operation and normally on one part only. While these extremes are noted for purposes of conceptual appreciation of the types of manufacturing plant in general, there is no reason to suppose the actual existence of an either-or condition. Most items of manufacturing plant are neither fully generally-purpose nor special-purpose. The degree of specialization is therefore of essence in the production and productivity process.
- b) Another method of classifying industrial machinery is by the degree of automaticity or the extent to which machines possess built-in automatic features. On this basis, plant may be classified as being manually operated, semi-automatic, or automatic.
- c) Either by virtue of the special requirements of the production process itself or by deliberate managerial choice arising from an optimization of the economic conditions that pertain in particular situations, industrial plant may broadly be arranged using three or four layout patterns.

78. These layout patterns are:

- i. Line layout-- a method of ordering the location of manufacturing plant on the factory floor such that the materials to be processed by the plant follow the same route between machines.

^{7/} Ibid. p.14 The management challenge-areas towards which productivity campaigns should be directed are treated here.

- ii. Process layout-- a method of ordering the location of manufacturing plant such that all machines that perform the same or similar operations are grouped together in an area of factory floor. A factory layout using process logic as a means for allocating floor space may be said to be built around the concept of process specialisation.
- iii. Product layout-- a method of arranging plant such that all machines required to complete a particular part or sub-product are grouped together in an area of factory floor. A factory laid out in this manner is characterized by what may be termed product specialization.
- iv. Flexible layout-- a method of arranging and re-arranging plant to suit particular jobs. Plants in flexible layout are not assigned permanent locations. This layout pattern is usually adopted when the product to be processed is bulky and can not be moved from work-centre to work-centre with ease.^{8/}

79. Plant capacity utilization is also significant. Plant capacity may be defined as the time available for work at a work-centre expressed in machine-hours, minutes etc. The theoretical maximum number of machine-hours to be obtained from any given machine is 168 (that is, 7 days x 24 hours each day). In practice such a maximum capacity use can seldom be attained. The actual plant capacity is obtained by estimating the idle machine time, and the machine down time, and deducting the two from the theoretical maximum plant capacity. We can therefore, restate 'plant capacity' to be the maximum volume of work flow which can be handled by the plant available, under given conditions of material flow.

80. Capacity in manufacturing operations also involves other dimensions, however. These are:

- a. Labour capacity-- the maximum volume of work flow which can be handled by the labour available.

^{8/} See E.F.L. Brech The Principles and Practice of Management (London: Longmans, 1966) and E. Wilkinson Production Methods and Services(London: Pitman, 1964).

- b. Capital capacity-- the maximum volume of work flow which can be sustained with the (finance) capital available.^{9/}

Analyses of Economic Propositions on Ethiopian Public enterprises

(i) Proposition One

81. Proposition one states that Ethiopian manufacturing enterprises must rely on labour-intensive as opposed to capital-intensive technology. This proposition implies that Ethiopian manufacturing enterprises must opt for general-purpose or manually operated machinery. The ostensible rationale behind this proposition is that special-purpose machinery is costly in the aggregate since each unit of equipment is restricted to only one of perhaps dozens of operations. The fewer the number of operations performed by individual machines the greater the number of unit-wise expensive machines required. That is, since special-purpose machines, normally possess superior built-in technical features, they are costly per unit and therefore more costly per manufacturing operation.

82. The argument proves true to a point and when viewed in its own terms. But it fails to take into account other important considerations. General-purpose machinery, although admittedly cheaper per production operation, tends to require relatively skilled manpower to couple with it. The old hand-operated general-purpose machinery "...require considerable skill and training before they can be operated successfully; [the newer special-purpose] machines require very little skill or even no skill. The skill is now required more in the machine-tool designers and tool-makers and in those who service and set up the plant than in the operators, who in the automatic plant are little more than machine operators."^{10/}

83. Since Ethiopia's endowment of skilled manpower is limited, it stands to reason that any advantages gained from the smaller capital investment on general-purpose hand-driven types of machines might be more than offset by costs accruing as a result of paucity of skilled manpower to operate these types of machines. These costs come in the form of poorly finished goods and in serious and frequent breakdowns of machinery. The less than satisfactory quality of the finished products, coupled with the higher cost of production induced in its turn

^{9/} This topic is better covered in R. Marris *The Economics of Capital Utilization* (London: Cambridge University Press, 1964).

^{10/} J.L. Burbidge, (5.p.31) and Gedye (8.pp.78-79 et passim).

by the higher repair and maintenance costs, could threaten both the domestic and foreign market competitiveness of Ethiopian manufactured goods.

84. Empirical testing of this hypothesis should prove very useful. On the basis of a priori observation, however, it seems that the productivity of Ethiopian manufacturing public enterprises appears to suffer as a consequence of the adoption and implementation of the factor-endowment theory in deciding the acquisition of industrial machinery.

85. The labour-endowment theory appears to argue in favour of those machine layout and production organization patterns adaptable to 'job' as opposed to 'batch' (interrupted flow) and 'mass production' (continuous flow) methods. Although production methods and factory layout patterns are not neatly associated one to the other, it is generally known that the line pattern of plant layout is more compatible with mass(continuous) production flow whereas the process and product patterns associate better with the job and batch methods of production.^{11/}

86. There is a strong reason why mass(continuous) production -- exemplified by line layout--fails to be suitable for a capital-poor country. The major feature of this type of production organization is that each stage, of the manufacturing process should possess equal time - value for production to be economical. Additional machinery at the bottleneck spots could be acquired until equal production-time values are attained at each stage of the manufacturing process. It is this problem of bottleneck removal--by means of acquisition of additional machines--that renders continuous production a capital-intensive alternative.

87. While this problem is uniquely featured in the continuous production alternative, the alternative is not without its compensating advantages:

- a. continuous production lends itself to the greatest efficiency of production, and therefore to improved productivity, since, in this pattern, materials flow through the factory along the minimum number of paths with a minimum amount of counterflow. This feature results in a significant reduction of the materials handling costs.

^{11/} E. Wilkinson, *Production Methods and Services* (London: Pitman, 1964) pp. 71-81.

- b. Continuous production also reduces throughput time. In other words, the time required between feeding materials into the production system and retrieving finished goods from it, is considerably reduced. Better material flow improves capital utilization by reducing capital tie-up and thus makes it possible to attain the same output with a smaller circulating capital. This result is in line with the manner in which we defined productivity.
- c. Continuous production, by improving material flow, thereby simplifies the supervision and production control activities. These benefits contrast sharply with the poor flow characterizing the job and batch types of production which are usually associated with process and product layout patterns. It can therefore be stated that, while continuous production may entail greater sacrifice of investible capital resources, it compensates for this by yielding features which are in harmony with improved productivity expectations. The proposition, in Ethiopia, which advocates deliberate bias toward job and batch types of production organization does not seem to be justified from the point of view of productivity considerations.^{12/}

(ii) Proposition Two

88. Proposition two states that Ethiopian manufacturing enterprises must utilize their manufacturing plant to somewhere near its theoretical maximum capacity. The rationale behind this proposition runs as follows: Ethiopia faces a critical shortage of investible capital. Despite this condition, it must keep on investing on capital equipment since even the most labour-intensive technology requires a certain minimum in the form of a capital complement. It stands to reason, therefore, that maximum returns be obtained from this resource since its opportunity cost is staggeringly high. It is for this reason that the Ethiopian national development Campaign and Central Planning Supreme council used to continuously urge industrial enterprises to "fulfil and overfulfil" their assigned production quotas. This position has unleashed a determined drive on the part of public industrial enterprises to operate their production facilities at near their theoretical rated capacities.

89. Such a direction, indeed, never fails to improve the productivity of the investment on plant. If productivity were restricted in its meaning only to the

^{12/} See J.L. Burbidge op.cit., pp. 36-37.

productivity of plant, we would then have rested assured that our policies were producing the desired results. Unfortunately, however, maximum plant utilization can be attained, "only at the expense of optimum labour and capital utilization. With respect to labour, maximum plant utilization can be obtained only if there is surplus labour which can be used to man the machines when the regular operators are absent for any reason. This provision of extra labour can be justified (only) when a factory is highly mechanized and the fixed capital represents a large part of the total investment. Generally in industry, however, the optimum use of labour is more important than the optimum use of plant."^{13/}

90. It should be noted that much of Ethiopia's factory equipment is not anywhere near qualifying for the label "highly mechanized". It is therefore certain that productivity improvements deriving from the optimum use of plant, will be more than offset by productivity declines arising from the sub-optimal use of labour.

91. The productivity implication of maximum use of plant capacity is not restricted to only the decline in the productivity of labour. With respect, also, to capital, "optimum utilization of plant can be obtained only when there is a very high investment in stocks. Stocks of [raw]material must be high to eliminate all risks of waiting for raw materials, and finished parts stocks will be high, due to the fact that large batches will tend to be machined in order to get minimum idle time [from machines having to wait for semi-finished components]."^{14/}

92. If in order to run machinery to its maximum capacity, surplus labour is required and a huge inventory of raw materials, optimum plant-capacity becomes incompatible with optimum labour and capital utilization. Economic decisions seldom involve treading a path undisturbed by conflicting choices. To optimize labour and capital utilization, the optimum use of plant must be foregone and vice-versa. If so, what is the "second-best" policy choice for Ethiopian manufacturing public enterprises on the question of capacity utilization? The answer to this question is clear:

"It is probable that too much emphasis has been placed on maximizing plant utilization, and that considerable economic benefits are possible by reducing the emphasis on plant and paying more attention to the efficient use of labour and capital. Finding the optimum balance between the

^{13/} Ibid p.39, Emphasis added.

^{14/} Ibid p.39.

weight to be given to these three factors of plant, labour and capital is one of the most complex problems in industry, and there is no simple mathematical method by which it can be solved."^{15/}

93. In the case of Ethiopian manufacturing public enterprises, however, the problem of identifying the optimizing choice can not be too difficult. It is a fact that, by policy choice, the major input into the production process in Ethiopian public enterprise is labour. It is also a fact that the great bulk of the industrial raw material is imported. These two inputs add to a greater share of the cost of production in Ethiopia. While physical capital or plant is by no means cheap, it is by far the smaller input.

94. It is therefore certain that the optimum use of plant in Ethiopia guarantees a less than optimum use of labour and capital. Choice in favour of optimizing the use of plant, hence, inevitably militates against the productivity of Ethiopian manufacturing public enterprises which stand to be burdened by increasing labour and (finance) capital costs.

Conclusions

The following conclusions are preferred on the basis of the foregoing analysis:

95. Labour-intensive technology is not necessarily in harmony with the aims of Ethiopian manufacturing public enterprise to improve its level of productivity. This is not however, an un-conditional conclusion: (i) The propriety of opting for capital-intensive technology implied by this conclusion is fraught with its own complications. Quite apart from the difficulties involved in raising the large investment capital, there is the additional danger of the wide-ranging dependency on foreign technology toward which a bias in favour of indiscriminate capital-intensity can lead. (ii) The validity of this conclusion is limited in its scope of application to productivity implications at the level of individual public enterprise only. No attempt has been made to accommodate important normative issues and considerations that may be crucial for policy at the macro level. (iii) A priori observations have constituted the primary basis that led to the formulation of the present conclusion. In the light of this, it is freely admitted that its strength must await empirical testing and validation.

96. Operating industrial machinery to its maximum capacity, aside from aggravating the problems of plant wear and tear and the required maintenance,

^{15/} Ibid, p.39.

tends to depress the productivity of Ethiopian public enterprises, and--in the long-run--threatens to prove a self-defeating option.

97. The motivation and productivity concepts operating in Ethiopia militated against those that had the high morale and the desire to produce. The cumulative effect of this state of affairs was the ruining of the economy across all sectors. As if this was not enough, Ethiopia was also not spared from the devastating consequences of the socio-economic crisis of the 1980s. The combined effects of public service mis-management, on the one hand, and the socio-economic crisis of the 1980s, on the other, was to squeeze Ethiopia so devastatingly that how soon the country can manage to rehabilitate itself from the harsh consequences of these crisis is very uncertain, at the moment.

98. As far as the Ethiopian government's initiatives at reform are concerned, the publication of two policy documents at the very outset of the socialist government coming to power are ones that deserve mention. These are the 1976 programme of the National Democratic Revolution and the 1975 Declaration on Economic Policy of Socialist Ethiopia. It was a result of these policies that all rural lands and urban land and extra houses were deemed government property. These nationalizations also included manufacturing enterprises, farms, and export/import establishments of all kinds.

99. In the belief that collective effort makes for rapid growth people were urged to join mass organizations of all types. Some have argued that the main purpose behind organizing the people to join groups was to enable the government to have complete control of the masses through the groups they join.

100. Another reform measure was the creation of the Revolutionary Campaign and central Planning Supreme Council to give the government's intervention in economic and social affairs the comprehensiveness and immediacy this aspect requires under socialism. The determination of production targets and even their pricing policy, which public service organizations had to meet, by the central planning office left little autonomy for initiative at the level of the enterprise. Consequently, motivation and productivity were low and drastic departures from past policy measures and guidelines are indicated if the state of affairs is to change for the better.

REFERENCES

1. Battersby, A., Guide to Stock Control (London: Pitman, 1967).
2. Beer, S., Cybernetics and Management (London: English Universities Press, 1959).
3. British Standards Institution, Principles of Production Control (London: British Institute of Management, 1953).
4. Gedye, G.R. Scientific Method in Production Management (London: Oxford University Press, 1965).
5. Mott, P.E., The Characteristics of Effective Organizations (New York: Harper & Row, 1972).
6. Price, J.L., Organizational Effectiveness: An Inventory of Propositions (Homewood, Ill.: Irwin, 1968).
7. Rice, A.K. Productivity and Social Organization Technical Innovation, Work Organization and Management (London: Tavistock Publications, 1961).
8. Shaw, A.G., Purpose and Practice of Motion Study (Columbine Press, 1960).
9. Woodward, J., Management and Technology (London: HMSO, 1958).