



GHANA

SEVEN-YEAR DEVELOPMENT
PLAN

**1963/64
TO
1969/70**

PRICE: TEN SHILLINGS

SEVEN-YEAR PLAN
FOR
NATIONAL RECONSTRUCTION AND
DEVELOPMENT

FINANCIAL YEARS
1963/64-1969/70



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FOREWORD

The Seven-year Development Plan which is now published embodies the proposals in the Party's Programme of Work and Happiness adopted at the Party Congress in July, 1962, and accepted by the country.

The Plan provides the blueprint for the future progress and development of Ghana as a nation. It is a programme of social and economic development based on the use of science and technology to revolutionize our agriculture and industry. It is designed to provide the basis not only of our national progress and prosperity, but also of our ability to contribute to the advancement of the African continent.

Our aim is to establish in Ghana a strong and progressive society in which no one will have any anxiety about the basic means of life, about work, food and shelter; where poverty and illiteracy no longer exist and disease is brought under control; and where our educational facilities provide all the children of Ghana with the best possible opportunities for the development of their potentialities.

The material basis for a socialist society can only be created by the labour of its people. This requires the highest sense of dedication on the part of all within the society. In working for the economic and social reconstruction of Ghana, we must see to it that the fruits of the people's labour shall belong to them, not to any class of exploiters. But first of all we must create the wealth. The only way to build up the national wealth is to maintain a maximum rate of productive investment in industry and agriculture.

The Plan, therefore, lays its greatest emphasis on the modernisation of agriculture and the most rapid expansion of industrial activity in Ghana. The essential aim of the Plan is to provide for all the people of Ghana who are able and willing to work, the opportunity for employment at a high level of productivity. Only in this way can the standard of living of the masses of the African people be raised to a level consistent with the human dignity of the man of the twentieth century. It must be the cardinal duty of all of us in Government, in productive enterprise and in our private lives to ensure at all times that everything is done to promote the highest level of activity in agriculture and industry.

This development must proceed in such a way as to promote our national independence and the unity of the African continent. We in Ghana have a mixed economy in which we have assigned to both public and private enterprise legitimate and important roles to play in our national development. We intend, however, to use the resources of the State to the maximum degree possible for productive investment in agriculture and industry.

FOREWORD

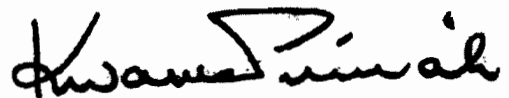
The Plan also provides for the development of the social services, of transport and communications, of electricity and water supplies on a scale hitherto unprecedented in Ghana. But proportionately it provides that the rate of investment in agriculture and industry and in the training of the manpower to run the economy should increase even faster.

Apart from the welfare of the individual Ghanaian, we intend to use the resources which our participation in the productive economy yields to the State to promote the economic independence of Ghana and the unity of Africa. It is therefore planned that the investments of the State in agriculture and industry should be so directed that the most strategic sectors of production will come under public control. It is also provided in the Plan that Ghana will actively participate in the movement towards Africa's economic unity as a part of the eventual unification of the continent. Only an economically strong Ghana can play a meaningful role in this historical process.

It is our hope that by the end of this Plan in December, 1970—which will coincide with the tenth anniversary of the Republic—firm foundations will have been laid for the complete transformation of Ghana into a strong, industrialised socialist economy and society.

The Plan has been prepared by the National Planning Commission under my Chairmanship, with the assistance of experts from Ghana and abroad. It sets out clearly the effort and sacrifice which will be required of each of us to enable the Plan to succeed. I, for my part, am determined that the Plan shall succeed but my determination must be supported by the combined efforts of the whole nation, including Members of Parliament, our Public Servants, our farmers and our working people.

In this spirit, I charge all of you to study this Plan very carefully and in doing so to consider what Ghana requires of you in respect of its implementation. If we all work hard and conscientiously at our tasks under this Plan, we can look forward with hope to a new Ghana where the opportunities for work and happiness will be matched by the abundant fruits of labour for all.



President of the Republic of Ghana

INTRODUCTION

The Planning Commission was set up in October, 1961 and a start was made then with the building up of an Office to service it. In spite of the small size and relative inexperience of the apparatus of planning in Ghana it was early on decided to attempt a comprehensive Plan along the lines set out in this document rather than to restrict our planning to the drawing up of a public investment programme as had been done hitherto in this and other developing countries. It was obvious that a public economic policy that mostly concerned itself with the traditional government services was no longer adequate: the growth of the productive economy in all its aspects must now become the central concern of Government. Especially with the increasing need to define the Government's socialist objectives in terms of economic development and to build up rapidly the public and co-operative sector in the productive economy it was no longer possible to maintain the narrower concept of planning. It was also considered necessary to introduce the people of Ghana more fully into the background and disciplines of economic policy; to show them how the sacrifices and efforts that they make in their own individual sphere contribute to the total national development; how the nation must set its priorities in order to obtain the maximum progress; how in choosing to do one thing we must forgo the chance to do some other desirable thing—especially, how and why it is proposed to save a large part of our national wealth to spend on development instead of spending it on immediate consumption.

The Ghana economy is already a fairly complex one. The task of drawing up a comprehensive Plan for it was made more difficult for the new planning organisation by the fact that we are as yet in the process of building up an adequate stock of statistical information about the country. These difficulties were partly made up for by the nature of the Planning Commission. The membership of the Commission covered a very wide field of knowledge and experience drawn from the civil service, the universities and business. This expert body was organised into a series of Committees, each Committee being empowered to co-opt as many other members as it needed. The present Plan is essentially the distillation of all the ideas and suggestions thrown up in the course of the work of these Committees throughout 1962. A great debt of gratitude is owed to these members of the Planning Commission—a list of whose names is shown in Appendix A—and to all the other experts who assisted them. In order to draw upon an even wider store of expertise and to profit by the experience of other parts of the world which have passed through or are currently in a similar stage of development to Ghana's a Conference was organised in April, 1963 to discuss an earlier draft of the Plan. To this Conference was invited a panel

INTRODUCTION

of internationally eminent authorities in the field of economics and planners from other African countries (see *list at Appendix B*) as well as many local professional, business and educational authorities. The suggestions and criticisms of all these people have helped us to produce a set of proposals for Ghana's economic development which we know are difficult but practicable.

Inevitably the result of this first effort at comprehensive planning must be far from perfect from the technical point of view. Much work remains to be done in working out detailed programmes of implementation and in planning individual projects. This Plan itself must be constantly reviewed as we gain more experience and collect more information. By the time we come to draw up a second Seven-year Plan the 1960 population census, the data on external trade, the consumption surveys and the national income estimates, which formed the statistical backbone of the present Plan, will have been supplemented with new data on agricultural and industrial production, on the balance of payments, on labour, wages and prices, and on the inter-relationships between different parts of the economy. We should then have a fairly complete statistical basis for planning in Ghana. There will also have grown up a cadre of Ghanaian planners who can use this information to draw up a technically more advanced type of Plan.

In the final analysis however the real value of a plan is to give to the nation a sense of direction and to institute a system of purposive discipline. The task of holding the nation onto its chosen course and of drawing out of the people of this country their willing sacrifice and enthusiastic co-operation has been entrusted to a new Planning Commission. Upon the success of this Commission in actually changing the face of Ghana and improving the lives of her people depends the success of this, as of any other, development Plan.

J. H. MENSAH
Executive Secretary.

SPEECH BY OSAGYEFO ON LAUNCHING THE SEVEN-YEAR DEVELOPMENT PLAN, WEDNESDAY, 11th MARCH, 1964

Mr Speaker, Members of the National Assembly:

I have come here to-day to present to you, and to the people of Ghana, our Seven-Year Development Plan which, when completed, will bring Ghana to the threshold of a modern State based on a highly organised and efficient agricultural and industrial programme.

The main tasks of the Plan are: firstly, to speed up the rate of growth of our national economy. Secondly, it is to enable us to embark upon the socialist transformation of our economy through the rapid development of the State and co-operative sectors. Thirdly, it is our aim, by this Plan, to eradicate completely the colonial structure of our economy.

On this occasion, let me take the opportunity here and now to thank all those experienced men and women, Ghanaians and non-Ghanaians, who have contributed so much to the preparation of this Plan.

Mr. Speaker, when the Convention People's Party came to power in 1951, the pace of development was so slow and confused that we decided to speed it up by attempting to implement in five years the programme of reconstruction which was designed by the colonial administration to take place over a period of ten years. That programme was not a development plan. It was a collection of various individual petty projects that had to be built in preparation for future planning.

At the conclusion of this programme, it became necessary to pause for two years in order to consolidate our position. By the time we reached the stage of implementing the next phase of our programme, it had already become quite clear to us that the only real solution to the reconstruction of Ghana lay, in the long run, in the adoption of a socialist and co-operative programme for industry, and the mechanisation and diversification of our agriculture. Our hopes in this regard lay in the Volta River Project, about which I will have more to say later on.

Mr. Speaker, this Seven-Year Development Plan which I now lay before you is therefore the first really integrated and comprehensive economic plan ever drawn up for Ghana's development after a thorough examination of our needs and resources. The Plan is designed to give effect to the Party's Programme of Work and Happiness which has already been accepted by the country. It also embodies a long view of the path which should lead to a self-sustaining economy, based on socialist production and distribution. An economy balanced between industry and agriculture, providing a sufficiency of food for the people, and supporting secondary industries based on the products of our agriculture. In other words, an economy founded securely on the basis of socialist production and distribution.

Our aim, under this Plan, is to build in Ghana a socialist State which accepts full responsibility for promoting the well-being of the masses. Our national wealth must be built up and used in such a way that economic power shall not be allowed to exploit the worker in town or village, but be used for the supreme welfare and happiness of our people. The people, through the State, should have an effective share in the economy of the country and an effective control over it.

A socialist Ghana must also secure for every citizen, at the earliest possible date, an adequate level of education and nutrition and a satisfactory standard of clothing, housing and leisure.

The Party has always proclaimed socialism as the objective of our social, industrial and economic programmes. Socialism, however, will continue to remain a slogan until industrialisation is achieved. Socialism demands a very different kind of planning and economic structure from the type that was evolved by the colonial administration. This is why in 1961 we set up a Planning Commission and charged it with the responsibility for drawing up this Development Plan which I present to you to-day as an instalment in the process by which we hope to turn Ghana into the sort of country we envisage.

A socialist State cannot come by itself, nor can it be established by the formulation of plans. Socialism has to be worked for and even sacrificed for. Socialism, which is aimed at the emancipation of the people from exploitation, has to be built by the people. It is the expression of the people whose Government accepts responsibility for promoting their welfare to the fullest possible extent.

Our youth from the primary schools, through the secondary schools to the universities and higher institutions of learning, should and must be taught and trained in the socialist philosophy. They must be taught to know the workings of neo-colonialism and trained to recognise it wherever it may rear its head. They must not only know the trappings of colonialism and imperialism, but they must also be able to smell out the hide-outs of neo-colonialism.

In this endeavour, we shall expect from each citizen a maximum contribution to the national economy according to his ability and training. It is only in proportion to the contribution which each of us makes to the work of the Nation that we can expect to share in the material gains which the socialist development of the economy will make possible.

Mr. Speaker, in order to accomplish our objectives, we have decided that the economy of Ghana will, for some time to come, remain a mixed economy in which a vigorous public and co-operative sector will operate along with the private sector. Let me make it clear that our socialist objectives demand that the public and co-operative sector of the productive economy should expand at the maximum possible rate, especially in those strategic areas of production upon which the economy of the country essentially depends.

We are determined that the economic independence of Ghana shall be achieved and maintained so as to avoid the social antagonisms resulting from the unequal distribution of economic power. We are equally determined to ensure that the operation of a mixed economy leads to the socialist transformation we envisage, and not to the defeat of our socialist aims. It is essential, therefore, that we should remind ourselves at all times of the necessity

- firstly, to promote to the maximum the development of the State and co-operative sectors;
- secondly, to regulate the pattern of State investment in order to give the highest priority to productive investment, and
- thirdly, to determine and direct the forms and conditions of foreign investment, in order to safeguard our socialist policy and national independence.

In this way, we shall ensure that the growth rate of the public and co-operative sector of our economy will exceed the growth rate of the private sector, particularly in industry and agriculture.

Mr. Speaker, as you know, we have already established many industrial projects and enterprises, as a means of securing our economic independence and assisting in the national control of the economy. I must make it clear that these State Enterprises were not set up to lose money at the expense of the tax payers. Like all business undertakings, they are expected to maintain themselves efficiently, and to show profits. Such profits should be sufficient to build up capital for further investment as well as to finance a large proportion of the public services which it is the responsibility of the State to provide.

In every socialist country, state enterprises provide the bulk of State revenues, and we intend to follow the same pattern here. Our State enterprises will be set yearly financial and production targets so that they may work towards definite objectives and goals and thereby given every stimulus to operate efficiently and profitably. Hence, the managers of our State enterprises, and those in charge of our State organisations and apparatus should be men trained in management; honest and dedicated men; men with integrity; men who are incorruptible.

When we have succeeded in establishing these principles, Government will then be in a position to lower taxes progressively, to lessen steadily the burden of taxation on the people and eventually to abolish many of them, if not all of them.

I have set up a State Management Committee to bring these ideas to life and to help in building up strong, well managed, efficient and profitable State enterprises.

I intend, however, that the State Management Committee shall do more than that. I want to ensure that the people of this country are fully informed of Government's intentions and plans, particularly with regard to industrialisation and

agriculture. The people have every right to be fully informed in order that they may know what our objectives are, what progress we are making and how Government funds are being spent in the interest of this country's economic development.

I am convinced that with this knowledge will come that understanding which will give our people the necessary impetus to do all they can to help achieve our objectives for work and happiness and accelerated development.

Mr. Speaker, foreign investment as the private-sector of our industrial development can play an important role in our economy. It has a valuable contribution to make to our economy and to the attainment of certain specific objectives. Among these will be production of consumer goods, the local processing of Ghanaian raw material and the utilization of Ghana's natural resources in those lines of economic activity where a large volume of investment is required.

We expect, however, that such investments will not be operated so as to exploit our people. On the contrary, we expect such enterprises to assist in the expansion of the economy of the country in line with our general objectives. Foreign investment enterprises will contribute personal initiative, managerial ability and technical skills towards the development of the country. They will also further the growth of similar initiative, ability, technical skills and habits of saving among Ghanaians.

We welcome foreign investors in a spirit of partnership. They can earn their profits here, provided they leave us an agreed portion for promoting the welfare and happiness of our people as a whole as against the greedy ambitions of the few. From what we get out of this partnership, we hope to be able to expand the health services for our people, to feed and house them well, to give them more and better educational institutions and to see to it that they have a rising standard of living. This in a nutshell is what we expect from our socialist objectives.

Mr. Speaker, in pursuing these objectives, we shall exert our efforts towards the maximum extension of the public sector within the productive economy. As I have said, within this framework we do not intend or desire to limit private investment.

Our Government has always insisted that the operations of all economic enterprises in Ghana should conform to the national economic objectives and be subject to the rules and regulations which are made in pursuance of our socialist policies. Our experience has been that foreign investors have been willing to invest in Ghana so long as the limits within which they can work are fair and clearly defined, and we shall continue to consult with them in order to ensure that co-operation is as full as possible.

Ghana's economy, particularly at the present stage, has room for all the investment capital which is likely to be provided by foreign investors, by the Central and Local Governments and by individual Ghanaians. In this respect, I believe that

there are a considerable number of individual Ghanaians who are in a position materially to assist in finding the necessary capital for the Seven-Year Development Plan.

One of the worst features of colonialism was that it produced an unbalanced economy in which there was little room for investment of the profits which were made by expatriate firms. In colonial days it was natural that profits made in Ghana should be invested abroad. To-day the situation is entirely different. An investor who lays out his money wisely in Ghana is likely to make a larger profit than if he invested it in a more developed country. Nevertheless, old habits of investment persist and there are a considerable number of Ghanaians who still maintain their savings in foreign investments and in property outside Ghana.

Under our Exchange Control laws it is, of course, illegal for Ghanaians to have property abroad without having declared this to the appropriate authorities. This aspect of our law is not always understood. The Government has therefore decided, not to penalise any Ghanaian firm or individual who, within the next three months, repatriates foreign holdings of money to Ghana, or who declares ownership of foreign property. A thorough investigation is afoot to discover the extent of holdings of foreign exchange and properties by Ghanaians, and those who do not take advantage of this offer but continue to conceal their foreign assets, must expect, after the three-month period of grace, to be subject to the full rigours of the law.

Mr. Speaker, the Seven-Year Development Plan makes provisions for a maximum volume of investment from all sources.

We intend that the State should retain control of the strategic branches of the economy, including public utilities, raw materials and heavy industry. The State will also participate in light and consumer goods industries in which the rates of return on capital should be highest. We intend also that those industries which provide the basic living needs of the people shall be State-owned, in order to prevent any exploitation.

Mr. Speaker, Members of the National Assembly, let me now turn to the specific proposals of the Seven-Year Plan.

In the next seven years, it is proposed that there will be a total expenditure of one-thousand-and-sixteen million pounds, that is, over a billion pounds sterling, on development projects in the Plan. Of this total, it is intended that four-hundred-and-seventy-six million pounds should be provided by the Central Government. Foreign investors, individual Ghanaians, Local Authorities and the Co-operative sector are expected to invest about four-hundred-and-forty million pounds. We also hope that individual Ghanaians will contribute nearly one-hundred million pounds' worth of direct labour in the construction of buildings, in community development and in the extension of their farms.

The total government investment will be four hundred and seventy-six million pounds.

Investment throughout the Seven-Year Plan period will average one hundred and thirty million pounds a year. Of this, approximately one half, or sixty-eight million pounds a year, will be invested by Government, and the rest by private investors.

We continue to look to the outside world to contribute to our national development. We expect the more advanced and industrialised countries to facilitate our trade in primary commodities and manufactured goods so that we can finance the bulk of our development out of our own resources and earnings.

We hope that where necessary, the Government of Ghana will be able to borrow money on reasonable terms for essential and productive projects. Let me say again that we welcome foreign investors to come and invest in Ghana's progress. We offer them every assistance, substantial material benefits, and the advantages of a coherent long-term economic strategy which will give them plenty of scope for planning and development. At the same time, we expect them to re-invest an adequate share of their profits in the further progress, both of Ghana and of themselves.

In order to be able to manage these new investments as well as our existing capital with the maximum of efficiency, the country needs a well-trained labour force under competent management. In this sense, the educational programme under the Plan is crucial to the success of the whole Plan. It is directed towards giving education in Ghana a new and more practical orientation and making it available to all who can profit by it. In order to make real economic progress, Ghana must adopt an improved technology in all lines of production. We look to the educational system and educational institutions to equip our people with the latest advancements in industrial and agricultural technology. We expect our Academy of Sciences and our research organisations to adapt this technology to the conditions of Ghana. And we look to the Managers of our enterprises to adopt the technology which is developed, and to foster skills by a maximum programme of "on the job" training.

The development of Ghana has hitherto not been sufficiently balanced between different parts of the country. It is the deliberate policy of this Plan to correct this imbalance. Naturally we must develop in each part of the country the type of economic activity to which it is best suited by reason of natural resources and geographical location. But a special effort has to be made in order to ensure that the rate of progress in the less favoured parts of the country is even greater than the rate of progress in those sections which have hitherto been more favoured. It is only by this means that we can achieve a more harmonious national development.

In the present Plan period it is proposed to pay special attention to the modernising of agriculture in the savannah areas of the Northern and Upper Regions. It is hoped through secondary industries based on agricultural raw materials, to turn the Northern areas into major sources of food supplies for the whole country.

In this regard, the Government has recognised the importance of irrigation and water conservation in the country, and has already initiated far-reaching plans for major schemes of irrigation and water conservation.

Mr. Speaker, the backbone of Ghana's agriculture has always been its farmers who, particularly in recent years, have made a fine contribution to the economy and expressed their patriotism in a number of unselfish ways. The developments the Government is proposing in the areas of State and co-operative farming will bring them a share of the local facilities they have so long been denied. More than this: they will have the opportunity also to share in the up-to-date techniques of farming that must be employed if greater yields and diversity of crops are to be attained.

I want our farmers to understand that the State Farms and Co-operative enterprises are not being encouraged as alternatives to peasant farming. The interests of individual peasant farmers will not be made subservient to those of the State Farms and Co-operatives. We need the efforts of our individual Farmers more than ever, along with our State Farms and Co-operatives, if we are to achieve, at an increased pace, the agricultural targets we have set ourselves. We look to our individual peasant farmers for the enlargement of investment in our agriculture.

Mr. Speaker, as I have stressed time and again, the revolution taking place in Ghana is chiefly a revolution of the workers and the tillers of the land. A vital phase of this revolution is the implementation of the Seven-Year Development Plan which aims at the total expansion of all sections of our economy to raise the standard of living of the people of Ghana. I am happy that the workers have demonstrated their complete dedication to our revolutionary cause.

Upon the attainment of independence, the Party, as the conscious political vanguard of the Trade Union Movement, worked with the Trade Unions and created a new and more effective structure of the Trades Union Congress. Government supported the desire of the workers for this new Trade Union structure.

Thus, we were able to create in our labour and industrial laws conditions for resolving quickly and expeditiously the problems of our working population. Thus, also, the workers accepted the responsibility to contribute to the economic and social reconstruction of our economy.

In the State sector of our economy, the workers employed in our State Corporations will be afforded full and equal opportunities for participating in the planning and execution of our industrial projects. It is only in this way that the workers will closely identify themselves with the attainment of the economic and social objectives of our new society and will thus equate their own welfare with the prosperity of our country. Such new working relationships will enable the workers to acquire the sense of complete belonging and full participation and they will no longer consider themselves as working for colonialist exploiters. I have given instructions that some of our State enterprises be handed over completely to the workers who will manage them for themselves on behalf of the State.

The success of this Seven-Year Development Plan will only be attained if the enthusiasm of our workers is mobilised and they follow the part they ought to play and are drawn into full consultation in the execution of our Plan.

I therefore call upon all workers, farmers, fishermen and peasants of our country to accept this challenge and fulfil the hopes and aspirations of our people.

Mr. Speaker, when I spoke at the opening of the Unilever Soap Factory at Tema on the 24th August, 1963, I said, among other things, that in order to pay tribute to the importance of labour in the development of Ghana, the Government has decided to institute a special Order to be known as the "Order of the Black Star of Labour". Details of this Order, which will rank among the highest honours of the State, have now been worked out and all classes of labour will qualify for this Order. It is my confident expectation that this award will provide an ample incentive to all workers, and that every worker of the nation will make it his ambition to qualify for the title of Worker of the Year and to become heroes and heroines of Labour.

Mr. Speaker, Members of the National Assembly, I am happy to inform the House that on present estimates, it is confidently expected that the Volta River Project will begin to generate electrical power by September, 1965. On that date, we shall come to the end of one phase of our cherished goal and usher in the beginning of a new and more exciting endeavour to utilise the vast electric power which will be at the country's disposal for the enrichment of our economy and our people.

Completion of the Volta Project will enable us to develop the industrial potential of Ghana. Indeed, the possibilities for our agriculture and industry will be completely revolutionised. First and foremost the Volta Project will increase by nearly 500 per cent the installed electrical capacity of the country. Nearly one half of this new capacity will be taken up by the aluminium smelter in Tema. But there will be an ample reserve of power for other users, and Ghana will have liberated herself decisively from the possibility of power shortage becoming again a brake on the rate of economic progress.

I would like in this context to point out the degree to which the Volta Scheme fits into our chosen combination of a mixed economy with socialist and co-operative goals. A major part of the scheme is being financed by the Ghana Government; but the American and British Governments have joined in the financing of it, together with the World Bank, and we have had the most helpful and fruitful collaboration with American enterprise in the shape of the Kaiser group of industries.

Meanwhile, our Italian contractors, Impregilo, have achieved the remarkable feat of taking one year off the time of construction of the dam. Throughout the scheme, we have worked together in the greatest harmony. I regard this great scheme as an example of the way in which careful and proper planning together with foreign investment, public control and participation, and the devoted labours of the people can revolutionize the economic base of society.

Such an investment can have a significance far beyond Ghana's frontiers. It is only by strengthening our economy in this way that we can make an effective contribution to our brothers in Africa and the political unification of our continent. In this endeavour, the Seven-Year Plan makes provision for the undertaking of joint enterprises in individual fields of industry and also for the harmonisation of our total programme of economic development with that of other African countries.

The Plan we are launching to-day relates to projects and developments which we wish to see take place in Ghana. It grieves me that we in Ghana, who so strongly advocate the unity of the African Continent, should be forced to take so narrow a view of planning. I have advocated for closer union of Africa times without number. I have emphasised the need for a continental union Government for Africa as the only solution to Africa's ills and problems. Since the Addis Ababa Conference, it has been made abundantly clear that artificial borders which we inherited from the colonial powers should be made obsolete and unnecessary. While we wait for the setting up of a Union Government for Africa, we must begin immediately to harmonize our plans for Africa's total development. For example, I see no reason why the independent African States should not, with advantage to each other, join together in an economic union and draw up together a joint Development Plan which will give us greater scope and flexibility to our mutual advantage. By the same token, I see no reason why the independent African States should not have common shipping and air lines in the interest of improved services and economy. With such rationalisation of our economic policies, we could have common objectives and thus eliminate unnecessary competition and frontier barriers and disputes.

As every day passes, it is becoming clearer and clearer that it is only the establishment of a Union Government of Africa which can save our separate States not only from neo-colonialism, but from imperialism itself. We in Ghana are determined to make our whole-hearted contribution toward this objective. We are prepared to make whatever further provisions may be required to enable us to play our part in the achievement and consolidation of African Unity. Recent events in East Africa and in other parts of Africa have shown how urgent is the need for the establishment of a central machinery for dealing with the serious political and economic questions confronting us in Africa to-day.

Mr. Speaker, Members of the National Assembly, the object of the Seven-year Development Plan which I have outlined to you is to modernise our agriculture and develop our industry as a basis of our socialist society. I, for my part, am determined that the Plan shall succeed. Its success must rest on the support of each and every one of you and on the devotion and hard work of the officials, Heads of Corporations and Enterprises, whose duty it will be to translate the Plan into action. In the seven years ahead, all our energies must be concentrated on its implementation.

It has long been apparent that the administrative machinery which we inherited was not designed for a country working within the framework of an overall plan and in which the activities of individual agencies of the nation are directed to clearly

defined goals of development. An effective reform of the governmental machinery is therefore needed if the Seven-Year Plan is not to falter on the inadequacies of administration. The first task in this regard will be to attune more closely the policies and actions of every agency or organ of Government to the overall national policy as defined in the Seven-Year Development Plan.

I have caused to be published with the Seven-Year Plan a guide to its implementation. This guide should be studied most carefully by Members of this House, by the Party and Government officials, Managers of State Enterprises, the farmers' organisation, the Trades Union Congress and all those who will be concerned with the implementation of the Plan.

I have, earlier this month, established several organisations whose responsibility it will be to see to the rapid execution of the Plan. These are, firstly, the *National Planning Commission*, through which the people will be associated with the Plan, and which will be enlarged to include Ministers, Regional Commissioners, representatives of Corporations and organisations and integral wings of the Party.

Secondly, the *State Planning Committee* which, under my Chairmanship, will be the key body for co-ordinating action and policy on the Plan, and for giving directions on its execution and implementation.

Thirdly, there is the *Budget Committee*, which will make recommendations for the policy of the annual budget.

Fourthly, the *Foreign Exchange Committee*, which will make recommendations regarding the size of yearly imports and exports.

And lastly—though by no means the least—there is the *State Management Committee* which will direct the operations and activities of State Corporations and State Enterprises in order to ensure their efficient and profitable management.

I am sure that if these five bodies carry out their duties honestly and energetically, we shall achieve and even exceed our goals under this Plan. We might even complete the Plan ahead of schedule, that is to say in less than seven years.

Mr. Speaker, all our efforts should henceforth be directed to ensuring that everything is done to make this Plan a success. I am sure that all the people of this country are determined in their efforts to ensure that we achieve all our Plan objectives and make our country a happy, progressive, prosperous and advanced nation. We must therefore ensure that State funds and resources are not frittered away uselessly or wastefully or that they find their way into private pockets.

We shall, in order to implement the Plan, be awarding a number of contracts to organisations both here and abroad; we shall also be entering into sales agreements as well as acquiring goods locally. I intend that all contracts, whether for the construction of factories or offices, or for any purchase or sale, should be so safeguarded that our funds will be properly husbanded and utilised for Ghana's advancement and for the welfare and happiness of the people.

In order that our resources are not wasted by corrupt practices and in order to prevent any attempts at personal greed and aggrandisement at the expense of the people and the State, steps will be taken to ensure that no contractor shall offer or give or agree to give to any person in the service of the Government of Ghana any gift or consideration of any kind as an inducement or reward for doing, or forbearing to do, or for having done any act in relation to the obtaining or execution of any contract for the Government of Ghana, or for showing favour or disfavour to any person in relation to any other contract for the Government of Ghana.

We shall also see to it that no contractor shall enter into any contract with the Government of Ghana in connection with which a commission has been paid or agreed to be paid by him or on his behalf, or to his knowledge, unless before the contract is made, particulars of any such commission and of the terms and conditions of any agreement for the payment thereof have been disclosed in writing to a special committee to be appointed by me to represent the Government of Ghana.

Any breach of these conditions shall entitle the Government to determine any contract, and recover from the contractor the amount of any loss which may have resulted from such determination and the amount or value of any such gifts, consideration or commission.

I have therefore directed that every contract for the supply of goods and services or for the execution of any Government project shall embody clauses to give effect to this decision. These conditions are being made in the interest of the tax payer who ultimately has to find the money to pay for these gifts and bribes.

I want the world to know that we shall do everything to set our own house in order. I want all of us here in Ghana also to realise that nothing must be allowed to hamper our efforts to achieve our Plan objectives and that no individuals will be permitted to hamper that effort, to retard our advancement in any way or to grow rich by corrupt practices. Those who have ears to hear, let them hear. The progress, welfare and happiness of the masses is our supreme concern.

Mr. Speaker, we know that the desire of people is to have enough to eat without spending too great a part of their income upon food. They want a reasonably comfortable place to sleep; they want light, a ready supply of water, education for the growing children and future generation, adequate medical care and welfare services. Our present plan will go a long way to fulfilling these very legitimate desires of the people. The Volta project will provide us with abundant light and water. In addition, a whole programme of irrigation and water development is engaging our attention very seriously.

Housing, too, is one of our main pre-occupations. We are at this moment in the last stages of formulating large-scale housing projects, which we hope to have ready soon. A factory for prefabricated concrete units is now under construction and will come into production sometime this year. When these plans are

completed, we shall be able to put up low-cost housing to meet the needs of our working people at the rate of about one hundred houses a month. This should go a long way to offset the pressing housing problem.

In transforming the many centres of over-crowded and insanitary housing that at present exist in some areas, we shall look carefully into the traditional community customs of our people and will, wherever it is feasible and possible, try to maintain such communities in their traditional locations, but with a newer, better and more pleasant look.

Mr. Speaker, we would be hampering our advance to socialism if we were to encourage the growth of Ghanaian private capitalism in our midst. This would, of course, be in antipathy to our economic and social objectives. There are some few among us who are seeking outlets for small enterprises. Such people we appreciate have initiative which it would be well to employ suitably in our socialist undertakings. There are some who have small capital savings which they consider they can profitably employ in business that will provide goods and services which are in public demand. Such small businessmen will be encouraged to operate enterprises provided they accept certain limitations as the Government will find it necessary to impose as to the size of the enterprise and the number of persons to be employed in their undertakings.

In this connection it is necessary to distinguish between two types of business which have grown up within recent years. The first is the type which it is the Government's intention to encourage, that of the small businessman who employs his capital in an industry or trade with which he is familiar, and in so doing, fulfils a public need.

The second type is very different. It consists of that class of Ghanaian businesses which are modelled on the old type of colonial exploitation. Individuals who can command capital use their money not in productive endeavour, but by the purchase and re-sale, at high prices, of such commodities as fish, salt and other items of food and consumer goods which are in demand by the people. This type of business serves no social purpose and steps will be taken to see that our banking resources are not used to provide credit for this type of business.

Even more harmful to the economy is yet another type of enterprise in which some Ghanaians have been participating. This consists of setting up bogus agencies for foreign companies which are in fact nothing but organisations for distributing bribes and exerting improper pressures on behalf of foreign companies. It is the intention of the Government to carry out a whole investigation into the activities of these firms. They can do incalculable harm to our economy and they must be ruthlessly suppressed.

The initiative of Ghanaian businessmen will not be cramped, but we must take steps to see that it is channelled towards desirable social ends and is not expended in the exploitation of the community. The Government will encourage

Ghanaian businessmen to join with each other in co-operative forms of organisation. In this way Ghanaian businessmen will be able to contribute actively in broadening the vitality of our economy and co-operation, and will provide a stronger form of organisation than can be achieved through individual small businesses.

We must also discourage anything that can threaten our socialist construction. For this reason, no Ghanaian will be allowed to take up shares in any enterprise under foreign investment. On the contrary, we shall encourage our people with savings to invest in the State sector and co-operative undertakings. I know that among our Ghanaian businessmen, there are some who are ready and willing to turn their businesses into co-operative undertakings. Where well-run private enterprises are offered to and taken over by the State or co-operative undertakings, we hope that businessmen will offer themselves as managers and administrators.

In the same way, Mr. Speaker, I want to refer to money-lending which, along with other problems, has been left to us by colonialism. I know that many of those who are carrying on this business of lending money at criminal rates of interest are non-Ghanaians. But, unhappily, not a few of our own people have joined the ranks of those who make quick and easy money out of the difficulties and misery of others. Money-lending and usury are intolerable and inconsistent with the ideals of a socialist state. We should see to it that this practice is eliminated from our society.

Mr. Speaker, Members of the National Assembly, I am sure that imbued with the spirit of the Party's programme of Work and Happiness, all those who are responsible for the interpretation and implementation of this Plan will do their work honestly and devotedly. It may be that in the course of the next seven years some of us will from time to time attempt to change the choice of emphasis that we have made and try to direct proportionately more of our national resources into immediate welfare services and proportionately less into agriculture and industry. It will be the duty of those who are charged with the implementation of the Plan to ensure that these pressures are resisted. Otherwise we shall end up in the long run with an economy weak in its productive base and backward in its level of technology.

This Seven-Year Development Plan can only be accounted a success if by 1970—the year in which we conclude the Plan and the year in which we celebrate the Tenth Anniversary of our Republic—we can truly say that the productive base of the economy has been revolutionised and that the level of technology and productivity in Ghana is approaching modern standards over an adequate area of the national economy.

Mr. Speaker, Members of the National Assembly, 1964, the year in which we launch the Seven-Year Development Plan, will be hailed as the turning point in the history of Ghana. In a little over a year from now, we shall be generating electricity from the Volta River Project to feed our expanding factories throughout the country. The Kwame Nkrumah Steel Works in Tema will soon be completed. Tema Harbour itself is already being extended to meet the needs of our expanding economy, and

in Tema a growing number of industrial projects are already in production and more are being established. In this connection I want to mention, particularly, the Aluminium Smelter which will produce aluminium for domestic consumption and export, the Dry Dock and Ship Repair Yard—which will be one of the finest and biggest in Africa—and the Accra-Tema Freeway, which will provide fast and safe travelling between the capital and the port of Tema.

I can already see, in my mind's eye, a picture of Ghana as it will be by the end of the Plan period. I see a State with a strong and virile economy, its agriculture and industry bouyant and prosperous, an industrialised nation serving the needs of its people.

Let us therefore, as from to-day, move forward together, united in devotion and determination, to give of our best in the execution and implementation of this Seven-Year Plan.

Mr. Speaker, Members of the National Assembly, it gives me a great pleasure on this historic occasion, and in this House, to launch our Seven-Year Development Plan.

I now leave you to your deliberations. May you continue to be guided by Providence in the highest interests of our Nation.

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CHAPTER I

THE STRATEGY OF GHANA'S ECONOMIC RECONSTRUCTION AND DEVELOPMENT

I.—THE BASIC PURPOSES OF GHANA'S POLICY

With this first Seven-year Plan Ghana enters upon a period of economic reconstruction and development aimed at creating a socialist society in which the individual Ghanaian will be able to enjoy a modern standard of living in his home supplemented by an advanced level of public services outside. The Government regards the well-being of the individual Ghanaian, however humble, as the supreme law. All the energies of the nation and the Government must be mobilised to promote it.

The well-being of the citizen must be measured by the degree to which he can realise the potential of his personality. But in order to attain his highest level of cultural and spiritual development the citizen must be relieved of the worst forms of physical drudgery through the increasing power of the economy in which he works, and the institutions of his society must assure him freedom and justice. These conditions cannot be satisfied unless the productive capacity and the efficiency of the nation's economy are developed to the highest degree. It is for this reason that the needs of economic development must precede all other considerations of policy as Ghana embarks on the new era of social reconstruction.

In the field of international affairs Ghana seeks two ideals: the independence and unity of Africa, and the preservation of world peace. Ghana will be an asset to Africa and a force for the liberation and unification of the continent in proportion to the strength of her economy. She will become a force for world peace and contribute to its attainment only to the extent that she and other non-aligned nations become economically powerful and through their prosperity help to eliminate those inequalities between men and nations which are the greatest threat to peace in our time.

In this and subsequent plans for the development of Ghana a consistent strategy must be developed and applied to yield the most rapid rate of economic development possible within the limits of Ghana's generous endowment in human and material resources.

II.—THE BUILDING OF SOCIALISM IN GHANA

Ghana has chosen the socialist form of society as the objective of her social and economic development. This choice is based on the belief that only a socialist

form of society can assure Ghana a rapid rate of economic progress without destroying that social justice, that freedom and equality, which is a central feature of our traditional way of life.

Our socialist policy is based on certain fundamentals, which include the following:

- (i) The economy must be developed rapidly and efficiently so that it shall within the shortest time possible assure a high rate of productivity and a high standard of living for each citizen based on gainful employment.
- (ii) The income from our physical assets and from the labour of our people applied to these assets year by year must be utilised for socially purposeful ends. Never must public want and private affluence be allowed to co-exist in Ghana. And among the most important ends that the community must provide for out of its incomes should be the education and welfare of its children, and the continued expansion of the economy itself.
- (iii) The community through its Government must play a major role in the economy, thus enabling it to assure the maintenance of a high level of economic activity, the provision of adequate employment opportunities, the equitable distribution of the nation's output, and the availability of the means of satisfying over-riding social ends. Accordingly the need for the most rapid growth of the public and co-operative sector in productive enterprise must be kept in the forefront of government policy.

The building of a socialist society is not an easy task. In other countries the progress towards socialism has not been smooth or rapid—even the pioneers in this enterprise are still in the process of building socialism. The path that Ghana chooses towards socialism must be one that will lead us at the end to a prosperous and just society.

In order to ensure that Ghana's progress in the construction of a socialist form of society shall be as speedy and efficient as possible the correct transitional arrangements must be made based upon objective considerations. Government has therefore decided as follows:

- (i) During the transition to a socialist form of society the economy of the country will remain a mixed economy, in which public and private enterprise will each have a legitimate, recognisable and very important contribution to make towards economic growth. In this and subsequent development plans separate tasks will be clearly assigned to public and private capital in the field of both productive and non-productive investment.

- (ii) Under the mixed economy system conditions must be preserved in which both public and private investment can fulfil their assigned tasks. The plans for national economic development will assign tasks which must be fulfilled by each sector if the momentum of progress towards the ultimate objective of a prosperous Ghana is to be maintained. Any suggestion that vigorous state and private sectors within the same economy are incompatible is unacceptable. Ghana's policies will be so designed as to obtain the maximum contribution from each sector towards the overall growth of the economy.
- (iii) The Government will actively encourage the voluntary association in co-operative societies of farmers and those engaged in small scale manufacturing and service industries. In this way they will be able to have access to capital resources and technical assistance much more readily than will be possible if they continue as individual operators.

The building of socialism imposes especially heavy responsibilities on the state in the field of economic policy and development. In order to ensure that Ghana makes significant progress towards building a just and prosperous socialist economy during the next twenty years the Government will observe certain constants in its expenditure pattern:

- (i) The financial resources of Government will be used as conscientiously for the provision of employment opportunities through productive investment as they are used for the provision of social services and other items of public consumption. As the state finances each year out of budget surpluses a large proportion of the productive investments made in the country the economy will become progressively socialised until by the end of the transition period the state will be controlling on behalf of the community the dominant share of the economy. This will have been accomplished without our ever having to resort to such expedients as nationalisation which, if carried out with full compensation, would only change the ownership of the means of production without adding to productive capacity or employment opportunities, and, if carried out without such compensation, would inevitably incur such a large measure of hostility as to make our development plans very much more difficult to achieve.
- (ii) These productive investments of the state must be concentrated on the most strategic sectors of industry and agriculture, thus giving the state control over essential supplies and the vital springs of economic activity while at the same time laying the foundations for the further growth of the economy.



- (iii) The projects chosen for state investment must include a large proportion with high rates of return and short pay-off periods. Only thus can we ensure that the investible resources in the hands of the state will grow rapidly, thereby enabling the state to extend further its participation in economic activity without having to impose intolerable increases in the burden of taxation falling on the people.
- (iv) State enterprises will be expected to make a contribution to the public revenues within a reasonable time, and they should not be allowed to become a permanent liability to the economy: enterprises which make losses indefinitely represent a waste of both capital and current labour resources. Successful enterprises can only be run by competent managements and a disciplined labour force.
- (v) The state's economic activities must never take such a form as to hinder the citizens' own efforts to help themselves. In the provision of communal services, of housing, and of employment opportunities, the more individual or local efforts that are successful the less need will there be for the state to borrow money or to increase the levels of taxation for the same purpose and the less social tension will be generated. Such enterprise whenever possible will be directed through collective and co-operative channels. Individual and co-operative effort of this sort is an integral part of the Ghanaian way of life and is compatible with our socialist principles. Government will devise a system of taxation to prevent excessive inequalities in society. The ceiling will be low enough to rule out undue affluence without being so low as to discourage individual effort. The more private investment in Ghana is contributed by our own people the less will Ghana be indebted to, or dependent upon, foreigners of all sorts, and consequently the greater the degree of her real independence will be.

III.—THE LONG RUN STRATEGY OF DEVELOPMENT IN GHANA

The economic policies to be realised under this and successive plans of economic development will lack direction and consistency unless they are firmly related to a clear vision of the structure of economy towards which we are moving. Besides, it is only in the longer view that it is rational to project any really radical transformation of an economic system.

In the very short period we remain prisoners of our past. The most important factors which determine the level of a country's economic development are not subject to radical change in a short period. The structure of production and trade, the location of manpower and economic activity, the skill and age characteristics

of the labour force, the technological level of the community—all these can only change over a period. However the direction and the speed of such change can be influenced by positive policy: and if it is left to chance, the economy stagnates or develops in the wrong direction. The long run objectives of Ghana's policy in economic and social development can therefore be attained in a relatively short period of calendar time if the arrangements made from time to time are properly designed to speed up economic change along the chosen lines.

Short term plans such as the present and subsequent ones can only contribute to a change in the basic features of the economy if they are viewed as instalments in a long run programme designed to effect such change even though the short term plans themselves must accept some of these features as being fixed for their own duration.

Government believes that a long run or perspective plan for Ghana's economic development must have four principal objectives:

- (i) The economy must be developed so as to be able to assure to every Ghanaian who is willing to work employment at a high level of productivity and a rising standard of living.
- (ii) The colonial structure of production based on exports of primary commodities which largely accounts for the present low level of income must be completely altered.
- (iii) The new structure of production that takes its place must be so designed as to enable Ghana to play her full part in a Pan-African, or at least a West African, economic community.
- (iv) Government's participation in the economy must be on such a scale as to enable her to implement her socialist policies with respect to the distribution and utilisation of the national income.

(i) *Full Employment Policy*

Recorded wage employment in Ghana increased from 245,000 in 1955 to 350,000 at the end of 1961. The statistics cover only a section of total employment in Ghana; the 1960 census estimated the number of all persons engaged in economic activities at 2.56 million. But the wage employment data cover the whole of government service and most of the larger organised establishments in agriculture, industry and commerce. These are the sectors of the economy that have grown fastest during this period.

When the 105,000 extra places of employment offered in the recorded sector during these six years are set against the number of workers available it can be seen that Ghana has still a long way to go before full employment can be guaranteed to everybody. In the same period 1955–1961 the output of the elementary schools

alone was 164,500; thus, not counting the even greater numbers of illiterate young people coming of working age all over the country, the numbers moving from the rural to the urban economy, or the numerous immigrants annually attracted to Ghana, the leading sectors of the economy could not have absorbed just the elementary school output alone.

Another important statistic provides a significant comparison. In the period 1955-1961, 847,720 Ghanaians attained the age of 15 and thereby joined the potential labour force. The growing ranks of young unemployed persons in all areas of the country are a living testimony to the inability of the economy so far to assure the security of regular employment to its labour force.

(ii) The Worker's Security

The security of the worker is often erroneously equated with subsidies, unemployment and sick benefits and other "free" social services. The fact is that for the average worker the central element in his security is assured employment. It is more important for him to have a steady job than to get a dole when he is unemployed. It is more important that steady employment is assured to him from the time he comes of working age till the time he retires, and that in the meantime his sons and daughters are also educated and trained so that they are able to take regular and profitable employment than that he can look forward to a small pension.

Social security in the traditional sense of course has to be provided for the minority who are the victims of social misfortune—the sick and disabled, the destitute, all those who for one reason or another genuinely cannot support themselves by gainful employment or rely on the assistance of their families. Government has an outstanding record among African countries for its efforts to relieve social distress during the past ten years and will further develop these services under the present Seven-year Plan.

For the mass of workers however Government's policy is to concentrate on maintaining such a rate of economic development as to assure them regular employment at a steadily rising level of real income out of which they can lead self-reliant, self-respecting and comfortable private lives. This safeguarding of the earning ability of the bread-winner will always be the greatest contribution that Government can make towards the security and stability of family life.

(iii) A Growing Labour Force

This Seven-year Development Plan will make a start on the task of bringing the supply of jobs more into line with the demand for jobs. Although the objective of assured full employment will not be reached until after many years of sustained economic expansion, the aim is to achieve substantial progress by the end of the plan period.

Ghana's labour force is growing very rapidly. As a result of previous achievements in the prevention and cure of the major endemic diseases, mortality rates in the country have been brought down sharply in the last generation. Even so, as is explained below, standards of public health are still relatively low and the mortality rates relatively high and Government intends to institute further improvements in the coming years. The fall in death rates has been most marked among children, of whom endemic diseases used to take a particularly heavy toll. The present infant mortality rate in Ghana estimated at eighty per thousand in the urban areas compares quite favourably with standards in other developing countries.

At the same time the population continues to show a high birth rate. It is estimated that on the average 1,000 Ghanaian women of childbearing age (15-49) give birth to about 200 children per year as compared with 70 children born to every 1,000 English women and 64.5 born to every 1,000 Japanese women of the same age group in 1959.

The result of this combination of a high birth rate and a falling death rate is that the population is growing at a rate estimated at 2.6 per cent per annum.

Since the principal cause of the growth in population is the combination of a high birth rate and a reduced infant mortality rate Ghana's population is a predominantly young population. At the time of the 1960 census every second Ghanaian was less than 20 years of age, every fourth Ghanaian was of school going age, and every fifth Ghanaian was an infant under 5 years old. These facts must condition all economic policy in Ghana for years to come.

The 1.3 million Ghanaians who were aged 0-5 years in 1960 will be aged 15-20 years by 1975. If adequate employment opportunities are to be created then Ghana's economy by that date must be expanding fast enough to absorb more than 70,000 additional workers every year. The comparison between that figure and the 105,000 jobs created in the leading sectors of the economy during the six-year period 1955-1961 provides some measure of the magnitude of the task involved in Government's undertaking to assure full employment opportunities to all Ghanaians by the end of a twenty-year perspective plan period. In later sections of this plan a programme is sketched out for the contribution that must be made towards the long-run objective in the coming seven years.

(iv) Requirements of a Growing Labour Force

Young people make two demands on the community and their elders. First they must be maintained and trained until they come of working age. Then the means must be found to set up the farms, factories and offices in which they can be employed. The expenditure on both their rearing and their subsequent absorption into the labour force must be financed out of the savings of their elders.

A young and growing population like Ghana's means that every bread-winner has to provide for a proportionately larger number of dependants than he would in a country with a stagnant or relatively older population. The burden of savings required of the Ghanaians now working must consequently be greater than it would otherwise be. In addition, the present low levels of productivity and incomes make it harder for Ghana to save than it is for a wealthier community to save.

This makes it necessary for the Government and people constantly to remind and rededicate themselves to the task of economic development. For it must be emphasised that the demographic situation which lays this heavy burden of savings on the population is not likely to show any significant changes in the short-run. The success that we have had in bringing down the death rate in one generation will not be matched by a similar rapid success in bringing down the birth rate. Until the birth rate is reduced the population will continue to grow and the numbers of the dependent young will remain proportionately large.

A growing population presents an opportunity as much as a problem. As there are more mouths to feed so also are there eventually more hands for work. A sustained stream of productive investment at an adequate rate is required to turn this opportunity into reality.

For this reason economic development must be put on a continuing basis and not treated as something to be taken up and laid down as desired. The young people for whom jobs must be found every year for the next fifteen years have already been born. Every year a given number of them will come forward to join the labour force. This cannot be postponed by any law or policy and therefore neither must the investment required to put them to work be deferred, otherwise the community will soon find itself with a class of idle but able-bodied youths whose dissatisfaction with society may be expressed in the most undesirable ways.

(v) *The Structure of Employment*

In 1960, 61·8 per cent of the entire working population of Ghana was employed in the agricultural sector, and this partly explains the low level of economic development in Ghana.

At that same date the comparable distribution of the work force between agricultural and non-agricultural employments for a number of other countries was as follows:—

DEVELOPED COUNTRIES

	<i>Agricultural</i>	<i>Non-Agricultural</i>	<i>Per Capita National Income</i>
	<i>%</i>	<i>%</i>	<i>£</i>
United States	12	88	801
United Kingdom	5	95	384
West Germany	15	85	370
Denmark	23	77	370
Japan	39	61	121

DEVELOPING COUNTRIES

	<i>Agricultural</i>	<i>Non-Agricultural</i>	<i>Per Capita National Income</i>
	<i>%</i>	<i>%</i>	<i>£</i>
Mexico	58	42	98
Spain	48	52	92
Ghana	62	38	70
Egypt(*)	64	36	40
India	70	30	25

It is noticeable at a glance that the wealthier countries all have a much smaller proportion of their working people engaged in agriculture than the poorer countries do. Even Denmark which is often held up as the model of a prosperous agricultural economy for countries like Ghana to emulate is seen to have had only 23% of its working population engaged in agriculture. It is not difficult to see why this is so. Ignoring the element of foreign trade it is obvious that since the wealthier countries need a smaller proportion of their manpower to feed the community they have a larger proportion left free to produce other commodities. Both the farmer and the non-farm worker are better off.

Labour productivity and hence the average level of wealth tends to increase in proportion to the degree to which mechanisation and specialisation can be applied to production. The scope for such application generally tends to be greater in non-agricultural than in agricultural production. Also, the rate at which technology changes is persistently higher outside agriculture. Therefore in all the advanced economies the non-agricultural, and especially the manufacturing sector tends to be the most dynamic element in the economy. Real wages in industrial employments can be raised faster owing to increases in productivity and wages in agriculture tend to be pulled up by the industrial wage rate. On the other hand in a slower-moving agricultural economy the average wage rate cannot rise very fast without risk of inflation since labour productivity tends to rise slowly. Thus the structure of the economy has an important effect on the rate at which the economy can grow: the more industrialised economies have on the average better chances for advancement than the more agricultural ones.

(vi) The Crucial Role of an Agricultural Revolution

Before the structure of employment can be changed, however, productivity in farming must be high enough so that a larger number of workers can be released to work in other occupations without the whole country starving. Thus in Ghana

* Figures relate to 1947.

in 1960 every farmer was producing enough food to feed $1\frac{1}{2}$ working people. In the United States at that date every farmer was producing enough to feed 12 working people. In fact he was producing more than enough, because at that date surplus food was still piling up in the United States owing to the excessive efficiency of their farming methods.

As the productivity of those who remain in agriculture increases, so will their earning capacity grow, and out of their higher earnings they will be able to save more. Some of their money will go directly into purchase of goods produced by the factories, either for use on the farms or for consumption by the farmers and their families, thus providing the factories with a demand for their output. Experience elsewhere has shown that in the early stages of industrialisation it is difficult for the factory workers themselves to provide an adequate market for the goods which they are producing.

Some of the farmers' increased earnings will also be available for investment outside the agricultural sector. The farmers may themselves invest directly in small processing and other similar plants or they may contribute to the expansion of public sector investment; this they can do either by the purchase of Government stock or through increased taxation. The inter-relationship between the two types of revolution must be clearly grasped and borne in mind if economic policy is to be correct and successful.

(vii) *Productive and Non-productive Sectors*

In the final analysis the real wealth of an economy derives from the commodities it produces in its agriculture and industry. The other sectors of the economy—commerce and finance, public and social services—important as they are, are still only concerned with organising the distribution and utilisation of the material wealth created in the productive sectors.

The real rate of growth of an economy must therefore be measured by the rate of growth of its commodity production. Conversely, to be viable and dynamic an economy needs to preserve the proper relationship between the amount of manpower devoted to productive activities and the amount devoted to non-productive ones. It is only at the stage where commodity production has developed to a highly advanced level that this rule ceases to be important.

It is noteworthy that in the wage employment figure of 350,000 quoted for the year 1961 30·2 per cent were engaged in productive and 69·8 per cent in non-productive employments. This structure of employment reflects the low level of development of productive activities in the more modern sector of the economy. Ghana's food is produced by small-scale peasant farmers; the processing of this food is done in small-scale family establishments; household goods, when locally made, are produced in small street-corner factories. The more organised and

large-scale establishments are mostly engaged in non-productive activities, a large proportion being in the civil service itself. It is because the commodity base of the economy is inadequate to carry this large non-productive superstructure that various economic imbalances both internal and external have developed in Ghana in recent years.

In the meantime the scale of demand for many commodities has grown far beyond the ability of the small business sector to meet. It has become increasingly obvious that the larger business sector must concern itself more with commodity production, using the resources of modern technology that should be more readily at its disposal. In such establishments moreover the productivity of the worker should be higher and this will be reflected in the wages that he can command.

Therefore an essential element in the economic strategy of Ghana should be that the largest possible proportion of the new jobs to be created through investment should be in the field of commodity production.

The adoption of this policy will increase the amount of capital investment needed to employ any given number of workers far above what would be sufficient if a larger proportion of the labour force were to continue to be allocated to non-productive employments. The burden of savings out of current resources to finance this investment will also be proportionately heavier. But the alternative policy would in the long-run leave Ghana with an economy dominated by an army of domestic servants, bootblacks, bureaucrats and petty traders, and most likely an overblown military establishment such as characterises so many economies in the contemporary world which have been allowed to develop along the wrong lines.

(viii) The Structure of Production

It has been suggested above that there must be a shift in the structure of employment away from having a preponderant share of manpower engaged in agriculture as it is now. As more of the labour force is moved into non-agricultural employments the structure of production as between agriculture and other commodities should also change if adequate attention has been paid to the development of productive employments outside agriculture. But among the wide range of non-agricultural products the correct set must be chosen for development on the basis of a scientific assessment of the economic and physical factors involved.

For Ghana the correct sequence of development would seem to be the following. At the first stage—under the present Seven-year Plan—the existing demand for staple consumer goods and basic building materials should be supplied from domestic sources. In the production of these commodities—clothing, shoes, packaged foods, cement, furniture and other household wares—which are mostly technologically simple, Ghana's new industrial labour force will serve its apprenticeship with best results.

THE STRATEGY OF GHANA'S ECONOMIC RECONSTRUCTION AND DEVELOPMENT

At the same time during this first stage of industrialisation the "colonial" structure of Ghana's international trade must be changed. Ghana's exports—minerals, timber, cocoa—must be progressively processed in Ghana prior to export so that eventually raw materials take second place in the structure of our external trade. This trade will be developed along lines compatible with the establishment of an African Economic Community as described in the next section.

At the second stage of industrialisation—at the end of this Seven-year Plan and more particularly during the next plan period—the concentration should be on basic industry, ferrous and non-ferrous metals, chemicals, fertilisers and synthetics. A beginning must then be made on the machine and other heavy industries which, with electronics and other more sophisticated industries, will form the core of the third stage of industrialisation.

These distinctions between the different stages of industrialisation and the assignment of different sorts of industrial development to each cannot be applied too rigidly. But it seems certain that a different arrangement of the areas of concentration at successive stages of development would not yield favourable results. If Ghana started out on industrialisation by trying to jump into complicated machine and chemical industries it is quite certain that her development would soon be halted by the mounting losses and the inefficiency of production. At the same time the balance of payments position would soon collapse.

On the other hand the scope for industrialisation through the production of final consumer goods will not sustain dynamic economic growth in this country for more than the span of one seven year plan. After all, the total population of Ghana is less than 7 million now and will still be less than 9 million by 1970. The demand for manufactured consumer goods in a market of that size cannot support an industrial economy on anything like the scale required to absorb the industrial manpower available in Ghana. Besides it is an observable fact that those economies which cannot grow beyond this first simple structure of industrial production do not rank among the wealthiest. The highest returns and hence the highest standards of living will always be found in the production of the most advanced products. But for technical reasons only very large markets can economically support the most advanced industries. To proceed beyond the first simple state of industrialisation Ghana needs access to a market much larger than any likely to be found within her existing boundaries.

Again, this approach to industrialisation requires more capital than the alternative approach of concentrating for ever on the production of simple consumer goods. But in the long-run Ghana will build a stronger and more prosperous economy by progressively advancing the technological level of the structure of her commodity production than she could by following the easier approach.

IV.—SHORT RUN POLICY FOR THE PLAN PERIOD

The strategy of development outlined above will be implemented through a series of development plans such as the present one. The speed with which the long term transformation of the economy which we seek can be implemented depends upon how effectively each such development plan is designed and implemented as an instalment in the longer run process of change. Modern science and technology have made it possible for the younger nations of today to telescope into a few years economic and social developments which took generations to accomplish in the older developed nations.

In order to reap the full benefits of its late start in economic development a young nation such as Ghana needs above all to observe two rules of policy, namely:—

- (a) It must embrace modern technology, especially by developing its cadre of technical and managerial personnel.
- (b) Its economic and social institutions at any given period must be such as to favour the maximum application of modern technology through a high rate of productive investment.

Each development plan such as the present one must propose measures for a significant advance in the technological level of the labour force. Social and economic policy at each stage of development must be designed to maximise investment. If this is done then the number of years that it takes to accomplish the aims of long term policy can in fact be quite small.

At its present stage of development Ghana has already begun to feel the shorttake of technically skilled manpower. Under previous development plans a lack of administrative and constructional manpower imposed a limit on the speed with which the physical and social infrastructure necessary for economic growth could be built up. Under this seven-year plan it is apparent that middle level and managerial manpower especially in productive enterprises will become a major bottle-neck in the process of economic growth. In later sections of this document detailed proposals are outlined for rapid increase in the supply of middle—and higher—level manpower in Ghana. The successful implementation of these proposals is the most crucial condition for rapid economic growth in the coming years. The manpower proposals must necessarily be couched in terms of the numbers of persons with stated levels of training which are required each year. But an even more important consideration is the spirit with which this skilled manpower is informed.

The technological leaders of Ghanaian society must not only be skilled but must also be dedicated to their mission of seeking constant improvement. A spirit of perpetual dissatisfaction with the status quo among managements, skilled workers and the political leaders of the community must supply the driving force for a sustained process of technological change.

New technology has its greatest chances of application in a community in which economic growth is proceeding at a rapid pace. Each new farm, factory and construction site provides a new opportunity for the ambitious skilled worker or manager to introduce new methods and even to change basic concepts of work. The prerequisite for having a large number of such opportunities for technological improvement is to have a high rate of investment in the economy. To maximise its rate of investment an economy needs to maximise the supply of savings from both domestic and foreign sources, and this in turn depends upon the strength of the economy and the suitability of government policies for promoting savings. Domestic savings in Ghana will grow as incomes grow and as the opportunities and inducements for saving are made more readily available.

A survey of the present situation of the country indicates that the most readily available way of raising the national income is by concentrating our efforts in the coming seven years first and foremost on the modernisation of agriculture.

The other element in the strength of an economy is its external payments position. In Ghana the policy for securing the balance of payments situation in the coming seven years will rely heavily on the industrial processing of, and the manufacture of exportable products from, our present range of raw material exports, as well as on the domestic manufacture of substitutes for a number of staple lines presently imported.

The balance of payments position is of especial concern because Ghana has to import almost all her capital goods as well as a large proportion of other producers' goods. Therefore even if domestic savings are available for investment foreign exchange must be obtained to enable such savings to be used for importing the necessary capital goods.

In addition to stimulating domestic savings, directing these savings into the sectors from which the quickest economic returns can be gained, and ensuring the availability of foreign exchange to back up such savings, Government policy in the coming seven years will also aim at attracting into Ghana a maximum of foreign capital. This will be done by way of an increased level of Government's own overseas borrowing, by the maintenance of legal and economic policies which facilitate the inflow of foreign private capital, and by the general improvement of the facilities for investing profitably in Ghana.

The final plank in Ghana's policy for the coming seven years consists of the management of Government's investments in such a way as to build up a sizeable socialised sector in the economy by 1970 and the running of these public enterprises at a high level of efficiency and profitability.

V.—AFRICAN UNITY AND GHANA'S ECONOMIC DEVELOPMENT

It is inevitable that sooner or later Africa will achieve economic and political unity. This unity will, however, only have meaning to the extent that the various members of an African Economic Community can become each others' principal trading partners. In the same way that the different parts of a continental economy such as that of the Soviet Union or the United States conduct the preponderant part of their commerce with each other rather than with outsiders, so also we must look forward to the time when African trade will be predominantly trade between different national and geographical regions of an African Economic Community. This, however, will not happen until the different African countries start producing some of the things that their neighbours want and are prepared to continue to import.

In deciding what lines of activity to develop as our share of an inter-African system of economic specialisation it is not a valid policy to consider what it is easiest for Ghana to produce. Our neighbours are unlikely to want to buy from us cocoa or any of those things that grow most easily here—and probably grow no less easily in their own countries. Those of them that have a deficit in the supply of basic foodstuffs that can be grown domestically will, like ourselves, be moving to eliminate such deficits as the first step in their economic development programmes. The international division of labour between the various African countries must be carefully planned.

Among manufactured goods contemporary experience suggests that most countries are unwilling to continue to import the bulk of their consumer staples, and in any case will tend to pre-empt those lines for their own incipient industrialisation programmes. International trade has developed, and will almost certainly continue to develop, most rapidly for (a) the technologically more advanced consumer goods, mostly durable consumer goods: (b) essential non-durable producers' goods: and (c) capital goods. From the point of view of stability of demand, maintenance of terms of trade and other favourable trends, countries whose export structure contains a preponderant element of such goods will make gains in international trade at the expense of the largely primary exporting countries. Even from the point of view of developing industries to serve Ghana's own domestic requirements it must be recognised that in the long run the industries with the highest potentialities for growth lie within these same fields. The demand for these products can be expected to grow fastest as both we ourselves and our trading partners in Africa grow wealthier.

These considerations would be relatively unimportant if Ghana's economic future could be planned primarily on the basis of her domestic markets. But clearly it cannot be so planned. Even after we have added another five million inhabitants to our numbers between now and 1983 our total population will still be only about

12 million. With that size of a domestic market really high productivity, and hence high average incomes, can only be sustained if Ghana can become a predominant industrial trading country. Ghana can only have a future as a trading country if her industries can supply the goods that are wanted. It is obvious therefore that while in the immediate plan period ahead considerable results in industrialisation and in progress towards ameliorating our balance of payments-situation can be achieved by setting up factories to supply domestic requirements of fairly simple manufactured consumer goods, in subsequent periods the structure of our industry must be re-oriented towards the production of technologically more advanced consumer goods and of capital and other producers' goods.

If economic progress in Ghana and other African countries proceeds at all satisfactorily in this decade, then the transformation of the structure of our industry must be well under way during our second seven-year plan period. It is therefore necessary that in the present plan period the foundations should be laid for the pattern of production that must be established in the longer run. These prerequisites would seem to consist primarily of:—

- (i) The development of the general technological level of our industrial labour force and management cadres far above that immediately required by the rather simple industrial projects to be implemented under this first Seven-year Plan.
- (ii) The immediate pre-planning of a carefully selected number of projects within those industrial fields—metals and machines, chemicals and synthetics, electricity and electronics—which are a necessary basis for the desired future structure of industry.
- (iii) The maintenance of a high availability of electrical power per head of employed worker. With the implementation of the Volta Scheme Ghana will have a higher output of electricity per head of population than most African countries. But we will still be far behind the advanced industrial countries. The blueprints for the development of other sources of hydro-power must be put into final shape before the end of this plan period and their technological planning must be such as to keep Ghana's electric power cheap by international standards. The programming of their actual implementation during the next and subsequent plan periods can then be determined on the basis of a careful assessment of the growth of demand.
- (iv) The full participation of Ghana in the efforts that are already under way to co-ordinate industrial planning among African countries with a view to securing a mutually advantageous division of labour and specialisation within an African Common Market. To this end a part of the funds earmarked for the promotion of medium and heavy

industry under this plan will be spent for inter-African projects to be sited within and without this country.

These efforts would of course not be justified if Ghana could validly adopt an inward-looking policy in her industrial development or if, in spite of Ghana's need for industrial trading outlets and of her efforts to promote Africa's economic unification, an African Economic Community were not likely to develop within which these outlets might be found. But an inward-looking policy in industrialisation is not possible for Ghana except in the very short run. We could plan on the basis of that approach for a Ghana in which the per capita national product were, say, double that of the present £G76 per annum. However that would still be far short of the levels of £G400 to £G1,000 per annum of the advanced countries which we should be trying to approach. Any increase in per capita incomes much beyond £G200 per annum will depend upon Ghana becoming an industrial trading nation. Given a reasonable degree of sound economic management between now and the time that an effective African Economic Community is established, Ghana's economy should be in a position to supply some of the wide range of industrial goods demanded by her partners. Since such mutual exchange of industrial goods will be the most profitable pattern of trade for the members of the African Community, it would seem the part of effective planning to accept the future role of Ghana as an industrial trading nation and to prepare the economy to meet its requirements.

VI.—THE CAPITAL REQUIREMENTS OF INDUSTRIALISATION

The consequence of this choice of strategy for Ghana's development must be faced. As indicated already, a policy of industrialisation imposes a heavy burden in terms of the requirements for savings. If, in addition to that, the industrial structure aimed at is to be progressively oriented towards the production of the technologically more advanced industrial goods, then the savings requirements are that much greater. For, as a rule, the capital investment required per worker employed is larger in the medium or heavy industries than in light industry, and the same is true of the technologically more advanced manufacturing processes as compared with the technologically simpler ones.

It is not necessary to adopt the identical capital/labour ratios of comparable manufacturing establishments in the most advanced countries. Especially in subsidiary operations it is possible to economise on the use of scarce capital resources. But there are severe limitations on the number of alternative techniques that are available for the main operations in most manufacturing processes, and if Ghana's industry is to be export-orientated then it cannot afford to employ main methods of production which are markedly less advanced—and hence in general less efficient though cheaper on capital—than those employed by its competitors in these export markets.

When all the possible adjustments have been made to accommodate the fact that Ghana is short of capital, the general position will remain that an industrialisation policy aiming at the production of capital and other technologically advanced goods for export is a capital-expensive policy.

The long term strategy that Ghana is choosing now will mean that, especially say, until 1975 while Ghana's industrial capacity is being built up, most of the increases in the nation's output each year will have to be reinvested in new manufacturing capacity and will therefore not be available for raising the standards of private or public consumption. The choice of strategy is based on our demographic circumstances, on our position in Africa, and on the need to invest our money in those lines of production for which the markets are most profitable and most secure. Both circumstances and self-interest point in the same direction; Ghana must develop in the next generation into an industrial trading nation. Cocoa, timber, minerals and all those other primary commodities which have formed the core of our fortunes for the past sixty years must gradually be replaced by the products of medium and heavy manufacturing industry based on modern technology. Unless this is done, Ghana's economy will continue poor and subject to the instability and other weaknesses from which it now suffers to such a painful degree.

An analysis of all the relevant factors suggests that if the rate of domestic savings can be kept at a reasonably high level—above 15 per cent per annum—then Ghana's economy could develop at a rate commensurate with the ambition to secure a rapid increase in national output and in the standards of living of the people, while putting through a radical change in the structure of economic activity.

If a high rate of domestic savings is maintained then it could be expected that Ghana's domestic resources for growth would be supplemented by a generous inflow of both public and private capital from abroad. The contribution of external capital to the development efforts of other countries in a position similar to Ghana's allows us to conclude that a supplement equivalent to an average of 5 per cent of the national output every year could be reasonably expected.

In the recent past the contribution of external capital to Ghana's economic development has fallen short of this level. Government, preferring to rely on its own resources as long as they lasted, and being for the most part engaged in the development of infrastructure and social facilities for which the commercial-type loans hitherto available are not in any case suitable, has not sought much foreign capital. For the future however the scale of projected development will make it necessary for Government to borrow on a fairly extensive scale. The growth in recent years of new sources of overseas capital on terms suitable for the financing of non-productive investments, such as the International Development Association and the proposed African Development Bank, make it possible to anticipate the

use of more external assistance in Ghana's development programme. The large share of self-liquidating investment in this and subsequent development plans should also ensure a greater ability to use foreign commercial loans for Government's investment programme.

The contribution of private overseas capital has sometimes been substantial as in 1955 and 1959. Mostly however it has remained small as compared to the needs and economic potential of the country, and it has fluctuated sharply year by year. With the extremely favourable conditions that Government has created and intends to maintain for foreign investment it can be hoped that the volume of such investment will increase and that it will be as stable as the Government's policy of encouragement to private investment.

VII.—GOVERNMENT POLICY FOR INDUSTRIALISATION

While a steady annual increase in the aggregate size of Ghana's labour force will tend to occur as a result of the natural growth of the population, the desired allocation of this force among the different sectors of the economy will not occur naturally. Labour will ultimately move into those geographical areas and occupational sectors where employment opportunities exist. If the pattern of investment were left to develop by itself the end result in terms of labour distribution would be considerably different from that shown above to be desirable from the point of view of the long run productivity and dynamism of the economy.

Most of Ghana's present entrepreneurs are farmers and small traders: these are the people who save and who account for the bulk of private investment in the economy. At the time of the 1960 Census 75 per cent of the adult population was found never to have gone to school; the ratio among farmers and traders must have been much higher than this national average. Most of these illiterate farmers and traders who could save must have been around middle age and therefore not very likely to be able to learn new techniques or change their occupations.

For the next twenty years their savings would continue to flow predominantly into real estate, education, trading and farming, as it has done in the past. These would be the types of investment the management of which would be within their entrepreneurial competence. Manufacturing and similar enterprises, with their problems of large-scale labour control, machine running and maintenance, stocks control, accounting and other procedures which demand the ability to read and write—all these would clearly lie beyond their entrepreneurial horizon.

Left to itself this situation would not alter significantly within the next twenty years. The bulk of the new opportunities for productive employment created by the investment efforts of Ghanaian private entrepreneurs would continue to be created in agriculture.

If these formed the bulk of the new jobs created year by year, then in the long run there would be no structural change in employment or production and our achievements in economic development would amount to no more than marginal improvements in the present poor condition of the economy.

It is also inevitable that the drift of people into the urban areas of the country will continue under its own momentum whether productive employments in these areas are growing at a comparable pace or not. These new potential workers in the urban areas will work at whatever jobs are available. If enough jobs in productive activity are not available they may put themselves into the sort of service occupations that can so easily become over-developed and that are proving such a drain on the economies of many under-developed nations, especially in Latin-America and Asia. The only alternative in that situation to having swarms of such unproductive and under-employed people in our cities would be to have swarms of completely unemployed but able-bodied youths—with all the social and political consequences which that entails.

For all these reasons another type of investor is needed to supplement the existing type and to carry the main burden for bringing about those structural changes which are essential to the long run development of the economy but which would not otherwise occur. The state itself is pre-eminently suited for this role. To play it effectively however the state must resist the demands for those types of investment that are traditional and popular but unproductive, and deliberately favour productive investments, which are new and difficult, and behind which there will never be any organised social pressures. New financial institutions must be created and existing ones strengthened which will mobilise the country's savings and channel them to the state and to those private investors who are capable of developing new forms of economic activity. The private investors who can contribute most to the desired transformation will often be new ones, who will come in from outside or grow up domestically.

State policy towards private investment will therefore always discriminate sharply between the sorts of investors whom it is desirable to encourage actively and the others to whom we may be indifferent. In particular, policies will be selected not only with regard to their effect on existing investors but also in regard to their effect on potential investors, especially those whom it is hoped to attract from the outside into manufacturing and other non-agricultural enterprises in Ghana. Everything will also be done to induce existing private investors to change their pattern of investment.

The change in the pattern of employment, production and trade advocated in this long-run policy will only happen if active steps are taken to change the sectoral allocation of investment away from what would happen naturally. During

this period of industrialisation the Government will itself ensure that the required sums for creating the types of employment desired and in requisite numbers are regularly forthcoming.

The new workers will come onto the labour market without fail each year, their numbers being entirely dependent upon demographic movements which cannot be stopped or postponed. If they cannot find the right jobs when they come to look for work they will either go into the wrong jobs, or, if these are also unavailable, go to swell the army of the unemployed. If the target of new employment for any one year is missed, then it is hardly ever possible to make it up in subsequent years, and the long-run structure of the economy that will emerge will carry the result of this failure permanently.

To the extent that some of the new non-agricultural jobs required to meet the target of structural change are expected to be created through private investments, then the Government has the even more difficult task of ensuring that it not only meets its own obligations under the plan but can also induce private investors to meet their obligations each year, punctually and without fail, over a number of years. The only way to assure this is to give to the needs of economic development a position of importance in all aspects of our public policy.

SUMMARY AND CONCLUSIONS

1. The four cardinal points of Ghana's policy are the welfare of her people, the building of a socialist society, the independence and unity of Africa and the preservation of world peace.
2. In order to pursue these ends Ghana needs first of all a strong and prosperous economy at home, which is able to assure profitable employment to all Ghanaians.
3. The building of such an economy will start with the modernisation of agriculture.
4. In the long run the structure of employment must shift away from the present preponderance of agricultural employments.
5. Outside agriculture the primary emphasis will be on the multiplication of employment in the field of manufacturing.
6. The structure of Ghana's exports must change from the present reliance on primary products and raw materials to a greater concentration on industrial exports.
7. The structure of production will be progressively transformed by the development of technology.
8. The long term objectives of economic policy can be accomplished in a relatively short period if each development plan aims at maximising the rate of adoption of modern technology and the rate of productive investment.

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9. Ghana's prospects for economic emancipation, like those of other African countries, ultimately depend upon the political and economic unification of Africa.

10. Within the context of socialism in Ghana both the public and the private sectors will play an active part in the structural changes which it is desired to bring about in employment, production and trade.

11. Through a proper concern for the needs of economic growth in the allocation of its own resources and through the adoption of suitable policies towards private investment the Government is determined to pursue the long term economic goals set out in this Plan.

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CHAPTER 2

THE TASKS OF THE SEVEN-YEAR PLAN

The primary aim of this plan is to secure the fastest possible expansion of Ghana's economy during the next seven years. Under the First and Consolidation Development Plans (1951-1959) and the Second Development Plan (1959-1964) Ghana spent very large sums of money in building up social services and amenities and a complex of infrastructure facilities which are acknowledged to be among the best in Africa. Under this Seven-year Plan we must make use of these facilities to create a modern economy capable of assuring to our people a rising standard of living. Government is satisfied that a rate of economic growth of 5.5 per cent per annum during the coming seven years is feasible and calls upon all Ghanaians to unite their efforts in achieving that target.

I.—ACHIEVEMENTS UNDER PREVIOUS DEVELOPMENT PLANS

A few comparisons as shown on Table 2.1 will illustrate the magnitude of the progress that has been made in Ghana during these ten years in the field of social and infrastructure development. Besides the items listed in the table there is the spectacular Tema project where a whole new town of 35,000 inhabitants and Africa's largest artificial harbour have been built in seven years at a cost of £27 million.

These achievements are impressive in themselves. The rate of progress that has been maintained in the expansion of Ghana's physical and social infrastructure must rank among the highest in the world.

This performance by a small country is even more remarkable when it is remembered that up till now Ghana has financed practically every penny of these developments out of her own resources. Few other developing countries can match this record. The Government and people of Ghana can justly congratulate themselves on the wise use they have made of the favourable trading conditions which this country enjoyed until 1959. The evidence of that good husbandry is now to be seen in every aspect of the life of the country and of the individual Ghanaian.

With the loan of £35 million received from the World Bank and from the Governments of the United Kingdom and United States in 1962 towards the realisation of the Volta River Project, Ghana's outstanding performance in self-help has at last begun to attract the outside recognition and material support which it so richly deserves. The main responsibility for the development of this country must continue to rest upon the Government and people of Ghana: 70 per cent of the investment under this plan must come from domestic sources. But Government

TABLE 2.2
DISTRIBUTION OF PROPOSED PLAN EXPENDITURES

	<i>Seven-Year Plan</i> 1963-70		<i>First and Consolida- tion Plans</i> 1951-59	
	<i>Allocation</i> £Gm.	<i>% Share</i> <i>in Total</i>	<i>Expendi- ture</i> £Gm.	<i>% Share</i> <i>in Total</i>
I. PRODUCTIVE	177.3	37.3	13.4	9.9
(1) Industry and mining	109.3	23.0	6.5	4.8
(2) Agriculture, Forestry and Fishing	68.0	14.3	6.9	5.1
II. NON-PRODUCTIVE	298.2	62.7	127.8	90.1
(a) <i>Social Services</i>	150.3	31.6	56.7	41.7
(1) Education	64.0	13.5	17.0	12.5
(2) Health and Sanitation	31.1	6.5	5.3	3.9
(3) Other Social Services	10.5	2.2	16.0	11.8
(4) Housing	20.0	4.2	6.8	5.0
(5) Public Administration	19.0	4.0	8.7	6.4
(6) Police and Prisons	5.7	1.2	2.9	2.1
(b) <i>Infrastructure</i>	89.2	18.7	60.3	44.4
(1) Roads	26.4	5.6	19.3	14.2
(2) Railways and Inland Waterways	8.7	1.8	11.6	8.5
(3) Ports and Harbours	5.5	1.2	16.1	11.9
(4) Airport and Airplanes	1.5	.3	—	—
(5) Shipping	2.0	.4	1.2	.9
(6) Posts and Telecommuni- cations	9.6	2.0	2.2	1.6
(7) Electricity	11.1	2.3	3.0	2.2
(8) Water and Sewerage	24.4	5.1	6.9	5.1
(c) <i>Miscellaneous and Contingencies</i>	25.0	5.3	3.5	2.6
(d) <i>Volta</i>	33.7	7.1	1.9	1.4
TOTAL	475.5	100.0	135.8	100.0

sizeable surplus of electrical energy. The power that will be generated in the first phase of the Volta Project will meet all the country's requirements for electricity until well after the period of the Seven-year Plan. After that plans have already been drawn up for further developments of hydro-electric power at Kpong and

elsewhere to cater for our needs till the 1980's. Thus shortage of power, which is a common bottleneck in the development of the poorer countries, is on the way to solution now and cannot impede Ghana's progress for a long time to come.

Major extensions to Ghana's water supplies are already under way. Further developments, such as the new Accra-Tema metropolitan system based on the Volta Lake, will be surveyed and their implementation commenced in the course of this plan period.

As a result of these ten years of strenuous effort and sacrifice Ghana has created the necessary pre-conditions for rapid economic development. Transport is adequate; a reasonable amount of manpower has been trained with which to make a start on economic development; energy and water will soon be available in more than ample quantities.

The time has now come to make use of these facilities for a corresponding expansion of the real productive capacity of the economy. Further developments in the field of infrastructure must be by way of consolidating the gains already made. The principal concern during the next seven years must be with expanding production, incomes and employment. It is the firm resolve of Government to subordinate all other considerations to this over-riding need for economic growth. It is only by building up a strong economy that Ghana can hope to maintain the present levels of private consumption and public services and subsequently to raise them to those higher levels which modern technology has put within the grasp of humanity.

II.—ECONOMIC PROBLEMS NOW FACING GHANA

Whilst the progress made during the ten years in the field of social and public services has indeed been outstanding, equal progress has not been made in the expansion of the economy itself. It is on a vigorous economy that the whole super-structure of expanding public services and rising standards of living must rest.

In recent years the economic capacity of Ghana has become increasingly unable to cope with the demands made upon it by both the public and the Government. There has been a marked improvement in the standard of living and, in some sectors, in productivity, but they both remain low by comparison with the achievements of the more advanced countries. The most important areas where a lack of sufficient economic progress has led to serious difficulties have been the following :

- (i) The growing amounts and varieties of goods demanded by the people as their standard of living has risen have not been supplied by the economy and Ghana has remained almost entirely dependent upon foreign sources of supply for manufactured goods. Even though

Ghana is a predominantly agricultural country she has also had to import food in ever increasing quantities and at great cost in foreign exchange.

- (ii) Taxable capacity, which depends upon the level of economic activity, has fallen behind the requirements of Government for the revenues with which to support the increasing scale of public services.
- (iii) The economy has been unable to provide enough job opportunities for an adequate proportion of the new hands which have become available for work.
- (iv) The external balance of the economy, upon which depends the international strength of the Ghana pound, has been too narrowly based on the fortunes of the single crop—cocoa. For the last seven years the Ghana economy has not been earning enough foreign exchange to pay for its current purchase of goods and services from abroad.

These problems exist in spite of the country's generous endowment in natural resources because in the past those resources were not exploited to yield maximum economic benefits including employment, foreign exchange and government revenues.

III.—ECONOMIC OBJECTIVES OF THE SEVEN-YEAR PLAN

This plan proposes to make a simultaneous attack on all these deficiencies of the economy, and in the process to achieve further substantial increases in productivity and the standard of living.

- (i) The commodity and employment deficiencies will be tackled together through the programmes of industrialisation and agricultural modernisation. The Plan aims to bring the structure of production in Ghana more into line with the structure of demand. In satisfying the needs of Ghanaians for goods and services, it will capture for Ghanaian workers more of the jobs that are now done by workers in other countries.
- (ii) Increased domestic employment and personal incomes will provide a basis for higher Government revenues to support more and better social services and to eliminate the internal financial deficit.
- (iii) Greater domestic production of the commodities demanded by Ghanaians and an increase in the values of our exports by the processing of raw materials and the sale of manufactured goods will help to eliminate the balance of payments deficit.

These are the three central tasks for the next seven years. All other parts of this Plan are designed to assist in the fulfilment of these tasks, and must be implemented in that light.

THE TASKS OF THE SEVEN-YEAR PLAN

The most important of the specific programmes proposed for the realisation of these economic objectives are the targets of commodity production set for agriculture and industry. The attainment of these targets must take precedence over all other programmes set out in the Plan. In particular, the productive investments required by agriculture and industry must have first claim on the resources that will become available during these seven years.

The successful attainment of these objectives in agricultural and industrial production demands that certain preconditions be observed:

- (i) Agricultural and industrial projects must be carefully chosen and planned to assure maximum economic operation.
- (ii) The managements of these enterprises should be competent, honest and dynamic.
- (iii) An adequate supply of skilled manpower must be obtained to man our agricultural and industrial enterprises.
- (iv) The general level of wages must not be allowed to rise above the increase in productivity in order to assure the maximum investment and employment opportunities for all potential workers and to keep the prices of Ghanaian products competitive.

If the people of Ghana can successfully accomplish the tasks set out in this Plan then we can expect to have achieved a major economic break-through on a number of fronts by 1970. Ghana will have ended her present excessive dependence upon imports of certain staple foods and might have become a net exporter of food instead. Ghana's extreme dependence upon foreign sources for the basic lines of manufactured consumer goods will have been eliminated.

Exports will have become diversified and industrialised to a large degree. This will contribute to a solution of the present unfavourable balance of payments situation.

In the process of implementing these programmes in agriculture and industry direct employment will have been found for many thousands of new workers who will join the ranks of the labour force in the coming seven years. The new investments which it is hoped to achieve and the adoption of improved methods in agriculture and industry should contribute to an improvement in the level of productivity. It is out of this that eventually the nation will be able to provide itself with better social services and that higher standard of living which is the ultimate end of our development.

IV.—INVESTMENT TARGETS 1963–1970

In the previous seven years the annual volume of cash investment in Ghana has about doubled. This fast rate of increase cannot be expected to be maintained in the coming seven years, but the progress made in laying the foundations in the past has opened up new opportunities for public and private investment.

THE TASKS OF THE SEVEN-YEAR PLAN

In order to achieve the economic objectives of this Plan aggregate cash investment in Ghana will have to rise from the current level of approximately £100 million a year to an average of £130 million a year over the plan period. The Government's investment programme will supply just under one-half of the capital formation required.

Private investment, if it is to be equal to the role assigned to it in this national endeavour, should supply the rest. Measures for helping private investors to achieve the targets set for them are described in greater detail in Chapter 3. It must be emphasised that this is not merely a plan of what Government will undertake in the ensuing seven years: it is also a plan of what each one of us in our private capacity must do to help in the building up of Ghana's economic strength.

Those Ghanaians who can afford to invest should consider it their national duty to do so at every opportunity that arises. They should help the Government to provide employment for our growing labour force and to ensure adequate housing for the workers of Ghana. The direct investment of Ghanaians in building their own houses, extending their farms and making numerous improvements in their towns and villages through individual and communal labour has contributed greatly to economic and social development in the past. These investments should be stepped up under the guidance of local authorities and social workers so that they can contribute an average of £G14 million a year to aggregate investment.

Foreign capital, both Government and private, must necessarily continue to supplement Ghana's domestic savings if an adequate rate of economic growth is to be maintained. By keeping up its previous record of prudent financial management and by producing a number of sound, well-planned schemes every year Government is confident it can attract the requisite volume of loans and grants for its own investment programme.

Government believes that its policies towards foreign private capital which are described in detail in the next chapter are as attractive as those of any comparable nation. It hopes that foreign investors, with all their managerial and technical skills, will come into Ghana in increasing numbers to supply the needs of our thriving market and to use the excellent physical and technical facilities which Ghana affords.

V.—PLAN PROPOSALS FOR GOVERNMENT INVESTMENT 1963–1970

Government proposes to spend £442 million on development projects during the next seven years plus £34 million required to complete the Volta Project making a total of £476 million. (See table 2.2.)

THE TASKS OF THE SEVEN-YEAR PLAN

The average rates of planned expenditure under the various Development Plans compare as follows:

Average Capital Expenditure Per Year

	£G
First Development Plan	15.5 million
Consolidation Plan	21.4 million
Second Development Plan	50.0 million
Seven-Year Plan	68.0 million.

As well as increasing the rate of expenditure it is also proposed to make a radical change in the distribution of government investment as between productive and non-productive items viz:

Proportionate distribution of Government investments

	<i>Agriculture and Industry</i>	<i>Social Services and Infra- structure</i>
First Plan	11.2%	88.8%
Second Plan	20.3%	79.7%
Seven-Year Plan	37.3%	62.7%

At the beginning of the plan period the pattern of Government expenditure will still be weighted on the side of social services and infrastructure items. By the end of the period however Government should be investing nearly as much every year in productive assets as in non-productive ones (*see table 2.3*).

A further break-down of these expenditures by major sectors is shown in Table 2.2 together with comparable data on actual expenditure in these fields during the last ten years.

The shift in the pattern of government investment in favour of the productive sectors will be made primarily at the expense of the share of aggregate expenditure directed to the building of infrastructure, which should fall from 44 per cent in previous plan periods to less than 19 per cent, and, to a lesser extent, of the share devoted to the social services. In absolute amounts however government's yearly investment in all sectors will run at much higher levels under this 7-Year Plan than it did in the period 1951-1959: the social services will get £21.5 million a year as against £6.2 million a year previously, infrastructure £12.8 million as against £6.6 million and the productive sectors £25.3 as against £1.5 million.

THE TASKS OF THE SEVEN-YEAR PLAN

Productive investments will also be accorded priority in terms of the timing of development expenditures in the coming seven years. The detailed yearly targets of investment shown in Table 2.4 are phased on the following principles:

- (i) Agriculture and education will be built up most rapidly at first, government investment in these sectors rising to their maximum by 1966-1967.
- (ii) The build-up of investment in industry will follow in the years 1966 to 1970 after the organisational framework for industrialisation in the public sector has been built up and the necessary research and pre-planning undertaken.
- (iii) Expenditure on health and community development will be evenly spread over the plan period. Other social services, housing and public administration, however, will get more resources devoted to them towards the end of the plan period when the economic base has been strengthened.
- (iv) Certain extensions of the infrastructure are already under way in posts and telecommunications and will be completed while the electricity network is also prepared for the completion of the Volta project in 1966. Water supplies will also be given a high priority in the early years of the plan period. But other elements in infrastructure development will be concentrated in the later years.

TABLE 2.3

CHANGES IN THE PATTERN OF GOVERNMENT INVESTMENT, 1963-70

	<i>Planned Expenditure £G Million</i>		<i>Share of Total Expenditure Percentages</i>	
	1963-64	1969-70	1963-64	1969-70
Agriculture, Forestry and Fishing	6.7	8.7	15.7	11.9
Industry and Mining	9.5	26.7	22.3	36.4
Total Productive	16.2	35.4	38.0	48.3
Social Services	14.2	24.9	33.3	33.9
Infrastructure	12.27	13.05	28.7	17.8
Total Non-productive	26.47	37.95	62.0	51.7
Total	42.67	73.35	100	100

THE PHASING OF PLANNED GOVERNMENT EXPENDITURES 1963-70

EG Million

THE TASKS OF THE SEVEN-YEAR PLAN	Totals							1963-64							1964-65							1965-66							1966-67							1967-68							1968-69							1969-70																																															
	109.3	68.0	6.7	9.5	9.8	8.2	10.6	11.5	10.6	10.8	13.5	10.8	10.9	16.8	21.5	26.7	8.7	35.4	177.3	16.2	18.0	22.1	24.3	27.7	31.1	35.4	7.6	5.0	1.9	4.7	4.3	1.4	7.5	4.6	4.5	12.3	10.9	4.5	4.5	1.7	1.4	2.2	2.6	3.2	1.8	1.8	3.8	3.5	1.2	22.4	24.9	26.42	4.58	4.11	3.18	3.13	3.42	3.95	1.10	1.18	—	0.25	0.70	0.50	0.58	0.47	5.40	1.00	4.05	8.68	0.75	1.95	2.20	0.75	0.75	0.23	—	1.10	1.10	1.18	4.05	26.42	8.68	0.75	1.95	2.20	0.75	0.75	0.23	—	0.25	0.70	0.50	0.58	0.47	5.40	1.00
Productive	1. Industry		2. Mining		3-5. Agriculture, Forestry and Fishing		Total		109.3		68.0		6.7		9.5		9.8		8.2		10.6		10.8		13.5		10.8		10.9		16.8		21.5		26.7		8.7		35.4																																																										
	1. Education		2. Health		3. Other Social Services		4. Housing		5. Public Administration		6. Police and Prisons		Total		150.3		14.2		17.9		20.0		22.6		25.6		22.4		24.9		7.6		5.0		1.9		4.7		4.3		1.4		7.5		4.6		4.5		12.3		10.9		4.5		4.5		1.7		1.4		2.2		2.6		3.2		1.8		1.8		3.8		3.5		1.2		22.4		24.9																		
Non-Productive	1. Roads and Bridges		2. Railways and Inland Waterways		3. Ports and Harbours		4. Airports and Airplanes		5. Shipping		6. Posts and Telecommunications		7. Water and Sewerage		8. Electricity		Total		89.21		12.27		14.52		13.65		11.35		12.10		12.27		13.05		9.7		16.4		10.9		5.2		1.1		0.1		—		—		73.35		450.5		59.07		61.32		60.95		59.35		65.50		65.77		—		—		25.0		10. Miscellaneous and Contingencies																								
	9. Volta		Total		9.7		16.4		10.9		5.2		1.1		0.1		—		—		73.35		450.5		59.07		61.32		60.95		59.35		65.50		65.77		—		—		25.0																																																								
	10. Miscellaneous and Contingencies		Total		9.7		16.4		10.9		5.2		1.1		0.1		—		—		73.35		450.5		59.07		61.32		60.95		59.35		65.50		65.77		—		—		25.0																																																								

(a) EG2.5 million supplementary loan granted to State Farms Corporation in 1962-63 Financial Year.
 (b) EG2.7 million of educational building initiated in 1962-63 Financial Year.

THE TASKS OF THE SEVEN-YEAR PLAN

To finance the planned level of expenditure Government proposes to raise £159 million from surpluses of revenue over recurrent expenditure; £240 million from external sources of which credits to a tune of around £100 million are already in sight in addition to £20 million of unspent balance on the loans for the Volta Project; and £137 million from other domestic sources. As now calculated the financial resources presently foreseeable as becoming available for implementing the government's investment programme fall short of requirements by some £54 million. This financing gap, as is explained in Chapter 13 below, will stand as long as the world cocoa market remains depressed. In that eventuality certain of the projects accepted for inclusion in this plan will be postponed to the next plan period. In selecting projects for such deferment Government will make every effort to protect the investment allocations to productive enterprises. Should the cocoa market improve however it will become possible to provide financial cover for the total government programme. Ghana's contributions to the financing of the Volta Project are a statutory charge on the revenues and will be provided separately to be supplemented by drawings on the foreign credits obtained.

This financing scheme includes a precautionary margin of £10 million in addition to the contingency allocation of £25 million. No provision has been made for expenditure on defence services. Such expenditure cannot properly be classified as development and henceforth all provision for defence will be included in the budget for recurrent expenditure, in conformity with standard international practice.

THE NON-GOVERNMENT SECTOR UNDER THE SEVEN-YEAR PLAN

Secondly, this foreign capital has generally come into Ghana accompanied by its own management, a factor of production of which, especially in the industrial and technical fields, Ghana is particularly short.

The main emphasis of Government policy towards foreign private investment under this plan is on furthering the change in the direction of such investment in favour of productive ventures and securing a rapid augmentation in its volume.

TABLE 3·1
FIXED CAPITAL FORMATION
PUBLIC AND PRIVATE

				£G Million							
				1955	1956	1957	1958	1959	1960	1961	1962
GENERAL GOVERNMENT											
Building and Construction	..	..	..	13	11	9	9	14	17	24	25·6
Machinery and Equipment	..	..	..	1	2	1	1	2	5	10	10·0
Other Government	..	..	..	2	3	3	3	4	4	4	3·5
Total	..	..	..	16	16	13	13	20	26	38	39·1
Public Enterprises											
Public Enterprises	..	..	..	4	3	4	6	8	23	16	10·3
Total Public Sector	..	..	..	20	19	17	19	28	49	54	49·4
PRIVATE											
Rural Building	..	..	..	5	6	6	7	7	7	8	5·8
Mines and Works	..	..	..	2	2	2	2	2	2	2	1·5
Universities	..	..	..	2	1	1	1	1	1	1	0·8
Other Private	..	..	..	23	28	30	26	37	37	39	35·7
Total	..	..	..	32	37	39	36	47	47	50	46·5
Total Fixed Capital Formation				52	56	56	55	75	96	104	95·9

II.—GHANA'S POLICY TOWARDS PRIVATE INVESTMENT

(i) Previous Policies Towards Private Investment

Under the previous development plans and the various policy and budgetary measures adopted from time to time to implement them Ghana has always given a maximum of encouragement to private investment.

Government has consistently held the view that its socialist objectives are not incompatible with the existence or the further growth of a vigorous private sector in Ghana's economy. As explained above Government aims to create a large public sector in the economy by intensifying its own productive investment rather than by hindering the operation and growth of private enterprise. It aims to secure to the community an adequate measure of control over the country's economic destiny by directing public investment to the key sectors of production and distribution. For controlling the general movements of the economy and the utilisation of the nation's output for socially purposeful ends, the Government of Ghana, like any other government in the world, has at its disposal the usual weapons of monetary, fiscal and legislative policy.

It is therefore neither a necessity, nor has it ever been the intention of Government, to discourage private enterprise. True to its commitment to evolve in Ghana a socialist pattern of society based on purely African conditions, Government will leave to private citizens that degree of freedom of enterprise and those rights to the holding of personal property which are traditional to the African way of life. This should also provide more than enough ambit for the operation and the security of foreign enterprises in Ghana.

In the past Government has employed the following main policies in its efforts to stimulate private investment in Ghana:—

- (i) The rate of taxation has been kept low. Even though this has to be adjusted from time to time in the light of other requirements of policy it still remains true that Ghana has one of the low rates of taxation among countries with an adequate tax system.
- (ii) In addition special exemptions from taxation have been granted to investors in those fields which it was particularly desired to encourage.
- (iii) Through the former Industrial and Agricultural Development Corporations the Government tried to support would-be private investors by offering capital loans and, where desired, the possibility of joint government-private ownership. With the dissolution of these bodies their roles in stimulating private investment have passed to the National Investment Bank as far as concerns finance and to the Ministries of Agriculture and Industry as far as concerns the other assistance and facilities needed by private investors.

- (iv) Private investors are, of course, more concerned to make adequate profits than to avoid taxation on such profits. The whole of Government's efforts in creating a modern complex of social overhead facilities in the last ten years have been aimed at providing the necessary framework for productive investment.

It is worth remembering that the main immediate result of Government's investments and external borrowings for the construction of the Volta River Project itself will be to provide power which will enable the Volta Aluminium Company (Valco) a private group of foreign investors, to run an aluminium smelter.

- (v) Government has also helped to keep private business costs down by levying either low or nil duties on raw materials. Machinery and equipment have always been completely exempt from duties, or other levies. In the course of this plan period Government intends to produce enough food and build enough workers' houses so as to keep the cost of living down and thereby relieve the pressure on wages. The successful implementation of this policy will make a powerful contribution towards keeping down the costs of doing business in Ghana and should provide a strong incentive to increased investment in agriculture and industry.
- (vi) A large number of private businesses in Ghana are already enjoying a high degree of tariff protection specifically designed for their benefit. Subject to the over-riding need to safeguard the interests of the consuming public at large, Government intends to continue to make judicious use of this device for stimulating private investment.
- (vii) The security of private investment in Ghana is enshrined in the constitution of the Republic and has always been assured by law and administrative practice. No property has been, or could be, taken over by Government without full and generous compensation.

(ii) The New Investment Law

Numerous encouragements to private investment have now been consolidated and extended in the Capital Investments Act passed by the Parliament of Ghana in 1963. Under this law special fiscal concessions and other privileges will be provided for investors in those fields of enterprise which have been given a high priority under this plan—the production of consumer staples at home, the processing of primary commodities and the fabrication of manufactures therefrom for export, the development of a building materials industry, and the promotion of all other activities which generate high incomes and employment in Ghana.

A Capital Investments Board has been set up to administer these privileges and to render to private investors all such assistance as may be necessary for the smooth conduct of their business. This Board will also provide a vital link through which will be maintained that co-operation between Government and private enterprise which is needed for the smooth functioning and growth of a mixed economy.

(iii) Other facilities for Private Investors

- (i) *The National Investment Bank.*—This Bank has been established to promote and finance productive enterprises. For this purpose it replaces the I.D.C. and A.D.C. which were wound up early in 1962.

It is intended that the National Investment Bank will operate in all sectors of the economy so that its disciplines and other influences may be available to all entrepreneurs in the economy. The role of the bank is to be promotional and catalytic, and it will provide medium-term and long-term loans; it may also assist enterprises by purchasing or subscribing for shares or other securities or by acquiring other interests in such enterprises. The bank will be expected :—

- (a) to assist in the establishment, improvement, expansion and modernisation of industrial, agricultural and commercial business;
- (b) to encourage and facilitate the participation of internal and external capital in such enterprises;
- (c) to counsel and encourage small Ghanaian business concerns; and
- (d) to seek to bring together investment opportunities, internal and external capital, and experienced management.

The bank will have adequate powers to borrow money for the purposes of its business from sources both in Ghana and in any part of the world. It will have a mixed equity capital with Government holding a majority interest.

In its operations the bank will establish a Development Service Institute to carry out pre-finance project examination and post-finance technical and professional services to projects financed by the bank. The Institute will in addition carry out general research to reveal profitable opportunities in the economy and promote the interest of domestic and foreign investors in such sectors by the dissemination of relevant information. The Institute will also actively participate in and contribute to the development of professional education and training of Ghanaians in business, finance and management. Non-clients of the bank will be allowed and encouraged to make use of the services of the Institute.

It is the intention of Government that a large proportion of the money provided in the industrialisation programme for the promotion of new manufacturing activities will be channelled through the National Investment Bank. This together with the sums which the Bank can borrow on its own account will enable it to extend powerful support to all worthwhile ideas submitted to it.

- (ii) *The training of skilled manpower and management.*—The programme for accelerated training of skilled manpower is outlined in Chapter 7. This programme has been designed to take into account not only the requirements for skilled manpower within the public sector but also the needs of the private sector for skilled workers and potential management personnel. Private investors who sometimes have difficulties in recruiting labour which can be trained rapidly in the use of complicated mechanical equipment, should find very soon that the new type of operative available in Ghana makes a far better worker.

Management training will be built on the foundations that are laid in the Universities which are expected to produce an increasing number of engineers, economists, accountants and administrators. The subsequent on-the-job training of this potential management material in private establishments will naturally be in the main the responsibility of the owners and managers of such enterprises. But Government intends to supplement such private efforts in management training by running additional formal and on-the-job courses wherever these are feasible. It is envisaged that the management training programmes which are being run under the auspices of the Office of the Planning Commission should be intensified in the coming years.

- (iii) *Central Government machinery for helping investors.*—In view of the crucial role assigned to private investment in this plan there is need for strong machinery on the side of Government to help private investors and ensure that they fulfil their allotted tasks. The policies that Government proposes to adopt in the fiscal, credit and legal fields to encourage private investment have already been described.

Foreign investors especially require more help and inducement than can be conveyed in general legislation and policies. In the sectors of agriculture, forestry and mining there are many problems of a legal nature and often also labour problems to be surmounted before an enterprise can get started. In industry foreign investors often need assistance with market appraisals, including information about other projects in the same or related fields, with acquisition of land and connections to public

utilities. The concessions and facilities granted to each investor must also be designed in a discriminating way to fit the importance of the investment to general development objectives as well as to the particular circumstances of the project.

As indicated above it is proposed to entrust the responsibility for assisting private investors to the Capital Investments Board which will be serviced by a division of the Ministry of Finance and will be able to call on the resources of the Office of the Planning Commission, the Ministries of Industries, Agriculture and Justice, the Bank of Ghana and the departments and corporations responsible for public utilities and labour. Investors will also be able to obtain help through the Board on some of the physical and legal problems connected with their business as well as all information of importance to them. The general opinion of investors has been that it would be of great advantage to them to have all these functions dealt with by one body representing the Government so that they know where to refer their problems for an authoritative answer.

The Board will also be able to interpret Government policy at all times to private investors: this should help to remove those doubts and misunderstandings that always arise when the business community has no reliable channel of communication with the Government of the country.

- (iv) *Housing loans and mortgage facilities.*—The main emphasis will be placed on giving Government guarantees to private investors who are prepared to finance housing development. Government proposes to help housing construction attain the level required for the expected growth in population in the coming seven years. In addition Government will continue and expand the various systems of direct loans for house building outlined in Chapter 9.
- (v) *Small loans schemes.*—An allocation of £4.5 million for farmers and one of £5.2 million for fishermen have been made under the agricultural development programme to be administered by the Bank of Ghana for the benefit of small farmers and fishermen in the country. In addition, it is expected that small enterprises will be assisted by the Ministry of Industries and the Investment Bank through technical advice and, in suitable cases, through capital investment. It is hoped that many of the smaller industrial enterprises especially in the field of food processing that will be started by the Ministry of Industries will subsequently be turned over to the co-operative sector with suitable arrangements made in each case to grant credits to co-operative groups for the purchase of such enterprises.

(iv) *National Productivity Centre*.—Of the minimum target of a 5.5 per cent per annum rise in aggregate production sought under this plan less than 3 per cent per annum can be obtained from an increase in the labour force. The rest should come from increased productivity of the labour force. While this plan specifies an investment programme which should contribute to a rise in labour productivity an equally important contribution to higher productivity must be sought through the application of better technology and management practices. Since the latter sorts of improvement are not susceptible to programming in money terms they tend to be ignored unless measures are taken to keep to the fore the importance of improved management and technology as sources of higher productivity. Government has therefore decided to set up in collaboration with labour and employers a National Productivity Centre charged with the responsibility of helping all sectors of the economy to plan for and implement on a steady basis a programme of improvement in productivity.

The first and perhaps the most difficult task of the Productivity Centre will be to create in the minds of workers and managers the right approach to productivity and to have them accept improvements in productivity as one of the normal objectives of their operations. The centre will concern itself with the training of managerial and supervisory personnel for all sectors of the economy who should be the main carriers of new ideas and methods into the workings of the economy. Such training will embrace the upgrading of existing managerial and supervisory personnel no less than the training of more management personnel. The centre will build up a storehouse of information on the most modern developments in management and organization and make this readily and constantly available to those who run the economy. Among its most important facilities therefore will be a reference library and information service on productivity matters.

The National Productivity Centre will also be able to offer detailed consulting advice to individual enterprises and agencies in the fields of industrial engineering, production planning and control, work study and simplification, marketing, accounting, distribution, personnel selection and testing, quality control, maintenance of standards and product design. The beginnings of such a consulting service to productive enterprises have already been made through the Ministry of Industries and the Office of the Planning Commission. These activities will be intensified and concentrated in the National Productivity Centre. Where the centre is unable to advise on productivity problems referred to it, it should be in a position to obtain such advice from the sources where it exists for the benefit of enterprises and agencies in Ghana.

THE NON-GOVERNMENT SECTOR UNDER THE SEVEN-YEAR PLAN

For Government enterprises and for the ministries and departments a regular system of compulsory checks on productivity will be instituted and methods will be devised to ensure that suggested solutions towards the improvement of efficiency and productivity are implemented. It is hoped that private industry and the labour unions will not only contribute financially to the National Productivity Centre but will also make their own arrangements for using the services of the centre in a regular and systematic way to improve productivity in the non-Government sector of the economy.

- (vii) *Industrial Estates.*—Government has spent considerable sums already on providing the industrial areas of various towns especially Accra, Tema, Takoradi and Kumasi, with modern transport facilities and public utilities. A very successful experiment in the provision of fully developed industrial estates has been completed in Labadi in Accra and will be extended as need arises. It is expected that the construction of such industrial estates might become one of the major means by which the National Investment Bank and the Ministry of Industries could render assistance or even supply a capital participation to private and co-operative investment.
- (viii) *Standards.*—Government believes that both consumers and producers would benefit from the establishment of clear minimum standards to guide manufacturers. A proposal to set up a Bureau of Standards is under consideration and will be implemented in the near future. This Bureau might also be able to arrange testing facilities for those manufacturers who cannot set up their own.

III.—THE TASKS OF PRIVATE INVESTMENT UNDER THE SEVEN-YEAR PLAN

(i) *General direction and magnitude*

It is hoped that in the course of the next seven years private investors, both Ghanaian and foreign, will be able to raise the average rate of their investments above the £G50 million per annum recorded in recent years.

Government especially invites private investors to help in the central task of expanding the real productive base of the economy by directing a maximum proportion of their efforts towards manufacturing and primary enterprises including mining, agriculture, forestry and fishing.

Apart from the measures already taken or proposed, as outlined above, to assist private investors government stands ready to discuss with all the interested parties such other measures of policy as will further the attainment of a satisfactory rate of private investment.

(ii) Ghanaian Private Investment

Private Ghanaian investors have an important role to play in this effort, particularly in the provision of housing, in the expansion of agriculture and in the development of small scale industries.

As will be explained in Chapter 4 on Agriculture, Government intends to provide a high level of supporting services for the small Ghanaian farmer—agricultural extension, seed distribution, irrigation, marketing, fertilisers, tractor services and agricultural credit. It is for the farmer to utilise these facilities to extend his acreage and to increase the yield from his existing acreage. To do either of these things most effectively, the farmer will need to save on a larger scale than hitherto in order to invest in new farms and new farming equipment.

There is immense scope for small scale Ghanaian industrial establishments supplying many of the vital needs of the economy. Repair and maintenance, food processing and the production of numerous household necessities—all these are fields waiting for the enterprising Ghanaian businessman. Government will intensify its efforts in supplying all the assistance that it can command to any such businessman who comes to it with sound schemes and the ability to implement them.

In every economy housing is by far one of the largest claimants on available capital resources. As is explained in a subsequent section, in recent years the supply of housing in the urban areas of Ghana has been seriously outstripped by the increase in population. Government intends to concentrate its own efforts in the field of housing during this plan period on the urban housing problem in addition to continuing its efforts generally to improve the standards of housing in Ghana.

But the main task of providing housing during the coming seven years must rest on private builders. Every encouragement will be given to them to build. Urban families will be assisted to build or to acquire their own flats and houses. In addition to any guarantees, loans and mortgage facilities which might be provided by government, this approach will demand that individual Ghanaians be ready to invest sizeable sums of their own money in housing.

(iii) Foreign Private Investment

Foreign private investment has quite a special place in this Seven-year Plan. First, the balance of payments position is potentially one of the most rigid brakes on the rate of economic growth that can be sustained in Ghana. Every penny of foreign exchange has to be used to maximum advantage, and it will be for the importing houses to venture out in whichever direction they can from which to obtain the best value for money. The traditional lines of commerce must be carefully re-examined and every effort made to obtain the best available returns on the expenditure of foreign exchange.

THE NON-GOVERNMENT SECTOR UNDER THE SEVEN-YEAR PLAN

Second, the level of technical services is still very low. The resulting short life of equipment is a great strain on an economy like Ghana's which is already short of capital. Even for motor vehicles which ought to be showing the favourable effects of the vast improvement in the standard of roads which has taken place in recent years, the normal effective life in Ghana is still very short, mostly due to inadequate maintenance. Government fully intends to undertake an accelerated programme for the training of technicians and hopes that private firms will continue with, and expand considerably, their own training schemes.

Third, foreign private enterprise in Ghana should form a channel through which those practices of labour and management which make for the high level of productivity in the advanced countries are imported into Ghana. The proposed National Productivity Centre will provide a focus for the movement towards greater efficiency in the country. But it can only be effective to the extent that its precepts are carried into the practice of business enterprises. The foreign private investor, with his flexibility for experiment and innovation, should constitute the entrepreneurial leadership whose practices of management will be followed by the rest of the business community. The scope for improvement in productive efficiency in Ghana is immense. The most casual observation of a major vehicle repair yard or building site reveals a generally low level of organisation and control. The results of this show up in the very high prices which we pay in Ghana for repairs to vehicles and for buildings even as compared to the most advanced countries where the labour is paid many times more than Ghanaian labour.

The fourth main task of foreign private investment under this Plan lies in the field of manufacturing industry. As outlined in Chapter 2 Government hopes that this country will become largely self-sufficient in the supply of staple manufactured consumer goods before the end of this plan period. These goods—clothing, shoes, housewares, packaged and processed foods—all belong to that category of manufacture which private investors from abroad will be best fitted to produce.

The mining industry in Ghana is largely in the hands of foreign private investors. As is shown in a subsequent section mineral exports, with an increasing degree of local processing before shipment, are expected to provide a sizeable part of the foreign exchange earnings needed to finance this Seven-year Plan.

Specifically, it is necessary that the following increases in output of the leading minerals be attained during the plan period.

	1962	1969	% Increase
Gold (ml. fine ounces)	·945	1·100	16·4
Manganese (ml. tons)	·464	0·700	50·9
Bauxite (ml. tons)	·286	0·400	39·9
Diamonds (ml. carats)	3·327	5·000	50·3

THE NON-GOVERNMENT SECTOR UNDER THE SEVEN-YEAR PLAN

With the completion of the Volta Project Ghana's massive iron ore deposits at Shieni will be brought within reach of cheap transportation. Other mineral deposits such as limestone, clays, glass-sands, and rock salt await exploitation. Government also invites foreign investors to join in the prospecting for petroleum of which the geological indications in Ghana are favourable.

The local processing of the country's mineral products is a field to which Ghana expects foreign private investment will bring sizeable resources of capital and expertise during the next seven years. The leading requirement in this field is for the local production of alumina to feed the Tema and possibly other aluminium smelters.

After cheap power from the Volta becomes available Ghana will embark on the development of basic industry on an extensive scale. Much of the metals, chemicals and synthetics which will flow from these developments will have to be used by private manufacturing enterprises in providing those sophisticated items of final and industrial demand which the economy will require on an increasing scale and for which there are ready export markets. Government expects private investors to prepare now for a sizeable development of the manufacture of pumps, motors, electrical goods and machines of all sorts and some of the durable consumer goods for which, before the end of this plan period, the markets of Ghana and neighbouring African countries, as well as the technical conditions of production here in Ghana, will offer scope for profitable undertakings.

With the very favourable financial and technical conditions now existing in Ghana and with the increasing opportunities for industrial and technical enterprises that have opened up Government hopes that foreign private investment will maintain an average in excess of £G17 million per annum during the plan period.

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CHAPTER 4

AGRICULTURE

I.—AGRICULTURE IN GHANA'S ECONOMY

It has long been a familiar judgement that Ghana is an agricultural country and that Government policy must pay particular attention to agriculture. The exact contribution of agriculture to economic activity in Ghana is however less well known. In 1962 domestic food production alone accounted for £G181 million or almost exactly one-third of the Gross Domestic Product of Ghana. In addition, agriculture, including forestry and fishing, supplied goods worth £G86 million for export. The total contribution of agriculture to the £G535 million worth of resources available to Ghana from all activities in 1962 was therefore about 50 per cent—far greater than the contribution of any other branch of economic activity.

As has been indicated in Chapter 1, agriculture accounts for 61 per cent of all employment in Ghana: in other words, about two out of every three working people in this country make their living out of farming, forestry and fishing.

International trade has been a great stimulant to the growth of the Ghana economy since the late 19th century. Most of the commodities for this trade have been supplied by agriculture—rubber, palm oil, and in the last fifty years, cocoa have successively dominated the country's export trade. It is out of these exports that Ghana has financed those imports of capital and consumer goods which have contributed to the maintenance of a rapid rate of economic growth and a general standard of living accepted to be amongst the highest in Africa. In 1962, in spite of the development of minerals and other export commodities, agricultural products still supplied nearly 77 per cent of total domestic exports.

In the period since the last war agriculture has made a very special contribution to Ghana's development over and above its role as the principal supplier of exports. The money to finance all the revolutionary advances that have been made in the modernisation of Ghana has come almost exclusively from agriculture. Within agriculture the cocoa farmers have been the real heroes of this achievement. Of the total income of £G700 million earned from the export of cocoa in the period 1951 to 1961 the cocoa farmers have received £G420 million while the remaining £G280 million has gone to maintain the public services, to finance development and to build up the external reserves of Ghana.

In addition to providing funds for almost all the developmental expenditures and savings of Government agriculture has also supplied most of the money that has gone into local and private investment in Ghana in recent years. The rapid

growth of urban populations stems from the prosperity of the cocoa industry. Agricultural money has financed much of the education of the youth and the development of transport. Local initiatives in the improvement of water supplies and roads, and in the construction of schools and clinics, have contributed significantly to the social and economic development achieved in recent years. The farmers of Ghana who have financed all these will be required to make an equally great contribution towards the objectives of economic growth and social modernisation envisaged under the present plan.

It is a remarkable fact that with the exception of the roads and railways contributed by Government, and the scientific advances in cocoa farming introduced in the last six years, the achievements of Ghana's agricultural industry have had practically no technical or financial assistance from anybody outside agriculture. The small scale farmer with his hoe and cutlass has virtually created Ghana as she is today.

That Ghana is an agricultural country and owes so much to her farmers does not mean however that this country should forever remain an agricultural country or that the farmer should continue to carry the whole burden for development. As indicated in Chapter 1 the further growth of Ghana's economy and the achievement of stability demand that Ghana be transformed eventually into an industrial country. New sources of support arising from new economic activities are needed to maintain the drive towards the modernisation of Ghana.

It is nonetheless obvious that however much progress is made in the non-agricultural sectors of the economy, the general level of prosperity in Ghana cannot increase significantly unless agriculture which employs nearly two-thirds of the labour force also undergoes a revolutionary change. During the next two decades the rate of growth in agriculture will condition the rate of growth of the whole economy.

In the next seven years the population of Ghana will increase by about 1.4 million or 19.7 per cent. If economic growth takes place at the rates hoped for then personal consumption should also rise by more than one-fifth during the period. To provide a rising standard of consumption for an increasing population, therefore, agricultural production should increase by over a third to keep up with the demand for food alone. Since the farming population will, and should expand rather more slowly than the population of the country as a whole this implies that agricultural productivity must rise by upwards of 4 per cent a year in order to meet the requirements of the economy for food and agricultural raw materials.

II.—THE PRESENT STATE OF AGRICULTURE

The development that has taken place in the agriculture sector has depended upon using increasing amounts of the country's labour supply which was abundant

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and growing, and applying it to the land of which also there is no scarcity, to produce the crops that were marketable. Yet this has been achieved with little change in farming methods. The traditional farming methods however have a low productivity. On the basis of such methods Ghana's agriculture has been able to provide only a relatively low level of nutrition and has yielded the farming community an average level of incomes which is also quite low by world standards. Changes in agricultural productivity are needed which will both raise the nutritional level of the population and increase the average level of farmers' incomes.

Besides this, Ghana's agriculture has not been able to keep up with the growing domestic demand for food in recent years and local food prices have risen steadily while a part of the demand for food has been met by increased imports. By 1962 the burden of food imports had become a major factor in the worsening balance of payments situation. Ghana had to spend over £G26 million in 1961 on food imports alone, which was almost exactly equal to the total deficit on visible trade for the year. Ten years before the food import bill had amounted to £G9.9 million, and it is estimated that with the rate of economic growth anticipated under the present development plan food imports, if unchecked, will have grown to some £G50 million by 1970. Table 4.1 shows in detail the increases that have taken place in imports of various items. Of all the major items in the food bill only wheat and perhaps dairy products could not be produced as cheaply in Ghana as elsewhere.

TABLE 4.1

DEVELOPMENT OF SELECTED FOOD IMPORTS 1951-1961

<i>Item</i>	<i>Imports in £G'000</i>		<i>% change in 10 years +increase -decrease</i>
	1951	1961	
Meat	1,195	1,935	62
Fish	1,422	4,814	239
Dairy Products	633	1,901	200
Rice	313	2,514	706
Maize	207	35	-89
Wheat	1,539	3,145	104
Sugar	1,139	2,690	136
Fruits and Vegetables	171	2,068	1,109
Total Selected Items ..	6,618	19,102	198

Foreign exchange is now, and will remain for a long time to come, one of the scarcest of the resources needed for Ghana's economic development. All the equipment required by agriculture, industry, government and commerce has to be imported. Many types of consumer goods will not be produced in Ghana for years to come. Until now Ghana has been able to draw on large reserves of foreign savings which were built up in the years of good cocoa prices until 1956. These reserves have now reached a level where they cannot give much support to the development programme. From now on imports will have to be financed by current exports supplemented by whatever foreign credits can be raised by Ghana. The prospects for foreign exchange earnings are clouded by the weakness in world cocoa prices which has persisted since 1957. In any case export earnings could not increase at anywhere near the rate at which food imports would rise if the recent trends were allowed to continue unchecked.

The food deficit has been largely responsible for a general upward pressure on the cost-of-living. In the periods when the imbalance between the supply and demand for food has been most acute and food prices have risen most sharply—such as 1947–48, 1950–51 and 1961–62—the threat to the standard of living of the people has given rise to a great deal of social tension. It is a part of the social policy of Government to keep the prices of food—and hence the cost of living—down.

The policy of cheap food is also necessary for the maintenance of fiscal and monetary stability which is required for the successful implementation of this Seven-year Plan. High food prices always lead to pressures for higher wages with the threat of inflation. The more wages rise, the higher the costs of production become, and the less competitive will be Ghana's agriculture and industry.

III.—INDUSTRY AND AGRICULTURE

As explained in Chapter 1, Ghana needs an Agricultural Revolution as a precondition for the Industrial Revolution at which policy is aiming eventually. A prosperous agriculture will provide the market for the consumer goods and producer goods which the industrial sector will want to sell. A country like this with a large proportion of the labour force engaged in agriculture can continue to draw capital for investment only from agriculture since there are so few other sources of wealth. The consumption level of Ghana's farmers is however rapidly catching up with their earning capacity at the present levels of productivity. The only way to be able to draw funds out of agriculture for general development, as Ghana has done in the past, is for average farm incomes to increase further so that a margin for savings may re-appear.

Ghana is, in relation to the amount of land available, a relatively underpopulated country. In the long run the process of her industrialization must involve a transfer of labour from agriculture although in the immediate period ahead surplus urban

labour can meet all the needs of industry. This transfer of labour can only take place with safety if the productivity of agriculture has improved to the extent that labour can be released while at the same time a greater volume of demand for food can be met at reasonable prices.

In addition to providing the markets, the capital and the labour for industrialization, Ghana's agriculture must also aim at supplying to the fullest extent possible the needs of domestic industry for agricultural raw materials. The need for cotton, non-apparel fibres, sugar cane and pulp-making materials is already pressing, and a beginning will be made during this plan period on their production here in Ghana.

IV.—PRODUCTIVITY IN GHANA'S AGRICULTURE

The Ghanaian farmer has a comparatively low productivity for a number of reasons long recognised. He farms too small an acreage; in many parts of the country scarcity of water inhibits farming; the stock of seeds and animals available to him is of relatively poor genetic quality; there has been little or no improvement in the way of husbandry practices; agricultural credit has not been readily available; in some cases the lack of easy access to markets still prevents the full utilisation of output potential. His own low level of nutrition and health affects his productivity.

(i) Acreage

The greatest single limitation to the acreage that our farmers can cultivate lies in the fact that they can only call on the physical powers of their own and their labourers' bodies. In the forest area especially, human power is faced with great difficulties in clearing and tilling the land. Although there are wide variations between farmers it has been estimated that the majority of cocoa farmers work 3 to 5 acres and the average farmer in the northern savannah areas farms about 3 acres, excluding the land which is lying fallow on account of shifting cultivation.

It is obvious that the application of mechanical power wherever it is possible and economical to do so, holds great promise for the improvement of agricultural productivity. Already it is apparent that the northern savannah areas are well-suited for mechanised farming and maximum advantage will be taken in extending this during the plan period.

The second important limitation on acreage comes from the system of shifting cultivation. Where a farmer cannot farm the same piece of land for more than two or three years it implies that the investment he makes in clearing and preparing a piece of land is quickly used up instead of making a permanent addition to his productive capital. This system therefore uses up a great deal of the labour that annually goes into agriculture, and puts Ghanaian farmers at a considerable disadvantage as compared with farmers in other countries who do not have to start all over again on a fresh piece of land every two or three years.

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It is imperative to find ways of enabling the farmer to use the same piece of land for much longer than he can now do without exhausting the fertility of the soil, so that eventually he will be able to farm a piece of land permanently. There is another reason for urgency in this search. Already the increase in population has made it impossible in certain areas to leave land fallow for the seven to ten years which are normally required to restore soil fertility in the system of shifting cultivation. The resulting greater frequency in the use of land must mean that soils will ultimately become sterile unless other means are found for restoring their fertility.

The two methods now canvassed for maintaining soil fertility are crop rotation and the use of fertiliser. Crop rotation has the advantage that it uses up land which is in ample supply in Ghana while making it possible to rest land by producing some types of crop on it instead of leaving it fallow. However the proper crop rotations have not been conclusively worked out for all the different ecological areas of Ghana. Where they have been worked out, either the technique has not been taught to the farmers or its advantages and efficacy have not been demonstrated to the satisfaction of the farmer. Most of the crop rotations with the strongest support in professional quarters involve the use of livestock to enrich the land. This makes them unsuitable for large parts of the country where livestock do not thrive.

In the past few years enough research work has been done to prove the efficiency of fertilisers in improving plant yields in various parts of Ghana. Some evidence has also been collected on the ability of fertilisers to sustain the fertility of Ghanaian soils under conditions of permanent cropping. But there is as yet insufficient knowledge on the matter. Also, especially since fertilisers are expensive and have to be imported, the economics of their use for soil regeneration requires the most careful investigation.

The search for ways of enabling greater use to be made of farm land and labour than is possible under traditional methods should be considered one of the most pressing tasks for agricultural research during this plan period. This and similar problems, are of course, by no means confined to Ghana. They exist in most other countries in Africa, with whom close contact should be kept as regards the work being done to overcome them. After results have been obtained it will be the responsibility of the Extension and Development Service and of the managers of state farms and other agricultural enterprises to ensure that they are widely adopted.

(ii) Water

In the savannah areas, especially in the north of Ghana, the single rainfall season from April till September deposits on the land a considerable amount of water (up to 40 inches in most places) which mostly washes away and is succeeded by a severe dry season during which crops will not grow and livestock deteriorate

through hunger and thirst. It has been demonstrated that, with an adequate supply of water, most of the savannah lands could support two crops of food every year. Both human beings and livestock would also thrive much better if the water were conserved and used evenly throughout the year.

During this plan period therefore it is intended to embark on an ambitious programme of water conservation and irrigation which will bring at least pond water to every village in the Northern and Upper Regions and some 80,000 acres of land under local irrigation. Should studies on the utilisation of Volta water prove that a large scale irrigation scheme is economical then these targets would be radically revised upwards.

(iii) Stock and seed

The absence of support from agricultural science for the efforts of the Ghanaian farmer is most evident in the quality of the seed he uses and the animals he rears. There have indeed been developed a number of improved varieties of crops such as the hybrid maize (GS. 1, GS. 2 and GS. 3) and known types of rice (D.52—37, Faya and HR. 8) which yield far more than traditional varieties. These have yet to be generally sold to the farming community. The most outstanding work has been done in the field of cocoa where improved varieties have already been widely accepted by farmers. Rubber which is being revived after forty years as a leading export crop has also benefited from the introduction of superior planting material.

But the vast majority of the crops grown by Ghanaian farmers have had no assistance whatsoever from agricultural science in the production of higher yielding varieties. When it is considered how much of the success of farming in places like North America and Europe depends upon the success of their scientists in the field of genetics then the extent of the handicap under which the Ghanaian farmer operates can be grasped.

The animals reared by Ghana's livestock farmers are of equally poor stock. Among cattle the N'dama is favoured by the experts but is by no means the type universally kept by farmers. With other livestock such as sheep, goats and pigs the breeds generally kept by farmers are unimproved local types mostly characterised by poor meat yields.

Generous provision for agricultural research is made under this Seven-year Plan to cover investigations into this and other problems of Ghanaian agriculture. Although these problems are not easy the general principles for their solution are well-known and reliable: it is hoped that results will be achieved which can be applied to improve the productivity of Ghanaian farming in the next few years.

(iv) Farming Practices

As was mentioned above, there is need to develop and propagate crop rotations which can help to maintain soil fertility and economise on capital investment costs in Ghanaian agriculture. It has also been indicated that fertilisers seem to hold

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promise of increasing crop yields in Ghana. It has to be borne in mind that since fertilisers have to be imported, applying them to crop production in Ghana is equivalent to importing a part of the food thus produced. Preliminary results indicate that in spite of this the increase in yields might be such as to justify the use of imported fertiliser for some food crops. Subject to the results of further research into the matter it is intended to promote the use of fertilisers through the Extension Service by organising its distribution to farmers, by supporting its sales with short term credit, and possibly by subsidising it.

There are other aspects of farming practice where technology needs much improvement. Shade requirements, proper drainage, the control of pests and weeds, the best times for planting and harvesting, and food storage—all these are matters on which the solutions of traditional technology need to be supplemented by modern scientific research and effective agricultural propaganda.

In some cases the application of improved technology has to be organised from a central source. For instance it is established that dressing seed against insect and fungus attack can have a marked effect on crop yields. It is therefore proposed to establish seed services to produce, dress and distribute seeds of improved varieties to farmers in all parts of the country.

(v) Marketing

It is claimed that farmers in some parts of the country do not produce as much as they could because they cannot market their produce at reasonable prices. Under previous development plans much effort has been put into the construction of feeder roads and other means of access to markets. This programme is to be further extended under the present plan, along with further improvements to village markets and other facilities.

However in order to effect really substantial increases in production something more will be necessary to obtain the confidence of the producer and to convince him that he will be able to sell within reasonable distance from his farm, all he can produce—and at fair prices. The organisations responsible for this marketing will need to decide, in consultation with the appropriate government authorities, which crops to encourage and in what areas. It will be necessary to set up chains of buying stores (or mobile ones) and purchase at prices fixed, guaranteed and publicised before-hand—even before planting if possible. In the case of a crop the increased production of which is especially desired, this may be achieved by adjusting accordingly its guaranteed prices in relation to those for other crops.

It may even be good policy to set up buying centres in areas where the actual production would not normally warrant them but where the potential is great and may well be realised if evidence of adequate marketing facilities is obvious to producers. Otherwise a vicious circle results, i.e., no market because there is meagre production and no increased production because of no marketing facilities.

The buying, handling and transport costs of the marketing organisations must be kept to a minimum so that food can be delivered at reasonable prices to the consumer while at the same time a fair price is paid to the producer. There must also be adequate market intelligence to ensure smooth channelling of food supplies to the consumer. With certain food crops of particular importance, rice for instance, a separate organisation or division may be warranted to deal with their marketing.

There can be no doubt that adequate marketing facilities, combined with fixed prices, guaranteeing a fair return to the producer, is as important as any other single factor in promoting increased production.

Losses in stored food, due to the depredations of insects, fungi and excess moisture, are greater than is generally appreciated and a sound organisation undertaking the purchase and distribution of foodstuffs should be in a position to reduce these losses to a minimum, by operating proper systems of pest control in its silos and stores. The burden of such losses should be lifted off the farmer as far as possible by making it possible for him to dispose of his crops as soon as they are harvested.

V.—TASKS OF AGRICULTURE UNDER THE SEVEN-YEAR PLAN

Agricultural development under this plan will be directed towards three ends:

- (i) The nutritional level of Ghana's population must be improved and the present food deficit eliminated;
- (ii) Rural incomes, especially in the Northern and Upper Regions, must be raised;
- (iii) Production of agricultural raw materials should be stepped up both for export and for domestic industrial purposes.

(i) Nutrition

It is the aim of Government that in the long run Ghana should produce enough food to be able to give every citizen 2,700 calories per day in his diet. This is approximately one-half more than his present average calorie intake estimated at approximately 1,800 per day. The main deficiency in Ghana's nutritional level however is in its protein content rather than its aggregate calorie value: as against the present estimated consumption of about 42 grammes per day, professional opinion is that people require around 70 grammes per day.

The food production targets have been set so that Ghanaian agriculture can supply the deficiency in present nutritional levels, to substitute as far as possible the contribution now made by imported food with local production, and to provide for the food required to feed the expected increase in population. This triple task will not be easy to fulfil in the coming seven years, especially in view of the many unsolved problems in agricultural productivity already mentioned. But it is not

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impossible to fulfil and government intends, with the support of the farmers and the various production agencies, to make a maximum effort towards its fulfilment.

4 (ii) *Rural incomes*

In order to meet the requirements of the long term policy for the economic development of Ghana an attempt must be made to achieve the production targets in agriculture without any significant increases in the total farm labour force. This would mean that each man now engaged in agriculture will have to be producing by 1970 one-third more on the average than he is doing today. It is only if this can be done that the level of rural prosperity can be expected to increase. The other way, where increased output is obtained by a commensurate increase in the number of farmers, will only mean multiplying the numbers of people living at the same standard as now prevails in the country-side.

Government is not satisfied with the present standard of living in the rural areas, and especially in the Northern and Upper Regions. Ghana cannot consider herself really modern or progressive until standards in the villages have been raised far above what they are now. This cannot be done by pouring money into the villages to construct social amenities; since the rural population forms by far the bulk of the total population and the other parts of the economy are as yet little developed, the money for such village improvement can come from nowhere except the villages themselves. The rural population however will only be able to provide this money in proportion to the increase in its income.

In the past the economic development of the rural areas has been very uneven. While the cocoa growing districts have progressed quite rapidly many other areas have tended to stagnate. The increased demand for food and other agricultural produce from the prosperous agricultural districts and from the growing urban populations has progressively been met through imports rather than by purchases from the other rural districts of Ghana. This has not principally been because these undeveloped districts were not physically capable of producing for their wealthier neighbours but because agricultural policy has not paid enough attention to promoting this potential trade between different parts of Ghana. It is one of the unfortunate features of colonial policy that most of the energies of successive administrations have been directed towards facilitating the production of agricultural goods for export and encouraging the importation of both food and manufactured goods from the metropolitan countries. The non-exporting sections of the countryside were thus largely neglected because they were of no importance to the metropolitan economies.

It is the intention of Government to assist the less developed parts of Ghana so that they can produce foodstuffs to meet the growing demand in the wealthier areas, the benefits of which have so far accrued to farmers outside this country.

As is shown in Table 4.1 this demand consists largely of commodities which can be produced competitively in Ghana given the necessary help and facilities. This plan therefore lays particular emphasis on the production of rice, maize, groundnuts, sugar cane, vegetables and fish which have featured so prominently in the growing import food bill and which the savannah and coastal areas are so well suited to supply. (See Table 4.2). Government sets special store by the plan to turn the Bolgatanga area in the north eastern corner of Ghana into one of the largest grain baskets of the nation.

As regards the forest areas, measures for the improvement of productivity and hence the increase of incomes have been in existence for some time. Cocoa producers have been given improved varieties and new methods of controlling capsid and other pests have been introduced. The use of fertiliser has been found economical and is now beginning to spread. In other areas farmers have been encouraged to increase the acreages they have under bananas, rubber, oilpalm and citrus. At the same time the introduction of higher yielding varieties and improved cultural practices is expected to result in further increases in productivity and incomes.

(iii) Commodities for Domestic Industry and Export

Ghana intends to maintain her leading position in the world cocoa market. If the current trends in demand are sustained then world consumption of cocoa could be expected to be at least 35 per cent higher by 1969 than it is now. Ghana therefore needs to produce at least 150,000 tons more cocoa by the end of the plan period in order to maintain her position. The required increase is to be achieved largely by increasing yields per acre rather than by devoting more land to cocoa production. This policy should also reduce production costs and thereby help to maintain Ghana's competitive position on a market in which prices are unlikely to improve very much in the next few years.

As indicated above the production of other tree crops for export has also been encouraged in the forest zone. These should help to broaden the basis of Ghana's agricultural and export economy and, notwithstanding the different market and weather influences to which they are all subject, bring more stability into Ghana's export earnings. Care has to be taken however to ensure that Government is not spending a disproportionate amount of its own money and inducing farmers to spend theirs on the production of commodities for which there are no markets. An assessment will therefore be made to determine how much of the efforts of the Extension Service and of the State Farms Corporation and how much in Government subsidies and other help should be devoted to these crops.

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Among the local industries which will be developed during this plan period are some using cocoa, cotton, sugar cane, palm oil, citrus fruits, non-apparel fibres, and timber. It is intended to produce cotton, sugar cane, urena lobata and sisal on state farms and other large scale plantations or farm settlements or in connection with major irrigation schemes. The supply of fruits and vegetables for large canneries

TABLE 4.2

AGRICULTURAL DEVELOPMENT PROMOTION PLAN

<i>Crops and Livestock</i>	<i>Savannah Zone</i>	<i>Forêt Zone</i>
(i) <i>Arable Crops</i>		
(a) Cereals	Rice, Maize, Millet, Sorghum.	—
(b) Legumes and Oil Seeds.	Groundnuts, Bambarra Nuts, Cowpeas, Beans, Peas, etc.	—
(c) Roots	Cassava, Yams, Sweet Potatoes.	Cocoyams.
(d) Fruits	Pawpaws, Pineapples ..	Bananas, Plantains.
(e) Fibres	Cotton, Urena lobata, Sisal.	—
(f) Others	Tobacco, Sugarcane, Grasses and Pastures.	—
(ii) <i>Tree Crops</i>		
(g) Oil Seeds	Shea Butter	Coconut, Oil Palm.
(h) Fruits	Mangoes	Citrus, Avocado Pears.
(i) Others	Cashew, Timber	Cocoa, Coffee, Rubber, Timber.
(iii) <i>Livestock</i>		
(j) Large Animals ..	Cattle	—
(k) Small Animals ..	Sheep, Goats, Pigs, Poultry	—
(iv) <i>Vegetables</i>	Tomatoes, Onions and Shallots.	—

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requires a type of large scale all-the-year-round farming which is so far only found in the citrus growing areas of Asuansi. Already the Nsawam cannery has difficulties with its supplies of fruit: there are plans to set up new canneries and processing plants in other places. Special attention will have to be paid to the production of fruit and vegetables for them. A soap factory has been set up at Tema: palm oil has before now been the major agricultural export of the country and the ready demand from this factory should provide the incentive for a revival of the palm oil industry in Ghana.

There are possibilities for the production of paper either from timber or from sugar cane fibre (bagasse) or from rice, guinea grass and corn straw. Investigations will be made to find which is the most economical pulping material. The timber industry however is already a major source of exports and it is hoped to increase substantially its contribution to foreign exchange earnings. It is the policy of Government that the timber resources of Ghana should be exploited to the maximum degree consistent with the maintenance of the forest as a permanent natural asset. Many factories for the production of furniture and other products, veneers, plywood, fibre and chipboard, as well as possibly wood-pulp, will be established in the course of the plan period.

At present only about 20 out of the 130 potentially commercial species of Ghana timber are exploited. This means that the use of the forests is highly uneconomic since either many of the trees felled during extraction are simply left to rot in the bush or a number of useful trees are left in an exploited forest to be subsequently destroyed in order to make way for farming. A concentrated effort must therefore be made to gain acceptance for at least a further 20 species of Ghanaian timber in the world markets in order to enable the required increases in timber exports to be attained. The less exportable species must also be used more extensively here in Ghana for building, furniture, pulping, firewood and timber products.

VI.—PRODUCTION TARGETS

The available information regarding present production of the major crops is highly inadequate. This situation will change with the completion of an agricultural census now in preparation. In the meantime the best available estimates of current production have been used in setting the agricultural production targets for this Seven-year Plan. These targets will be reviewed in the light of the results of the agricultural census. The targets set for increases in the main categories of agricultural product are as shown in tables 4.3 and 4.4.

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TABLE 4.3

PRODUCTION TARGETS 1963-1969*

	1963 <i>Estimated Production</i>	1969 <i>Target Production</i>	<i>Total Increase</i>	<i>of which</i>	
				<i>Private</i>	<i>Public</i>
	'000 Tons	'000 Tons	'000 Tons	'000 Tons	'000 Tons
Staple Foods					
1. Cereals	422	642	220	153	67
2. Roots and Plantain	2,255	2,560	305	228.5	76.5
3. Legumes and Oils	117	284	167	111.75	55.25
4. Vegetables (onions, tomatoes)	31	70	39	34.5	4.5
5. Fruits	5	10	5	5	—
Animal Products					
1. Livestock	20.8	37.8	17.0	8.28	8.72
2. Fish	70	250	180	95	85
Exports and Raw Materials					
1. Cocoa	420	600	180	180	—
2. Rubber ('000 acres)	17	35	18	11.5	6.5
3. Sugar cane	—	1,000	1,000	—	1,000
4. Tobacco	1.2	3	1.8	1.12	.68
5. Bananas	3.5	7	3.5	3.4	0.1
6. Non-apparel fibres	0.2	7.0	6.8	1.0	5.8
7. Cotton	0.1	0.2	0.1	—	0.1
8. Pineapples	22	30	8	5.5	2.5
9. Wood (million cubic feet)	458	584	126	126	—

The main features are an attempt to increase the output of cereals by over 50 per cent, to more than double the production of legumes and oils and to increase many times over the production of fish. Significant increases in the production of other staple food crops as well as cocoa, lumber and other foreign trade items will also be secured. The very large increase in fish production is a particularly important feature of the plan. The intention is that a substantial part of the catch should be processed and cured and that a fish meal industry should be established in conjunction with the processing plants in order to help meet the country's deficiency in animal feeding stuffs.

(i) Food

The bulky foodstuffs produced in Ghana fall into two broad groups which come from the two natural zones: the savannah where the cereal crops, yams and groundnuts are best grown and the forest areas where plantain and cocoyams are grown. Nevertheless certain crops can be grown in both the savannah and forest areas, e.g. cassava, yams and rice. In order to obtain the best returns it is intended to extend support under this Seven-year Plan to the production of each crop in the area best

*These targets are further detailed in Table 4.4.

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suited to it, as shown in Table 4.2 and research will be conducted to ensure this. It has been decided to put most effort into the promotion of cereals rather than plantain and root crops. Among the reasons for this are that the cereals are preferable from the point of view of nutritional value, they are more easily stored and transported, they grow best in those areas of Ghana where it is most important to raise incomes and standards of living and the demand for some of them, e.g. rice, will increase fastest as incomes rise in the country. It can be confidently expected that as they are more advanced the farmers of the forest zone will be able to respond quickly to any increases in demand for the forest zone foodstuffs without the need for any great effort on the part of the Government. Since extensions of cocoa acreage are not expected during the plan period there is a possibility that the supply of plantain could fall off. If consumers do not substitute grains and yams fast enough certain pressures on the cost of living in the forest areas could develop. A watch will be kept for any such tendencies and the necessary corrective action taken. But it is not expected that a scarcity of plantains will in fact develop.

The seasonal shortage of water is the main obstacle to agricultural production in the savannah areas while at the same time these are the parts of the country offering the greatest scope for extensions of acreage through mechanisation. A considerable proportion of the irrigated acreage to be established under this plan will be devoted to the raising of rice and other cereals in the savannah zones.

Present yields on Ghana's cereal farms are quite low for the reasons partly explained above. Farmers get between 500 and 800 lb., of maize an acre when growing traditional varieties. Available improved types already yield an average of 1,200 lb. an acre; if the seeds were dressed and sown at the recommended densities then further increases in yield could be readily obtained. Even so, American farmers by comparison expect 3,000 lb. an acre, which shows how much more room there is for improvements in crop yields through the application of agricultural science. Similarly Ghanaian farmers normally get around 800 lb. per acre under rice. With improved varieties they could get 1,300 to 1,500 lb. an acre under hillside cultivation while the D99 type has been known to yield over 3,000 lb. an acre when grown under swamp conditions.

Therefore, although the targets for increases in cereal production are very ambitious the present level of productivity of farming in the savannah areas is so low as to make it possible to expect that, with a determined application of available technology and the implementation of an adequate water conservation programme, these targets could be readily attained. Owing to the crucial importance for Ghana's economic prospects of solving the food supply problem these targets are perhaps more important than any others in the plan.

(a) Protein

The answer to Ghana's protein deficiencies will be sought mainly through increased production of fish, poultry and legumes. Ghana has unlimited amounts of land suited to the cultivation of groundnuts. Yields under local conditions average only 400 lb. per acre whereas all the improved varieties that have been tried yield between two and three times as much. Even the local types of groundnuts, when planted closely yield 600 lb. an acre without any other change in farming practice. The application of seed dressing and fertiliser produces yields some three times higher than is normally obtained by the average farmer.

Efforts will be made to popularise the growing of peas and beans as part of a rotation system designed to restore soil fertility and permit longer use of farm land. The most serious cause of loss in the cultivation of these crops stems from depredations of insects which mostly occur when crops are stored. Cheap methods of control have been evolved and a marketing system will be instituted which will take crops off the hands of farmers as soon as they are harvested and store them under conditions which will prevent insect damage. At present beans and peas are generally sold by volume. Owing to insect damage some of the volume that the consumer pays for consists of empty space that has been eaten inside the seed. Thus the prevention of insect damage should also prove a boon to consumers.

Ghana has immense potential for fish production. This potential will be much augmented by the creation of the Volta Lake which will provide many hundred miles of shore line for fishing. Present production of sea fish amounts to less than 40,000 tons a year even though many people are employed in fishing. The traditional system of canoe fishing does not permit of a higher level of productivity than this because the operation of the canoes in the surf is very hard work and their fishing area is limited to the few miles off shore which are not the most popular haunts of sea fish. The solution of using larger motorised boats and fitting outboard motors to existing canoes has been tried with great success. The main emphasis on fishery development under this plan will therefore consist of increasing the mechanisation of the fishing industry. It is not expected that the sea itself will set any limit to the amount of fish that can be caught off Ghana's shores. Therefore the extent to which the target for increased production of fish is attained will depend upon the numbers of boats in operation.

Main reliance is placed on fish rather than meat as a solution to the protein problem because fishing is by far the quicker and easier solution. Livestock production in Ghana still faces many difficult problems among which are the poverty of the stock used, the production of feed and the establishment of pastures, as well as the numerous diseases, especially of cattle which, though under control, have not yet been eradicated. The solution of livestock problems will inevitably take years

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and in the meantime only a modest increase can be expected in the production of cattle and sheep. Every encouragement will be given to farmers in the savannah areas to include livestock in their farming pattern since this is the cheapest known method of maintaining soil fertility. On state farms and other publicly controlled units the practice of mixed farming would be made obligatory wherever it is feasible.

Already a revolution in poultry farming is taking place. The importation of eggs has virtually ended and the supply of fowl meat to the major urban centres has developed to a degree where some reductions in price can be expected by about 1964. Every effort will be made to keep up the poultry business: e.g., nutrition officers will concentrate their efforts on backyard poultry raising. The rearing of pigs is the other field where rapid results could be reasonably expected. It is hoped that the farmers' co-operatives, especially in the southern savannah areas, will be successful in raising the production of pork by an appreciable margin in the course of the seven years.

In preparation for what can be done under subsequent development plans, research work now in hand on the problems of livestock production in Ghana will be generously supported by Government in this plan period. Especially, since the demand for milk is so high already and is likely to grow rapidly, success in this research work is necessary to ensure that Ghana's food deficit is not kept large by the lack of a domestic dairy industry nullifying the effect of developments in other parts of agriculture.

(b) Fruits and Vegetables

Large-scale citrus growing in Ghana is practically limited to the Asuansi area. The indications however are that many other areas would be suitable for the extensive cultivation of citrus. This is an industry where farmers need the kind of help and advice that the Asuansi farmers have had from Rose's and the tobacco growers from the Pioneer Tobacco Company. It should be possible for the Nsawam Cannery and other processing factories to develop their own supplies through technical assistance to the farmers in their area.

Ghana now imports half a million pounds' worth each of tomato products and canned vegetables and nearly £G200,000 of onions every year. It is planned to eliminate these imports and also meet a greatly increased level of consumption from domestic production. In the Northern and Upper Regions especially, excellent results have been obtained in the growing of these vegetables under irrigation. An effective marketing system should be able to call forth the necessary volume of production from farmers in those areas and in the southern savanna regions.

(ii) Agricultural Raw Materials and Export Crops

The second main purpose of the development of savanna area farming and irrigation, after it has satisfied the food requirements of the country, will be to supply tobacco, sugar cane, cotton and non-apparel fibres for which production targets are:

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suggested in Table 4.3. Tobacco growing is now well established and its further expansion depends upon the maintenance of a satisfactory marketing and technical assistance service for the farmer. The cocoa bag factory in Kumasi will take 4,500 tons of fibre a year. Adequate acreage and natural conditions exist in the Ejura area and it would seem that only a determined effort by the co-operatives and the Extension Service is required to call forth the necessary supply. The cultivation of cotton in Ghana has long been plagued by insect attacks. Depending upon the solution of this problem and the construction of an adequate irrigation system, possibly based on the Volta, the eventual development of a cotton growing industry can be foreseen. Even though the international cotton market is unlikely to be buoyant or easy for new producers to break into, there exists here in Ghana a huge market for cotton textiles. As is explained below in Chapter 5 it is hoped to be able to supply most of this demand out of Ghana's own mills by 1970. A cotton growing industry therefore could develop on the basis of a home market.

Already nearly 5,600 acres of new rubber plantation have been established in the Western Region through the encouragement of Government. Although further considerable plantings are proposed, there will need to be a limit to the further expansion that Government will subsidise during this plan period in order to avoid over-production for a world market which is already weighed down by a surplus of rubber from the traditional producing countries and faced with tough competition from synthetic rubber. Palm oil however has better prospects in the sizeable domestic demand that already exists both for cooking purposes and for the manufacture of soap. Research results previously accumulated by the West African Institute for Oil Palm Research suggests that high yields and adequate incomes can be obtained from oil palm farming in Ghana. It will be the responsibility of the Extension Service in the areas suited to oil palm cultivation—the Eastern, Central and Western Regions—to promote the revival of this crop in the country.

It is intended that by 1975 Ghana should be satisfying most of her domestic need for sugar, which it is estimated will have expanded to some 200,000 tons a year, from local sources. During this plan period it is intended to implement up to four sugar growing schemes. All of these schemes should be in substantially full production by 1970 with a combined capacity of about 100,000 tons per annum. The sugar cane will be grown under irrigation in the savanna areas and the trials carried out so far suggest that yields will be comparable to those in other sugar cane growing countries.

As explained above world demand for cocoa has shown a steep upward trend in recent years as over-production has driven prices down to their lowest post war level. Ghana is a member of the Cocoa Producers' Alliance and the Cocoa Study Group of the F.A.O., both of which are trying to find means of stemming the decline in cocoa

prices. Eventually, Ghana and other cocoa producing countries will have to match their production more closely to world demand in order to maintain prices at satisfactory levels. But world demand by present indications seems likely to be appreciably higher by 1970 than it is now. The means for increasing Ghana's production to maintain her share of the market without any great extension of cocoa acreage are well known. The farmers have accepted the improved varieties of cocoa and the methods of disease control although vigilance with the latter has to be constantly re-emphasized. Since cocoa is an export crop there would not be so much economic reason against applying to its cultivation imported fertilisers which could increase yields by a very wide margin.

Bananas are a relatively new export item popularised in the Western Region during World War II. There is some case for continuing to encourage production although the problems of bruising during transport, ripening and shipping space all suggest that it might be easier to aim at exporting banana products rather than fresh bananas. At present there is a high rate of rejection for export which could be avoided if the banana were exported in a processed form.

VII.—POLICY FOR AGRICULTURAL DEVELOPMENT

The basic policy for agricultural development under this Seven-year Plan is to concentrate on a limited number of commodities and apply to them all the available technology and agricultural knowledge. These commodities are the ones that will fill basic nutritional requirements like cereals and fish, or that will contribute to the amelioration of the balance of payments position like sugar or cocoa, or, better still do both, like rice. The production of many other commodities besides these will eventually be encouraged, but for the present, while the basic problems of nutrition and balance of payments remain unsolved, the efforts of the country should be concentrated on the most strategic necessities instead of being diffused over a large number of possibilities.

Under this development plan an attempt will be made to stimulate in each section of Ghana that form of economic activity best suited to it. It is also the policy of Government that in securing the benefits of economic growth to all parts of the country special attention should be paid to those areas which are relatively worse off. The growing urbanisation and the rising standards of living of the population of Ghana present an opportunity for the hitherto neglected savanna areas to become a major farming area complementary to the cocoa growing forest zone and the rapidly expanding urban areas. Therefore the maximum effort in agricultural development will be devoted to the promotion of increased agricultural production in the savanna areas.

Proposals for the organisation of a strong Extension Service in Ghana are outlined below. It is hoped that if this service is installed and allowed time to establish the necessary relations of confidence with the small farmer, then a wide application of known technology for improving productivity could be expected by the end of the seven-year period. Initially however agricultural production can most readily be increased by extensions of acreage and by the adoption of new farming methods in the large-scale farms. Therefore between 1963 and about 1966 the State Farms, Workers' Brigade and Farmers' Co-operatives will be engaged on extensive bush clearing operations designed to bring a maximum amount of acreage under cultivation. The programme of water conservation and irrigation will also be pushed vigorously.

In the second half of the plan period it is hoped that new farming methods will have been accepted by the small farmer and agricultural research will have started to show further results. For those small farmers who attempt to practise a more settled type of farming and for the large-scale farming units, the problem of maintaining soil fertility will also by then have become of greater importance. Thus it is to be expected that most of the agricultural progress to be made during that period will have to come out of increased yields obtained through the application of scientific advances on the farm.

In agriculture as in the economy as a whole Government wishes to promote and preserve the system of a mixed economy with the private farmer and the public organisations each having a well defined part to play, the two roles being complementary to one another in the overall task of building up the economic strength of Ghana. The private farmer, representing by far the bulk of the working population, must prosper before the country can be truly said to be making progress. He represents a store of farming experience, managerial talent and sheer physical hard work which must be utilised to the full for economic development.

Private farmers will be actively encouraged to organise in co-operatives. In this way they will be able to obtain access to machinery and modern techniques which might otherwise be beyond their resources and thus increase their productivity.

On the other hand there has grown up especially over the past two decades a cadre of new agricultural manpower trained in the ways of modern farming. Hitherto this skilled manpower has been used rather ineffectively as a sort of reporting bureaucracy standing over and outside agricultural production rather than being itself a part of the productive labour force. This corps of agricultural technicians must now be redeployed and given a chance to take part in actual farming work. These are the men who are capable of organising large groups of farm workers to operate farms of 100 acres and over, of handling the technical problems of mechanised and irrigated farming, and of managing the accounting,

marketing and other problems involved in large-scale farming. At the going rates of pay private farmers are unable to hire the services of such agricultural technicians and they themselves usually lack the capital to set up independent large-scale farms. Government is therefore establishing state farms which will provide adequate scope for the exercise of the farming skills learnt by our trained agricultural manpower. Because these farms will be state controlled and will be managed by people trained in modern agricultural techniques they are the easiest way of getting early results in agriculture such as are needed now for nutritional and balance of payments reasons and for securing a rapid adoption in the field of new advances in agricultural science.

As can be seen from Table 4.3 the bulk of the increases in agricultural output expected to be secured in the course of the next seven-year period are proposed to be derived from the small-scale private farming sector. The individual Ghanaian fisherman will be expected to produce $3\frac{1}{2}$ times as much fish, and the farmer over twice as much groundnuts and about 50 per cent more cereals and meat in 1969 as he does now. The large-scale farming enterprises—State Farms, Workers' Brigade and Co-operatives farms—represent a new element in the farming system. Although they will be responsible for a minority share of the production of most crops their contribution will be of strategic importance. They will be expected to implement the large extensions to acreage required under this plan and to make rapid additions to the supply of the basic commodities in the earlier part of the plan period.

VIII.—INVESTMENT PROGRAMME FOR AGRICULTURE

It is proposed to invest a total of £G67·5 million from government sources in agricultural development under this Seven-year Plan of which £G32·3 million will be spent on central services and other activities on behalf of the private farmer, £G9·2 million will be allocated to the state farms, £G4·5 million to the agricultural wing of the Workers' Brigade, £G2·9 million to the United Ghana Farmers' Co-operative, £G11·75 million to fisheries development and £G2·6 million to forestry. A reserve of £G4·25 million is allowed for miscellaneous development. (See Table 4.5).

(i) *The Private Sector*

As indicated in a previous section the agricultural industry of Ghana, which at present consists almost entirely of small-scale private farming, is an industry with a turnover of more than £G250 million a year. The Government's expenditure on its agricultural services must be considered in a sense the overhead cost for the industry as a whole. From this point of view the £G7·5 million a year spent by Government during the last ten years on the agricultural services can be considered quite

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reasonable. The purposes for which this money has been spent however have not been sufficiently closely related to the actual operations on the farms. The main change of emphasis in the agricultural services under this Seven-year Plan will be to direct more of the Government's efforts into activities more closely related to agricultural production. Reporting and control will be much less important and research, agricultural extension, statistical, and other farm services much more important than hitherto.

A centrally controlled extension service, an organization for the production and distribution of seed and live-stock and a vigorous research programme into agricultural problems are the three basic services which will contribute most to the increases in farm productivity sought under this plan. These services, in order to be most effective, must be centrally controlled and generously financed.

(a) Extension and Development Services

As indicated previously a considerable body of existing knowledge on how to improve agricultural productivity in Ghana has up till now failed to find its way into the field practice of the farmer. This gap between agricultural science and agricultural practice is due largely to the absence of an effective extension organisation. As has been demonstrated in the case of the recent advances in the cocoa industry the small farmer is very willing to adopt advances in farming methods and practices which are convincingly demonstrated as being capable of raising his productivity and income. The knowledge about new methods in cocoa production has been conveyed to the farmer through extension work under Ghanaian conditions, and similar extension work must now be used in the campaign to raise productivity in the other sectors of agriculture.

Government intends to create an Extension and Development Service which will cover all parts of the country with a cadre of 50 Senior Officers of the professional and technical grades supported by about 300 middle level staff, trained in agriculture up to the standard now offered at Kwadaso. For each district an Extension and Development Officer will have direct responsibility for the attainment of the district production target set at the beginning of each farming year. He will be expected, through a process of joint planning between himself and the farmers of his district, to work out these production targets and methods for their implementation and subsequently to co-operate with the farmers in actually implementing them.

The success of an extension service largely depends upon the degree to which confidence can be established between the extension officer and the farmer. In general this requires that the farmer and the extension officer shall get to know each other over a long period of time within the farmer's own community. An extension officer must also have had the time to demonstrate to selected leaders among the

village community that the new methods he is advocating actually work. This means, first, that the extension officers in the proposed Extension and Development Service must be stationed at points actually within the farming community rather than at regional and district headquarters. There is also great merit in keeping extension officers at a given post for long periods. The traditional civil service practice of frequent transfer and promotion away from one job to another is unsuitable for an extension service. Means will have to be devised to ensure that extension officers do not lose in pay, promotion and other privileges by being kept at a single duty station over extended periods. Secondly, efforts must be made to recruit extension officers, especially at the middle level, if possible from the areas in which they are expected to operate. The ability of an extension officer to communicate freely and to inspire trust and confidence is most important in areas like the Northern and Upper Regions where the Government will be seeking to spark off what amounts to a revolutionary change in the way of life of the people. Thirdly, the new farming techniques which an extension officer is given to propagate among farmers must have been sufficiently tested to ensure that they will actually work under existing conditions of the village. Economically, they should also be within the capacity of the farmer to implement. It is intended to build up the Extension and Development Service initially to a strength of thirty agricultural officers and two hundred supporting staff, most of them to be stationed to begin with in the Northern and Upper Regions and in the Southern Savannah areas. The service will then be extended progressively so that by the end of the seven-year period each of the 40 districts will have an extension and development officer with an adequate supporting staff of agricultural technicians stationed at the villages and towns. If this service is installed quickly and given suitable facilities for its work (e.g. they should be fully mobile), then it can be confidently expected that productivity on the average farm will show the increases required in order to meet the agricultural production targets set out in the previous section.

£G2·8 million is allocated for the establishment of the Extension and Development Services under this Seven-year Plan.

(b) Seed, Stock and Machine Service

It requires a specialised plant and animal breeding service to produce improved planting material and livestock in sufficient quantities to cover all the individual and large-scale farms in the country. At the beginning of the plan period it will be necessary to centralise much of this breeding work so that all the farmers as well as the various agricultural agencies who operate in any given district can have access to the improved material. This will also avoid the duplication of facilities and waste of technical manpower of which there is a severe shortage in the field of plant and animal breeding. In subsequent years it will be possible for some organizations and

even some larger farms to do their own nursery work entirely. These state farms which have technically qualified managers might also be made responsible for stock multiplication work in their areas. In addition to their service in the field of agricultural education, members of the Extension and Development Service will be responsible for directing and supervising the distribution of planting material and improved livestock among farmers in their districts and for the running of such machine services and farm settlements as Government will set up for the benefit of the small farmer. The importance of scientifically prepared planting material in raising agricultural productivity has been stressed in previous sections. Until improved varieties which are now known to work in Ghana have been put out on the individual farm and until the majority of planting material used is adequately protected against insect and fungus attacks yields per acre on Ghana farms are bound to remain very low.

In some parts of the country the distribution of improved livestock, often associated with credit schemes, has in the past proved quite a success. The increases in the production of poultry, pigs, and larger animals hoped for under this Seven-year Plan will depend in part on the resumption and extension of the livestock supplying function performed by the Animal Production Division.

In many parts of the country it will be possible to increase productivity by taking off the shoulders of the farmer some of the work now involved in clearing and preparing land for cultivation. The Government intends to try a number of settlement schemes in which irrigated or dry farming units are mechanically prepared by Government and then leased to individual farmers. In the Northern and Upper Regions this system of Government ploughing will be integrated with the soil conservation programmes now in force in the various land planning areas. For this purpose a number of machine stations will be maintained in selected districts under the control of the Extension and Development Officer. A suitable system of rent payments and amortisation will have to be worked out and implemented as soon as this scheme is firmly established. For this purpose £G2·7 million is allocated for the establishment of seed production and distribution units covering all parts of Ghana, £G1·3 million for livestock improvement in the savannah areas and £G3·5 million for the setting up of machine stations and farm settlements.

(c) *Marketing*

The Food Marketing Board has assumed the responsibility for sponsoring the establishment of a comprehensive system of marketing for local agricultural produce. In order to attain the objectives of this plan its efforts will have to be initially concentrated on providing a ready market for cereals, groundnuts and other legumes. The Fish Marketing Authority is in the process of establishing a corresponding marketing system with adequate cold storage facilities to handle the output of fish.

As has already been said (*see* page 60) the introduction of an efficient and accessible marketing system is one of the prime methods of inducing an increase in agricultural output by the farming and fishing community. These marketing operations can be financed from the internal resources of the Food Marketing Board and the Fish Marketing Authority and no separate allocation is made for them.

(d) *Credits and Subsidies*

It is proposed that agricultural credit for farmers shall generally be managed by the Bank of Ghana while the National Investment Bank will deal with large agricultural investments. At the local level the Bank of Ghana will use the facilities of the commercial banking system to operate the agricultural credit scheme. Technical advice as to the feasibility of farming proposals put up to the Bank, as well as supervision of the use of agricultural credits, will be a function of the Extension and Development Officers. An element of credit will be involved in the establishment of farming acreage for lease to private farmers and in the seed and stock distribution schemes. Other farm credits will be needed for individual purchases of farming equipment and for the construction of farm buildings.

If it appears that in addition to the provision of credit, subsidies are required for newly created acreage; for the adoption of recommended farming practices, and for the purchase of insecticide and fertilizer, consideration will be given to the part which they can play in promoting the agricultural objectives of the plan, and a separate decision will be made in respect of each crop on the basis of a full economic evaluation.

Credits and subsidies will mostly be channelled through co-operative societies except in the case of very large agricultural investment schemes which will be dealt with on an individual basis by the Bank of Ghana or by the National Investment Bank.

For agricultural credit and possible subsidies to the small scale farmer a total allocation of £G4.5 million is made.

(ii) *State Farms*

The farming plan for the State Farms Corporation during the next seven years envisages heavy concentration on cereal and basic crops especially to meet demand in the rapidly expanding urban areas and on the establishment of new farming acreages in the savannah zones of Ghana. More specifically, the State Farms Corporation should concern itself with the introduction of new crops and proven techniques and establish itself in uncultivated, rather than already farmed, areas. This would be an effective means of popularizing new methods and ensuring that idle land resources are put to productive use. In addition, state farms will play a leading part in the production of sugar-cane, cotton, rubber, non-apparel fibres and meat where large scale organisation has decided advantages in production.

(a) Organization and Management

Large-scale farming is an entirely new form of economic activity in Ghana. It is therefore most liable to run into difficulties through inadequate organization and insufficiency of management. As is recommended for other productive enterprises in the state sector, the leading principle in the organization of state farms must be that each farming unit will be under the full control of a manager who is completely responsible for its economic success. While Government will provide the initial fixed and working capital to set up all state farms, the financing of operating expenses will be made out of the farms' own reserves and the normal credit facilities of the commercial banks. Each year every state farm will submit individually both a capital investment programme and an operating budget showing the acreages to be farmed, the requirements for labour and other major inputs, and the expected production for the year.

The State Farms Corporation will be responsible for making proposals for the establishment of new state farms as well as for approving the capital and operating budgets of existing farms. It will determine general matters and policy such as the crops to be grown in the different areas of the country and it will be responsible to Government for the amortisation of Government's investment in state farms with an adequate amount of profit. The Corporation will not be concerned with matters of the day to day management of state farms which shall be the responsibility of the individual managers.

The success of management on the state farms will depend to a great extent on the efficacy of the process by which this management is initially selected and on the care with which it is trained for its job. In the field of agriculture there exists a pool of potential management in the agricultural officers and technicians previously absorbed by the General Agriculture and other divisions of the Ministry of Agriculture. It should not be difficult to select such personnel and reorientate them from their previous concentration on reporting and control to their new functions in the management of actual agricultural production.

As a general rule most farms of 500 acres and over need and can afford a manager of a rank equivalent to that of the former agricultural officers. Farms of between 50 and 500 acres, according to the crops grown on them, may be entrusted to the next lower level of agricultural technicians. But in view of the amount of Government money invested in these state farms none of them should be entrusted to very junior personnel who do not possess adequate training in agriculture or the ability to organize a labour force and manage the financial and other problems of the farm. It would be undesirable to maintain the traditional civil service system of pay, promotion, and other conditions for the managers of State Farms. While the level of earnings should on the average come to slightly more than what they would earn as agricultural

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officers, the basis for determining what their earnings should actually be in any given year must in some way be related to their performance as managers of State Farms. A suitable system of bonuses and other incentives, with a guaranteed minimum of earnings, should be devised.

The allocation of £G9·2 million is made to cover the farms that the State Farms Corporation will set up under the Seven-year Plan and those that are being set up for it under various technical assistance arrangements.

(iii) Agricultural wing of the Workers' Brigade

In order to put the agricultural activities of the Workers' Brigade on a sound footing a re-organisation has been instituted to build up a separate wing which will operate all Workers' Brigade farms on a commercial basis. The individual farm units within the agricultural wing will be operated on the same organisational principles as those under the State Farms Corporation. Each farm will be managed separately by its commandant who will be a trained agriculturist. Government investment in the farms will be regarded as a medium-term loan with interest and profit payable over an agreed period. Government will make no more provision in the general recurrent budget for the wages and other operating expenses of these farms, but will be prepared to consider other forms of financial assistance, e.g. guarantees, or loans for increased working capital.

All current costs will be met out of the revenues of the farms themselves and such commercial bank credit as they can raise. Each farm will prepare an annual development and production programme. The function of the central office of the Agricultural Workers' Brigade will consist of processing these programmes, of promoting the establishment of new farming camps, and of setting the overall policy for the agricultural operations of the Worker's Brigade.

An allocation of £G4·5 million is made for all the agricultural operations of the Worker's Brigade.

(iv) United Ghana Farmers' Co-operatives

The farmers' co-operatives are essentially private voluntary organisations and their contribution to the success of the Seven-year Plan will depend upon the decisions of the individual societies themselves. For its work in the internal marketing of cocoa the organization of the United Ghana Farmers' Co-operatives at present receives an annual subvention from the Cocoa Marketing Board. It is hoped that in the course of this Seven-year Plan the individual co-operative societies will develop to a stage where they are able to finance most of their activities from the contributions of their members. As a supplement to these efforts of their members the co-operative societies will be able to call on the loan funds of £G4·5 million and £G5·2 million

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which have been allocated for credits to farmers and fishermen respectively administered by the Bank of Ghana. The central organization of the U.G.F.C. have the responsibility of guiding the efforts of the farmers in line with the plan outlined in this plan for the agricultural development of the country. Government has already made an allocation of over £G2 million to the U.G.F.C. for the purchase of machinery and other equipment with which the co-operatives can establish machine stations for supplying ploughing and other services to farmers. Further allocations will be made under this plan to bring the total equipment loan from Government to the U.G.F.C. up to £G2·9 million. The machine stations will also stock seed, fertiliser, insecticide and other requisites for the farmer. The total amount of central government capital which will flow directly into the small-scale farming sector during the plan period will therefore be around £G12·5 million. This will be in addition to the central agricultural services—extension, research, seed and subsidies—which will be provided by Government. Co-operatives will normally be expected to amortise their loans over a period of not more than five years.

(v) Agricultural Research

The importance of agricultural research in promoting the objectives of the Seven-year Plan in the field of agriculture has been emphasized at different points. The Academy of Sciences and the Universities will be expected to organise research into problems indicated by the Ministry of Agriculture as being of particular interest. Much more work than has been done hitherto will have to be put into the solution of agricultural problems of the small farm. A network of research stations under the Academy of Sciences and the Universities already exists. This will have to be extended especially in the savannah areas so that investigations can be carried out in specific ecological zones. A suitable system will have to be devised for the financing by the Ministry of Agriculture of research activities conducted on its behalf by the Universities and the Academy of Sciences. An allocation of £G4·4 million is made to cover the capital costs of agricultural research during the plan period.

(vi) Agricultural Education

It is the intention, as has been said, that individual farmers and co-operatives should be assisted in increasing their productivity by an enlarged Extension and Development Service. The facilities for training the personnel for this service will have to be expanded, and instruction will have to be given to the large number of persons who will be employed in providing other services to the modernised agricultural industry, e.g. farm machinery maintenance, and production of seed and seedlings. For this educational programme an amount of £G2 million has been earmarked.

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(vii) Irrigation

The development of farming under irrigation for the extensive growing of sugarcane, rice and other suitable crops will be a relatively new departure in Ghana's agriculture. But the results of limited irrigation schemes tried so far in the savannah areas suggest that it is justifiable to make major efforts in the field of irrigation during this seven-year period. An Irrigation Division has been established within the Ministry of Agriculture and a series of sites is being chosen especially in the Northern and Upper Regions for the construction of dams and other irrigation works.

It is provisionally estimated that 80,000 acres of land will have been brought under irrigation by the end of the plan period, of which some 30,000 acres will be taken up by four sugar growing projects, expected to be producing a total of 100,000 tons of sugar by 1969. One of the projects, at Akuse, already surveyed and reported on, includes some 12,000 acres for the growing, under irrigation, of other crops, mainly rice, whilst the remainder of the production target for this crop will come from the land to be irrigated from the dams in the savannah areas.

An allocation of £G11.1 million is made for the irrigation schemes under this plan.

(viii) Fisheries

As indicated in a previous section the development of fish production is relied upon to make a major contribution to the solution of the problem of protein supply during the coming seven years. The Fishing Corporation already has on order a fleet of trawlers and other fishing vessels which, when delivered, will enable it to achieve an initial level of production of around 30,000 tons per annum. An allocation of £G3.55 million is made for the further development of the work of the Corporation during the seven years. It is expected that this sum will be augmented by an even greater contribution from the Corporation's own resources beginning from the end of 1963, when it will have a fleet of fishing vessels in operation. It is also planned to construct a number of cold storage and other distribution facilities to get fish into all parts of the country.

The contribution of the private fisherman to fish production is expected to be just as important as that of the Fishing Corporation. As explained in a previous section the use of larger motorised boats by the fishermen has proved highly effective in increasing the productivity of the small fisherman and the main emphasis of the fisheries programme should be to make it possible for many more small fishermen to acquire and learn how to use such motorised vessels. At present the average cost of fishing boats is rather high, presumably owing to the small numbers in which they are produced. With a major publicly-supported programme for the construction of more fishing vessels it is hoped to be able to bring down the average

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cost of a 40-foot boat to not much more than £G4,000. If this can be achieved then the fishermen will find great profit in the possession of such boats and will be able to amortise rapidly the loans that are made to them for the purchase of fishing boats. The fishermen will be encouraged to organise themselves in co-operatives and small companies.

An allocation of £G5.2 million is made for a revolving credit fund for the purchase of fishing vessels. This fund is to be managed by the Central Bank in association with the fund for agricultural credit. Importance will also be attached to the development of fish processing and fish marketing as a function separate from the actual catching of the fish. Smoke ovens and storage and other ancillary facilities will be established, and a total allocation of £G3 million has been made for fish processing and marketing. The Central Bank will use the cold storage and other marketing facilities of the Fisheries Corporation as a convenient point for the management of its loans to individual fishermen and fishing units.

(ix) Forestry

The volume of private capital available for the exploitation of Ghana's forest resources is ample and is expected to remain so in the course of the seven-year period. The main contribution of the Forestry Division of the Ministry of Agriculture will be to promote the most economical exploitation of the forest to ensure its maintenance in the long run as a national asset, and to promote a further increase in the contribution of lumber to Ghana's export earnings. It is hoped to establish a series of lumber depots where Government and private building organizations can obtain ready supplies of those species of timber which are not now extensively used but which are proved to be quite suitable for most domestic purposes and whose use must be encouraged in order to release other species for export. An allocation of £G2.6 million is made for the development of the activities of the Forestry Division during the Seven-year Plan period.

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TABLE 4.5

SUMMARY OF FINANCIAL ALLOCATIONS IN AGRICULTURE

	£GM	£GM
1. <i>Central Services</i>		32.3
(1) Establishment of Extension and Development Services	2.8	
(2) Establishment of Seed Production and Distribution Units	2.7	
(3) Live-stock Improvement in the Savannah areas	1.3	
(4) Setting up Machine Stations and Farm Settlements	3.5	
(5) Credits and Subsidies	4.5	
(6) Agricultural Research	4.4	
(7) Agricultural Education	2.0	
(8) Irrigation	11.1	
2. <i>State Farms Corporation</i>		9.2
3. <i>Workers Brigade</i>		4.5
4. <i>United Ghana Farmers' Co-operatives</i>		2.9
5. <i>Fishery Development</i>		11.75
(1) Ghana Fishing Corporation	3.55	
(2) Credit Fund for Purchase of Fishing Vessels	5.2	
(3) Fish Processing and Marketing	3.0	
6. <i>Forestry</i>		2.6
7. <i>Reserve for Miscellaneous Developments</i>		4.25
Total		£G67.5

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CHAPTER 5

INDUSTRY AND MINING

In the sequence of Ghana's economic development, industry and mining follow the development of agriculture as the second major driving force in economic growth in the first seven-year period. Under the present Seven-year Plan, it is expected that industrial development will not only make a great contribution to the increases in employment and incomes, but will also improve the balance of foreign trade, and lay the foundation for the future development of Ghana as a primarily industrial country. As far as the mining industry is concerned, improvements will be introduced in all departments: the extraction techniques will be modernized and the State Mining Corporation will enter into new fields where considerable potentialities exist. Government has set sizeable targets for increases in the production of all the main mineral products and basic industrial manufactures.

A. INDUSTRY

I.—THE PRESENT STAGE OF INDUSTRIAL DEVELOPMENT IN GHANA

At present industry makes a relatively small contribution to the national income of Ghana. The industrial statistics survey of 1959 counted 433 industrial establishments having six or more paid employees in the fields of mining and quarrying, manufacturing, construction and electricity, gas and steam. The gross value of the sales of these establishments amounted to around £G60 million and value added amounted to just over £G43 million. The total wage bill for the 99,000 persons employed in these enterprises and establishments amounted to nearly £G18 million, which makes around £G180 per paid employee annually. These figures are based on the data submitted by a number of the larger industrial units in the country.

The exact extent of the contribution of the industrial sector to the national income of Ghana will be established by the current statistical survey of all large and small industrial and distributive trade establishments in the country and the development of fully integrated annual industrial statistics. The provisional results of the census show that in 1962 there were around 100,000 large and small industrial establishments in the same four fields of economic activity all over the country. Of these around 3,000 establishments or about 3 per cent could be considered according to international statistical standards as larger industrial units (engaging 10 or more persons or having six or more paid employees). These larger establishments engaged about 181,000 persons or 47 per cent of the total employment recorded

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of whom about 157,000 were paid employees. The rest of the establishments recorded belonged to the small-scale sector (engaging nine or less persons or employing five or less paid employees). Many of these establishments were self-employed, handicraft or household type units which produce for sale industrial commodities or services on a small scale and often combine their industrial production activities with other economic activities, e.g. agriculture, transport or trade.

(i) Small-scale Industry

The greatest part of manufacturing activity in Ghana therefore still takes place in small-scale establishments employing mostly family labour and using very little capital or capital goods. At the time of the 1962 industrial census these small-scale industrial enterprises employed 53 per cent of Ghana's industrial labour force. This small-scale manufacturing sector, comprising bakers and "kenkey" women, small tailors and brewers, little repair shops and carpenters, has hitherto constituted the characteristic type of industry in Ghana. The domestic demand for manufactured goods and for the products of other industrial activities generally remained small because of the relatively low standards of living. Such establishments, amounting in effect to no more than small service enterprises, were adequate to supply most of the day to day needs of the population.

There have of course always been major items of demand that small scale establishments have not been able to supply, while some items which they previously supplied have also tended to be taken over increasingly by larger scale industry. These items have generally been those for which the income elasticity of demand tended to be highest. Thus as people have grown wealthier and bought more clothing, modern housing, transportation and more highly processed food, domestic industry has fallen progressively behind in its ability to supply domestic requirements. In order to correct this imbalance between domestic production and demand therefore the types of industry that will be promoted under this and subsequent development plans will in general be on a larger scale than the types that have hitherto characterised industrial activity in Ghana and in fields of industry supplying the newer lines of popular demand. This does not imply of course that in those sectors of industrial production where small-scale establishments have particular advantages these will not be promoted. Neither does it imply that Government will not consider it a duty to help small-scale industrialists in a large number of ways. Large-scale industry often grows out of the expansion of small-scale industrial establishments, and the successful small businessman with potential for growth will be sought out and offered a wide range of assistance. It is the policy of Government that within the mixed economy Ghanaian businessmen who have grown from small beginnings may be able to play the part that their counterparts in other economies have been able to play in the economic growth of their countries.

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(ii) *Large-scale Industry*

Of the establishments covered by the 1959 survey of industries, those in the two sectors of mining and quarrying and construction contributed 35 per cent each out of the total value added in all industries. This itself represented a considerable change from the previous year when the share of mining and quarrying alone had been estimated at 45 per cent. Manufacturing in all forms accounted for 28 per cent of the total value added in all industries in 1959. The dominance of mining and construction in industrial production reflected the early stage of economic development at which Ghana then was, with extractive industries entirely orientated towards export markets and a construction industry booming at the initial stages of economic development when the building of infrastructure and social facilities are typically a large element in total economic activity.

Within manufacturing industry itself, large-scale establishments were only really important in the field of beverages and tobacco and wood products. These industries together accounted for nearly three-quarters of total value added in all manufacturing industries. Grain milling, bakeries, food manufacturing, textiles, printing and publishing, leather and rubber and chemicals—all of which are much more important items in terms of domestic demand and are likely to become more so than beverages, tobacco and wood products as the economy expands—accounted in 1959 for shares of value added in manufacturing which in no case exceeded 4 per cent. The manufacture of transport equipment, which contributed about 9 per cent of gross value added in 1959 owing to the development of railway engineering and motor assembling, marked the beginning of the transformation of the structure of production in the direction that should be seen more and more under this and subsequent development plans.

Until the eve of the first nationalist administration in 1951 industrial development in Ghana had been left entirely to private enterprise. Since the major expansion of infrastructure and manpower supply during the Guggisberg era had been followed by the great depression private industry did not show any significant initiatives for almost a generation. At the end of the second world war industry in Ghana consisted mostly of gold and manganese mining which had largely been established before the first world war.

In 1947 therefore Government set up the Industrial Development Corporation to promote the expansion of the industrial sector by offering inducements to private investors, including loans and capital participation where desirable, by offering technical and management assistance to its debtors, and by setting up its own subsidiary enterprises. By the time the Industrial Development Corporation was succeeded by the new Ministry of Industries in early 1962 it had invested just under £G4 million in 22 directly managed subsidiaries and 9 associated companies managed

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by its partners in which it held minority shares. The Industrial Development Corporation also lent a total of about £G634,000 to 456 private businesses mostly by helping to pay for new plant and equipment.

The enterprises sponsored by the Industrial Development Corporation covered among other fields furniture, lumber, wooden boats, prefabricated aluminium houses, storage and mobile tanks, steel nails, tyre retreading, vegetable oils, alcoholic beverages, cold storage, laundries and dry cleaning and hotels. Most of these were small or medium-sized establishments. As in so many developing countries the Industrial Development Corporation experiment ran primarily into difficulties of management—a problem of which Government is keenly aware as it embarks on a new programme of industrialisation and to which it is determined to find and apply a workable solution. At the time the Industrial Development Corporation was wound up only six of its enterprises were working at a profit.

During these years private enterprise has also been expanding in the larger scale industrial sector. Diamond mining and the timber industry have shown a most spectacular rise to become major elements in the structure of Ghana's exports. This development of private industrial investment in Ghana has been capped by the two largest factories now under construction at Tema. An oil refinery costing £G8.5 million and jointly sponsored by the Ghana Government and the Italian AGIP Company started production in 1963 with an initial planned output of one million tons of petroleum products a year. The new aluminium smelter which is associated with the great Volta project is being built by Valco, an American consortium, at a total cost of £G58.6 million and with an initial production of 100,000 tons of metal a year.

It is these developments and a host of other smaller but no less important ventures of private investment in Ghanaian industry which make it possible to look forward to a further rapid growth of the industrial sector in the economy. The growth of private industry in the past has not been hindered by the growth of Government industry. On the contrary, private investors have been assisted in various ways even to the extent of capital participation and tariff protection. Government still holds that the Ghanaian economy has room for the further growth of both Government and private industry and will shape its policies in order to promote both.

To make the greatest contribution to economic growth and to the solution of current economic problems the successive stages of industrial development in Ghana will consist first, of the establishment of industries to supply the bulk of consumer demand, and to manufacture articles out of Ghanaian raw materials for export, second, of industries to produce metals, building materials and other basic requirements of the economy, and eventually of industries supplying machines and other products of the heavier and technologically more advanced industries.

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II.—OBJECTIVES OF INDUSTRIAL DEVELOPMENT—1963-70

Industrial development under this Seven-year Plan will aim at five important economic objectives:

- (a) To the largest degree possible domestic substitutes should be produced for those manufactured staples of consumer demand for whose supply Ghana is now entirely dependent upon foreign sources and expends large sums in foreign exchange each year.
- (b) The agricultural and mining commodities that are at present exported mostly as unprocessed primary products should be progressively processed and manufactured before export.
- (c) The building materials industry should be expanded and modernised to enable it to support the inevitable increased activity in construction and a start should be made on the development of other basic industries in the field of metals and chemicals.
- (d) In the development of basic industries particular attention should be paid to preparing the economy for the further stages of industrialisation envisaged under subsequent plans. A beginning should therefore be made in a small way in the field of machine industries, electrical equipment and electronics.
- (e) Industries will be developed in such a way that they fit in with development in other African countries.

In pursuing these targets in industrial development Ghana has the advantage that the natural resources and the agricultural potential of the country are capable of supporting a high degree of industrialisation.

(i) *Manufactured consumer goods*

This is the area of industrial development in which it is intended to lay the main emphasis of industrialisation under this plan. Owing to the almost complete dependence upon foreign sources for the supply of these goods foreign trade data provide a substantially complete guide to Ghana's demand for these manufactured consumer goods. Of the total of £G70 million spent by Ghana in 1961 on imports that were destined for consumption a preponderant share was accounted for by expenditure on a small number of staple items—textiles, clothing, footwear, soap—all of them products which are technologically simple and for which the manpower and in some cases the raw materials are readily available in Ghana. The demand for these consumer staples has increased rapidly in recent years as is shown in Table 5.1. Owing to the relatively low levels of *per capita* income that still prevail over large parts of Ghana it is to be expected that demand for these goods will increase no less rapidly in the coming few years especially if, as is the intention

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under this plan; a major effort is made to develop those parts of the country that have hitherto made the least progress.

Owing to the need to conserve foreign exchange, and to the present and prospective importance of these consumer goods as users of foreign exchange, the attainment of the targets for the production of staple consumer goods will be given priority over all other aspects of the industrialisation programme. It will be expected that whether the production of these commodities is undertaken by state or private enterprise a high degree of self-sufficiency in these goods should have been attained by 1969. It is therefore intended that before the end of 1966 there will have been put in hand enough factory projects to meet substantially all the production targets set in this field of industrialisation.

TABLE 5.1

GHANA: DEVELOPMENT OF IMPORTS OF CONSUMER STAPLES
£G million

	1938	1945	1950	1955	1960	1961
Clothing	0.18	0.16	0.59	2.12	3.93	4.81
Footwear	0.03	0.02	0.27	0.96	2.20	2.72
Soap, etc.	0.09	0.09	0.66	1.34	2.39	2.74
Textiles	1.35	3.22	12.12	19.23	19.70	21.52
Totals	1.65	3.49	13.64	23.65	28.22	31.79

As food production increases and standards of living rise there will be need for numerous processing, canning and packing plants to handle food. These will in general be small-scale establishments handling the produce of the different areas in the immediate vicinity. They will help to avoid some of the costs of transport and some of the damage at present incurred in transporting food. This is the class of enterprise which the Central Government will hand over to co-operative societies as soon as these are able to undertake management and financing. It is expected that in most cases the factory and farming enterprises will be planned as a unit and implemented in a co-ordinated programming sequence so that the farmers can be assured of markets and the factories of supplies. It is hoped, through a wide dispersion of food processing industries, to provide alternative employments especially for the youths and women in rural districts, thereby spreading the benefits of industrialisation to all parts of the country.

Ghana's furniture industry has undergone rapid progress in recent years and is now doing a certain amount of export business as well as supplying the local market with a wide range and greatly improved quality of furniture. There seems to be a good market in the wealthier countries for knocked down furniture compo-

nents made of Ghana's hardwoods, and the level of technology and craftsmanship will have to be further improved to take advantage of these opportunities.

The assembling of components for the manufacture of durable consumer goods is regarded as being economically feasible in a number of cases. Household durables like fans, refrigerators and cookers are as yet only in limited demand in Ghana, but the completion of the Volta grid system and the expected increase in the numbers of people with access to electricity will offer an incentive for the promotion of the more widespread use of electrical consumer durables. Questions of consumer finance and of price are all-important in this regard. Subject to their solution, Government will be ready to assist in the local assembling of household durables and in building up a local industry to supply standard electrical and mechanical components for these products.

It is readily apparent both that the variety of automobiles in use in Ghana is excessively large and that many types are unsuited to local road conditions and hence represent a poor use of scarce foreign exchange. Concentration on a more limited number of car types selected for their superior technical performance would not only facilitate local assembly and eventual manufacture but would also improve the standards of maintenance and reduce the costs of spare parts to the consumer. The gains from this re-organisation of the automobile market will depend upon the initial selection of models to suit Ghanaian conditions, the possibility of changing such selection to keep up with technological innovations, and the importation of the vehicles in a form which will enable a maximum of assembling to be done locally. The imported components can then be gradually replaced with locally made substitutes. A similar strategy can be worked out for commercial vehicles, some of which are already being assembled in Ghana.

In planning this development regard will be had to the plans of other African countries; the aim should be for each country to specialise in the production of those goods which it is especially well suited to produce by reason of its natural resources, climate, etc. In this way it will be possible to achieve maximum production in Africa with the most economic scale of operation.

(ii) *Intermediate Goods*

In order to be able to maintain an increasing livestock population out of which a higher annual take-off may be produced to meet rising needs it will be necessary to develop the livestock food industry on a scientific basis. Fish meal, oil cake and other by-products of agricultural processing should be fully utilised. Again co-operatives and fairly small private establishments can handle this branch of enterprise most suitably and the function of Government investment in the field would be to initiate these enterprises for later disposal to the co-operatives or to assist with capital and technical advice in setting them up. Whatever the decision regarding the use of charcoal in an iron and steel industry the volume of timber

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available as a by-product from the expected growth in sawmilling, and other timber industries will present an opportunity for a considerable expansion in charcoal production. The typical enterprise in this field will also be small and suitable for ownership and management by co-operatives and private manufacturers.

In conjunction with the cocoa bag industry it is also intended to develop the local production of rope and other fibre products based on the coconut, and possibly a sisal industry. As the livestock population increases there will also be enough raw materials for a leather industry, the primary object of which will be to feed the local shoe and travel goods industry. The local market for tyres and allied rubber goods has now reached a size where local fabrication is justified. This is an industry in which technological change is fairly rapid and it will probably be necessary for public investment in it to be regularly reviewed to ensure that the enterprise does not suffer from rapid obsolescence. The same consideration holds true for automobile starter batteries and other rubber-based accessories.

(iii) Export Commodities

Ghana's export trade is also dominated by a small number of agricultural and mineral commodities—cocoa, timber, gold, diamonds, manganese, non-ferrous metals. The programme for industrialising exports, and hence raising their capacities to earn foreign exchange, will therefore also be concentrated initially on the processing of this small range of commodities.

In the case of cocoa many of the major customers of Ghana in Western Europe and North America have processing capacity and therefore have traditionally tended to buy only raw cocoa beans from Ghana and other cocoa producing countries. In the evolving re-arrangement of the international division of labour however the processing of cocoa and other such commodities must be progressively transferred to the producing countries as the best avenue for the industrialisation and the general economic development of those countries. It can therefore be reasonably expected that chocolate manufacturers and other users of cocoa in the industrialised countries of Europe and North America should increasingly buy from Ghana and other producing countries cocoa products instead of cocoa beans. The rate at which this transformation of the cocoa trade between the producing countries and the industrialised countries can take place will be determined largely by the amount of good-will shown by manufacturers and consumers towards this process of change. With the relationships that have traditionally persisted between Ghana and her major customers in Europe and North America it is the hope of Government that the transition from our being an exporter of raw cocoa beans to becoming an exporter of manufactured cocoa products can be accomplished fairly rapidly.

The newer markets for cocoa lie in the Eastern European countries, Russia, and Japan, and, as economic development gains momentum, in some of the other south Asian states. In these potential new markets consumption is mostly inhibited

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by the high levels of external taxation on cocoa and cocoa products and by an absence of cocoa processing capacity. A start has been made, for instance in Japan and some East European countries, towards dismantling some of the fiscal obstacles to the increased consumption of cocoa and chocolate. In association with other cocoa producing countries Ghana intends to continue to work for the further lowering of these barriers to consumption and eventually for their entire elimination. The cocoa producing countries will also look for a similar process in the wealthier industrialised countries of Western Europe and North America which can now, without much cost to themselves and with much gain to the cocoa producing countries, afford to relax the discouragement which a number of them have hitherto put in the way of the consumption of cocoa and chocolate. For the newer markets it is expected that the installation in Ghana of cocoa processing capacity will enable them to increase their consumption of cocoa and chocolate products without their having to divert any sizeable amount of investment capital themselves into the construction of processing capacity.

As a rough target therefore it is proposed that by the end of this Seven-year Plan perhaps one-third of the total exports of cocoa from Ghana shall be in the form of cocoa products rather than cocoa beans.

Ghana's timber trade which in 1961 accounted for around 13 per cent of total export earnings has also not progressed far enough beyond the stage of a primary commodity trade. Of the £G15.3 million earned from the export of timber in 1961 60 per cent was earned on the export of logs and 40 per cent on the export of timber that had not been processed beyond the stage of simple sawmilling. So far there exist in Ghana only three factories for the manufacture of veneer and ply-wood and we are actually still importing these articles. It is established that Ghana's timbers sell well on international markets in these forms as well as in the forms of chip-board panelling, flooring and furniture. It is proposed that by the end of this plan period the export of unprocessed lumber will have been reduced to fairly minor proportions and the import of veneer and ply-wood eliminated and that Ghana's timbers will then be entering the world markets at least as sawn timber, but increasingly also as wood products manufactured far beyond that state.

The processing of Ghana's mineral products presents more difficult problems of capital and technology than those likely to be encountered in the processing of agricultural raw materials. However there is now under construction the Tema aluminium smelter which will provide the first opportunity for the local processing of Ghana's considerable bauxite resources. As a minimum target it is proposed that by the end of this plan period the production of alumina from local bauxite should be approaching a level at which it can supply all the requirements of the Tema smelter.

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At present much of Ghana's gold enters world markets as gold processed to finenesses ranging from 38 per cent to 93 per cent. It is intended that, subject to the solution of the relative technical problems, gold produced in Ghana will be processed domestically to full bullion standard of 98 per cent before export.

Ghana ranks about fifth in the world as a producer of manganese. With the availability of cheap electrical power from the Volta it is intended to set up a ferro-manganese, and later a silico-manganese, smelter in order to up-grade the foreign exchange value of Ghana's manganese exports.

Government will hold itself ready to implement the project for the production of ferro-manganese. Consideration will also be given to public investment in the aluminium industry either by way of Government participation in the Tema smelter or by the promotion of other smelters to process the vast resources of bauxite which yet remain to be exploited. This would place Ghana in a favourable position to follow the modern trend in using aluminium for the fabrication of all those numerous products for which this metal has proved a substitute for the more traditional metals and for which export markets are also readily available:

(iv) Building Materials

The general standards of housing in Ghana could be very much improved if the swish of which the majority of houses are now built could be strengthened with the addition of some cheap lime or cement. Urban housing, which is now built predominantly of cement and steel, is a large and increasing drain on Ghana's foreign exchange resources since at present all these materials as well as much of the materials required for the roofing, the windows and the doors of urban housing, are imported.

At Buipe in the Northern Region, Asuboni in Kwahu and Nauli in the Western Region, Ghana possesses limestone deposits which can supply a certain amount of cement, and quicklime for an indefinite period. The Buipe and Asuboni reserves, whose exact extent is yet to be determined but which are provisionally estimated to be capable of yielding at least 15 million tons of usable limestone, will be exploited for the production of limestone to be used as mortar for ordinary house construction, as a stabilizer for road surfaces and increasingly as a fertilizer in agriculture. The burning of this limestone will require considerable quantities of charcoal or brown coal. It is intended that initially timber removed from the areas to be flooded by the Volta Lake will provide the basis for a charcoal-burning industry which will later have to depend primarily on the waste from sawmilling or other wood-working enterprises and on charcoal plantations to be established in suitable areas. The production of this local limestone will improve standards of housing and road building but will not in itself save foreign exchange. At Nauli it has been established that the limestone deposits are suitable for the manufacture of portland cement

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which will substitute for some of the 500,000 tons of cement that is presently imported every year into Ghana at a cost of £G4 million. The exploitation of these reserves faces problems of transport and of the supply of clays, gypsum and fuel. Subject to the successful solution of these problems it is intended to exploit all the Nauli deposits for the production of up to 250,000 tons of cement a year.

In the meantime it is already possible to save a considerable amount of foreign exchange by the local processing of imported clinker. A special pier has been constructed at Takoradi for the handling of clinker and it is proposed that a clinker milling factory be set up at Takoradi to process imported clinker while the problems connected with the exploitation of the Nauli deposits are tackled.

In addition to producing for the home market, the building materials industry of Ghana also has considerable potential to earn foreign exchange through exports of aluminous cement. There are extensive deposits of low grade bauxite suitable for the production of aluminous cement and it is proposed to exploit these in association with the limestone deposits for the production of aluminous cement for export.

Up till the beginning of the second world war a majority of the private houses in Accra, Kumasi and Sekondi-Takoradi was built of locally-made bricks. The brick and tile industry however has not been able to share in the construction boom of the post-war period and in fact has tended to disappear in some parts of the country. It is probable that the increasing distances over which bricks and tiles have had to be transported as the urban areas have grown, and the competition of household uses for the available fire-wood, have tended to make the industry increasingly uneconomic. Recent endeavours to revive it have not been successful, partly owing to the incomplete solution of these problems and partly owing to preference that seems to have become entrenched for cement and sand as building materials in the urban areas. It is also probable that there is now a proportionately smaller number of skilled building craftsmen capable of handling bricks than there was before the war and that any major revival of the use of bricks as a building material must be contingent upon the possibility of retraining considerable numbers of masons in the use of bricks. It is however generally agreed that it should be possible to make far greater use of bricks in building than is now done, especially in the medium-sized towns where labour is still relatively cheap and where the demand for housing is likely to grow most rapidly in the next few years.

It is proposed therefore that Government should extend a considerable amount of financial and technical help towards research into the various problems of industry so that brick and tile enterprises will be established in all parts of the country where suitable clay reserves are available.

It is expected that the factory now being projected to manufacture prefabricated building parts will before long be able to use local materials on a large scale.

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Owing to an unnecessary lack of standardization in the windows, doors and other elements used in building construction in Ghana it has not so far been possible to develop the production of these components on an industrial basis. Partly as a result of this many building undertakings have relied upon foreign sources for their supplies of such components, usually made of aluminium or iron and steel. With Ghana's wealth in wood and with the large proportion of construction that is controlled by Government itself there is no reason why this situation should continue. The consumer should be able to have a wider range of materials when Government establishes factories for similar kinds of goods. As a first step it is proposed to erect factories in Kumasi and other suitable centres for the mass production of standardized members out of suitably seasoned wood and to make the use of such members obligatory in the construction of most public buildings. Where necessary the local fabrication of similar items in aluminium, iron or steel will also be promoted.

It is intended to begin a glass industry in Ghana with the manufacture of bottles and containers. This industry could rapidly expand to the manufacture of sheet glass and other building glass, for which there are suitable deposits of sand around Tarkwa in the Western Region. Raw materials for the production of china and other porcelain ware seem to be available in the Central Region in considerable quantities and the expected building developments could justify the establishment of an industry based on them. The demand for pipes, sheeting and other products of asbestos is also quite high already and likely to grow rapidly. There are no known deposits of asbestos but the local manufacture of asbestos cement products, which are particularly difficult to transport over long distances as all Ghana's supplies now have to be, seems to offer good prospects for profitable investment.

Plastics have clearly demonstrated their versatility and their ability to provide a cheap substitute for metal, rubber and leather in the fabrication of a wide range of consumer and industrial products and in building construction. The establishment of a large oil refinery in Tema provides the opportunity for the development of a plastics industry based on petroleum by-products. As with other chemical industries this will require considerable sums of capital to develop and will present technical problems of some complexity. It is however proposed to start studies to resolve the economic and technical problems in the way of a plastics industry in Ghana. Meanwhile the existing manufacturers of plastic goods will be expected to make sizeable increases in their rates of production.

(v) *Iron and Steel*

There is now under construction at Tema a small steel plant for the production of steel from scrap metal. By 1964 it is expected that this factory will be producing at the rate of 30,000 tons per annum, which will supply enough steel for the fabrication in Ghana of most of the simpler steel products that are now imported into the

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country. But in the long-run the development of an iron and steel industry in Ghana must await the exploitation of domestic iron ores, of which there are reserves in the Shiene area along the eastern borders estimated provisionally at more than 100 million tons. The new Volta Lake will extend to within 55 miles of these deposits and thereby provide cheap means of evacuating iron ore from the region or bringing into it coke, limestone and other inputs if it is decided to establish smelting facilities in that region. Four technical problems have to be resolved before the exploitation of these ores can begin. First, it is necessary to establish the exact extent and location of usable ores and to carry out all other prospecting activities needed to bring the ores to the actual point of exploitation. Secondly, it is already known that in its original state the average iron content of Shiene ore is not as high as is required either for smelting in electric furnaces or for selling on world markets. Preliminary work on the beneficiation of these ores however indicates that they could be brought up to 56 per cent, which may prove suitable for these purposes. These results have now to be tested out on a large scale to determine whether they will be economical. Thirdly, should it be decided to use blast furnace methods for the production of pig iron from Shiene ore then low-grade ores could be used, but on the other hand large quantities of coke and limestone would have to be transported for mixing with the iron ore. Fourthly, Shiene ores have a phosphorus content ranging from .13 to 1.32 per cent. The ores with higher phosphorus content will be unsuitable for steel manufacture, and an iron and steel industry based on local ores would have to be planned with this in view.

There is a possibility that, as is done in other forested countries such as Brazil, iron smelting in Ghana could be based on the use of charcoal. This however, will require the organisation of a charcoal industry on a scale very much larger than anything so far envisaged. It is almost certain that limestone from Buipe will be suitable for use in local blast furnaces.

It is intended to put in hand immediately studies and planning towards the solution of these problems so that if it is proved to be feasible a start can be made on laying the foundations for the development of an iron and steel industry before the end of this plan period. In this planning careful attention will be paid to the need for inter-African co-ordination in the development of such heavy industry, which depends for its success on the availability of large markets. Government also intends to investigate carefully the possibilities of developing a trade in iron ores, pig iron or steel between Ghana and Japan and the importing countries in Europe. Such a trade could help to diversify and stabilise Ghana's foreign trade. At the same time negotiations will be commenced regarding the financing of this project which, should it materialise, would be even bigger than the aluminium industry now under construction.

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With these developments projected for the manufacture of cement, limestone, building components and steel it is expected that Ghana should become largely self sufficient in her requirements for building materials by 1970 and almost completely so by 1975.

(vi) Other Basic and Capital Goods Industry

For the duration of this and the next seven-year plans it is expected that Ghana will have to continue to depend upon her exports as a means of procuring the capital goods and other basic products needed for current production and for economic development. In the long run however the economy will need to develop capital goods and other basic industries in order to be able to supply its own requirements, which will inevitably grow rapidly. The best contribution that can be made towards this long-run objective under the present plan will be to lay the basis for a chemical and a machine goods industry.

At present Ghana's advantages for entering the chemical industry field consist in the fact that she possesses substantial resources of salt and that with the commissioning of a petroleum refinery at Tema there will also be available the raw materials for a petro-chemical industry. A possible source of sulphur exists in the recovery of sulphur dioxide from the burning of pyrites in the gold-mining industry. The general development of the economy is also now approaching the position where caustic soda, the basic acids, oxygen, hydrogen and nitrogen for industrial purposes will be required in such quantities as may make their local manufacture economic. Subject to the availability of viable projects in one or other of these fields it is intended to allocate a certain amount of investment funds to start the development of a chemical industry during this plan period.

In the field of mechanical industry the present state of the market makes it possible to envisage the possibility of entering into the production of simple pumps, motors, mechanical and electrical appliances for domestic use and the manufacture of machine parts. The Ghana Railway and Harbours Administration and the mining industry have accumulated considerable experience in the fabrication of machine parts, and a number of industrial establishments in the engineering industry already exist in Accra and other centres. Consideration will be given to the expansion of these activities as a means of laying the foundation for the eventual development of a machine industry.

III.—SELECTED TARGETS OF INDUSTRIAL PRODUCTION 1963-70

It is intended that before 1970 domestic production of the basic list of industrial items shown in Table 5.2 will have reached the rates indicated in that table. A large number of other industrial items which it is hoped will also develop in the course of the seven-year period are omitted from that table. But the allocation of investment funds for the development of public industries assumes that rapid

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progress will be made in the development of some of these other industries and, as indicated in the previous section, private investors will also be encouraged to develop lines of industrial production over and above those specified. The production targets listed in Table 5.2 must therefore be considered merely as the basic minimum targets which, for reasons of balance of payments and economic strategy, it is mandatory to attain before 1970.

TABLE 5.2
LEADING INDUSTRIAL TARGETS FOR 7-YEAR PLAN

INDUSTRY	Target 1969		Value of	Value of	Increase	Ghanalan	Imported	Potential
	Quantity	Unit	Output 1963 (£Gm)	Output 1969 (£Gm)	of Output 1963/69 (£Gm)	Raw Materials 1969 (£Gm)	Raw Materials 1969 (£Gm)	Exports 1969 (£Gm)
1. Cotton Spinning weaving and fini- shing	22m	sq. yd.	—	2.75	2.75	—	1.10	—
2. Cotton Finishing only	60m	sq. yd.	—	7.50	7.50	—	4.50	—
3. Shoes (Leather)	2m	pairs	—	2.50	2.50	0.50	0.50	—
4. Soap	35,000	tons	1.00	3.50	2.50	—	2.63	—
5. Tobacco	5.8m	lb.	3.00	5.32	2.32	1.45	0.36	—
6. Salt	100,000	tons	—	1.00	0.78	•	—	0.20
7. Sugar	100,000	tons	—	4.50	4.50	1.25	0.13	0.20
8. Fish	60,000	tons	—	6.60	6.60	3.30	0.40	—
9. Grain	140,000	tons	—	7.70	7.70	2.80	3.75	—
10. Paper	25,000	tons	—	1.88	1.88	•	0.04	—
11. Lime	100,000	tons	—	1.60	1.60	•	0.50	—
12. Cement	600,000	tons	—	4.02	4.02	•	2.67	—
13. Gold Refining	850,000	f.o.	—	10.63	10.63	9.35	—	10.63
14. Aluminium	100,000	tons	—	18.60	18.60	—	15.60	16.74
15. Alumina	—	—	—	—	—	—	—	—
16. Non-apparel fibre	12,000	tons	0.72	1.92	1.20	0.05	0.48	—
17. Cocoa Products	90,000	tons	4.56	17.10	12.54	15.66	—	17.10
18. Plywood and Ve- neers	5.5m	cu. ft.	0.51	8.51	8.00	1.83	—	7.43
19. Sawn Timber	18m	cu. ft.	10.00	12.42	2.42	6.00	—	9.66
Total			20.01	118.05	98.04	42.19	32.66	61.76

IV.—PUBLIC AND PRIVATE PARTICIPATION IN INDUSTRY

Since industrial activity now accounts for such a small proportion of the national product and supplies a minute fraction of the demand in Ghana for manufactured goods there is room for almost unlimited participation by both public and private enterprises in the development of industry. In many of the sectors that it is proposed

• Primary production of raw materials is included as part of the industrial process.

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to develop most urgently, such as textiles, clothing, building materials and food processing, the existing demand can support a considerable number of establishments of economic size. It is to be expected that a number of public and private establishments in these fields will each be able to find the particular product specialisation which it can best supply, and the various enterprises will be complementary to each other in meeting the available demand.

Where current demand can support only one establishment of economic size, Government intends, wherever the product is one considered to be of sufficient economic importance, to ensure that either through Government investment or through private investment the industry is developed by the time it is required for reasons of economic policy. In such cases where a one-factory industry is of strategic importance it will be expected that a private investor who intends to go into the field will be able to obtain some of the concessions available under the Capital Investments Act. It will generally be the practice to seek some measure of Government participation or adopt other methods of safeguarding the interests of the community whenever an enterprise operates under monopoly conditions.

As has been made clear in numerous Government announcements, in all cases where public and private establishments operate within the same industrial field competition between them will be equal and fair and public enterprises will not be allowed to obtain any facilities or favours that are not available to private investment in a comparable situation. This principle is an essential one for the smooth running of a mixed economy and the Government is determined that it should be scrupulously observed.

It is expected that private investment will play an important part especially in those industries concerned with the supply of final consumer goods where product differentiation and detailed matters of quality are of the greatest importance. In these sectors the most fruitful role for state investment will be in the supply of standardized components and primary materials that go into the fabrication of the final consumer goods. Private investment will also be invited to participate in the production of some basic consumer items and in some of the larger-scale projects in the field of producer goods manufacture.

As regards the industrialisation of Ghana's export commodities, in those cases where factors of marketing and technology can present difficulties to new entrants into the field it will be expected that private investment will be willing to undertake at least a part of the investment and management functions required to reach the minimum targets of production.

A part of the public investment capital provided under this plan will be available for the promotion of joint ventures and other forms of public-private co-operation

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in the development of industrial activities. The Capital Investments Board will be empowered to receive proposals for such joint ventures.

V.—POLICY FOR THE DEVELOPMENT OF GOVERNMENT INDUSTRIES

Government will follow certain distinct steps in its industrial development programme in order to ensure that all capital invested is utilised to the best advantage. The strategy for the industrial plan will thus be in order of priority:

First, the attainment of the maximum utilization of existing plant capacity;

Secondly, an expansion wherever possible of the productive capacity of existing enterprises in preference to the setting up of entirely new factories for the production of the same commodity;

Thirdly, completion of projects in the process of construction; and

Finally, the erection of new buildings and installation of new machinery to commence entirely new industries.

The items become progressively more expensive in the order in which they have been listed and since industrial production in Ghana, as in other less developed countries, imposes severe strains not only on capital but also on managerial and technical resources, it is essential that the more expensive stages are not tackled before the less expensive. The fact that the cheapest in terms of unit cost of additional output are also the quickest to accomplish lends further weight to the importance of going through the stages systematically.

(1) Maximum utilisation of existing plant capacity

The most cursory inspection of the procedures followed today in many government factories yields the impression that the adoption of some simple techniques could lead to substantial improvements in productivity. There are many factories, for instance, that could almost double their output by the introduction of a second shift. As a measure of increasing employment and output and achieving a quicker amortisation of borrowed capital, this course has no equal. A third shift appears a rather less urgent proposition for most factories in the present rudimentary state of engineering and plant maintenance services; but some self-reliant and enterprising establishments are recording distinct successes in this regard, and as many as can adopt the third shift with equally happy results will be encouraged to do so.

Other factories at present operate well below capacity owing to the lack of some balancing equipment. For example, it was estimated at the end of 1962 that the match factory at Kade could increase output by about 75 per cent by the installation of an efficient steam boiler and box filling machines. The important point about such cases is that the installation of the missing pieces would repay their cost many times over in a short period.

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Some companies have been handicapped by a shortage of working capital either real or caused by inefficiency in the marketing of finished products. Wrong planning of raw material procurement, and unsatisfactory plant maintenance services (reflected sometimes in the failure to keep adequate stocks of the simplest items of spares), have been known to bring about stoppages in production for several weeks. The answer is the streamlining of procedures and practices, which may well begin with the training of management, charge-hands, foremen and technicians. This subject is discussed further in the sections dealing with Education, Manpower and Employment and with Plan Implementation. A start has been made with the assistance of experts on time and motion studies and related subjects, and the early successes achieved indicate how great the opportunities are.

(ii) Expansion of existing enterprises

After achieving satisfactory levels of operating efficiency in all its existing industries, the Government will wherever practicable encourage expansion in such enterprises when increased production of the same or similar goods is needed. This course of action always involves much less capital expenditure per unit of output than entirely new ventures. In this process, plant outlay will be studied to see if the same building can accommodate more machinery units. Only when this is not possible will it be wise to carry out extensions or additions to existing buildings.

(iii) Completion of unfinished projects

At the end of 1962 there were about twenty projects in the public sector in the course of construction; the private sector had many times more. Since such projects have already imposed certain well-defined financial obligations that can seldom be postponed, the country will in most cases have to press on with their development, so that their gestation period may not be prolonged beyond the scheduled dates. This is essential, owing to the further reason that all such unfinished projects impose a strain on the economy by generating incomes without supplying corresponding goods and services.

(iv) Commencing new projects

The construction of new projects is in the nature of things the part of a development plan that makes the greatest demands on resources. For this reason, it should not be embarked on lightly, and all the necessary preparations will have to be carried out with increasing thoroughness. It is therefore proposed to use independent consultant services right from the start, and throughout the various stages of preparation. It is expected that the volume of business generated by the plan will induce many of the firms of consulting engineers now operating in Ghana to strengthen

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their establishments so that they may be able to execute a greater proportion of the tasks involved within the country, and thus offer quicker services. On the basis of the consultants' reports, tenders will be invited from machinery suppliers, and as has been the practice, the specifications will include, in addition to the usual particulars, training of Ghanaians, and provisions for erecting the plant, starting it up and managing it for a minimum period whilst Ghanaians are being prepared to take over.

One problem that will always pose difficulties is that of location of industries. Where the pull of the raw material is greatest, it may be necessary to embark on a considerable amount of development work before the factory can be sited. Roads and bridges, housing and social amenities, water, power, telephone connections, may all call for expenditures that in the small and medium-size factories, may even equal or exceed the direct investment cost of the factory and thereby detract from the profitability of the project. Where the advantages of siting near the raw materials are overriding, but the required facilities are inadequate or non-existent, the best course would be to postpone development, and to subject the claim by the project concerned for a high place on the list of priorities to the most vigorous examination. In general industrial projects will be sited so as to make the maximum use of the infrastructure facilities that Ghana has already built up at such great cost instead of being sited where this will necessitate more of such non-productive investment.

The timing of projects is just as important. Thus, electro-chemical industries should not be established until well after Volta River power has become available; factories expensive in terms of foreign exchange should not as a rule be commenced unless the industrial raw materials could be developed quickly in the country; and those that demand high levels of engineering skills should not long precede the availability of at least a good proportion of the technicians required; and so on. This point will be further developed in the section dealing with plan administration and management.

VI.—BASIC INDUSTRIAL TARGETS

Commitments have already been entered into for the setting up of Government factories to produce appreciable quantities of some of the basic industrial products shown in Table 5.2.

Private enterprise projects are already under construction to produce enough soap and refined petroleum for the domestic market and 100,000 tons of aluminium for export. Factories for the production of lumber products, textiles, tobacco, salt, household utensils, clothing, shoes and plastic goods, have been in operation for some time and, subject to quality, price and public policy, many of them could be readily expanded to meet the basic industrial production targets under this plan.

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In order to implement the remainder of the targets for basic industrial production additional projects to make up the quantities indicated in the table will have to be completed during the plan period, many of them before 1967. The information so far available indicates that private investors propose further extensions in the field of textiles, soap, tobacco, houseware, wood products, and mining. As the industrial priorities of the plan become known, private investors will no doubt plan further projects in those fields to which Government attaches the greatest importance. Every encouragement will be given to them under the Capital Investment Act and other measures of policy to implement these plans at an early date within the Plan period.

As previously explained, the state will hold itself ready to invest whatever sums are necessary to bring the aggregate of domestic production of these basic items up to the target levels set under this plan. The investment programme for meeting the basic industrial targets constitutes the topmost priority in the industrialisation plan for the next seven years.

As at present estimated total investments of around £G120 million will be required to implement the production targets in these priority sectors of industry. In addition, a start will have to be made on the construction of bauxite mining and alumina processing facilities and on the implementation of some of those projects in chemicals, machinery and other more advanced industrial sectors which should feature more prominently in the structure of industrial production in the years after 1970. The high priority industries to be developed during this plan period will add substantially to Ghana's exports by 1970 if the schedule of their construction is adhered to. The largest potential contributions are to be expected from the industries which will process cocoa and timber. Until Ghanaian bauxite is used in the aluminium smelter the contribution of this industry to foreign exchange earnings will remain, in relation to its total output, relatively small. Equally important will be the contribution of those industries making goods for domestic consumption. They are the industries that the economy will rely on to prevent that explosive growth in the import of manufactured consumer goods which would otherwise accompany the growth in the national economy that is envisaged under this plan. For the present, however, many of these industries, both export promoting and import substituting, will rely to a considerable degree on imported raw materials. The textile industry, the aluminium industry and the cement industry will all require substantial imports of raw material. The full balance of payments improvement that could result from the establishment of these leading industries will therefore not be realised until the development of Ghanaian agriculture and other sources of raw material has reached an adequate stage.

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VII.—PUBLIC INVESTMENT PROGRAMME IN INDUSTRY

(i) *Existing enterprises and commitments*

The most immediate task of the industrial programme in the public sector during the first twelve months of this development plan will be to complete projects already started (see Table 5.5) and to take steps to bring up to a state of economic viability the considerable numbers of manufacturing enterprises in the public sector which are not now commercially successful. This up-grading process, costing a total of £G1.6 million will be completed by 1966. (see Table 5.3).

TABLE 5.3
EXPANSION PLANS FOR THE NEXT SEVEN YEARS CONCERNING
MANUFACTURING AND SERVICE INDUSTRIES

<i>Name and Address of Firm</i>	<i>Additional Fixed Investment</i>	<i>Additional Working Capital</i>	<i>Total</i>
	£G	£G	£G
Ghana Boatyards—Sekondi	38,700	10,000	48,700
State Furniture and Joinery Corporation— Kumasi.	11,100	20,000	31,100
State Furniture and Joinery Corporation— Accra.	7,300	30,000	37,300
Ghana Tyre Services Limited	38,100	10,000	48,100
Ghana Distilleries Limited	203,500	10,000	213,500
Brick and Tile Corporation	59,600	10,000	69,600
Ghana Paint Corporation	68,200	35,000	103,200
Nzima Oil Mills Corporation	79,500	10,000	89,500
Ghana Boatyards Corporation—Tema ..	11,400	5,000	16,400
Fibre Bag Manufacturing Corporation ..	630,000	50,000	680,000
Ghana Laundries Corporation	156,000	—	156,000
National Timber Corporation	100,000	10,000	110,000
	£G1,403,400	200,000	1,603,400

The enterprises in respect of which financial and other commitments have been entered into, as shown in Table 5.5, fall in many instances within the categories of the basic industrial targets. Government factories should come into production in the earlier part of the plan period to add substantially to productive capacity in sugar, grain milling, textiles, shoes, cocoa processing, and fibre goods. The comple-

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tion of these existing projects will, as has been indicated earlier, form the second main task in the public industrial programme.

(ii) New enterprises

As the plan period opens, because of the general reflation of the economy, the improvement of the investment climate especially by reason of the Capital Investments Act and the consequent increase in the amount of private capital coming forward to seek investment opportunities the scope and purpose of Government investment in industry can be reviewed. As indicated in a later section of this document the prospects for Government surpluses which can be invested are much clouded over by uncertainties regarding cocoa prices and by the difficulties that can be foreseen with the attempt to keep down the rate of increase in Government's recurrent expenditure. In the circumstances, the full public investment of £G480 million can only be implemented if the circumstances alter radically. Unless they do, the Government's development programme will have to be slowed down and this can most easily be done by reducing the level of Government industrial investment envisaged and allocating to private investment a larger role in the implementation of the targets for industrial production. In that case the national stake in industrial activity will have to be sought through other means than full initial public ownership. It will be possible for the Government's equity in some new industries to be a small part of the total with agreements previously made for Government to acquire an increasing share in the ownership as time passes. Some agreements for private investors to utilise Ghana's natural resources can be made in such a way that the business reverts to the nation as a going concern after the elapse of a certain amount of time or after the private investor has gained a certain return on his capital. All these devices, which are now very well established in the field of contemporary economic development will be examined by the Ministry of Industries, the National Investment Bank and the financial and planning authorities with a view to using them wherever possible to relieve the immediate burden on the Government's own financial resources in the difficult period of reconstruction ahead.

There will however be a number of lines of basic industry whose development depends upon long range national planning strategy and whose control must be kept in public hands. These industries, in basic mining and metallurgy, fuel and power, industrial chemicals and building materials, also require very expensive and protracted pre-investment studies and activities which the state is ideally suited to undertake and which in fact private investment will generally not undertake. The public industrial development agencies will therefore concentrate their energies and resources on these basic industries, leaving the consumer goods sector in which on the whole private capital, technical expertise and management capability will be available in adequate quantities.

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On the basis of this strategy the Government's investment programme in the field of industry and mining could be held down to a total of £G70 million, of which £G40 million would be devoted to projects falling within the priority fields previously discussed, £G10 million to mining and geology, £G13 million to rural small scale and other non-priority industries, most of which are already committed, and £G7 million to inter-African and other major projects related to the long-run pattern of development previously outlined.

VIII.—MANAGEMENT

More than capital or skilled labour, the availability of adequate management is potentially the most serious impediment to a successful implementation of this programme of industrialisation. The measures to cope with the problems raised by the short supply of managerial personnel are discussed further in Chapter 7.

B. MINING

The mineral wealth of Ghana has always been known to be considerable and has been one of the greatest attractions for foreign capital in the country. During the last fifty years a mining industry has been created which now occupies an important place in the economy as an employer of labour, as an earner of foreign exchange and as a contributor to the revenues of Government. In 1962, mineral exports from Ghana amounted to £G24·82 million, equivalent to 21·6 per cent of total exports. Wages were almost of the same order as in 1961, when the total recorded wage bill in mining and quarrying amounted to £G6·2 million or 8 per cent of all recorded wages.

In the last ten years, however, the mining industry, unlike the other sectors of the economy, has been relatively stagnant. Its total exports in 1962 were only 7·2 per cent higher than its exports ten years earlier. While exports of gold were 21·8 per cent higher and diamonds 37·4 per cent higher, manganese exports were nearly 34·0 per cent lower than they had been in 1952.

As the figures in Table 5.4 indicate, during 1962 only gold and bauxite reached new recorded levels of export value. Diamonds and manganese were both running at values well below those of recent peak years. Manganese exports reached their highest level in 1957, and the value of diamond exports in 1962 showed a reduction of 24·6 per cent from the 1960 level in spite of an actual increase in its volume by carat. There is evidence to suggest that this declining performance of the mineral industries is not the result of any lack of potential workable mineral resources but of the inadequate exploration and exploitation of available mineral resources.

The first aim of mineral development policy in the next seven years must therefore be to promote an improved performance in the industry in terms of

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production, exports and employment. As indicated in Chapter 3, Government has set sizeable targets for increases in the production of all the main mineral products of Ghana for the coming seven years.

Private investors who already hold mining concessions and who have going mineral enterprises in Ghana will be encouraged and assisted by Government to make their fullest contribution to the attainment of these production targets. The forms that this assistance will take will be discussed with investors in the light of existing legislation and Government policy regarding investments in the mining industry. At the same time Government will take steps to ensure that such concessions are in a form which is just to all the parties to the agreement and to the nation.

It is intended to enact legislation to ensure that all mining operations are carried out in the manner most appropriate to the economic needs of the country, and the Mines Department will be strengthened to enable it to give effect to this legislation.

In 1961, Government acquired a group of five mines, now organized into the State Mining Corporation, some of which were at that time in danger of having to close down. These mines had previously been responsible for 52.9 per cent of the total gold output. The second task of Government's efforts in the field of mineral development under this plan must therefore be to secure an improved performance in the public sector of the mining industry.

TABLE 5.4
EXPORTS OF MINERALS FROM GHANA

Value in £G Million

	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Gold	9.24	9.45	9.82	9.04	7.48	9.79	10.59	11.19	11.07	10.75	11.25
Manganese	8.32	8.72	5.11	5.19	7.04	8.98	8.64	6.78	6.38	6.02	5.42
Diamonds	5.40	3.92	4.27	5.53	7.92	8.97	8.66	8.66	9.84	7.15	7.42
Bauxite	0.13	0.20	0.31	0.20	0.33	0.45	0.53	0.37	0.56	0.46	0.67
Total	23.09	22.29	19.51	19.96	22.77	28.19	28.42	27.00	27.85	24.38	24.76

Quantities in—000 Units

	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Gold (Ozs.)	704	733	788	723	599	788	852	902	893	969	945
Manganese (Tons)	794	746	447	540	636	641	513	527	547	385	464
Diamonds (Carats)	2,136	2,160	2,124	2,280	2,520	2,928	3,276	3,120	3,276	2,856	3,327
Bauxite (Tons)	74	115	176	116	138	186	207	147	224	195	286

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I.—MINERAL EXPLOITATION

(i) *Gold*

Since the mines in the Obuasi area now account for 42 per cent of the total output of gold in Ghana they must be looked to for the largest single contribution towards the projected increase in gold production. There is every indication that the ore reserves to supply this increase are available and that with their thorough exploitation this goldfield can supply the required contribution to the increase in output. The Ashanti Goldfields Corporation has accordingly embarked on an expansion programme which will increase its rate of mining by 25 per cent between 1963 and 1966. Further developments beyond that date are also already under discussion. The increased exploitation of the reserves currently known will necessitate an enhanced rate of surveying and exploration in order to preserve the life of the mines and avoid their premature closure.

The reduction in the output of the mines now comprising the State Mining Corporation was caused by persistent decreases in their proven reserves which threatened their exhaustion if the previous rates of output were maintained. Exploration work on these properties since they were acquired by Government in 1961 indicates that although, as in the case of all other mines, the country will sooner or later have to face the prospect of their exhaustion, the life of a number of them can be extended in the immediate future by further investigations. It is estimated that if some £G750,000 were spent in the search for further ore reserves at these mines enough reserves could probably be established to enable their rate of output to be stepped up considerably. Intensified prospecting is also required to establish once and for all which of these mines are really worked out and have to be closed down. An early decision on this subject would allow the Government and the State Mining Corporation to plan their phased closure in an orderly way so as to avoid the undesirable dislocation that would result from their unforeseen exhaustion. It would also help towards the planned reduction of the losses now being sustained by the Corporation.

An increase in the current rate of output of the state-owned mines is necessary in order to put their current operations on a profitable basis. At Amalgamated Banket Areas it is estimated that the present losses on production, which are running around £G300,000 per year, could be eliminated if production were stepped up from 38,000 tons to 55,000 tons per month. If this were also done for the other mines within the State Mining Corporation which are capable of supporting higher rates of production then the money which now goes into supporting their annual losses on production could be saved for further prospecting and the mines might themselves be able to contribute towards the capital required for their further exploration and development.

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In addition to putting its existing properties on a commercially more viable basis the Corporation will have to develop by 1964 advance plans to provide for the re-deployment of labour which has become surplus to requirements at the mines which have run out of exploitable ores. The preliminary indications are favourable for the development of new gold mines at a number of other places in the country. Among primary gold deposits it is proposed that investigation be carried out in the following areas: Kayiankor, Obuom Siwum, Tokosua, Nangodi and Dokurupe. This preliminary work is estimated to cost £G300,000. It can be expected that, say, two of these prospects might prove workable, in which case a further £G0.7 million would have to be spent on exploration and development of two mines. In addition to these outlays the development of new gold mines will entail the erection of very expensive surface installations to handle and process the ore. Estimates of these however cannot be presented until it is known how many sites could be economically worked and what rate of production is to be aimed at by each mine.

A number of thin reefs seem to deserve further investigation for possible exploitation with small mobile plants operating on opencast methods. These mobile plants will each have cyanidation equipment capable of recovering gold from the ores at an efficient rate.

Alluvial gold winning was the source of the wealth with which Ghanaians financed their trade with the rest of the world in pre-colonial times. Although gold dredging financed by foreign investors was always carried on in the colonial period it never became a major element in the industry, and many of the river beds which have been known for a long time to merit detailed study have not yet been adequately prospected.

(ii) Diamonds

The production of diamonds by African diggers seems to be declining steadily. It is assumed that the most easily workable ores have now been used up in the established areas and that the diggers' inability to undertake more advanced forms of mining accounts for the decline in their production of diamonds. However, it is feasible to develop simple equipment which is economical to operate in order to enable small scale African diggers to regain their position in the market.

MINING AND GEOLOGY PUBLIC INVESTMENT PROGRAMME

	£G'000							
	1963/1969	1963	1964	1965	1966	1967	1968	1969
Gold : Preliminary Works ..	1,050	200	250	250	200	150	—	—
Mining ..	700	—	—	—	—	150	—	—
Diamonds: Preliminary Works ..	450	50	100	100	100	100	250	300
Development ..	1,600	—	—	—	200	400	500	500
Bauxite ..	4,750	150	200	300	500	800	1,300	1,500
Geological Surveys ..	1,700	350	250	200	200	200	250	250
	10,250	750	800	850	1,200	1,800	2,300	2,550

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The more widespread use of such equipment would also have the advantage of enabling the diggers to exploit their ores more efficiently. It is generally considered that using their present methods of operation these diggers are leaving a considerable proportion of the diamonds in the soil. Soil which has been thus inefficiently worked contains appreciable quantities of diamonds but not enough to justify another operator reprocessing the same soil to recover what remains. The only way to obtain the full value in terms of diamond output from any piece of ground is to have it efficiently processed when it is first mined. Because of the inefficient methods of mining employed by most diggers a permanent loss of diamonds has been taking place. An allocation of £G200,000 will be made for the development of simple mining equipment and for the demonstration of its use to the diggers.

However, the main concentration in the development of the diamond industry in the coming seven years must be on dredging in the Birim River, which over a distance of some 38 miles from its confluence with the Pra River to near Kade seems to present indications of valuable opportunities for diamond dredging. Concessions in this area are held partly by a private mining company and partly by the State Mining Corporation.

Research is required to determine the types and capacities of dredges and diamond recovery jigs required for mining this ore, the methods of recovering gold and ilmenite from the by-products, and other technical problems connected with the deposits. The total cost of the initial prospecting and research is estimated at £G250,000.

Should the indications from these investigations prove favourable for the development of diamond digging, the Government's share of the cost of bringing the dredging project into operation is estimated eventually to come to over £G3 million, of which approximately £G1.6 million is allocated for the present plan period. For the most economic working of the ores in both parts of the concessions and also to take advantage of the preliminary research and development work already done by the private mining company on these deposits, consideration will be given to the formation of a joint enterprise between the State Mining Corporation and the private company for the development of the dredging scheme.

(iii) Manganese

Of the known deposits of manganese in Ghana only two have hitherto been worked, and only the Nsuta mine remains in production, although the manganese mines of Ghana produce generally high grade ore, a significant proportion of it suitable for chemical uses. Recent production of manganese in Ghana has tended to fall, apparently owing to the reduction in the most easily accessible reserves of manganese at both Nsuta and Yakau. Prospecting work at the latter site is already in hand, and it is expected that more prospecting at Nsuta will also be commissioned early in the plan period.

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It is important that the Government should know the approximate size of the country's reserves of manganese, and early steps will be taken to obtain the necessary information. Should exploration establish the existence of sufficient quantities of manganese, it is intended to examine the relative merits of making a substantial increase in the volume of manganese exported annually from Ghana, and of keeping the reserves to support a ferro-manganese industry. As indicated in the previous section, the aim is to construct a ferro-manganese plant of at least 100,000 tons capacity in the course of this plan period if the present favourable indications are borne out by further studies.

(iv) *Bauxite*

Although the known deposits of bauxite in Ghana are very extensive and accessible to rail transport, and the reserves of commercial grade ores at Awaso, Nkawkaw, Yenahin and Kibi have been the subject of consideration for a long time, the current level of bauxite mining in Ghana is very low. Much of the bauxite occurs in formations that would permit of mining by open-cast methods and therefore should be comparatively inexpensive to exploit. It would therefore seem that a large extension of bauxite mining in Ghana represents the easiest means of increasing mineral production and exports in the immediate future.

The lower-grade bauxite ores should also be suitable for processing with other ingredients to produce aluminous cement, for which there is vigorous demand in the world market. It is therefore proposed to concentrate on bauxite in the development of mining during the plan period. The target increase in bauxite output will also enable Ghana to supply from domestic sources the bauxite required to feed the Tema smelter, which it is hoped will rapidly turn from imported to local alumina.

It will be necessary to construct at whichever of the bauxite deposits it is proposed to exploit first an alumina plant. The construction of a plant of 250,000 tons capacity in the first instance is included in the list of first-priority industrial targets, always subject to such a project proving feasible.

For the development of bauxite mining and the alumina plant it is proposed to allocate £G4.75 million of public capital during this plan period. Private mining and metallurgical concerns will be encouraged to participate in the development of both the mining of bauxite and the production of alumina.

It will also be necessary in the course of the plan period to prepare for the construction of a second smelter. Government proposes to devote some resources to the study of this project between 1963 and 1966. Should a second smelter be found feasible and should capital for its construction be readily forthcoming it will be necessary to promote the development of Ghana's electrical resources in such a way as to accommodate a second aluminium smelter.

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(v) *Iron Ore*

As indicated in the previous section the existence of sizeable deposits of iron ore provides a good basis for the development of an iron and steel industry subject to the solution of the problems enumerated there. It is not expected that the mining of local ores can attain a high rate before the end of this plan period. However, it is intended to make a start on the exploitation of local iron ore for the local manufacture of iron and steel or for export.

II.—GEOLOGICAL AND CHEMICAL INVESTIGATIONS

It is apparent from all that has been said above that the essential precondition for further development of the mining industry is the intensification of geological and other investigations to establish more exactly the extent and the quality of ores both in existing and in the as yet undeveloped areas of mining activity and to prepare for their exploitation. This is only one aspect of the general paucity of information regarding the natural resources of Ghana which it will be necessary to correct in the very near future if economic development is to be based on a sounder footing than hitherto. As indicated in Chapter 14, it is proposed to develop within the Office of the Planning Commission a system for the central collection of information regarding the natural resources of Ghana as a basis for the more effective planning of Ghana's industrial and agricultural development.

Intensified geological work has already been put in hand covering the Northern and Upper Regions. In the more southerly areas of the country, where previous geological work was most advanced, what is required is detailed investigation of known deposits preparatory to their mining. Work already in hand on the Yakau manganese deposits is expected to be completed in 1964. The Kibi bauxite deposits which are nearest the Tema smelter will have to be made ready for exploitation soon after the smelter goes into operation. The largest bauxite deposit, however, which is at Yenahin, is in the long run the most important basis for the aluminium industry in Ghana. Intensified exploratory work will therefore have to be done on this deposit.

For all these purposes it will be necessary to extend rapidly the operations of the Geological Survey Department which since 1961 have tended to run down owing to staffing difficulties. While the programme for training Ghanaian geologists goes through its process of gestation it will be necessary for the Geological Survey Department to recruit considerable numbers of non-Ghanaians in order to carry out the required volume of survey work. Geological surveys always have to be followed by complex laboratory work to determine the peculiar characteristics of any given deposit and to devise methods for its most economical exploitation at the industrial level. It is therefore proposed that at least £G1.7 million out of the funds

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allocated under this plan for the development of the mining industry should be used for the immediate expansion of the staff and operations of the Geological Survey Department.

III.—THE STATE MINING CORPORATION

The opening up of the thin reefs and alluvial gold deposits as well as of the diamond, manganese and bauxite resources described in the previous sections provides ample scope for the re-deployment of that element of the labour force which is now engaged on unprofitable operations within the gold mining industry and especially within the State Mining Corporation. This re-deployment will be necessary in order to put the whole industry, and especially the Corporation, on a sound commercial footing. It will entail difficult programmes of labour relocation involving the provision of housing and other social and commercial facilities in new areas. However, if the new mining activities selected for development are carefully chosen for their commercial viability they should be able to support the new facilities required. Government's chief responsibility will be to ensure that the expansion of the new areas is carried out smoothly and that enough other economic activity is brought into the older areas to prevent their complete economic decline.

In an industry as speculative as gold mining diversification of activities is sound policy for the enterprises engaged in it. This is the strategy selected for the development of the State Mining Corporation during this plan period. In addition to working new goldfields and increasing the rate of production at its existing mines to make them more profitable the Corporation will have to undertake other mining activities in bauxite, diamonds, manganese, iron ore and other minerals. Bauxite especially, for which the world market has continued bouyant for longer periods than the markets for most other minerals, presents the greatest opportunity for the development of new profitable mining enterprises within the state sector.

A total of £G10'25 million has been allocated for the development of the mining industry. A considerable part of this will be required for exploration work in the gold mines and for general development work in the industry. The balance will be spent in the manner most calculated to diversify the operations of the State Mining Corporation in the shortest possible time.

TABLE 5.5 STATUS OF GOVERNMENT INDUSTRIAL PROJECTS AT MID-1963

Completed
Oil Mills
Rice Mills
Fibre Bag Factory—Kumasi.

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Work Begun

Textile Printing Mills—Tema
Meat Processing Factory—Bolgatanga
Sugar Factory—Akuse
Sugar Factory—Komenda
Steelworks—Tema
Aluminium Cutlery—Tema
Shoe Factory—Kumasi
Cocoa Processing Plant—Tema
Cocoa Processing Plant—Takoradi
Glass Factory—Tarkwa

Committed or under Consideration

Food

Tomato and Mango Processing Plant—Wenchi
Pineapple Processing Plant—Nsawam
Tomato Processing Plant—Pwalugu
Tomato Factory (unplaced)
Food Complex—Tema
Tobacco Factory—Tema
Sugar Factories (2)
Refined Solar Salt Factory
Slaughter Houses
Meat Processing Factory

Building Materials

Clinker Grinding Plant
Asbestos Factory
Wood Cement Board and Wood Cement Tiles Factory
Lime and Hydrolised Lime Factory
Cement Factory

Clothing and Textiles

Tannery—Aveyime
Integrated Textile Mill—Tema
Cotton Textile Mills (2)
Sleeping Mats Factory
Towel and Blanket Factory
Hard Fibre Plant
Clothes Factory

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Raw Materials Preparation

- Rubber Factory—Bonsaso
- Gold Refinery—Tarkwa
- Pulp and Paper Mills (2)
- Caustic Soda and Chlorine Plant
- Charcoal and Activated Coal Plant
- Nitrogen Fertiliser Plant
- Saw Mills
- Plywood and Veneer Factory

Mining

- Plant for Gold Mines
 - Manganese Mines
 - Iron Ore Mines
 - Diamond Dredging and Polishing
- Ferro Manganese Plant

Miscellaneous

- Pharmaceutical Factory
- Incandescent Lamp Factory
- Electronics Products
- Pencil Factory
- Cutlass and Hoes Factory
- Fitting Shops
- Vehicle Assembly Plant
- Cars Assembly Plant
- Television Assembly Plant
- Metallurgical Plant
- Wire Drawing and Manufacturing Plant
- Workshop Tools Plant
- Agricultural Implements Factory
- Ceramics Factory
- School and Office Equipment Factory
- Porcelain Wares Factory
- Mechanical Joineries Factory

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CHAPTER 6

INFRASTRUCTURE

I.—GENERAL

The importance and role of a good infrastructure in the promotion of rapid economic development has long been realised by the Government. In the first and second development plans, therefore, the bulk of investment was made in the fields of economic infrastructure and social services. Out of a total development expenditure of £G136 million under the first and second development plans, £G60 million, representing 44·0 per cent of the total, was devoted to the provision of an infrastructure that is more than adequate for the present level of economic development. In this Seven-year Development Plan, therefore, high priority need not be given to the further development of infrastructure, although a fair amount of expenditure will still be necessary in this field.

The government attaches great importance to the development of agriculture and the efficient distribution of agricultural products. In the seven-year period it therefore aims at connecting all farming and rural industrial areas with trunk roads by means of an adequate feeder road system to ensure free access to and from these areas. Local Authorities will be expected to encourage voluntary communal work in order to derive maximum benefit from the funds to be made available by the Central Government. Voluntary labour played an important part in the construction of feeder and town roads during the previous development plans and it is the policy of the Government to encourage this in the Seven-year Plan also.

The total amount being made available for infrastructure other than the Volta project in the period is £G89·21 million. This is about 18 per cent of total development expenditure and represents a decrease of about 26 per cent in the share of infrastructure as compared with the previous development plans. Out of the total allocation for infrastructure, £G48·17 million has been provided for transport and communications and £G24·45 million for water supply, both urban and rural, and sewerage. For electricity it is expected that, until Volta power becomes available, the existing services will be expanded to provide power for the growing industrial sector as well as for domestic consumers in the urban and rural areas. It will also be necessary to prepare a distribution network to receive Volta power and £G11·06 million has therefore been provided for this purpose. £G5·53 million will be made available for the provision of fishing harbours and extensions to Tema port.

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The main objective of the investment which is being made in infrastructure during the seven-year period is the elimination of bottlenecks and the promotion of the maximum utilisation of existing facilities. It is also the policy of the Government to foster close co-ordination among projects, particularly in transport and communication, in order to avoid uneconomic competition and duplication; for example, road and rail and water transport should be complementary to each other. In order to co-ordinate the activities of all transport agencies the establishment of a Transport Commission is being considered.

The Government proposes both for organisational and economic reasons to establish a National Water and Sewerage Authority. This authority will systematize all water services, and, while not being motivated by profit alone, will be required to operate in such a way that it will meet its operating and overhead costs, as well as interest on capital and repayment of loan funds, from revenues accruing to the Authority. The Authority should be in a position to raise funds to enable it to meet development expenditure in areas where it is not practicable to charge an economic price. A similar statutory body is envisaged for electricity generation and distribution, and it is expected that the Electricity Corporation will be able to operate without any annual budgetary allocation from the Central Government.

Government intends to review the pricing policy of all public utility services such as water, telephones and electricity with a view to placing the operation of these services on a more economic basis. This review will be carried out during the first year of the plan period to enable maximum benefit to be derived for the general implementation of the Plan.

Although it has been pointed out that the existing infrastructure is more than adequate for the present level of economic development it is the intention of the Government to continue to invest in infrastructure so that the implementation of the agricultural and industrial projects outlined in this Plan is not handicapped during the Plan period. In order to ensure that this policy does not exert too much pressure on government financial resources to the detriment of the agricultural and industrial projects, the provision of funds for water, telephone and telegraph facilities and electricity has been limited to the minimum. In addition to the funds earmarked for these services, it has been agreed that any profits accruing to the agencies during the Plan period over and above the existing levels, and as a result of the changes in tariff, will be given to the respective agencies to supplement capital investment in the various fields. It is expected that this policy will also act as an incentive for improving the revenue earning capacity of these services.

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II.—TRANSPORT AND COMMUNICATION

(i) *Roads, Bridges and Ferries*

The emphasis laid by the Government on economic infrastructure in general and on roads in particular, is underlined by the proportion of funds made available for construction of new roads and improvement of existing ones during the first and second development plans. In the second development plan the provision made for roads of all kinds amounted to £G25·2 million. Although the amount allocated for this purpose in the Seven-year Plan is nearly £G26·5 million, the share of roads expenditure as a single item under transport and communication remains at around 56 per cent.

The principal objective of the Government in road development is to continue with the network of trunk roads for the country and to extend and improve the feeder road system. Trunk roads and bridges are also being planned and developed in such a way as to provide access to neighbouring countries. At present there are altogether in the country some 20,000 miles of roads of which 2,053 miles are bitumen-surfaced (first class) and 3,277 miles are gravel-surfaced trunk roads maintained by the Ghana National Construction Corporation. It is expected that by the end of the seven-year period over 460 miles of new first class alignment, including some 17 miles of city and town roads, will have been completed. This will bring up the total mileage of bitumen-surfaced (first class) trunk roads to over 2,500 by 1970.

The projects to be undertaken under this Plan extend to all regions of the country. Decisions regarding the standard to which a particular trunk road is to be built and the time at which it will be constructed during the period of the Plan have been based largely on economic factors. Priority is being given to those roads which are vital for industrial and agricultural projects included in the Plan. The extension of the trunk road system to the south-western frontier will result in a first class trunk road along the entire length of the coast line.

In addition to the provision for a sound trunk road network in the country, it is the objective of the Government that the feeder road system be improved in order to connect all farming and rural industrial areas with trunk roads. As a basis for this development the Central Government will provide £G1·5 million as supplementary assistance to local schemes for the construction of feeder roads. The bulk of the fund for feeder road construction, which it is estimated will involve £G7 million during the plan period will be supplied by local authorities out of their own resources including the mobilisation of voluntary communal effort.

The most urgent task in the development of the trunk road system is to adjust it to the fact that by 1965 the Volta Lake will be formed, partly flooding existing trunk routes and also necessitating a new network of roads and railways to feed goods into the lake transport system which will provide by far the cheapest form of transport between the north and the south of Ghana.

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It is intended to open up the eastern part of Ghana which has hitherto been relatively neglected, by completing the gap in the eastern trunk road. This will start from Kadjebi, and pass through Nkwanta to the Oti River and Bimbila. The road will be constructed initially as a gravel-surfaced trunk road; however, if better productivity can be realised in costs of road construction, sufficient funds have been allocated for all trunk roads to allow for bitumen surfacing of part of the eastern trunk road. When completed, this road will not only provide a fast connection between Accra and Tema and the north, but will also serve the north-eastern corner which it is intended to develop into one of Ghana's major food producing areas. In this way Ghana and the neighbouring African countries such as Upper Volta will be able to make the fullest use of the port of Tema.

It is planned to instal a new fast ferry service at Yeji so that the Kumasi-Yeji-Tamale road will continue as a main trunk route after 1964. However, the essential sections of a new and shorter road between Kumasi and Tamale will be constructed to relieve the growing burden on the Kumasi-Yeji-Tamale road. It is also planned to improve road communications between Ashanti and both Takoradi and the Accra-Tema area.

The construction of new roads will also involve the building of bridges, and funds have been earmarked for this purpose. The existing ferry at Yeji will be made obsolete by the flooding of the Volta lake in 1964. A new type of ferry, a slipway and overhauling facilities will be provided by 1964. A new ferry will also be provided to replace the crossing at Mankrong which will be flooded. Also a ferry will be installed on the Oti River at Dumbai to connect with the Volta River Authority service roads linking Kete Krachi with the south.

The internal organisation of road transport will be based on the individual bus and truck operator as well as the larger-scale trucking businesses including the Government Transport Department.

The small operator is ideally fitted to carry small loads and scattered passengers over short distances. This constitutes the bulk of road traffic in Ghana and requires a flexible transport system. Individual owners and operators of trucks and buses are being increasingly organised into co-operatives which should improve the quality of the service they render to the public and at the same time ensure that their charges are kept at reasonable levels. As indicated in a previous chapter the owners of vehicle maintenance and spare parts businesses are expected to raise the efficiency of their services so that the life of vehicles on Ghana's roads can be lengthened and their safety while they are running be enhanced.

The movement of bulk loads over longer distances has become an increasing element in road transport as the economy has expanded. Petroleum products, cement and other building supplies, machinery and heavy equipment have been moved by

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road in ever growing quantities. With the rapid expansion of domestic production in agriculture and industry which is envisaged under the present plan such bulk transport is bound to increase. It is expected that existing trucking businesses will expand their capacity to cope with this increase in traffic and thereby avoid bottlenecks and delays in transport which can constitute a serious drag on economic efficiency. The increasing share of Government in economic activity will also necessitate an increase in the capacity and an improvement in the operational efficiency of the Government Transport Department. Already the acquisition of new equipment and the modernization of its maintenance facilities is well advanced. This progress will be consolidated during the plan period.

(ii) Railways

During the second plan period investment in railways was directed toward general improvement of services and increased operational efficiency. The Achimota-Tema line was brought into full use by the time Tema Harbour came into operation in 1961 and the Takoradi-Manso line was doubled. At present there are 589 miles of railway network linking Ashanti with the coastal cities and harbours and carrying annually 5.4 million passengers and 2.5 million tons of goods.

In the Seven-year Plan it is intended to continue with the improvement of existing services and to prepare for the eventual extension of the railway system to the north when economic development and the consequent growth of traffic will have made this necessary. The economics of a railway line from Awaso to Sunyani are being studied, and funds have been earmarked for part of the cost of this line and for the construction of the Shai Hills-Akosombo line.

With abundant power supply at Akosombo, consideration will be given to the possibility of electrifying the Accra-Tema-Akosombo line and other busy sections of the rail network. This would ensure an additional effective demand for power and save foreign exchange now spent on the importation of fossil fuels.

(iii) Volta Lake transport

Water transport is still the cheapest means of moving men and goods. An important side benefit of the Volta Project is that it will open up a large part of Ghana to water transport. It is intended to take full advantage of this by installing a lake transport system to handle all the bulk and slow traffic which now moves by road and rail but could move very much more cheaply by water. A fast passenger and express service on the lake is also being planned.

Eventually the exploitation of the Shienc iron ore deposits, the limestone of Buipe, bauxite and other mineral deposits in the vicinity of the lake will make the Volta one of the largest arteries for bulk traffic in Ghana. In the meantime a system of lake ports and connecting roads and rail lines must be installed.

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The development of Volta Lake transport will be closely co-ordinated with that of the trunk road system with which it must share the north-south traffic on a rational basis.

(iv) Air transport

There has been a rapid expansion of civil air transport both internally and externally, particularly since Independence and with the establishment of Ghana Airways in 1958. To meet the increasing volume of traffic and to anticipate the introduction of jet aircraft, it was necessary in the second plan to expand and modernize Accra International Airport. Internal air strips were also developed to cater for local flights.

In the Seven-year Plan the aim of the Government is to consolidate and modernise air transport services. It is recognized that some subsidy will be necessary during most of the plan period but the Government will require Ghana Airways to keep this within reasonable limits by a careful scrutiny of operational costs, and to show definite progress towards self-sufficiency by 1970.

(v) Shipping

The Black Star Line has become a wholly Ghanaian enterprise with the purchase of the external shareholding in it. By the end of 1962 its fleet consisted of twelve vessels of a total of 107,000 tons dead-weight. This tonnage is expected to increase to 164,000 tons with the delivery of six new ships on order, thus increasing the national merchant fleet to eighteen.

At the end of 1962 the Black Star Line was making about 42 voyages per annum using its own ships and chartered ships and carrying about 620,000 tons of freight. The line was responsible for about 8.3 per cent of the total freight earnings in Ghana. The proportion is expected to rise substantially with the delivery of the new ships and also with the plan to increase the Line's share of traffic on the high seas generally. To facilitate the expansion of the company's activities, an amount of £G2 million will be provided out of Central Government resources in the plan period. But the company will finance a major part of the expansion of its activities out of its own resources. The aim is that the Line should be carrying the equivalent of 40 per cent of the ocean traffic between Ghana and the rest of the world by 1970.

Until 1958 there was nothing on the credit side of the balance of payments on current account for freight and insurance. The situation has changed with the establishment of the national shipping line and earnings on this item increased by 32 per cent from £G568,000 in 1959 to £G750,000 in 1961. With the steady growth of the external trade of Ghana in recent years, it is hoped that the increasing activities of the national shipping line will contribute much to the abatement of the strain on the balance of payments.

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(vi) Posts and Telecommunications

Considerable progress was made in the expansion of the postal and telecommunication services during the second plan. The objective of the Seven-year Plan is to improve these facilities throughout the country and to close the lag in supply that has arisen as a result of increased demand, particularly from the industrial sector. It is also proposed to provide a good telecommunication system between Ghana and the outside world. The total amount earmarked in the plan for posts and telecommunications is £9.5 million.

The largest project, for which £G6 million has been provided, is the building of new telephone exchanges at Accra North, Ho, Koforidua, Swedru, Sunyani and Tamale, including the provision of television and microwave links.

Additional exchanges and trunk lines, including telex exchanges at Kumasi, Takoradi, and Tema, will be provided at a cost of £G2.3 million, and V.H.F. links with Tamale, Lagos and Abidjan will be installed at a cost of £G1.2 million.

Postal business is estimated to increase by about 70 per cent during the seven-year period and provision has been made for additional buildings and vans to accommodate this.

III.—ELECTRICITY

The purpose of the electrification programme of the Government is to provide adequate power to meet the requirements for our industrial expansion and eventually to supply electricity to all homes in Ghana. The greatest single source of power for the electrification of Ghana will soon be the Volta River Project which is planned to be completed towards the middle of 1967. In the meantime, generation will be carried out wholly by diesel engine-driven alternators, involving an additional expenditure of £G600,000 on generation plants.

Regarding rural electrification, it is felt that it will not be realistic to initiate a number of new independent diesel generating centres in view of the future plans for a national grid system. It is therefore proposed to feed the needy rural areas as far as possible from existing supply centres, whose capacities will be increased until the national grid system is ready. After that some of the existing thermal capacity will be transferred to centres outside the national grid area while the rest is used for stabilisation and other ancillary purposes in the grid area. To keep the supply of power in line with the increasing demand including the electrification of some twenty-one rural towns and villages as well as the improvements to the existing system of distribution, the sum of £G10 million has been provided for the seven-year period.

It should be noted that with the completion of the first phase of the Volta Power development in 1967, 512 MW of electricity, or nearly seven times the present output from Government stations, will be produced for both industrial and domestic

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uses. The total power generated will be gradually increased as the need arises to around 747 MW in 1976.

It is estimated that the maximum demand on the power station by 1970 will be 363 MW. This is expected to rise to about 600 MW in 1976. The biggest single consumer will be the aluminium smelter at Tema which will be responsible for more than 50 per cent of the total demand. The industrial and agricultural projects planned for implementation during the seven-year period will add to the demand for electrical power but it is certain that for many years to come the electrical generating capacity of Ghana will stay ahead of demand and the power bottleneck will have been broken.

IV.—PORTS AND FISHING HARBOURS

The development of Tema harbour was virtually completed in July, 1961 when the port was opened for shipping. A total of 381 vessels were cleared during that year. Total tonnage handled at the port constituted only about 4 per cent of total cargo tonnage handled by all ports in the country in 1961. It is expected, however, that Tema harbour's share of shipping tonnage for imports will increase substantially with the virtual closing down of Accra harbour and also when it is used for the importation of plant and equipment for such heavy projects as the Volta Dam and other major industrial projects. The development of the country's resources will also result in increased exports through Tema and Takoradi.

With approximately 6,000 feet of quayage in use at Tema it is estimated that a monthly tonnage of between 150,000 and 200,000 tons should be accommodated. To facilitate this and to increase the Tema fishing harbour's capacity so as to allow for further development of the fishing industry, extensions to the fishing harbour and certain other works in the main harbour are to be undertaken during this period. An amount of £G5.4 million has been provided for this purpose.

Harbour development projects are to be carried out in other coastal areas of the country in order to provide more facilities for fishing. This includes the dredging of the Benya Lagoon at Elmina, the provision of better fish-landing facilities at Sekondi-Takoradi and the construction of a jetty at Miemia.

The Volta estuary at Ada will also be developed to provide all-the-year-round facilities for fishing boats.

V.—WATER SUPPLY AND SEWERAGE

At present only one-sixth of the population of Ghana enjoys good drinking water, which is made available through 74 public supply systems. The rest of the population relies mainly on natural sources which are often polluted and unsafe for drinking purposes. The Government attaches great importance to water supply and sewerage. This fact was recognised during the second plan and water supply was accorded a relatively high priority.

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The ultimate aim of the domestic water supply service in Ghana is to provide good and abundant water to all parts of the country and to achieve a house-to-house delivery, thereby eliminating the public stand-pipe system of supply, since this detracts so much from the value of the water service by the element of pollution which it introduces.

Since the bulk of Ghana's population lives in rural communities new schemes and extensions of existing water supplies to rural areas are envisaged in the Seven-year Plan. This will take the form of providing certain areas with bore holes and wells. Where this system is not feasible, as in certain rural parts of Northern Ghana, and other dry parts of the country such as Brong-Ahafo and the lower Volta, the basis of water development will be the provision of reservoirs and artificial ponds. For these rural projects an amount of £G2 million is being made available. The selection of rural areas to be provided with water will be based, where population density and other demand factors such as health, etc., are similar, on the location of industrial and other economic and social projects. It is therefore proposed that close co-operation should be maintained between the Water Authority and the promoters of industries. In order to relieve acute seasonal shortages in certain areas, especially in the north, it is proposed to mobilise large water tankers to serve needy areas. Provision will also be made for research into methods of improving water storage in the rural areas. In many parts of the country the villagers would be capable of constructing through communal labour simple weirs or storage tanks which could provide them with clean drinking water.

To meet the requirements for rapid urbanisation and industrialisation it is necessary to improve and extend existing supplies and distribution in cities and urban centres with populations exceeding 10,000. This includes the Kpong extension and Akosombo development which will increase the water supply in Accra and Tema, and will result, in the first phase, in the supply of 22 million gallons per day, bringing the total available capacity for the Accra-Tema metropolitan area to 40 m.g.d., the amount judged to be needed in this area for all purposes including sewerage. The supply at Kpong and Akosombo will eventually be adequate for supply to the Akwapim Ridge and neighbouring districts as well. Extensions for Kumasi and Sekondi-Takoradi are also to be undertaken in this plan period. The total allocation for the water development of city/industrial areas is £G11.9 million. An additional amount of £G4.75 million is provided for the development of modern sewerage systems in Accra-Tema and Kumasi. The estimated total cost for the full implementation of the Accra sewerages scheme is of the order of £G10 million. There are also proposals for extensions to the Tema sewerage system. It is expected that the sewerage systems in Accra-Tema and Kumasi as now planned will be constructed in stages between 1963 and 1975. The present allocation will be spent on the construction of those major elements whose cost tends to increase the longer their construction is postponed.

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For the improvement and further development of water supply in urban areas and towns with less than 100,000 persons the total allocation under this Seven-year Plan is £G5·8 million. This will be used for the construction of rural district schemes such as Ekumfi District, Kwahu District and Akwapim Ridge and to supply piped water to some 44 towns spread all over the country.

INFRASTRUCTURE—SEVEN-YEAR DEVELOPMENT PLAN 1963–1970

SUMMARY TABLE

	1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year	Total
1. Transport and Communications								
1.1 <i>Roads and Bridges</i>								
(a) Trunk Roads	2·53	1·73	1·32	1·85	2·16	2·73	2·70	15·02
(b) Town Roads	0·45	0·45	0·55	0·61	0·61	0·66	0·70	4·03
(c) Feeder Roads	0·20	0·56	0·57	0·57	0·20	0·20	0·30	2·60
(d) Bridges	1·13	1·18	0·74	0·10	0·45	0·36	0·35	4·31
(e) Ferries	0·27	0·19	—	—	—	—	—	0·46
Total Roads, Ferries and Bridges	4·58	4·11	3·18	3·13	3·42	3·95	4·05	26·42
1.2 <i>Railways and Inland Waterways</i>								
(a) Track and Bridge Structure	0·50	1·20	1·70	0·75	0·75	1·10	1·18	7·18
(b) Volta Lake Transport	0·25	0·75	0·50	—	—	—	—	1·50
Total	0·75	1·95	2·20	0·75	0·75	1·10	1·18	8·68
1.3 <i>Air Transport</i>	0·25	0·10	0·25	0·20	0·20	0·25	0·25	1·50
1.4 <i>Shipping</i>	—	—	—	0·40	0·40	0·50	0·70	2·00
1.5 <i>Posts and Telecommunications</i>								
(a) Philips Project	0·87	1·25	1·33	1·05	0·83	0·41	0·32	6·06
(d) Other Development Projects	0·73	0·68	0·37	0·18	0·23	0·17	0·15	2·51
(c) Accra V.H.F. Link with Lagos and Abidjan	—	0·40	0·60	—	—	—	—	1·00
Total P.&T.	1·60	2·33	2·30	1·23	1·06	0·58	0·47	9·57
2. Ports and Fishing Harbours								
2.1 Tema Port Extensions	1·04	1·05	1·06	1·03	0·98	0·23	—	5·39
2.2 Fishing Harbours	0·02	0·04	0·05	0·02	0·01	—	—	0·14
Total	1·06	1·09	1·11	1·05	0·99	0·23	—	5·53
3. Electricity	2·28	2·39	1·76	1·49	1·18	0·96	1·00	11·06
4. Water and Sewerage								
4.1 Rural Water	0·25	0·25	0·25	0·25	0·30	0·35	0·35	2·00
4.2 (Other Water: Extensions and Distribution)								
(a) Cities/Industries	0·60	1·40	1·50	1·50	2·00	2·30	2·60	11·90
(b) Urban/Industries	0·90	0·70	0·70	0·70	0·90	0·90	1·00	5·80
4.3 Sewerage	—	0·20	0·40	0·65	0·90	1·15	1·75	4·75
Total	1·75	2·55	2·85	3·10	4·10	4·70	5·40	24·45
Total Infrastructure	12·27	14·52	13·65	11·35	12·10	12·27	13·05	89·21

INFRASTRUCTURE
TRUNK ROADS, BRIDGES AND FERRIES

Table 6.2

£G million

Description	1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year	Total
TRUNK ROADS								
Item 1. Abofour-Techiman-Jema Sangpale Tamale ..	0.40	0.40	0.60	0.65	—	—	—	2.05
2. Kadjebi-Nkwanta Nkwanta-Oti-River-Bimbila ..	0.25	0.40	0.32	—	—	—	—	0.97
3. Tarkwa-Dunkwa ..	—	—	—	0.40	0.40	0.55	0.58	1.93
4. Kade-Prasokuma Obogu-Juaso ..	—	—	—	0.40	0.40	0.50	—	1.30
5. Accra-Nsawam-Adelso-Asamankese-Kade ..	—	—	—	—	0.18	0.32	0.57	1.07
6. Accra-Tema-Free-way ..	1.88	0.93	—	—	—	—	—	2.81
7. Kumasi-Bibiiani ..	—	—	—	—	0.28	0.56	0.56	1.40
8. Axim-Half Assini-Samang-Nkrofo ..	—	—	0.40	0.40	0.50	0.40	0.60	2.30
Total Trunk Roads	2.53	1.73	1.32	1.85	2.16	2.73	2.70	15.02
BRIDGES								
Item 1. Tefe ..	0.73	0.73	0.74	—	—	—	—	2.20
2. Morno and Yapei ..	0.40	0.40	—	—	—	—	—	0.80
3. Prasokuma ..	—	—	—	0.10	0.15	—	—	0.25
4. Kumi ..	—	—	—	—	—	0.06	—	0.06
5. Ankobra Mouth ..	—	—	—	—	0.30	—	—	0.30
6. Oti ..	—	—	—	—	—	0.30	0.35	0.65
7. Tono ..	—	0.05	—	—	—	—	—	0.05
Total Bridges	1.13	1.18	0.74	0.10	0.45	0.36	0.35	4.31
FERRIES								
Item 1. Yeji ..	0.12	0.13	—	—	—	—	—	0.25
2. New Adawso ..	—	0.06	—	—	—	—	—	0.06
3. Dumbai ..	0.15	—	—	—	—	—	—	0.15
Total Ferries	0.27	0.19	—	—	—	—	—	0.46
FEEDER ROADS								
Item 1. Volta Lake Ports ..	—	0.36	0.37	0.37	—	—	—	1.10
2. Unspecified ..	0.20	0.20	0.20	0.20	0.20	0.20	0.30	1.50
Total Feeder Roads	0.20	0.56	0.57	0.57	0.20	0.20	0.30	2.60
Total All Roads, Ferries and Bridges	4.13	3.66	2.63	2.52	2.81	3.29	3.35	22.39

INFRASTRUCTURE

TABLE 6.3

TOWN ROADS

£G'000

<i>Description</i>	<i>1st Year</i>	<i>2nd Year</i>	<i>3rd Year</i>	<i>4th Year</i>	<i>5th Year</i>	<i>6th Year</i>	<i>7th Year</i>	<i>Total</i>
1. Improvement of Independence Avenue .. .	303	300	500	350	350	340	300	2,443
2. Ring Road	150	—	—	—	—	—	—	150
3. Central Area By-pass (Liberia Rd.)	—	—	—	200	100	100	200	600
4. Boundary Road extension to Kwame Nkrumah Circle .	—	50	50	54	60	70	200	484
5. Labadi By-pass .. .	—	100	—	—	—	—	—	100
6. Workers Circle, Sekondi .	—	—	—	—	100	150	—	250
Total	453	450	550	604	610	660	700	4,027

TABLE 6.4
POSTS AND TELECOMMUNICATIONS

£G

	1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year	Total
1. EXCHANGES	192,500	195,000	200,000	22,500	67,500	20,000	—	697,500
2. TRUNKS								
(a) Rural Areas—New Trunks	6,500	6,000	5,500	5,500	5,500	5,500	5,500	40,000
(b) Other Trunks	229,500	228,000	46,500	46,500	46,000	46,000	46,500	690,000
Total Trunks	236,000	234,000	52,000	52,000	51,500	51,500	52,000	730,000
3. V.H.F.								
(a) Accra-Lagos-Abidjan	—	400,000	600,000	—	—	—	—	1,000,000
(b) Northern Ghana 5-Channel V.H.F.	90,000	80,000	—	—	—	—	—	170,000
Total V.H.F.	90,000	480,000	600,000	—	—	—	—	1,170,000
4. OTHER PROJECTS AND EQUIPMENT								
Telex Exchange Kumasi, Takoradi, Tamale ..	5,000	5,000	5,000	5,000	5,000	5,000	5,000	35,000
Subsequent Telex Equipment	8,000	7,500	7,500	7,500	7,500	7,500	7,500	53,000
Telegraphic Automatic Switching	—	—	—	10,000	10,000	—	—	20,000
Subsequent Apparatus (Pabx. and Telex Installations)	16,000	14,000	14,000	14,000	14,000	14,000	14,000	100,000
Local M/g Cables	80,000	70,000	70,000	70,000	70,000	70,000	70,000	500,000
Monitoring Stations	10,000	30,000	10,000	—	—	—	—	50,000
Telecommunications School Building and Furniture	30,000	25,000	—	—	—	—	—	55,000
Central Workshops (Acquisition of Site) ..	20,000	—	—	—	—	—	—	20,000
Central Stores (Acquisition of Site)	20,000	—	—	—	—	—	—	20,000
Motor Transport	15,000	15,000	10,000	—	—	—	—	40,000
Mechanical Aids	7,000	6,500	6,500	—	—	—	—	20,000
Total Other Projects and Equipments ..	211,000	173,000	123,000	106,500	106,500	96,500	96,500	913,000
5. PHILIPS PROJECT								
Equipment	55,788	435,791	612,695	563,868	415,832	394,688	303,593	2,782,255
Building, etc.	400,000	400,000	300,000	70,300	—	—	—	1,170,300
Sub-Telephone Sets	21,500	21,500	21,500	21,500	21,500	21,500	21,000	150,000
Underground Cables	392,000	392,000	392,000	392,000	392,000	—	—	1,960,000
Total Philip	869,288	1,249,291	1,326,195	1,047,668	829,332	416,188	324,593	6,062,555
Grand Total	1,598,788	2,331,291	2,301,195	1,228,668	1,055,332	584,688	473,093	9,573,055

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Table 6.7 (a)

WATER SUPPLY AND SEWERAGE

£G

	1st Year 1963	2nd Year 1964	3rd Year 1965	4th Year 1966	5th Year 1967	6th Year 1968	7th Year 1969	Total
CITIES	600,000	1,400,000	1,500,000	1,500,000	2,000,000	2,300,000	2,600,000	11,900,000
URBAN (above 10,000 population)	800,000	600,000	600,000	600,000	800,000	800,000	900,000	5,100,000
TOWNS (5,000 to 10,000 population)	100,000	100,000	100,000	100,000	100,000	100,000	100,000	700,000
RURAL (under 5,000 population)	250,000	250,000	250,000	250,000	300,000	350,000	350,000	2,000,000
SEWERAGE								
Accra/Tema	—	200,000	400,000	500,000	600,000	700,000	850,000	3,250,000
Kumasi	—	—	—	150,000	300,000	450,000	600,000	1,500,000
	1,750,000	2,550,000	2,850,000	3,100,000	4,100,000	4,700,000	5,400,000	24,450,000

Table 6.7 (b)

CITIES/INDUSTRIAL

£G

	1st Year 1963	2nd Year 1964	3rd Year 1965	4th Year 1966	5th Year 1967	6th Year 1968	7th Year 1969	Total
ACCRA/TEMA								
Weija-Kpong Extensions	200,000	200,000	290,000	280,000	160,000	250,000	240,000	1,620,000
Accra-Tema District Distribution	150,000	280,000	300,000	290,000	360,000	390,000	280,000	2,050,000
Akosombo Headworks	10,000	40,000	70,000	200,000	320,000	440,000	455,000	1,535,000
Akosombo/Accra/Tema Trunk Main	—	—	70,000	160,000	600,000	600,000	1,105,000	2,535,000
KUMASI								
New Headworks Kumasi Distribution	90,000	700,000	470,000	390,000	460,000	500,000	400,000	3,010,000
SEKONDI/TAKORADI								
New Headworks—Sekondi/Takoradi	150,000	180,000	300,000	180,000	100,000	120,000	120,000	1,150,000
	600,000	1,400,000	1,500,000	1,500,000	2,000,000	2,300,000	2,600,000	11,900,000

Table 6.7 (c)

URBAN/INDUSTRIAL

£G

	1st Year 1963	2nd Year 1964	3rd Year 1965	4th Year 1966	5th Year 1967	6th Year 1968	7th Year 1969	Total
Tarkwa District	—	80,000	100,000	100,000	20,000	—	—	300,000
Cape Coast District	50,000	100,000	150,000	—	—	—	—	300,000
Swedru District	230,000	165,000	70,000	100,000	172,000	200,000	205,000	1,142,000
Koforidua District	53,000	—	50,000	60,000	—	—	—	163,000
Ho District	—	—	—	60,000	308,000	300,000	498,000	1,166,000
Sunyani District	—	45,000	20,000	20,000	—	—	—	85,000
Tamale District	327,000	120,000	100,000	140,000	100,000	127,000	100,000	1,014,000
Bolgatanga District	140,000	90,000	110,000	120,000	200,000	173,000	97,000	930,000
	800,000	600,000	600,000	600,000	800,000	800,000	900,000	5,100,000

INFRASTRUCTURE

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CHAPTER 7

EDUCATION, MANPOWER AND EMPLOYMENT

A. EDUCATION AND MANPOWER

I.—EDUCATION

As has been said, we must look to industry and agriculture to provide an increased standard of living, but these two sectors of the economy are dependent on an adequate supply of suitably educated and trained manpower. In a sense education takes precedence over the other two as the mainspring of economic progress. Economic growth does not consist merely in the expansion of aggregate production, it consists in the expansion of output per head and therefore it necessarily entails an increase in productivity per head. Without such an increase in productivity the population may grow and with it the national income, but the level of prosperity cannot increase. Rising productivity derives from two sources. On the one hand it is influenced by the kinds of capital goods—equipment, machinery, land—with which the population is supplied. On the other hand it depends upon the skill with which labour and management use these capital assets. Contemporary experience suggests that the latter is every bit as important as the former in determining the level of economic development in a country.

In the context of economic development education may be viewed in two aspects. First, in order that the productivity of the people may improve they ought to be made generally receptive to new ideas. Secondly, education should have the function of teaching the population the specific skills that are required to produce the goods and services needed by the economy.

II.—THE PRESENT LEVEL OF EDUCATIONAL DEVELOPMENT

Education in Ghana has witnessed profound changes in the last ten years in the field of making people, especially children, more receptive to new ideas and more aware of the world and their surroundings. Fee-free primary education was instituted in 1952. From that date educational facilities rapidly expanded to all parts of the country, so that by 1961 they were sufficient to make it possible for Government to introduce compulsory primary education.

These measures have laid the foundations for the greatest revolution in Ghana's history. It is possible now to envisage the date when every child without any regard as to whether his parents are rich or poor will be able to develop his talents to the fullest degree. Eventually this revolution will make it possible for every child,

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provided he has the ability, to get an education from the primary to university level without any hindrance arising from his financial circumstances. Already university education and teacher training are virtually free. It is intended that by the end of the Seven-year Development Plan secondary education will also have become free.

Hitherto accidents of birth, place of residence and financial circumstances have played a large part in determining which of the children in Ghana were able to go to elementary school and to continue their education beyond that level. It is proposed to replace this haphazard and frequently inequitable selection mechanism with one more closely related to the intellectual abilities of children. Methods of selection based on scientific principles are being worked out and tested. When the validity of these tests as a way of determining intrinsic capabilities has been firmly established it is proposed to apply them uniformly throughout the country in selecting young people for the various forms of further education—continuing and secondary schools, technical schools and institutes, commercial and clerical institutes and so on—that will be established under this and subsequent development plans.

In the past ten years Ghana has also made outstanding progress in the field of changing the receptivity of the adults to new ideas and technology. The mass education and community development system of Ghana has been deservedly acclaimed for its success in broadening the mental horizons of the adult population in remote villages.

III.—THE TASK OF EDUCATION UNDER THE SEVEN-YEAR PLAN

The stage has now been reached where educational policy must increasingly concern itself with the second great purpose of education, the teaching of skills and other attainments that are needed for the running of a modern economy. The educational programme outlined in this plan seeks to do this in two ways. First, when the mass of children leave primary school, facilities must be provided for them to learn the skills and attainments that will fit them for life as members of a modern labour force. Secondly, the educational system must be geared to meet the needs of the expansion of industry and agriculture and other sectors of the economy that are foreseen under this plan.

The children coming out of the primary schools at present are mostly fitted out by their education with basic skills of literacy. It is proposed to supplement the six-year course of basic primary education by a two-year course at a continuing school in which the children will be introduced to elementary skills of a more specifically economic nature.

For the other training in skills required by industry, agriculture and the other sectors of the economy it is generally necessary that the trainees should have had basic education up to the secondary school level. These people, who constitute the middle and potential high level manpower of the economy, are those of whom

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there is the greatest scarcity in Ghana. The programme of educational development under this plan therefore lays especially heavy emphasis on the expansion of secondary education, both full-time and part-time, and of the subsequent facilities for training in technological and managerial skills.

These facilities for further training in the technical institutes and universities will be expanded to cope both with an increasing volume and a rising technological level of work. At the same time their extra-mural impact must be widened. Opportunities will be provided for an increasing number of working people to continue their education and training through part-time attendance, evening courses, short intensive courses and correspondence courses.

IV.—LABOUR FORCE

It is estimated that in the period 1963-70 the population of Ghana will grow from 7.2 to 8.6 million. During that period 1.3 million young people will enter the labour force, of whom, allowing for those who are temporarily removed from the employment market by marriage, further education or physical disabilities, approximately 1.1 million will be available for employment. Of these approximately 600,000 will be required to replace the wastage in the existing labour force, leaving about 500,000 for whom new employment opportunities must be created. Government is firmly committed to a policy of full employment and this Seven-year Plan has been framed on the assumption that new jobs must be created at a rate sufficient to absorb all the fresh manpower that will become available during the period. This entails expanding the labour force by approximately 3 per cent a year in order to create the 500,000 new jobs required to absorb the expected increase in Ghana's labour force.

Since the plan also calls for the absorption of most of these new workers into industry and modernised agriculture it is necessary that a maximum number of them should be fitted out by the educational system to fill jobs that require skill and training. An increase in the numbers of workers fitted by their basic education to acquire the higher skills is particularly urgent since it is estimated that the requirements of economic growth under this plan will not be satisfied unless employment in both high level and middle level occupations increases by more than 60 per cent in the course of the next seven years.

In order to ensure that the required numbers of high and middle level employees will be available a planned programme of intensive training for up-grading must be introduced without delay. A system will be devised which will provide an incentive to employers to organise and operate in-service training programmes for their employees.

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At the time of the 1960 census 4 per cent of the labour force in Ghana was employed in the higher level occupations and about 16 per cent in middle level occupations. As compared with this, in the more advanced economies of the world the proportion of the labour force in those two levels of employment approaches 50 per cent. The profile of employment in 1960 shows a particularly small proportion of employment in managerial, technical, craftsman and supervisory grades. These are precisely the elements in the total labour force on whom the economy depends most for its productive efficiency and its ability to grow.

The approximate pattern of employment which the education programme under the present plan is designed to make possible by the end of the seven-year period is shown in Table 7.1. If the targets under this plan can be met then the proportion of the labour force engaged in higher and middle level operations can be increased from 20 per cent to about 26 per cent, involving the training of over half a million workers to fill jobs in these categories. The provision of new and extended facilities for this training, and especially for the production of the numbers of new teachers required to train this manpower, will make very heavy demands on the community's resources in the coming years. A total capital allocation of £G64 million is made for the development of the educational services.

It is hoped through the expenditure of this sum, and of correspondingly heavy amounts on the recurrent costs of running the educational system, to produce over 750,000 new workers with at least eight years of formal schooling and 110,000 others with formal education beyond the elementary level. The targets for the production of trained manpower are set out in Table 7.2. For the earlier years of the plan period the output of the educational system will depend upon the numbers of pupils that have already been taken into schools before the inauguration of this plan. The full impact of the new developments in education under the plan will not be seen in the output of the elementary schools until after the end of the plan and in the output of the secondary schools until the second half of the plan period.

Of the 1.1 million new workers who will join the labour force by 1970, about 0.8 million will be educated to some given level. The large pool of young workers with middle and continuing school education will, after some pre-service training and further training on the job, fill places in the middle-level manpower categories and in the agricultural sector where some 20,000 farm equipment maintenance mechanics will be required. The 110,000 other school products who will be educated beyond the elementary level will mainly fill jobs in the high-level manpower categories. The remainder numbering about 0.3 million illiterate workers will work in the unskilled categories and in the agricultural sector as farm labourers.

Table 7.1
GHANA MANPOWER PROJECTIONS—1963-1970

	Employment		New Places Required by 1970	Percentage Rise in Employ- ment over 1963	Replacement for Wastage by 1970	Total Intake Needed by 1970	Ratio of Intake to 1963 Em- ployment
	1963	1970					
High-Level							
Administrative-Managerial	13,000	16,000	3,000	23	3,900	6,900	53%
Professional	19,000	24,000	5,000	26	5,700	10,700	56%
Sub-Professional and Technical	7,000	19,000	12,000	171	2,000	14,000	200%
Skilled Crafts	36,000	52,000	16,000	44	10,800	26,800	74%
Primary/Middle Teachers	32,000	69,000	37,000	115	9,000	46,000	143%
Secondary and Higher Teachers	2,000	6,000	4,000	200	600	4,600	230%
Sub-Total	109,000	186,000	77,000	70	32,000	109,000	100%
Per cent	4%	7%					
Middle-Level							
Clerical and Commercial	43,000	65,000	22,000	51	15,900	37,900	88%
Trade (Exclusive of Petty Traders)	46,000	69,000	23,000	50	16,000	39,000	84%
Mining	33,000	42,000	9,000	27	15,000	24,000	72%
Transportation/Communications	63,000	105,500	42,500	67	25,300	67,800	107%
Semi-Skilled Craft & Operatives	156,000	237,000	81,000	51	58,800	139,800	89%
Service	54,000	80,000	26,000	48	24,500	50,500	93%
Sub-Total	395,000	598,500	203,500	51	155,500	359,000	90%
Per cent	16%	19%					
Unskilled							
Petty Traders	300,000	330,000	30,000	10	100,000	130,000	43%
Tailors, etc.	75,000	82,500	7,500	10	26,000	33,500	44%
Bakers, etc.	45,000	68,000	23,000	51	30,000	53,000	117%
Labourers	80,000	144,500	64,500	80	44,000	108,500	135%
Sub-Total	500,000	625,000	125,000	25	200,000	325,000	65%
Per cent	20%	20%					
Agriculture							
Self-Employed Farmers	1,300,000	1,337,500	37,500	28	200,000	237,500	18%
Other Farm Employment	200,000	250,000	50,000	25	12,500	62,500	31%
Sub-Total	1,500,000	1,587,500	87,500	5	212,500	300,000	20%
Per cent	60%	54%					
GRAND TOTAL	2,504,000	2,997,000	493,000	19	600,000	1,093,000	43%
MALE	1,504,000						
FEMALE	1,000,000						

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Table 7.2

EMPLOYABLE OUTPUT OF EDUCATIONAL SYSTEM: 1964-1970

	<i>Middle School and Continuing</i>	<i>Secondary School</i>	<i>Universities</i>	<i>Apprentice and Tech- nical Training</i>	<i>Teacher Training</i>	<i>Clerical and Commercial</i>	<i>Total</i>
1964	35,500	1,900	400	1,130	2,000	—	41,430
1965	46,500	2,400	900	1,285	2,000	2,000	56,085
1966	48,500	2,800	1,150	1,485	5,000	2,000	60,938
1967	49,500	12,000	1,450	2,200	5,000	2,000	72,150
1968	117,500	7,500	1,650	2,675	5,000	2,000	136,825
1969	212,500	9,000	1,750	2,850	6,000	2,000	234,600
1970	242,500	11,000	1,750	2,925	6,000	2,000	266,675
	752,500	46,600	9,050	14,550	31,000	12,000	865,700

(i) *High-Level employment*

As compared with the real needs of the economy relatively slow rates of growth have occurred in the training of professional and managerial personnel. There were two reasons for these slow rates. First, the education, training and experience required to qualify for these occupations are lengthy and demanding. Second, the rate at which personnel in high-level occupations can be absorbed into the economy is limited by the fact that each employee at this level requires at least five supporting technicians to make his employment worth-while, and the training of such personnel has also been at too slow a rate in the past.

The growth rate among the highly skilled craftsmen during the plan period may not be as rapid as the increases in the semi-skilled craftsmen and operatives. It is expected that a greater degree of mechanisation will increase the number of semi-skilled operators (in the middle-level group) and will diminish to some extent the recent accelerated demand for skilled craftsmen. It is also planned that the individual output of those now employed as skilled craftsmen should be increased substantially through improved in-service training schemes and further mechanisation. This should decrease the demand for craftsmen still further. Because of these expected changes in demand for certain types of craftsmen it is proposed to re-examine the entire structure of the present apprenticeship programme so as to bring it into better alignment with the future employment demands. It is also proposed, in this regard, that the contract terms for each new enterprise will include a clause requiring that the new industry will provide pre-employment training for the operative personnel which will be employed.

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An increase of 12,000 is projected for the sub-professional and technician groups. With major increases in the industrial sector, large numbers of qualified technicians will be needed. In addition, a serious shortage of qualified technicians has existed for several years. These are key occupations in the expansion plans of the economy and every effort must be made to provide the numbers required. To ensure that the technical institutes enrol a sufficient number of students it is proposed to make all education in technical institutes tuition free.

The recruitment and retention of teachers of all types has become increasingly difficult, largely because of unattractive salaries and conditions of service in the teaching profession relative to other occupations. It is proposed to adjust the salary scales for teachers to make them at least comparable with those in other occupations for which similar qualifications are required. The discrepancy at the top salary levels is particularly discouraging because it provides no incentive for making a career of teaching. Some of the largest relative increases in any type of employment are planned in this field—115 per cent for the primary-middle group and 200 per cent for the secondary and higher education group. The provision of these teachers, as was stated earlier, is fundamental to the success of the entire Seven-year Plan.

(ii) Middle-level occupations

The largest numerical growth in employment can be expected to occur in the middle-level category. These increases can be accomplished more readily than in the high-level category because the training and education requirements here are lower. It will also be possible to obtain large numbers of middle-level personnel from the ranks of those now employed in unskilled occupations. This up-grading process will require the introduction of intensive in-service training programmes and improvements in employee selection methods. Hitherto, with a few notable exceptions, employers of labour in Ghana have paid insufficient attention to the training of their workers. It needs to be more widely appreciated that the formal educational system cannot provide all the training required in a modern economy. Employers, both public and private, will be expected to make far greater contributions to labour training through individual factory and farm schools, industry-wide training schemes, day release, payment for attendance at short courses and evening classes, etc. As indicated above, the facilities of the formal education system will be made accessible to working people on an increasing scale. It will be for the employers to make it possible for their employees to take advantage of these opportunities.

Two-thirds of the growth in middle-level employment will occur in the transportation-communication field and in the semi-skilled craft occupations. It is expected that employment in these two categories together will increase by 56 per cent by 1970. Increases will result especially from the expansion of the radio, telephone and

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electrical networks and facilities and from the introduction of television. Among the semi-skilled occupations, rapid growth will be required to provide employees for the new industries which must be established during the seven-year period.

As the economy develops, normal growth can be expected in the clerical, trade and service occupations. This growth will occur at an accelerated rate and must therefore be taken into account. Employees in these occupations form the supporting cadre for all those in the more specialised categories and, in addition, they ensure that essential basic services are available. More than 22,000 additional office-clerical employees will be required by 1970. Since only a small number of students are being trained in these skills at the present time plans have been made to expand this type of training. These plans are described in a subsequent section of this report.

The sizeable target set for the exploitation of all the main mineral resources of Ghana is bound to lead to an increase in mining employment. It is expected that employment in the mining industry will increase by about 23,000.

In-service Training

Ghana's educational institutions can be expected to provide nearly 900,000 new employees during the plan period. It should be emphasised, however, that while these additions to the labour force will be educated up to given levels, none will be trained for, or experienced in, the occupations in which they will be employed. The introduction of a majority of these workers into the wage earning sector of the labour force within a short period of time can have serious negative effects on the efficiency of the total labour force.

The problem is further complicated by the necessity for up-grading a large number of those now employed into positions of higher skill and responsibility. Many now employed as artisans must become foremen; foremen must become supervisors; supervisors must become managers, and so on. Unskilled workers must be raised to the semi-skilled; semi-skilled must become skilled; middle-level employees must be converted into high-level employees—if the requirements of the plan are to be met.

If these transitions are to be accomplished with minimum losses arrangements must be made promptly to expand and improve existing in-service training facilities and programmes. While excellent in-service training schemes are in operation in many institutions, both public and private (e.g. G.N.C.C., Posts and Telecommunications, U.A.C., U.T.C.) the combined output of trainees from all of these facilities is insignificant when compared to the needs of the total economy. Only a few hundred employees are undergoing in-service training on a planned basis while several thousands will require this type of training.

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The operation of a scheme of this magnitude will require the training of hundreds of training directors and staff trainers in all types of enterprises. While the Productivity Centre can be expected to assist in this effort the combined forces of every agency in this type of work will be required—technical institutes, colleges, universities, specialised institutions, etc. In addition, incentives must be provided to employers who undertake approved training schemes in the form of tax benefits or import priorities. Employees must also be offered wage incentives for undertaking and successfully completing programmes of in-service training. For the years immediately ahead Ghana's most valuable manpower supply will be those already employed. Their skills and abilities must be built upon and improved.

Pre-service Training

The industrialisation programme under the Plan will require the establishment of numerous industries employing hundreds of semi-skilled operatives whose training and skill should not take the form of the existing five-year apprentice training programme. Though such workers will benefit from schemes of on-the-job training, it is desirable that some form of training, lasting for three to nine months, be organised for them before they enter the factories. It is proposed therefore to set up, in collaboration with the main industrial establishments, a number of specialised vocational training centres where the would-be factory hands will get some months of pre-service training before entering the factories.

(iii) Unskilled Employees

Outside agriculture the lowest relative rate of growth in any of the manpower levels is expected to take place in the unskilled categories. Although, apart from farming, this segment has the largest number of employees of any sector, recruitment activity will be largely for the purpose of replacing those who move up to higher levels or who leave the employment market.

If, as is to be expected, the process of marketing continues to change from the traditional petty trader pattern to a more highly organised system, the increase in the number of petty traders will be very small.

There will however be a substantial increase in the number of unskilled labourers required for the expansion of the services and industrial sector of the economy.

(iv) Agriculture

Although no appreciable net increase is planned in agricultural employment, it must be remembered that replacement requirements resulting from wastage will absorb thousands of people. The average age of those employed in farming is high and the work is strenuous. It is to be expected that the wastage rate will therefore

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run high during the plan period. The Government plans to introduce mechanised farming methods and new techniques and crops and to increase productivity throughout this sector. These changes will require the services of approximately 20,000 farm equipment maintenance mechanics and thousands of other agricultural workers. Most of these employees must have specialised education and training, the provision of which will be the main purpose of continuing and technical schools in the rural areas. Therefore, while the total agricultural labour force will rise by only 6 per cent the composition of this labour force will change considerably. These changes can be effected within the group of 300,000 new employees who must be recruited and trained during the next seven years.

V.—THE PATTERN OF EDUCATION

(i) *Elementary Education*

It is proposed to shorten the overall length of time required for the completion of elementary education from ten years as it is at present to eight years. Of these the first six years will be devoted to the acquisition of those basic skills of literacy that are now taught in the six years of primary and the first two years of middle school.

This compression of the length of the primary school period requires corresponding changes in the curriculum and text-books. Efforts now being made to produce a wider variety and higher quality of school text-books more attuned to the pupils' background and their future will be greatly intensified. Starting from 1963 school text-books will be supplied free of charge, which should remove what is now a financial brake on the progress of pupils from the lower income families. The new system will be designed to enable children who have taken the six-year primary school training from the age of six to twelve years to be able to enter either the secondary, technical or continuing schools. In order to help achieve a satisfactory level of basic education within the six years it is intended also to exploit more fully the potentialities of audio-visual and other aids to education.

Unless this shortening of the overall length of elementary education is carried out, with approximately 250,000 children entering schools every year under the compulsory education law nearly two million additional pupils will be enrolled in the elementary schools of Ghana during the period of the Seven-year Plan without any of them becoming available to the labour force before 1970. It is obvious that such an increase in the overall size of the school population at the elementary level could hardly be supported by the economy at the same time that it attempts to implement a rapid programme of economic development. It is also generally agreed that it should not be necessary to take as long as is now taken over the

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teaching of elementary skills of literacy and comprehension. Under the present school system the youth in Ghana enter the labour force at an age far above that at which the youth with comparable education in other countries enter the labour market. In order to be able to implement this shortening of the length of the primary school period it will of course be necessary to up-grade significantly the quality of teaching in the primary schools. This plan therefore contains proposals for an accelerated training of primary school teachers, both to up-grade the quality of staff by replacing some of the large proportion of pupil teachers and other unqualified staff and also to add to the total number of teachers available.

(ii) Continuing school

After children have acquired the basic literacy skills in the first six years of elementary education those who do not enter secondary and other institutions of further education will be required to undertake two years of continuing education which will be designed specifically to fit them to enter the labour force. The nature of this post-basic schooling in the elementary school system has to undergo radical changes. Formerly, when only a small fraction of the children in Ghana went to school, the elementary schools' products were trained in such a way that they could be fitted into mainly white-collar jobs in which the ability to read and write was required. Other jobs, especially all those operative jobs requiring training in manipulative and technical skills, were filled with people who had not had any schooling. The coming of universal elementary education has changed all that; we must now envisage a situation where all the entrants into the labour force, whatever the occupation they are going into, will have had some schooling. Therefore the purpose of elementary education will no longer be to fit youths to enter white-collar occupations but to fit them for all the jobs that need to be done in the economy. The curriculum, the content and the whole orientation of the elementary schools have to be changed in the light of the new circumstances.

Also, in order to accommodate the education of the coming generation of Ghanaians to the technological requirements of the modern world it has been decided to introduce the teaching of basic scientific concepts and facts into the elementary school programme and to improve the teaching of mathematics. The facilities of the present middle schools will be converted for the use of the continuing schools. To supplement the programme in the fields of vocational and science training it is proposed to expand the system of Vocational Training Centres which has recently been introduced with such success to cover the entire country. Each Vocational Training Centre can serve a number of schools and thereby reduce the need for specialised equipment and teachers.

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For boys it is envisaged that the continuing school curriculum will include various trades related to the industrial and construction sectors of the economy; modern agricultural techniques; typing and shorthand together with simple office routine; elementary book-keeping and accountancy. For girls it is intended that, in addition to learning some of the commercial and manipulative skills taught to the boys, there will also be training in such specialised fields as domestic science and handicrafts. Already large numbers of young girls are employed in industrial and commercial establishments in Ghana and have proved to be very apt at learning manipulative and service techniques. It is intended that, like other progressive countries, Ghana should make full use of the potential female labour force especially now that, with universal education, these girls will be educated by the time they are ready to enter the labour market.

Table 7.3

PROJECTED ENROLMENT IN PRIMARY, MIDDLE AND CONTINUING SCHOOLS AND TEACHER REQUIREMENTS, 1964-70

Year	<i>School Popula- tion at end of Last Year</i>	<i>Number of Pass Ours</i>	<i>New Pupils Enrolled</i>	<i>Net Total Enrolment</i>	<i>Teachers already at Post</i>	<i>Additional Teachers Required</i>
1964	1,303,000	49,000	244,000*	1,498,000	37,250	4,875
1965	1,498,000	60,000	240,000*	1,678,000	42,125	4,500
1966	1,678,000	64,000	236,000	1,850,000	46,625	4,300
1967	1,850,000	65,500	244,000	2,028,500	50,925	4,460
1968	2,028,500	125,000	253,000	2,156,500	55,385	3,200
1969	2,156,500	220,000	262,000	2,198,500	58,585	1,050
1970	2,198,500	250,000	271,000	2,219,500	59,635	525
	—	833,500	—	13,629,000	—	22,910

Note (1) *Enrolments in 1964 and 1965 exceed the census figures of children reaching the age of six. This increase is to bring in children aged 7, 8 and 9 who do not join the school system at age 6. Thereafter the enrolment figures are normal.

(2) These projections do not take into account any wastage resulting from dropouts.

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Table 7.4†

PRIMARY-MIDDLE-CONTINUING SCHOOLS, 1964-70

Year	Net Total Enrolment	Pass Outs			Additions to Labour Force
		Primary	Middle	Continuing	
1964	1,498,000	86,000*	49,000	—	35,500
1965	1,678,000	124,000*	60,000	—	46,500
1966	1,850,000	220,000*	64,000	—	48,500
1967	2,028,500	250,000*	65,500	—	49,500
1968	2,156,500	244,000*	125,000	—	117,500
1969	2,198,500	240,000*	220,000	—	212,500
1970	2,219,500	236,000*	—	250,000	242,500
Total			583,500	250,000	752,500

*Not added to Labour Force.

†This Table provides figures for the three types of elementary education—primary, middle and continuing schools. Since all those who finish their primary education continue as pupils in secondary or continuing schools there is no addition to the labour force at this point.

Labour force additions from the continuing schools cannot, in theory, begin for eight years since that is the length of the total cycle. It is entirely possible, however, to convert the present middle school programme to the vocationally oriented continuing school pattern by 1965 or 1966. If this is done the "pass outs" from continuing school could begin in 1967 or 1968.

In the curriculum of the continuing schools special attention will be paid to the teaching of English to all pupils since ease of communication is an increasingly important necessity for the smooth functioning of the economy. At present an imperfect knowledge of English is a handicap not only to the youths who are employed in offices and commercial establishments but also to those in agriculture and industrial enterprises where it is necessary for them to master new and rapidly changing techniques.

In order to make the training in the continuing schools sufficiently practical to fit the youths psychologically and technically to take their place in the labour market it is proposed to institute intensive systems of practical work in industry, agriculture, commerce and government as a part of the curriculum. The teaching staff for the continuing schools must have specialised qualifications and training. Since the first pupils will enter these schools in 1966 plans for this specialised teacher training should be formulated immediately. More than 12,000 teachers will be required.

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(iii) *Secondary and secondary technical school*

At present less than 2 per cent of the output of Ghana's educational system goes through secondary schools. In order to satisfy the requirements of a modern economy it is estimated that this proportion should rapidly be built up to about 25 per cent. This is a goal which Ghana has set for itself following the Addis Ababa Conference on Education in 1961. Although the full target cannot be reached in the course of one seven-year plan it is intended to make significant progress toward its implementation before 1970. Unless this can be done the secondary and technical schools, which constitute the training grounds for all the high level and much of the middle level manpower required for the economy, will continue to act as an impediment to the rate at which economic and social development can be accomplished in Ghana.

The rapid expansion of educational facilities in the past decade, especially at the primary school level, and the introduction of free and compulsory primary education have created an imbalance in terms of numbers at the expense of higher education. Because the number of children reaching the age of six is so large and will grow larger, this imbalance is likely to persist for a while.

Under previous plans for the expansion of secondary education it was proposed to increase the enrolment in secondary schools at the rate of 500 additional pupils per year. In view of the increasing needs of the economy it is now proposed to increase secondary school enrolment at the rate of 2,000 additional pupils per year. This would increase the prospective output of the secondary school system from 33,000 to 62,000 in the course of the seven years. At present one out of five middle school leavers proceeds to secondary school; by 1970 despite the large expansion in secondary school facilities, only one out of ten middle school leavers will be able to find a place in a secondary school. This as mentioned is due to the rapid growth in primary school population resulting from the large numbers of children reaching the age of six each year.

Table 7.5

PROJECTED ENROLMENT IN SECONDARY SCHOOLS AND
TEACHER REQUIREMENTS (1964-7)

		<i>Old Pupils</i>	<i>Passing Out</i>	<i>Net Number of Pupils</i>	<i>New Pupils</i>	<i>Total Enrolment</i>	<i>Total Teachers Required</i>	<i>Additional Teachers Required</i>
1964	.. ..	28,500	3,500	25,000	10,000	35,000	1,575	325
1965	.. ..	25,000	4,000	31,000	12,000	45,000	1,975	400
1966	.. ..	43,000	4,500	38,500	14,000	52,500	2,450	475
1967	.. ..	52,500	14,500	38,000	16,000	54,000	3,000	550
1968	.. ..	54,000	10,000	44,000	18,000	62,000	3,400	400
1969	62,000	12,000	50,000	20,000	70,000	3,900	500
1970	70,000	14,000	56,000	22,000	78,000	4,300	400
		—	62,500		112,000	—	4,300	3,050

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Under this revised secondary school plan enrolment is expected to increase from the present level of 24,000 pupils to nearly 80,000 pupils by 1970, and the yearly output from 3,000 to 14,000. Of the total output of the secondary schools during the plan period it is estimated that about 16,000 will be required for further education beyond secondary level and the rest will be immediately available to join the labour force.

To accomplish these increases in enrolment and output in the secondary schools the number of secondary school teachers will have to be increased from the present level of 1,000 to about 4,300 by 1970. Since secondary school teachers must have a university degree or equivalent qualification and the proposed expansion in the secondary schools is itself required to take place before the Universities can begin to produce enough graduates, it is expected that in the course of the seven years there will be a large deficit of graduate teachers which will have to be made good by the recruitment of expatriate staff. After about 1965 when a higher output is expected from the Universities this deficit of graduate teachers should be gradually eliminated. Before then however it is estimated that about 200 additional teachers a year will need to be recruited from outside Ghana for about three or four years.

At present, the number of science students from the secondary schools who qualify to begin degree work in the Universities is much too small to meet the needs of the country. Of all the students who apply each year for entry to the Universities, less than 30 per cent apply to read science. This figure will need to be raised to not less than 50 per cent if the requirements for science personnel under the plan are to be met. Science personnel will be required in ever-increasing numbers in industry and agriculture as well as for teaching in the secondary schools, where 2,000 additional science teachers will be required. To help students to know what opportunities exist for careers in science, a guidance and counselling service will soon be set up to popularise job opportunities for science students.

The reasons for the low out-turn of science students from the secondary schools are not far to seek. Many secondary schools lack science laboratory equipment and qualified science teachers, with the result that many would-be science students are denied a good basic science course in their secondary schools. Perhaps equally important has been the inadequate exposure to science, both in the home and in the primary school. Effective steps will be taken to correct these conditions so that many students will be encouraged to select science as a career. Science will be introduced into the primary school curriculum as much as possible and all existing and new secondary schools will be adequately equipped and staffed to teach science as a major subject.

The estimated large increase in enrolment in secondary schools will require the construction of many more schools. To reduce such capital outlay to its lowest possible levels, every effort will be made to expand existing schools in preference to building new ones and to construct as many day-secondary schools as is possible.

(iv) Teacher Training

The need for teacher training as a prior condition for any expansion in the educational system was recognised in the intensive teacher training programmes that were instituted at the beginning of the introduction of universal education in 1951. Since the introduction of compulsory primary education however it has become necessary to dilute the quality of the teaching force again and at present approximately 40 per cent of the 32,000 teachers employed in the primary school system are untrained. The total enrolment in the elementary schools is expected to be about one million higher by 1970 than it is at present. This will require an additional 37,000 teachers. Under the existing teacher training programme fewer than 20,000 new teachers could be trained in the coming seven years and the increase in the demand for teachers would therefore result in a further dilution of the quality of the teaching staff.

It is therefore proposed under this Seven-year Plan to increase the enrolment in teacher training colleges from the present level of approximately 5,000 to around 21,000 by 1970. This should enable the annual output of teachers to be stepped up from 2,000 a year to about 6,000 a year by 1970. Over the course of the seven-year period this should result in the production of about 31,000 additional teachers, which would allow the net increase in the demand for teachers for the elementary schools to be met with trained teachers and a start to be made with the replacement of some of the pupil teachers. Prospective teachers in the continuing schools will receive specialist training in the various technical subjects which they will be required to teach.

As in the case of the secondary schools there is also a prospective short-fall in the supply of teachers for teacher training colleges. Until about 1965 this short-fall will also have to be made good by the importation of about forty graduate teachers per year.

(v) Technical Education

While Ghana has always had a reasonable supply of the technically skilled manpower required to run an economy at a fairly low level of development, the new developments in agriculture and industry proposed under this and subsequent seven-year plans require an entirely new approach to technical education.

A most important group among the technical manpower of any economy is the group of senior technicians who stand between the engineers and managers on the one hand and the skilled labour on the other hand.

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Table 7.6

TEACHER TRAINING COLLEGES: ENROLMENT AND TEACHERS
(1964-70)

			<i>Old Students</i>	<i>New Students</i>	<i>Total Enrolment</i>	<i>Number Passing out</i>	<i>Number of College Staff</i>	<i>Additional Staff Required</i>
1964	..	..	6,000	5,000	11,000	2,000	755	200
1965	..	..	9,000	5,000	14,000	2,000	955	200
1966	..	..	12,000	6,000	18,000	5,000	1,155	200
1967	..	..	13,000	6,000	19,000	5,000	1,225	66
1968	..	..	14,000	6,000	20,000	5,000	1,291	66
1969	..	..	15,000	6,000	21,000	6,000	1,357	66
1970	..	..	15,000	6,000	21,000	6,000	1,357	0
				40,000		31,000	8,095	798

Table 7.7

OUTPUT FROM APPRENTICE TRAINING AND TECHNICAL
EDUCATION: 1964-1970

						<i>Products from Technical Training Institutes</i>			<i>Total (Cols. 3-4)</i>
						<i>Products from Apprentice Training Craftsmen</i>	<i>Advanced Craft Training (Senior Technicians)</i>	<i>Junior Technicians</i>	
1964	..	..	..	..	..	205	90	835	925
1965	..	..	..	..	..	300	150	835	985
1966	..	..	..	..	..	500	150	835	985
1967	..	..	..	..	..	700	300	1,200	1,500
1968	900	500	1,275	1,775
1969	1,000	500	1,350	1,850
1970	1,000	500	1,425	1,925
Total	4,605	2,190	7,755	9,945

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These are the men who fill supervisory positions and take responsibility for the implementation by groups of operatives of projects that have been planned on paper. It had originally been hoped that the Kwame Nkrumah University of Science and Technology would be responsible for the training of senior technicians in Ghana. That University however is now engaged mostly on training at the professional engineer level and there is need for a new complex of institutions to fill the gap in the educational system.

At present the technical institutes run by the Government are largely devoted to the training of craftsmen and fitters at the same level of competence as those produced through the apprenticeship programme; technician training constitutes a relatively small part of their activities. Under the existing training programmes approximately 4,000 additional apprentices will have been trained by 1970 and 9,000 craftsmen will have had their training through the technical institutes. But out of these the existing programme enables only 150 students to be enrolled per year in the senior technical institutes. It is proposed gradually to increase this number to 500 students per year. If this can be done then about 1,200 more senior technicians will become available for employment in the course of the seven years than would be available under the existing arrangements. In the process of establishing new industries, modern agriculture and other forms of advanced economic activity, this increased number of senior technicians would be required in any case, and if they are not trained locally they would have to be trained abroad at considerably greater expense or else be recruited from overseas at even greater cost. A recent survey has established that some of the existing technical institutes possess the technical facilities for the training of senior technicians. It is proposed to establish additional senior technical institutes to allow the enrolment of 500 entrants per year. The training facilities now available in Kumasi for the training of technical teachers can be expanded to supply all the additional requirements for staffing these senior technical institutes. The institutes will be sited in the most suitable areas having regard to the developing industrial structure and the facilities thereby available for the practical training of technicians in going industrial and agricultural enterprises.

(vi) Clerical and Commercial Education

In Table 7.1 the estimates show that 22,000 additional employees will be required in the clerical and commercial occupations by 1970. At the present time few facilities are available for training people in these important skills. Small programmes for the training of clerical employees exist in a few of the technical institutes and, in addition, the Government provides specialised training for some of its clerical employees. A large share of the responsibility for the overall efficiency of every establishment in the country rests with the clerical staff. It is therefore proposed to institute an expanded programme for the training of clerical and commercial personnel.

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By far the largest element in this programme should consist of the in-service and part-time training of employees sponsored and financed by their employers along the lines previously described. An imaginative programme vigorously pursued should result in a considerable up-grading of the present levels of clerical efficiency which are quite low in both public and private employments.

On the formal side this clerical and commercial education programme will be established on two levels. The first and larger will be drawn from the pupils completing the two-year continuing school programme. By 1965, 1,500 pupils should be enrolled each year for a special one-year programme of training at the continuing schools. Upon the completion of this course, the average pupil will be fifteen years of age and ready to enter employment in the clerical field with a reasonable degree of competence. By 1970, 9,000 pupils will have completed this training and will be available for employment. From that point on, the output of the programme will be expected to rise steadily above the level of 1,500 new clerical employees each year.

The second or higher level clerical and commercial training programme will be designed for a smaller number of students drawn from secondary school leavers. This programme will require one year beyond secondary education and will be set up for 500 pupils each year. These pupils will be trained in office administration, book-keeping, accounting and other higher clerical skills and, upon the completion of their education, will be ready for employment as skilled clerical employees. The output from this programme will be 3,000 by 1970.

Taken together, these two formal programmes in clerical and commercial education could be expected to produce 12,000 additional employees by 1970. 75 additional teachers will be required to produce these employees for the lower level programme and 25 teachers for the higher level programme. In addition the up-grading programme for older employees will require at least an equal number of teachers. Candidates for these teaching positions are available but specialised teacher-training will have to be provided.

Along with these expanded facilities for training clerical and commercial personnel a new system of standards will be set up clearly differentiating the various levels of skill and pushing up the minimum standards for employment which are at present quite low. In the public sector a revision of pay structure will be instituted to ensure that those with requisite competence in their fields are suitably rewarded.

(vii) University Education

Ghana has already made considerable progress in the development of its university programme in a brief period. The number of graduates has reached the

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rate of 300 each year and, by 1970, the number of graduates will approach 1,800 each year. The quality of the education provided has continued to improve and thus adds to the impressiveness of the growth record of the Universities.

Table 7.8

CLERICAL—COMMERCIAL EDUCATION
(1964-70)

CLERICAL CERTIFICATE TRAINING (POST-PRIMARY)

					<i>New Students</i>	<i>Outflow</i>	<i>Teachers Required (1:20)</i>
1964	..	..	..	..	1,500	—	75
1965	..	..	..	..	1,500	1,500	75
1966	..	..	..	..	1,500	1,500	75
1967	..	..	..	..	1,500	1,500	75
1968	..	..	..	..	1,500	1,500	75
1969	..	..	..	..	1,500	1,500	75
1970	..	..	..	..	1,500	1,500	75
						9,000	75

COMMERCIAL DIPLOMA (POST-SECONDARY)

					<i>New Students</i>	<i>Outflow</i>	<i>Teachers Required (1:20)</i>
1964	..	..	..	..	500	—	25
1965	..	..	..	..	500	500	25
1966	..	..	..	..	500	500	25
1967	..	..	..	..	500	500	25
1968	..	..	..	..	500	500	25
1969	..	..	..	..	500	500	25
1970	..	..	..	..	500	500	25
						3,000	25

It is expected that by 1970 approximately 5,000 students will be enrolled as regular students in the three Universities thus utilising university facilities to the full. It is also planned that this regular residential enrolment will be augmented by additional numbers of day students. For planning purposes, the Universities can

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be expected to graduate 9,000 students between 1962 and 1970. This is a large enough total to fill all of the professional and secondary teaching posts which will be created during the plan period, but will not provide for the losses in the high-level occupations which will result from wastage. The increases in university staff required during the period will not be large but, because of the high qualifications required, they will present a difficult recruitment problem. The Universities are expected to play a vital role during the Plan period. Not only will they provide some 9,000 additional high-level personnel, they will also continue to make valuable contributions in research as well. To encourage undergraduates to undertake studies in fields in which the country's needs are most urgent, incentives will be provided, and towards the same end a guidance and counselling service will be set up to ensure an optimum distribution of students to the various fields of study.

(viii) Adult Education

The Government is fully aware of the important contribution which adult education can make towards economic development and towards ensuring that every citizen has the opportunity to enjoy as full a life as is possible. It is intended that the Institute of Public Education should be responsible for the co-ordination of most of the activities in the field of adult education.

At the present, the Institute of Public Education has a total student enrolment of 10,000 pursuing courses in arts and science subjects leading to the ordinary and advanced levels in the West African school certificate examination. The Institute has established Workers' Colleges in Accra, Kumasi, Tamale and Sekondi/Takoradi and runs a residential college in Tsito where short refresher courses of two or three months' duration are run.

The Institute will operate at both the secondary and university level. In secondary education it will provide tuition in evening classes at both the ordinary and advanced levels for those in employment who were either unable to enter a secondary school or were unable for some reason to complete the course there. In this way it will be possible to mitigate the shortage of middle-level manpower to which reference has been made. During the course of the plan period the Institute will also organise correspondence courses to enable those who live outside the main centres of population to study for the General Certificate of Education examination.

At the university level, it is intended that the Institute should organise part-time courses to enable those who have been unable to enter the universities in the normal way to take external degrees. The Institute will also organise residential courses

for farmers and members of co-operative societies and will be in charge of adult residential colleges. It is intended that additional colleges should be developed as facilities are made available.

Outside the purely academic programme of the Institute of Public Education, the programmes in agricultural education and in welfare services presently run by the Ministries of Agriculture and Social Welfare respectively will be intensified. Undoubtedly agricultural education and extension have contributed substantially to the high standards of cultivation and harvesting attained in the cocoa industry. It is hoped that in the period ahead this programme will be extended to the food sector of agriculture. The community development and adult literacy programme of the Ministry of Social Welfare has during the past decade contributed greatly to the receptivity of our population to those new ideas which have helped to make rural Ghana one of the most progressive rural areas in Africa. Such programmes will be extended during this plan period and in subsequent ones so that the population can easily adjust to the social changes that attend such industrial and economic transformations.

Educational Research

As a corollary to the implementation of a new education plan, investigations will be made into some facets of our educational system to determine the areas where improvements are vital. Research studies will be conducted into the following fields:

- (a) attainment level studies in selected schools before and after the implementation of the new educational plan;
- (b) methods of popularising science and mathematics in schools;
- (c) effective selection techniques for choosing pupils for various courses of study and training;
- (d) child development studies with special reference to primary school pupils.

Existing agencies in the Universities will be asked to undertake much of the research needed in education.

VI.—FINANCING OF EDUCATIONAL DEVELOPMENT

Under this plan educational development is scheduled to take place at a rapid pace at both the elementary and the higher levels. Even with the proposed reduction in the length of the elementary school period it is estimated that school enrolment will nearly double in the course of the coming seven years owing to the progressive enforcement of the law on compulsory free elementary education and the increase in population.

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Table 7.9

CENTRAL GOVERNMENT INVESTMENT IN EDUCATION 1963-69 (a)

£G million

	1963	1964	1965	1966	1967	1968	1969	Total
Elementary	0.3	0.4	0.4	0.3	0.2	0.1	0.1	1.8
Secondary	2.2	3.1	4.5	5.8	6.5	3.4	3.6	29.1
Teacher Training	0.6	2.1	2.8	3.4	3.9	2.2	2.1	17.1
Technical	0.4	0.5	0.6	0.6	0.8	0.8	0.9	4.6
Universities	1.9	2.0	1.2	0.8	0.9	1.0	0.9	8.7
Total	5.4	8.1	9.5	10.9	12.3	7.5	7.6	61.3

(a) In order to meet the anticipated requirements of the secondary schools, training colleges and universities for the academic year starting October, 1963 it was necessary to put in hand supplementary development works totalling £G1.4, £G0.2 and £G1.1 million respectively for these branches before the first financial year of the Plan period.

At the same time as indicated above a rapid increase in the numbers enrolled in secondary, technical, teacher training and higher institutions is necessary in order to implement both the economic and social programmes of development proposed under this plan.

The cost of maintaining this simultaneous expansion at all levels of education as well as improving the quality of education, especially at the elementary level, will naturally represent an increasing burden on the country's financial resources. It is estimated that using 1962 prices the running cost of the educational system as a whole will have increased from its present level of around £G15 million a year to nearly £G33 million by 1970. Given the proposal to up-grade the quality of the teaching staffs by having a higher proportion of trained teachers, it can be estimated that the bill for the running expenses of the educational system by 1970 will be nearer £G40 million.

At the same time it is proposed that the Central Government should make investments in educational facilities totalling some £G64 million in the course of the plan period. This sum will be almost entirely taken up in expanding the number of places and making improvements to the educational facilities at the secondary schools, the teacher training colleges, the universities and the technical institutes. The provision of adequate laboratory space and scientific equipment to support the increased emphasis that it is hoped to place on scientific education will make particularly heavy demands on capital funds. The decision to introduce science teaching

into elementary education and to re-orient post-primary education towards the teaching of useful arts in agriculture, industry, and technical services will necessitate the construction of a large number of new continuing schools and the re-equipment of existing middle schools with facilities for technical education along the lines of modern schools in other countries. This equipment is not cheap and the only hope of procuring it in sufficient quantity lies in the assumption of the responsibility for a substantial part of the education investment required during the plan period by agencies outside the Central Government.

This plan therefore envisages a division of responsibility in the financing of education which will call forth maximum contributions by local communities towards the development of elementary education while the Central Government concentrates its efforts on the development of the other elements in the education programme. The recent re-organisation of the local government system provides the organisational basis for the mobilisation of local effort both in the construction of elementary school facilities and in providing these schools with teachers, supplies, equipment and other necessities.

The conversion of the present middle school to the proposed new continuing school with its greater emphasis on basic scientific and technical training will pose a particular challenge to local authorities in the development of what will be an entirely new departure in the educational system of Ghana. It is proposed that the Central Government's grants to the local authorities specially earmarked for the development of educational facilities, in addition to the £G3.8 million provided for under Chapter 11 below, will total £G1.8 million and will be concentrated primarily on those areas of the country which are initially unable to raise finance for the construction of elementary school facilities. It is hoped that with the strengthening of the local government system these grants will taper off gradually in the course of the plan period. The remainder of the Central Government's disbursements for the development of the educational services will be distributed as shown in Table 7.9.

Education has become an increasingly more attractive field for foreign assistance by way of both grants and loans. The bilateral programmes of the Governments of the more advanced countries as well as the operations of international agencies have come to an increasing awareness of the necessity to back up other forms of financial assistance with a greater amount of assistance to educational development, whose absence in a number of cases has frustrated the effective use of both foreign capital assistance and domestic resources for development. Already education in Ghana has attracted international assistance by way of the provision of teachers and books and, to a lesser degree, of equipment. An implementation programme for the developments summarised in Table 7.9 has been drawn up in the Ministry of Education showing the exact details of the educational institutions to be constructed or expanded and the

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facilities that will be required. It is hoped that this programme will be widely disseminated and will attract external financial assistance on a generous scale.

B. EMPLOYMENT AND WAGES

The programme for educational expansion outlined in the previous section should ensure that by 1970 the yearly gross supply of trained manpower will be substantially in balance with demand for most grades of skilled labour. What will be lacking will be the ability of this labour force to fill the available jobs in the way that a more experienced labour force would. But this is something for which the whole economy will have to wait until the trained manpower has had time to gain its experience in the actual process of production. The supply and demand position in regard to individual categories of manpower will nevertheless need to be reviewed from time to time and employment market conditions studied on a continuing basis, so that where imbalances develop suitable action may be taken in good time. Between 1963 and 1970 however the demand for trained manpower will continue to outstrip the supply, in some cases by a considerable margin. A situation of imbalance in the labour market holds potential risks for the stability of the economy and for its ability to grow unless a suitable incomes policy is worked out and consistently applied. Even in the long run, since the Government has committed itself to ensuring the opportunity of employment to every Ghanaian who is willing and able to work, a national incomes policy is needed in order to deal with some of the monetary and social problems which a full employment policy can bring to an economy.

Under the Seven-year Plan Ghana's incomes policy must be designed to promote:

- (a) economic growth
- (b) rising productivity of the labour force.

I.—ECONOMIC GROWTH

Only 20 per cent of the working population of Ghana works for wages and salaries. The rest of the working force is self-employed, mostly in farming and trading. Economic growth in Ghana will not only entail the transfer of labour from agricultural to non-agricultural employment as described in a previous chapter but will also increase the proportion of the total working force that works for wages and salaries. In the most advanced countries about 80 per cent of the total labour force works for salaries and wages and receives about 75 per cent of the national income. Only about 20 per cent of the working force in those countries is self-employed, which is the exact reverse of the employment situation that currently exists in Ghana. It is to be expected that the ratio of wage earners to self-employed in Ghana will change in the direction of that existing in the more advanced countries as the economy develops. But the speed at which this transformation takes place depends upon the wages policy that is in force.

It is important to recognise that the 20 per cent of the Ghanaian labour force who work for wages and salaries earn far more on the average than the 80 per cent who do not work for wages and salaries. In the rural areas of Ghana during March 1961 earnings per worker ranged from £G35 in the Northern and Upper Regions to about £G106 in the Brong-Ahafo Region. Since wage earners have a guaranteed minimum wage of £G101 per annum it is evident that the exclusion of wage earners from these figures would show that the non-wage earning section of the working force earns on the average not more than one-half of the minimum wage earned by the more unskilled labourers in Ghana. This fact must profoundly influence wages policy for many years to come.

The differential between wage rates for employees and the average earnings of the self-employed determines the rate of redistribution of the labour force between wage and non-wage employment in two ways. First, the wider the gap between average earnings in wage employment and non-wage employment the greater the inducement for the non-wage earning labour force to attempt to move into the wage-earning class. The rate of urbanisation on the one hand and the rate of rural depopulation on the other are both affected by this differential and its influence on labour mobility. The economy must regulate the relationship between wage rates and earnings in the non-wage sector in such a way that the opportunities for wage employment that are being created through the process of investment and economic growth are adequate to meet the inflow of potential wage labour. When these two developments get out of balance then we have the phenomenon of urban unemployment which it is the policy of Government to avoid at all times.

Second, the average wage of labour determines how far any given volume of aggregate investment is able to provide employment opportunities. The higher the average wage rate is set the smaller the ability of the wage-employing sector to offer employment opportunities. An excessively high wage rate therefore may benefit the labourers who are employed at any one time but it works against the interests of those who are trying to enter the wage labour force. On the other hand an excessively low average wage rate leads to inefficient use of labour, which Ghana cannot afford, because in the final analysis this country is relatively under-populated and must husband her labour supply very carefully.

II.—PRODUCTIVITY

The expansion of the economy must come as much from increasing productivity as from an increase in the total working force if real economic progress is to be made. The wage structure is a powerful tool for regulating the use of available manpower and for promoting increased productivity. It is of course obvious that the general level of education and the availability of training facilities set an absolute limit on the potential level of productivity of the labour force. But an inadequate wage

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system can prevent the utilisation of the potential for productivity that exists in the labour force at any given time. The wage structure should encourage people to improve their skills, by suitably rewarding such skills. It is generally thought that in Ghana the wage structure as it exists now has as much differential for skills as is needed to encourage the acquisition of skills.

It is considered that over the economy as a whole the rewards for similar skills in wage employment are substantially uniform, owing partly to the operation of the present collective bargaining system and partly to the widespread tendency for the general level and structure of wages to follow the pattern set by Government as the largest single employer of labour in the country. The major exception to this uniformity, and for which corrective action is proposed in the sections of this plan dealing with agriculture and industry, is the wage structure in public enterprises and other quasi-governmental agencies. The lack of uniformity in the wage structure in these semi-government sectors will be corrected in the course of the first year of this plan.

However, the existing wage structure, though uniformly applied over the economy and showing a sufficiently wide spread in general levels, considerably under-pays technical skills. It is therefore proposed that the wage relationships between jobs requiring technical skills and white-collar jobs should be reviewed with the aim of encouraging the acquisition of such technical skills.

The greatest problem in using the wage system for promoting productivity is ensuring that actual earnings bear some relation to actual performance. Owing to the dominance of Government practice in the wage system of Ghana the tendency has been for the wage structure to be well adjusted to the skills required for initial entry into employment but for earnings to follow automatically on the initial skill grading without any regard for performance on the job.

The best-known method for relating earnings to performance and thereby raising labour productivity, is the system of payment by results. At present payment by results is restricted to a small number of industrial sectors—building and construction, furniture making, clothing, retailing and gold mining. It is the intention of Government to encourage a more widespread use of the system of payment by results in both public and private enterprises.

Certain necessary conditions however have to be met before the system of payment by results can work successfully.

- (i) It is essential that the individual worker should be able to increase his earnings by increasing his own performance. Where the individual's performance is limited by the technical considerations of the job or by the performance of his mates, his management or natural forces, then the system of payment by results cannot work successfully.

- (ii) The job to be performed must be capable of exact definition and the performance subject to exact measurement. The worker must have clear responsibility for a given operation or set of operations. The possible earnings for performance must be tied to reasonable norms established as a result of careful work study and other investigations.
- (iii) The management of an enterprise in which the system of payment by results is in force must be able to measure the exact performance of the individual worker as a basis for determining a fair reward for his work. This means for instance that the management should have accurate records of the quantity and quality of work performed by each individual worker. A system of payment by results therefore involves for an enterprise a large increase in clerical and book-keeping operations based on scientific measurement.
- (iv) In order to control quality and to avoid excessive waste of raw materials and the improper use of equipment, management in an enterprise where the system of payment by results is in force needs to be of a higher quality and of a more intensive character than management in an enterprise where the workers have less incentive for improving quality, for conserving raw materials, etc. Especially in such a system the quantity and efficiency of supervisory and shop-floor management needs to be very high. These are of course precisely the types of management of which Ghana is most deficient at present.

It is however considered that if the system of payment by results is introduced after sufficiently detailed work study and explanation to the workers and with a carefully designed system of management control its operation should be feasible in a very large number of enterprises. Besides, there are standardized operations in production and construction which are susceptible to the application of a system of payment by results even where the other parts of the work of the enterprise cannot be covered by that system. It will be one of the aims of the proposed National Productivity Centre to help in the establishment of norms of labour performance both for these standardized operations and for all those operations in individual enterprises which are capable of exact measurement and hence are suitable for the application of the system of payment by results.

In order to make payment by results fair to the workers it is necessary that in all cases the management of enterprises should be adequate to ensure that it does not itself constitute an obstacle in the way of the performance and the earnings of the worker. A situation in which, through failure of the flow of materials or through inadequate machine maintenance, the individual worker would be penalised for the inadequacies of management, will be avoided in the application of the system.

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of payment by results. Also, in all cases it will be necessary to secure the full consent and co-operation of labour before the introduction of the system in any given enterprise.

The other method of inducing higher labour productivity through the wage system is to relate earnings not to the measurable performance of each worker but to the overall results, usually the profits, of the enterprise. Such systems of bonus payments, profit sharing, etc., are less efficient as an incentive to labour productivity than a detailed system of payment by results, and are not as fair to the individual worker. The trading results of the enterprise may be due to factors of management, of markets, of price controls or even of weather, which are quite outside the control of the individual worker. It may be however that in enterprises where the performance of the individual worker is not usually easy to measure the system of payments based on the general results of an enterprise may be the only method of securing the identification of the worker with the success of the enterprise. In all such cases however:

- (a) A minimum level of earnings must be defined which allows the worker to earn a tolerable wage based on his work.
- (b) The worker must be associated with the management of the enterprise in such a way as to be able to influence those decisions which in turn determine his earnings. On state farms and in co-operative and state industries representatives of the workers must therefore be associated with management in such a way that they can take some of the responsibility for the overall results of enterprise. In the private sector the terms and conditions for the application of bonus systems will be determined by collective bargaining agreements under the labour code.

III.—WAGES POLICY

Along with the income of farmers and other self-employed persons and the level of profits as modified by taxation the earnings of wage labour in any given year are a very important influence affecting the general balance of the economy. A wages and income policy must therefore be devised in order to relate wage and other incomes to general economic policy.

Decisions will be taken about wage levels and wage structure from time to time. These decisions will always seek to protect the interests of the workers and the farmers in the distribution of the national income. But the share of the nation's wealth which accrues to the people is not measured only by the wages and other incomes they receive. It is also influenced by the amount of public services that is available to them and by the prices that they pay for the goods which they buy. It is an essential part of the socialist philosophy of the Government that the need for an adequate level of public services should not be sacrificed to the demands of individual interest.

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A share of the national income must be secured to the state sufficient to allow it to provide for the population as a whole what is considered to be an adequate level of public services in the light of the given economic circumstances of the country and the ultimate objectives of Government in the modernisation of Ghana.

Under this development plan Government intends particularly to assure an increase in the standard of living of the workers and farmers not merely by paying higher money incomes, which may be nullified by movements in prices and by shortages in the supplies of necessities, but also by keeping down the prices of essential consumer goods. It is one of the cardinal aims in the development of state farms and in the propagation of modern methods of agriculture among the nation's farmers, to provide an adequate supply of basic food at prices that will enable the average person to increase the level of his nutrition without any significant increase in his outlay for the purchase of food. In encouraging individual Ghanaians to make a major contribution towards the supply of adequate housing Government naturally recognises the claims of owners of houses to an adequate return on their investment. On the other hand it is the policy of Government that the working man who has to live in rented accommodation shall not be the victim of exploitation. A number of measures will be taken to maintain a reasonable level of rents especially in the urban areas. Government will itself build enough houses to relieve the pressure on the available housing supply where it is most severe. This will prevent any tendency towards excessive rent charges by private builders. Wherever necessary Government will also institute direct regulations setting legal limits to the rents that may be charged for particular types of housing in particular areas and these measures will be strictly enforced.

The Government expects that the manufactured goods produced in Ghanaian enterprises will be sold at reasonable prices. This will be achieved by ensuring that the efficiency and productivity of manufacturing enterprises in Ghana is high enough to enable these enterprises to make a reasonable profit without charging excessive prices for their products. The consuming public also needs protection as regards the quality of the products that it buys. Proposals for the control of product standards are outlined in other parts of this document.

It is hoped through these measures to maintain a socially just distribution of the national income by a wages policy that at the same time avoids inflation and protects the nation's balance of payments position.

IV.—MACHINERY FOR WAGE DETERMINATION

The management of a scientific wages policy to achieve the objectives outlined above requires that wage determination be based on a system which is not subject to the erratic and haphazard influences that govern wage movements in so many other economies. Government proposes to establish a National Wages Commission

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composed of three independent members who will determine the key elements in wages structure and wages policy in the light of general economic considerations and particularly the requirements of economic growth. In particular, the Commission will deal with questions affecting the national minimum wage, the wage structure as it affects the inter-relationships of a limited number of selected grades in the semi-skilled, skilled, technical, executive, administrative and professional levels, and the determination of minimum and average payments standards under a system of payment by results.

It is necessary that this Commission be serviced by a competent staff capable of bringing to bear on its work objective and correct analyses of the economic and social factors relevant to the work of the Commission. It is therefore proposed that the Division of Employment and Manpower in the Office of the Planning Commission will assist the Commission in its work.

Employment Service

There already exists in the country a network of Public Employment Centres concerned with the registration and placement of unskilled and middle level workers. With the increase in the number of trained and skilled personnel resulting from the expansion of the educational and training programmes under the Plan, it will be necessary to strengthen the Employment Service suitably so that it may extend its placement services to cover all skilled and highly trained workers entering the employment market. In particular, it is proposed that a Central Employment Office for high level technical and professional personnel be established in the Labour Department, to function in co-operation with the Scholarships Secretariat, to cater for those seeking administrative, supervisory, scientific, technical and professional jobs.

The Employment Service will also be responsible for the collection of information regarding employment market conditions and changes in the employment and manpower situation from time to time. A beginning has already been made in this connection and the programme will be extended to cover the whole country. Side by side with this, the Labour Department with the assistance of the Central Bureau of Statistics will undertake the collection and analysis of occupational information so that manpower training can, as far as is possible, be geared to manpower requirements. The scheme for vocational guidance and youth employment will be extended and a personnel selection programme will be put into operation as soon as possible in both the vocational and the educational field to help select candidates for places and courses for which they have most aptitude.

V.—THE ROLE OF THE TRADES UNION CONGRESS

Ghana has always ascribed a leading role to the workers' organisations as an instrument for securing social justice. By adhering to modern norms of labour

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legislation and international conventions protecting the rights of labour Ghana has secured for the working man his proper place in the management and enjoyment of the national economy.

In a developing country however the trade union movement must carry a heavier responsibility than unions in maturer economies for promoting increased productivity and hence economic growth. The Trades Union Congress has been made joint founder, along with Government and employers, of the National Productivity Centre. Union representatives will be expected to point out the problems that stand in the way of higher productivity, to take part in the search for solutions to these problems, and to propagate and win acceptance for these solutions at work sites, in the factories and on the farms. In carrying the message of productivity to the individual worker the Congress will be teaching him at the same time that increased happiness and prosperity for the individual Ghanaian is dependent on increased productivity.

The Congress will also have a crucial role to play in the implementation of a national incomes policy designed to promote rapid economic growth. In a socialist Ghana the distribution of the national income can no longer be the chance outcome of a chaotic struggle between antagonistic social classes. Rather it should be based on scientific decisions regarding the utilisation of increases in the nation's wealth in such a way as to advance the welfare of the worker and the growth of the economy and to maintain an adequate level of employment within a framework of economic stability. This can only be achieved if the nation's incomes policy based on the work of the National Wages Commission is wholeheartedly accepted and implemented. The Trades Union Congress will have the responsibility of mobilizing the support of labour behind the incomes policy.

The third contribution expected from the trade union movement towards the realization of the goals of the Seven-year Plan will be through its role in the re-furbishing of the wage structure and payments systems in order to promote higher productivity. As already indicated some wage relationships will have to be changed in order to encourage the acquisition of skills, new norms of performance will have to be devised in order to improve standards of work, payment by results and other incentive systems will have to be introduced, and technical training will have to be re-organised and intensified. In all these the Congress will be expected to play a leading role in furthering the national objectives.

The assumption of these responsibilities cannot of course detract from the traditional responsibilities of the Trades Union Congress. It will still be charged with responsibility for the negotiation and implementation of collective bargaining agreements and for the protection of the welfare, the security and the safety of the working man in all sectors of the economy.

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CHAPTER 8

HEALTH

I.—RECENT PROGRESS IN HEALTH SERVICES

From its small beginnings as a colonial medical service looking after a few civil servants and their dependants, the Ghana medical service has now grown into a truly national health service. Until ten years ago progress was slow and spasmodic. Since the early fifties the health service has undergone a truly extensive transformation. Extensions to old hospitals such as Korle Bu and Sekondi and the provision of a new 500-bed Kumasi hospital highlight the physical expansion. Rural health centres have been constructed to bring health care to some densely populated rural areas.

There has been a large increase in the recruitment and training of all cadres of medical personnel. In the period immediately after the war only five new doctors were registered in Ghana each year and most of these were non-Ghanaians. Until 1960 scholarships for medical training amounted to no more than ten a year. The number is now 50. In 1961/62 114 new doctors were registered in Ghana, of whom 17 were Ghanaians.

There was no top-level nursing school till 1945, and the single one had achieved an annual output of only eight by 1950. In 1961/62 six schools of nursing turned out 265 new nurses and midwives. The increase in output of other paramedical personnel was also substantial, but even so did not fully meet requirements.

In spite of the increases in hospitals, health centres, doctors, nurses and other medical workers the health services have been unable to cope with the demands made on them. Out-patient attendances at Korle Bu and Kumasi alone have doubled in three years. This load is also reflected in the in-patient departments, and hospitals have been compelled to provide accommodation for twice the number of beds for which they were designed. This demand for health care is a good sign that the population will accept the health services and there need be no fear of providing facilities which will not be used to their full capacity. This could only happen if medical facilities were for some reason provided in the wrong place.

The most outstanding contribution to public health has come from the Medical Field Unit. This unit was formed to seek out and control trypanosomiasis and has been able to contain the disease. It has also helped in a massive vaccination programme and played a leading role in the control of epidemics of cerebro-spinal meningitis and the control of yaws. Now it is actively engaged in combating onchocerciasis. The leprosy and tuberculosis units have been operating for only compara-

tively short periods and it is still too early to assess their results. It is clear, however, that up till the present time the more glamorous but economically less fruitful curative services have received much more attention than the preventive and public health services.

• II.—THE PROGRAMME FOR 1963–1970

In the period covered by the plan Government intends to accord the health of the people a high order of priority. Quite apart from humanitarian reasons, capital devoted to the improvement of the health services is an economic investment, for a healthy population is much more productive than an unhealthy one. It is the ultimate intention to aim at the highest standards of health service and health care obtaining anywhere in the world. Immediately, however, the maximum possible allocation of £G31 million has been made for the extension of the medical services under this Seven-year Plan. Government will ensure that under the best available technical leadership wastage will be curtailed and that by the exercise of the greatest care in planning and construction of health facilities the Ministry of Health and its constituent departments will provide the people with the most useful and extensive service that can be procured for the money.

A programme of basic health improvement such as is outlined in this plan requires continuity in its administration in order to succeed. Experienced and authoritative professional guidance will be available to implement the Seven-year Plan. In the administration of the health services as in other spheres the greatest possible economy will be exercised to avoid wastage of manpower. It is not the intention of Government that the expansion of the health services should be determined solely by reference to economic considerations, but those in authority will be required to ensure that the generous and humanitarian plans of the state are executed to the benefit of as wide a section of the population as possible.

In this plan period the emphasis will be on:

- (1) Training and
- (2) Rural health.

(i) Training

The shortage of personnel at all levels has been a restricting influence on the expansion of health work in this country. If rapid progress is to be made then the workers must be trained. It is the intention to produce by 1970 enough personnel of all grades to make the service effective.

(ii) Rural Health

Not only was the emphasis in previous years on curative medicine but the medical service was almost entirely concentrated in towns and large villages. The rural population was left to a very large extent without adequate medical care. During the next seven years an extensive network of mobile and static health

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facilities will be made available to the rural population. It is intended that all medical workers trained in this period will have an orientation which will make it possible for them to make an effective contribution to rural health work. If success is achieved in the training programme and in the establishment of a sound rural health service, then this plan period will have gone a long way towards providing the basis for a first class health service in Ghana.

III.—PREVENTIVE MEDICINE

The major causes of morbidity and mortality among Ghanaians today are diseases which are communicable and preventable. Some of these are spread by contact, some by insects and others by carriers and still others through food and water. People are still suffering from malaria, tuberculosis, onchocerciasis and typhoid. These endemic diseases are amenable to control and can eventually be eradicated altogether. It is the intention of Government during the plan period to launch an all-out effort aimed at controlling them. Such control will produce a marked improvement in the energy and stamina of the people.

With the assistance of the World Health Organisation the pilot projects for the control of malaria will be continued and extended. These are based on vector control of the mosquitoes with residual insecticides and control of the transmission of malaria with medicated salt. Other projects in which the participation of the W.H.O. is assured are bilharzia and tuberculosis control. Assistance from the United Nations Children's Fund for the control of leprosy has been on a substantial scale, and very good results have already been achieved by the yaws campaign—a joint Ghana Government/W.H.O./UNICEF project. Allocations in this plan have been made to enable Ghana to make the maximum possible use of W.H.O. and UNICEF assistance in the control of these endemic diseases.

There is little doubt that the returns in terms of decreased morbidity and mortality and consequent increase in productivity that will accrue from investment in these programmes will be more substantial than could be achieved by any comparable expenditure on the curative services.

It must be stressed that preventive medicine is not solely or even mainly the domain of health workers. There must be a co-ordinated effort in which Central Government and local authorities, engineers, agriculturists, teachers and welfare officers all play a part. Guinea worm for instance is spread through contaminated water. The protection of the population lies in the provision of good water. Enteric disorders are spread through bad environmental conditions. Many agencies have to work together to achieve the desired improvement. At all levels co-ordinating committees will be formed to ensure that there is a proper appreciation of the task involved.

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Endemic diseases are mutually reinforcing. A body undermined by one disease is more likely than a healthy one to become a prey to another disease. Vulnerable groups such as children and pregnant and nursing mothers are the greatest sufferers. The mortality rate for children below the age of six is still too high. (This subject is discussed further in the section dealing with maternal and child health).

A total of £G4 million is being allocated for the control of endemic diseases. Of these malaria is to be given first priority.

IV.—REGIONAL HEALTH SERVICES

A comprehensive service such as is planned requires competent leadership. It is proposed to strengthen the regional health offices and delegate to them a large measure of authority. The Principal Medical Officers, who will be trained in public health, will be the heads of each regional service. Regular meetings of these Principal Medical Officers will be held and other steps taken by the Ministry headquarters to co-ordinate the work in the regions so as to ensure that they fit into the overall pattern.

The Regional Principal Medical Officer, who will be in charge of both curative and preventive health work, will have as his deputy a trained public health physician who will have direct responsibility for the rural health work. As many Regional Principal Medical Officers as possible will be trained in epidemiology and health statistics.

The rural health services are to be based on the health centres, of which there are 47 at present. During the plan period it is proposed to build more. (See Table 8.1.) These are not meant to become little hospitals. The doctors in charge will have a public health orientation and will operate as public health officers for the areas served by the health centres. They will concentrate on the prevention and control of endemic and epidemic diseases in the area, and the provision of a more adequate maternal and child care system. They will also assist both local authorities and Central Government officers in efforts to improve environmental sanitation. Health education of the public is discussed in a later section. The health centres will also provide a limited amount of curative service.

At present the control of some of the major endemic diseases—leprosy, tuberculosis, malaria—is entrusted to separate organizations, while the Medical Field Unit has extended its activities from trypanosomiasis to include, *inter alia*, yaws and onchocerciasis. Although a substantial measure of success has been achieved, this approach has outlived its usefulness. It is the aim to amalgamate all these services with health centres, maternity clinics, dispensaries and the projected health posts to form one rural health service. This service will have two arms: viz., the mobile units and the static centres.

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The mobile units will conduct special campaigns organized along the lines of the Field Unit teams. They will make the initial attacks on endemic diseases. Once the diseases have been brought under control surveillance and further control will devolve upon the static units.

The major activity of static units will be to keep the incidence and prevalence of major endemic diseases at the prescribed low levels at which they cease to be a major health hazard. They will have staff comprising health inspectors, vaccinators, public health and community health nurses, midwives and health education officers. This staff will provide consultant services for environmental sanitation.

TABLE 8.1
REGIONAL HEALTH SERVICES

	<i>Allocation 1963-1970 in £G'000</i>
Health Post	1,650
Health Centres	620
Improvements: Dressing Stations and Maternity Clinics ..	200
Maternity Clinics	500
	2,970
Urban Sanitation	1,500
Central Public Health Laboratory and Disease Intelligence Bureau	200
TRAINING ESTABLISHMENTS	
School of Hygiene, Accra	350
Rural Public Health Schools	400
Tamale School of Hygiene	80
Tamale Community Health Nursing School	60
	890
Regional Headquarters and Accommodation	175
	5,735

(i) Health Education

The health education unit of the ministry is to be strengthened and re-organised. Each region will have a regional health education officer and each health district will have its own district health education officer. The task of the health educator will be to explain to the population all the activities that will be undertaken by the ministry; to teach the population its role and to obtain its participation in the work.

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The educator will work closely with the field personnel of the Ministries of Agriculture, Education, Social Welfare and Local Authorities, and advise them on the medical aspects of their work.

(ii) Maternal and Child Welfare

Although there are no reliable statistics, it is known that at least 100 children out of every 1,000 die before they are one year old and that at least 250 out of 1,000 do not live to enjoy adult life. It is also known that this great wastage occurs in the years before a child goes to school and that endemic diseases and malnutrition are the principal causes. The maternal mortality rate is estimated at 17 per thousand live births. There is heavy mortality from anaemia and complications which could be prevented with proper ante-natal care. When losses from still-births are taken into consideration it becomes immediately clear that this is an area in which remedial action is urgently required, and in which spectacular results can be expected.

Each health centre and health post will have a maternity clinic. Many more such clinics will be established. Local authority clinics will be reconditioned and helped to improve their range and usefulness. Community health nurses will receive a course in elementary midwifery so that they can undertake some ante-natal work. Home visiting of the pregnant and newly delivered mother will be undertaken by staff of the health centres and health posts. Special prominence will be given to this aspect in the Northern and Upper Regions. Health and nutrition education officers will play a key role. W.H.O. and UNICEF have been assisting with maternal and child welfare work, and this assistance will continue.

The implementation of universal primary education provides a convenient focus for the organisation of child health systems. It is intended that the full range of medical services will be made available to the schools from the health centres and other establishments of the rural health service. The new polyclinics (urban health centres) and mobile consulting rooms will be used for a school health service in the large towns. The provision of an organized school health service also establishes a basis for informed health education of school children in a more practical way.

(iii) Urban Health

So far health services in the big towns have been partly under the control of urban medical officers of health and partly under the Central Government. This has not always proved satisfactory and urban health care has tended to suffer from lack of funds, shortage of personnel and inadequate control. It is intended that urban Medical Officers of Health shall become legally part of the Central Government medical service. In this way it will be possible to integrate the urban health services with those of the rest of the country and to achieve more effective control.

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(iv) Curative Functions of Static Health Units

Inevitably health centres, health posts, dressing stations and other static units will be called upon to provide curative facilities on a substantial scale, since the hospital services will still be inadequate in size and will physically remain out of reach of many for some time to come. Such curative service as is provided will be deliberately limited so as to leave the health staff free to undertake their primary task of disease prevention and control. An efficient reference procedure together with a well organised ambulance system will ensure the rapid transmission of cases from health units to hospitals.

Centres within the rural health services will be able to offer:

- (i) Simple first aid;
- (ii) treatment of a specific number of infections where health post personnel can be trained to make a diagnosis and administer specific treatment according to fixed schedules, e.g. malaria;
- (iii) treatment of simple conditions like boils and ulcers.

Centres with resident medical officers will be able to offer a wider range of services, and, as already stated, it will be made much easier to refer the more serious cases to hospitals with greater facilities.

Apart from the health centres mentioned above 150 health posts will be established, and dressing stations, more efficient than the majority of those in existence, will also be built and staffed.

(v) Other Functions

There is much work to be done in discovering the sick. During their campaigns against endemic and epidemic diseases the health units will report on any other sick people they find. These can be referred for treatment at an appropriate centre.

Planning of health services is made very difficult by lack of information. There are no accurate statistics on morbidity or mortality in Ghana. The extensive rural service will be able to assist in collecting data on diseases and causes of death. These figures will be collated and analysed in a central public health intelligence bureau, which will also be the principal agency for the registration of vital statistics. Teachers, local authority personnel and the officers of the rural health service will be used for collecting these figures.

For the development of all these services in the rural health system the amount of £G5·7 million will be made available during the plan period.

V.—THE HOSPITAL SERVICES

It is proposed to continue the programme of expanding hospital facilities and modernising old hospitals. (See Table 8.2.) Twenty-seven district hospitals which need basic facilities such as kitchens, laundries, X-rays and theatres will have these constructed during the plan period.

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New regional hospitals will be built at Tamale, Koforidua, Ho and Sunyani. All the normal specialist facilities will be available at these hospitals. A total of 1,500 beds will be added to existing hospital beds. By 1970 there will be one bed for every 1,000 of the population.

District hospitals will be more intimately connected with their regional hospitals. The system of reference to specialists and the arrangement of consultations with them will be improved. The director of each regional hospital will be a deputy of the regional Principal Medical Officer, and this will materially assist the development of an integrated health service. Six new district hospitals will be built and four more urban polyclinics (urban health centres) will be constructed. These polyclinics will help to decentralise out-patient work. Patients in urban areas will normally attend one of these clinics first and only the more serious cases will be referred to the hospitals; in this way the latter should become much less congested.

TABLE 8.2
FINANCIAL ALLOCATIONS

HOSPITALS	£G000
Korle Bu	2,080
Regional Hospitals	2,950
Regional Mental Hospitals	2,670
District Hospitals	1,050
Hospital Extensions and Modernisation	2,950
Equipment and Vehicles	1,000
	12,000
TRAINING ESTABLISHMENTS	
X-ray and Laboratory Technicians	105
Nursing Assistant Training Schools and Hostels	240
S.R.N. and Midwifery: Training Schools and Hostels	305
Midwifery and Nursing Assistant: Training Schools and Hostels	80
Extensions: Nursing Schools	95
Mental Nurses	85
Mental Nursing Assistant	120
	1,030
OTHER FACILITIES	
Offices and Stores	150
Urban Health Centres	200
Staff Accommodation	3,500
	3,850
MEDICAL SCHOOL	
Medical School	3,500
	20,380

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VI.—MENTAL HEALTH SERVICES

The country's only mental hospital in Accra is old-fashioned and grossly overcrowded. It is due for demolition. Five new mental hospitals will be built to provide 1,200 beds. In addition psychiatric units will be provided in the central hospitals. It is planned to provide adequate out-patient and follow-up treatment for as many mental patients as possible. The cadre of psychiatric social workers will be increased to ensure that those who have been afflicted with mental disorders are quickly reabsorbed into society. The training of mental nurses will be improved, and when the new mental hospitals have been established the facilities for training will be further increased.

VII.—DENTAL HEALTH SERVICES

A school dental service is the principal innovation envisaged during the next seven years. The recruitment of dental surgeons and the training of dental hygienists will be accelerated. A new school is to be established for dental hygienists. As soon as staff becomes available a series of school dental clinics will be opened. In the rural areas reliance will be placed mainly on mobile dental units. This service will be part of the overall school health services.

The preventive aspects of dental care will be emphasised. Each hospital will ultimately have its own dental department.

VIII.—TRAINING

All the training programmes of the Ministry are to be extended.

(i) *Nursing*

A new grade of nursing assistant is to be established. These assistants will be recruited from middle or continuing school leavers and given two years' training in practical nursing.

(ii) *Pharmacists*

The School of Pharmacy already has the capacity to produce all the pharmacists we require, and steps will be taken to see that the school receives an adequate number of students. The newly established grade of dispensing assistant has proved a success and the numbers will be increased.

(iii) *Laboratory technicians and technologists*

For the immediate future candidates with elementary education will be trained as laboratory assistants, leaving those with the school certificate to train as technologists.

(iv) *Public health and community health nurses*

These programmes will continue to expand and special efforts will be made to encourage candidates to enter these grades.

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(v) *Doctors*

With the increase in medical scholarships to 50 a year the placing of students in world-renowned universities became a problem. Cocoa Marketing Board and private scholars have been trained in West Germany and other countries in Europe. In the last couple of years an increasing number of students have gone to Eastern European countries. Differences in orientation, approach, and even standards are bound to be reflected in the quality of medical care when all these students graduate and return home.

Ghana has therefore decided to establish her own medical school. The school will be designed initially to turn out 50 graduates a year. In October, 1962, 51 premedical students were enrolled at the University of Ghana. It is planned to provide facilities for them to start their medical course in October, 1964.

When the school is functioning fully it will be empowered to provide a screening system for all doctors not trained in Ghana who wish to practise here before they can be registered.

The sum of £G3.5 million has been allocated for the medical school project.

IX.—TARGETS

The aim of medical development under this Seven-year Plan is to achieve the following ratios by 1970 :—

- 1 physician per 10,000 population
- 1 nurse per 5,000 population (this includes public health centres)
- 1 technician (laboratory, x-ray technicians) per 5,000 population.
- 1 sanitarian (health inspector) per 15,000 population.
- 1 health auxiliary (community health nurses, vaccinators, dressing station attendants) per 1,000 population.

X.—NATIONAL HEALTH SERVICE

It is the declared policy of the Government eventually to provide free health facilities for the entire population of Ghana. To provide an efficient national health service certain basic pre-requisites are essential, namely the provision of adequate physical medical facilities and manpower. At present these still fall far short of requirements. It will not therefore be possible to achieve a free medical service during the present plan period, but it is intended to provide those essential requirements which will lay the foundation for such a service.

It is the aim during the period to inaugurate a partial national health service which will provide free treatment for paupers, for all communicable diseases and accidents, and for the most vulnerable elements of the population (mothers and children up to school leaving age). It is also proposed that all diagnostic services should be free.

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XI.—SUMMARY OF FINANCIAL ALLOCATIONS

The composition of the expenditure on the medical services envisaged in the next seven years is as follows:

	£G
Disease Control and Eradication	4,000,000
Regional Health Services	5,735,000
Hospital Services	16,880,000
Medical School	3,500,000
Dental Health Services	805,000
Miscellaneous	140,000
	£G31,060,000

Appendix A

HOSPITAL SERVICES

8.A

1. Korle Bu

	£G
Ear, Throat and Eyes Hospital	580,000
Orthopaedic and Rehabilitation Centre	1,050,000
Radiotherapy Centre	125,000
Medical Stores Extensions	40,000
Library and Auditorium	95,000
Laboratory and Blood Bank	160,000
Resident Doctors' Flats	30,000
	£G2,080,000

2. Regional Mental Hospitals

	£G
Accra—300 beds	630,000
Kumasi/Nsuta/Mampong	580,000
Tamale	660,000
Ho	550,000
Ankaful Extensions—300 beds	250,000
	£G2,670,000

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3. Regional Hospitals

	£G
Tamale—300 beds and Regional Laboratory	850,000
Koforidua—200 beds	300,000
Ho—200 beds and Regional Laboratory	600,000
Sunyani—200 beds	500,000
Total	£G2,250,000

4. District Hospitals

	£G
Denu	150,000
Wiaso	150,000
Half Assini	150,000
Bekwai	200,000
Nsawam	200,000
Odumase	200,000
Total	£G1,050,000

5. Hospital Extensions and Modernisation

	£G
Tema, up to 300 beds	425,000
Mampong Ashanti, up to 120 beds	148,500
Tetteh Quashie Memorial Hospital	153,000
Kumasi for another 200 beds, etc.	637,500
Cape Coast	95,400
Korle Bu	425,000
Ridge Hospital, Accra	63,750
Bawku	17,450
Jirapa	19,550
Kete Krachi	56,100
Kibi	4,250
Hohoe	40,800
Akim Oda	25,925
Winneba	41,650
Saltpond	33,150
Sekondi	331,150
Takoradi	5,950
Axim	22,100

HEALTH

	£G
Bolgatanga Observation Ward and Laboratory	59,500
Tarkwa	58,620
Dunkwa	30,600
Salaga	28,900
Wa	26,350
Lawra	80,750
Yendi	51,850
Navrongo	32,450
Bole Health Centre, Miscellaneous	42,500
Total	£G2,966,075

6. Training Schools and Hostels

	£G
X-Ray and Laboratory Training School and Hostel, Accra	35,000
X-Ray and Laboratory Training School and Hostel, Kumasi	35,000
X-Ray and Laboratory Training School and Hostel, Tamale	35,000
Nurses Training School and Hostel for Nursing Assistants, Yendi	40,000
Nurses Training School and Hostel for Nursing Assistants, Oda	40,000
Nurses Training School and Hostel for Nursing Assistants, Sunyani	40,000
Nurses Training School and Hostel for Nursing Assistants, Nsawam	40,000
Nurses Training School and Hostel for Nursing Assistants, Half Assini	40,000
Nurses Training School and Hostel for Nursing Assistants, Odumase	40,000
Nurses Training School and Hostel for S.R.N. and Midwifery, Tamale	175,000
Nurses Training School and Hostel for S.R.N. and Midwifery, Sekondi	130,000
Nurses Training School and Hostel for Midwifery and Nursing Assistants, Tema	80,000
Extensions to existing Training School, Cape Coast	50,000
Extensions to existing Training School, Kumasi	45,000
Extensions to existing Training School—Mental Nurses, Accra	60,000
Extensions to existing Training School—Mental Nurses, Ankaful	25,000
Extensions to existing Training School—Nursing Assistants (Mental), Ho	40,000
Extensions to existing Training School—Nursing Assistants (Mental), Nsuta	40,000
Extensions to existing Training School—Nursing Assistants (Mental), Tamale	40,000
Total	£G1,030,000

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CHAPTER 9

HOUSING

I.—HOUSING IN THE NATIONAL ECONOMY

In many countries in the world housing constitutes the greatest single national asset. The demand of housing on available investment resources is correspondingly great. The large amounts that are everywhere invested in the provision of housing make the construction industry which produces this housing and other buildings one of the largest industries both from the point of view of its output and from the point of view of the numbers of working people it employs. But the cost of a housing programme cannot be financed from within the building industry itself; investment for housing must come from the savings which the community makes out of its incomes generated in the productive sectors of the economy. Therefore, while housing could add greatly to employment and incomes a national housing policy must be closely related to the level of development of the productive sectors of the economy and observe a rational balance in the allocation of investment between housing and the more directly productive investments.

II.—URBANISATION AND HOUSING IN GHANA

The rate of urbanisation in Ghana, as indeed in many other developing countries, has been very rapid in the post-war period. The improvement of sanitation and other health facilities has been most rapid in the urban areas. Hence mortality rates have fallen farthest in the towns, with a consequent increase in the natural rate of growth of the urban populations. There has also been a massive drift of population into the towns both from villages within Ghana and from neighbouring countries. This urbanisation has put great pressure on available housing in urban areas. Between 1948 and 1960 the average occupancy per house in the larger cities increased by about 30 per cent to 19·3 persons per house. In Accra one-third of the people were living at more than 20 persons per house and more than 2·5 persons per room. In the medium-sized towns of 10,000 to 50,000 population, which are expected to show an even more rapid rate of population increase than the largest cities in the coming years, the present housing occupancy is around 13 persons per house.

Urbanisation increases the cost of housing any given number of people. Apart from the higher standards required in the house structures themselves in the urban areas as compared to rural areas, the cost of ancillary services and other facilities also tends to be very much higher. Thus it is estimated that where it costs £G110 *per capita* to provide a house for each city dweller it costs £G70 to house every person in a medium-sized town and £G50 to house an average person in a rural area. Thus

with the urban population of Ghana expected to increase by about 600,000 persons during the course of the Seven-year Plan a national housing programme to provide adequately for housing needs is going to be quite expensive. The Government's social policy also requires that a start be made during this plan period on stemming the growth of slums in urban areas, especially in the major cities.

The growth of population, traffic and general economic activity in the urban areas has pointed up the importance of effective town planning. Already the central areas of the larger cities are in need of redevelopment and the arrangements made for the movement of men and goods have proved inadequate. New traffic arteries have to be developed and more forward-looking conceptions are being worked out for the use of land in these cities. Modern concepts of regional planning are being applied to the Accra-Tema area which will continue to require special attention both as the seat of Government and as a major centre of industry.

At the same time action must be taken now to forestall the growth in the medium-sized towns of similar situations of imbalance. The Town Planning Division is already preparing schemes for many of these towns. Their implementation, and especially the reservation at an early date of adequate land for public purposes—roads, markets, schools, drainage—should enable these towns to avoid the worst aspects of the difficulties of the large cities.

III.—THE ECONOMIC AND SOCIAL IMPORTANCE OF HOUSING

In embarking on a major programme of development in industry, in agriculture and other sectors of the economy Ghana must rely on being able to secure a high level of productivity from the working force. The provision of adequate housing both as to the physical properties of the housing and as to its location in relation to the place of work is an important element in the productivity of labour. Thus Government's housing policy under this Seven-year Plan aims at ensuring that in those locations where new economic activities are expected to develop and bring together large numbers of working people, adequate housing will be available to meet the requirements of the working force. The housing programme outlined below therefore places its main emphasis on the provision of housing in those urban areas where the growth in employed labour force is expected to be greatest in the next seven years.

The greatest threat posed by an insufficiency of housing in urban areas is to the stability of family life which in turn could undermine the whole social fabric. It is Government's intention to encourage a rate of housing construction that will preserve the cohesion of family life in the urban areas. In this regard Government recognizes the importance of preserving the community pattern in the development of urban areas as has been demonstrated in the development of Tema; a city divided

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up into fairly self-contained communities can develop a community life in which the individual family, especially if it is an immigrant family, can find a satisfactory social position.

IV.—PREVIOUS HOUSING DEVELOPMENT IN GHANA

Government's housing policy in the past has been mostly implemented through the Ghana Housing Corporation, the First Ghana Building Society, the Roof Loans Scheme of the Ministry of Communications and Works, and the direct provision of Government housing to public officers. Up till the middle of 1962 the Ghana Housing Corporation had constructed over 2,000 units of housing in urban areas in all the regions of Ghana and also taken over the administration of nearly 14,000 houses previously built by Government. The total value of the buildings under its control was £G10·5 million and its monthly rental income of over £G40,000 should enable the Corporation henceforth to finance a sizeable volume of house-building from its own resources. The First Ghana Building Society within six years of its formation has granted housing loans up to a total value of £G1 million to 600 beneficiaries. These loans have been financed not only by the investment of £G500,000 that Government has made in the Building Society but also by the savings that individual Ghanaians have contributed to the society and which at the end of the 1961-62 financial year amount to nearly another £G500,000. The Government's Roof Loans Scheme has up to the end of 1961-62 extended loans amounting to almost £G1·5 million in the rural areas which have called forth matching investments by individual villagers of many times that figure and thereby helped to build over 11,000 houses of improved quality in the villages. Although in recent years the supply of Government housing for members of the public service has tended to fall rather far behind the demand for such housing owing to a slowing down of the rate of construction, and even more to the rapid increase in the number of public servants to be provided for, it still remains a creditable fact that most of the housing for middle and upper income groups in Ghana has been provided by Government.

V.—HOUSING POLICY 1963-70

Eventually the economy of Ghana must be able to assure adequate housing for each family in the country as a matter of right. Along with the right of children to education and the right of adults to a chance for gainful employment, the Government recognizes access to adequate housing as one of the fundamental privileges of the people of Ghana. Until the economy is able to assure the implementation of this right, however, a more limited housing policy should be designed aimed at relieving the housing problem at the points where it is most acute. Under this Seven-year Plan housing in the urban areas for the expected increase in the population of those areas is recognized as the most pressing need.

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The population of the smaller towns and of the villages of Ghana is expected to increase by nearly 1·2 million in the coming seven years. At the existing rates of housing occupancy this requires the construction of about 170,000 more housing units in the rural areas. However, these areas have been traditionally able to provide adequate living space for themselves through local savings and through construction by owner-occupiers. The assistance of the Central Government to rural housing during the plan period will therefore consist mostly of the further extension of the Roof Loans Scheme and of the development of a building materials industry which should be able to assure the rural communities access to building materials at reasonable prices. Work is already in hand to produce workable techniques in the design of houses, in methods of construction and in the use of local building materials. The Ministry will propagate those techniques which are found to be most successful through an extensive advisory service. If these objectives can be achieved the standard of rural housing can be improved by an appreciable margin during the next few years through the local effort of the rural communities in the provision of their own housing. Government intends to make an early start with the exploitation of limestone deposits in order to provide cheap building materials for rural house-builders, and also to provide lumber at prices considerably lower than what they now have to pay.

It is estimated that in order to provide for the expected increase in urban population during this plan period a total of 25,000 new dwelling units should be constructed in the city areas of Accra-Tema, Kumasi and Sekondi-Takoradi and another 35,000 new units in the other towns and municipalities. This housing programme is expected to cost a minimum of £G44·5 million of which £G31·2 million will be required for strictly commercial housing and £G13·3 million for low income housing. It will be the function of Government housing policy during the plan period to ensure that, both from its own resources and from the resources of the individual house-builder, an adequate flow of finance is available to construct the requisite number of houses.

The rapid inflow of rural people into urban areas since the end of the second world war has resulted in the creation of a number of satellite towns and villages around the larger cities and also to the increased over-crowding of slum areas within those cities. Hitherto municipal policy has not adopted a realistic approach to the reception of these immigrant workers who constitute a very important element in the total labour supply on the basis of which the economies of the cities have expanded. The result is that on the one hand these immigrants have provided themselves with what housing they could in the middle of the cities in defiance of building and other regulations of the municipal authorities, and on the other hand, the satellite towns and villages which they have created have grown up without adequate planning or sanitation. It is proposed that under this plan a definite policy will be evolved

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for the development of sub-urban towns and villages as initial reception centres for immigrant labour in the larger cities. Minimum standards of housing will be prescribed based on realistic economic considerations. But in order to remove the threat to public health that exists in many of these communities at present the most important requirements are adequate sanitation, controlled layout and water supplies. It is therefore intended that, partly using the constructional facilities of the Workers Brigade, a number of planned sub-urban communities will be prepared with roads, drainage and water supplies provided by Government. When such facilities are constructed it can be expected that the immigrant worker will be able to build for himself housing to suit his needs. At the same time the provision of facilities by Government will enable Government to exercise some control over the standard and disposition of houses in these communities. As has been done under the Roof Loans Scheme, standardized building plans and construction methods will be evolved by the housing authorities and given or taught to the immigrant workers for construction of their own houses.

The most ambitious project in house building so far undertaken by the Government has been in the construction of Tema Township. In the last seven years £G5·0 million have been spent on the provision of housing and related facilities for Tema. With the further development of Tema into a major industrial and transportation centre it is estimated that in the coming seven years twenty thousand new housing units will be required in Tema alone. If these needs are to be met then it will be necessary for the Government's efforts in providing housing in Tema to be supplemented by private efforts and by the efforts of the industrial establishments that will grow up in Tema. The development of Tema on the basis of a number of self-contained community units will be continued. More new communities will be developed in which the Government's investment will consist of providing the basic facilities of roads, drainage, water and electrical connections plus the communal facilities, while private individuals or corporate bodies construct the actual housing under the normal building regulations of the municipal authority. It is intended to initiate the first experiments in this policy in 1963 and, based on the results, this co-operative effort of Government and private capital in the provision of housing at Tema will be extended in the course of the plan period. Suitable arrangements will be made regarding rents for the lease of government-built houses and for the recovery of Government's investments in essential facilities from private house builders in Tema on the same basis as is done in other municipal areas.

VI.—FINANCING OF THE HOUSING PROGRAMME

It is intended that private savings should make the maximum possible contribution to the implementation of the housing policy. Government intends to facilitate this private participation by making a number of financial arrangements conducive to increased private savings and investment in housing.

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Hitherto the private house owner in Ghana has generally had to save the whole amount required for his investment first and then build afterwards. The main objective of the financial arrangements to be instituted in the coming years will be to make it possible for the individual's savings to be supplemented so that he can begin to build as soon as he has accumulated a reasonable proportion of the cost of the house. He can then save the rest of the cost of the building afterwards by making payments towards these savings while enjoying the use of the asset. This would bring the small Ghanaian builder to a position more nearly equivalent to the position of the private home owner in most other countries.

The institution of mortgage and loan facilities on a large scale pre-supposes the existence of savings within the community which can be channelled through these mortgage or loan organizations to the private home owner. In most countries the banking system, insurance and pensions funds, savings and loans associations and such other bodies are by far the greatest sources of the savings which are channelled into house building. In Ghana hitherto the contribution of such sources of funds to the provision of housing has been quite negligible. The first target of the Government's efforts in arranging to make more funds available for housing will therefore be to stimulate the flow of loanable funds from such institutions into the house building market. First of all an assessment will be made during 1963 of the total resources likely to be available from all such sources for the financing of house building.

The most effective means available to any Government in drawing out loanable funds from such institutions is the method of guaranteeing loans by such bodies either directly or through a financial intermediary. There already exist three major house building agencies which should be put in the position of being able to borrow from holders of guarantees. The Accra Tema Development Corporation, Ghana Housing Corporation and the First Ghana Building Society will all be developed to a status where banks, insurance companies and pension funds are able to lend to them. The experience of most countries suggests that Government guarantees to such bodies are the cheapest means of stimulating house building since in general most people who borrow from such agencies will pay back their loans if the agencies themselves are well organised to make and collect such loans. It is this latter aspect, the effectiveness of these bodies in granting loans and in collecting loan and mortgage payments, that is the greatest weakness of the system at present. When this has been corrected it will be expected that loanable funds will flow into these bodies in the large amounts needed for the housing programme.

To judge by the numbers of serious enquiries that have already been examined by the Ministry of Works, the Ministry of Finance and the Office of the Planning Commission, foreign sources of capital can be used for financing housing construction

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in Ghana on a sizeable scale. It is intended to follow up these enquiries with the view of arranging either for the potential foreign lenders to lend directly to individual builders in Ghana with the support of the Government of Ghana, or to lend through the various home building agencies. Since the financing of real estate cannot yield quick returns and the investment is less transferable than most other sorts of investment, some additional protection may be demanded by these potential foreign lenders. Government will explore the possibility of getting the Governments of the countries from which the capital is derived to add their guarantees to those of the Government of Ghana in order to facilitate the flow of such loan funds into home construction in Ghana.

Under the Roof Loans Scheme and other systems of selective help to rural housing construction a great deal of private investment in home building has been stimulated by relatively small outlays of Government money. The existing scheme will be expanded and variations of it suitable for building in the urban areas will be considered.

Government has already invested £G5·0 million in housing under the Tema Corporation, £G2·8 million under the Housing Corporation, and £G2·2 million under the First Ghana Building Society and the Roof Loans Scheme. On the basis of repayment over periods of 15 to 20 years including a reasonable element of interest, Government ought to be recovering 8-10 per cent of these investments every year by way of amortisation. This would imply that £G900,000 per annum could be derived from the turnover of existing investment by Government in housing. Steps will be taken to ensure that this return is secured in order that more housing can be provided for those members of the community who have not hitherto enjoyed the help of the state in obtaining their housing. The existing situation where there is the tendency for some of the people enjoying these facilities not to make the payments expected of them amounts to a position where a small section of the community enjoys the benefits of the use of money provided by the whole community without accepting the responsibility of enabling other members of the community to enjoy the same privilege. Both on the grounds of social justice and for the purpose of making these agencies commercially credit-worthy therefore their administrations to some extent has been strengthened but more has to be done in order to enable them to finance a sizeable proportion of the total investment in housing required in the coming years out of their own internal resources and out of the loans which they can independently command.

In many countries industrial and agricultural enterprises play a major part in the provision of housing for their workers. Especially where, as is proposed in Ghana, systems of bonuses and other incentive payments are an important feature of the wage structure, the use of profits and other resources of productive enterprises in the provision of housing contributes a major share to the total investment in

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housing. In the case of Tema for instance, large industrial enterprises are being set up employing thousands of working men who up till now have been housed entirely by Government. It is proposed to obtain from the users of such labour a sizeable contribution towards the provision of their housing. This may be done by two methods. In some cases the enterprises may be able themselves to finance the construction of housing for their workers. In other cases these enterprises can place their access to loan capital at the disposal of the working people by helping them or some intermediary organisations to borrow for the purpose of house building. Especially now that most businesses in Ghana no longer need to construct their own roads, water or electricity supplies, there should be room within the financial structure of many productive enterprises for the provision of housing and other facilities for the benefit of their workers.

The existence of a network of financial institutions is necessary to stimulate the private savings which will go into building and more directly productive investments. Proposals for assisting the development of an adequate financial structure for Ghana are outlined in Chapter 13 below. Building Societies, savings co-operatives and other such organisations for individual savings should be developed energetically. Some local authorities are also capable of making a significant contribution to the financing of house building in Ghana. These will be encouraged through financial and technical assistance by the central Government to implement their own local building programmes.

In addition to the financing that will be available from the returns on its existing investment in housing Government intends to provide each year during the plan period in average £G600,000 for the construction of housing under the direct control of Government; £G1·8 million for the housing programmes of the Accra Tema Development Corporation and the Ghana Housing Corporation and £G500,000 for the Loans Scheme. This will amount to a total of £G20·3 million over the seven-year period. With the addition of the loans that building agencies can raise and of private investment in housing by individual Ghanaians and by business organisations the total housing supply needed to accommodate the expected increase in the urban population should be amply provided for. It is expected and it would be of some advantage that the build-up of the volume of housing construction both in the Government and the private sector should be gradual in the earlier years of the plan period. As the period opens the flow of savings into the housing sector is not well organized. The import content of housing is very high and will remain so until a domestic building materials industry has been developed. Methods of construction are still relatively backward especially from the point of view of the planning of construction work and the use of prefabrication, standardisation and other modern methods of reducing costs of construction. Although the construction industry has enjoyed a great boom in the second half of the 1950s, the production of skilled

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workmen, especially in the overseer class, has lagged behind and has contributed to the inflation in the costs of building in Ghana. A too rapid revival of the industry will produce similar results until there has been time to step up the rate of output of skilled workers from the educational system as proposed in a previous section. In a number of areas also the supply of infrastructure especially drainage, water and electricity has not been able to keep up with the development of housing. For all these reasons the volume of building that can be economically undertaken in the earlier years of the plan period will remain relatively small. In the later years however, it should be hoped that many of these obstacles will have been removed. Especially the opportunity should be taken by planning and research in the earlier part of the plan period to bring down the cost of workers' houses to the level of around £G350 per unit which is commonly realised in other parts of Africa where the rationalisation of building and the development of a domestic building materials industry have been carried to an adequate degree.

VII.—OTHER CONTRIBUTIONS OF GOVERNMENT

(i) Public Facilities

The quality of housing depends as much upon the availability of facilities such as water, drainage, streets, electrical connections and community facilities as on the physical characteristics of the structure itself. The Government's programme in the construction of such facilities is outlined in Chapters 6 and 8. Hitherto home builders in urban areas have not always been able to count on the availability of the most basic services like water, streets and electricity. With the programme of construction of infrastructure facilities envisaged in this plan it is hoped at least to be able to catch up with existing demand and to assure to house builders the availability of these essential services in all urban areas.

On the other hand methods must be found for obtaining from the owners and occupiers of urban housing a contribution to the construction of roads, drainage and public lighting. Some municipal areas have been able to make a major local contribution towards the provision of these facilities. Others however are very far from being able to make the contribution that could reasonably be expected of them. The administration of municipal finances requires a thorough overhaul in order to enable the urban areas to assist the Central Government in the task of providing essential services.

A particularly important element in municipal service is public transport. It cannot now be said that the system of public transport in any of the urban areas of Ghana is adequate for the rapid and comfortable movement of working people. The municipal transport authority will be re-organised and supplied with the means to assure provision of adequate municipal transport services.

It is also the intention of the Government to ensure that an adequate supply of land with a firm title is available to house builders at reasonable cost.

(ii) Engineering and Architecture

In relation to the average levels of production and income in Ghana the cost of housing is still very high. Where in the most advanced countries a man's house costs the equivalent of three or four times his yearly income, in Ghana housing costs amount to between six and eight times the incomes of most occupiers. Thus financially housing is put out of the reach of the majority of the working population who in other countries would be expected to own their housing. Even so the actual physical standard of housing in Ghana cannot be considered to be very high. A great deal of work in engineering and architecture therefore requires to be done to bring the cost of housing within the means of the average working man while at the same time improving the physical standards of housing.

The cost of housing is made up of the cost of materials used in building and the cost of the actual process of construction. Studies are already under way into methods of reducing the cost of building materials and especially the proportion of these costs that leak out of Ghana in the form of payments for imported building materials. But the building industry must first evolve practical methods of utilising local building materials and of economising on the use of all building materials through improvements in the architectural and engineering design of houses. It is proposed to examine as a matter of high priority how the construction industry can be made more efficient, with special reference to the building of houses.

Unless this research into cheaper building through improved designing and more efficient methods of construction and into the greater use of local building materials succeeds the cost of an adequate building programme to meet the social objectives of the Government will stay beyond the means of the country's economy. The Ministry of Communications and Works will therefore treat this assignment as one of the highest priority.

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CHAPTER 10

THE VOLTA RIVER PROJECT

GENERAL MAGNITUDE OF INITIAL INVESTMENT

The Volta River development is the biggest single step that has been taken in the economic and industrial development of Ghana. It involves an investment of £70 million in the Hydro Project. £58·6 million in the Aluminium Smelter Project and a projected £7 million in ancillary development. Although these cover not only infrastructure development but also industrial enterprises in other sectors of the economy they have been taken together because they represent the most significant group of investments which will take place in Ghana during the present plan period.

About £12 million of the total expenditure will have been incurred before the start of the plan period, leaving a total investment of £100 million to be incurred during the plan period. The first and foremost among the developments which have already started is the harnessing of the river and its tributaries and the construction of the dam and the power station. Work on other aspects of the project has also been started. Among these are studies on river navigation, measures for the resettlement of 70,000 people whose homes will be flooded by the Volta Lake, creation of new settlements, provision of alternative areas for agriculture and of other means of livelihood for them, the development of fisheries, and a certain amount of road transportation for linking the communities.

THE HYDRO-ELECTRIC PROJECT

The Volta Project ranks with the largest undertakings of this type so far developed in Africa. The rockfill dam rising about 244 feet above river level (370 feet above the foundations) will have a crest length of 2,100 feet. The reservoir, wholly within Ghana, will be 250 miles in length and have a surface area of 3,275 square miles. Of the total reservoir volume of 120 million acre feet, 50 million-acre feet will be useful storage. The power station is designed for an ultimate capacity of 883 MW (Six 147·2 MW units). Four of the six units, equivalent to 589 MW, will be installed initially. Other major features will be a spillway having a capacity for a flood discharge of 1·2 million cubic feet per second, and an auxiliary rockfill saddle dam 1,100 feet long and 120 feet high.

The transmission system of 165 KV, will consist of two double circuit lines running 44 miles from Akosombo to the smelter at Tema and one double circuit

THE VOLTA RIVER PROJECT

ring 400 miles long serving the whole of the Southern part of Ghana. The latter line will supply Kumasi, Takoradi, the mining areas and other major centres of economic activity. Studies are already far advanced for the possible extension of the transmission system to the Northern and Upper Regions and the South Eastern corner of Ghana. Possibilities also exist for the export of power to neighbouring countries.

The estimated initial cost of the hydro project covering the installation of four generator units and including interest during construction on borrowed capital, contingencies and an initial working capital allocation, will be distributed as follows:—

ESTIMATED COST OF THE PROJECT

£G million

	<i>Local Currency</i>	<i>Foreign Exchange</i>	<i>Total</i>
Reservoir clearance, resettlement site preparation, camp and access roads	10·2	—	10·2
Civil works (main and saddle dams, intake structure, power station building and steel penstocks) ..	8·7	13·1	21·8
Power plant, equipment and installation (4 units)	1·2	6·6	7·8
Transmission lines and sub-stations	3·2	8·5	11·7
Engineering (design and supervision)	1·4	2·0	3·4
Contingencies	2·4	4·3	6·7
Working capital	0·5	—	0·5
Interest during construction	—	5·9	5·9
Totals	27·6	40·4	70·0

The foreign exchange component will thus comprise 60 per cent of the total cost of the project.

The Government is to invest up to £35 million in the project and to obtain an additional £35 million in loans from the following sources:—

<i>Lending Agency</i>	<i>£G'000</i>
IBRD, 5½%, 25 years	16,785
United States Agency for International Development, 3½%, 25 years	9,643
Export-Import Bank, 5½%, 25 years	3,572
United Kingdom Exports Credits Guarantee Department, 6%, 25 years	5,000
Total	35,000

THE VOLTA RIVER PROJECT

The distribution of expenditures from 1961 to 1967 between Government and foreign sources was originally planned as follows:—

						£G million		
<i>Year</i>						<i>Ghana Government</i>	<i>Foreign Sources</i>	<i>Total</i>
1961	..	..	..	..	..	4·422	2·326	6·748
1962	..	..	..	..	..	6·288	3·773	10·061
1963	..	..	..	..	..	7·408	7·660	15·068
1964	..	..	..	..	..	5·767	6·000	11·767
1965	..	..	..	..	..	2·674	4·403	7·077
1966	..	..	..	..	..	1·052	1·895	2·947
1967	..	..	..	..	..	—	0·176	0·176
Adjustments and Unallocated					..	7·389	8·767	16·156
Total					..	35·000	35·000	70·000

POWER MARKET

The market to be served by the project will result from:—

- (a) the demand of the £G58·6 million aluminium smelter to be established by Volta Aluminium Company, a private enterprise corporation sponsored by Kaiser Aluminium Company and Reynolds Metals and operating mainly on capital borrowed from the United States Government;
- (b) the general consumer demand in the southern area of Ghana which includes Accra, Tema, Takoradi, Kumasi and other towns and villages to be served by the transmission network; and
- (c) the demand of the mines.

The Ghana Government has negotiated an agreement with the Volta Aluminium Company (VALCO) which guarantees that VALCO will buy a steady supply of a large portion of the initial power as soon as it is completed.

The general consumer demand for commercial, industrial, domestic and miscellaneous purposes throughout Ghana will constitute the next largest market for Volta Power. It has been estimated that in the period 1965–67 the rate of load growth in the general consumer market, excluding the mines, will be around 15 per cent and thereafter 11 per cent per annum up to 1977. The load of the towns and villages of southern Ghana is expected to be about 85 megawatts (including transmission losses) in 1966 when the project is scheduled to come into operation and then grow to 266 megawatts in 1976. These are fairly high rates of growth. On the other hand general economic indicators would tend to support these estimates. Among these are the relatively high *per capita* income—currently about £G76 per year—and the growth of power-using industrial enterprises in southern Ghana.

THE VOLTA RIVER PROJECT

It is also expected that the mining load, which at present is privately produced, would be transferred from private generation to the public system. It is estimated that supplies to the mines would be about 11 megawatts in 1966 increasing to 32 megawatts in 1975.

The combined demand on the project, taking into account transmission losses, is expected to increase from 265 megawatts in 1967 to 349 megawatts in 1969. Should VALCO exercise the option of buying the entire capacity reserved for the smelter by 1969 rather than in 1972, the combined demand should increase from 265 megawatts in 1967 to 460 megawatts in 1969.

The following Tables give the power station capacities and estimated maximum demand for the years 1966-76 inclusive. Table 10.1 (a) shows the power distribution if the smelter demand is increased in April, 1972, and Table 10.1 (b) shows the power distribution if VALCO exercises its option to increase the smelter demand by April, 1969.

TABLE 10.1

VOLTA RIVER PROJECT: CAPACITY AND POWER SUPPLIES, 1966-76

10.1 (a)—*With smelter in full production in 1972*

Year	<i>Installed Capacity</i>	<i>Total Power Generated</i>	<i>Smelter Demand</i>	<i>Ghana Load</i>	<i>Reserve Power</i>	<i>Spare Capacity</i>
	(Megawatts including Transmission Losses)					
1966	589	232	—	85	147	357
1967	589	412	166	99	147	177
1968	589	481	223	111	147	108
1969	589	496	223	126	147	93
1970	589	510	223	140	147	79
1971	589	526	223	156	147	63
1972	736	656	334	175	147	80
1973	736	676	334	195	147	60
1974	736	698	334	217	147	38
1975	736	721	334	240	147	15
1976	883	747	334	266	147	136

THE VOLTA RIVER PROJECT

10.1 (b)—*With smelter in full production in 1969*

Year	<i>Total</i>						
	<i>Installed Capacity</i>	<i>Power Generated</i>	<i>Smelter Demand</i>	<i>Ghana Load</i>	<i>Reserve Power</i>	<i>Spare Capacity</i>	
	(Megawatts including Transmission Losses)						
1966	589	232	—	85	147	357	
1967	589	412	166	99	147	177	
1968	589	481	223	111	147	108	
1969	736	607	334	126	147	129	
1970	736	621	334	140	147	115	
1971	736	637	334	156	147	99	
1972	736	656	334	175	147	80	
1973	736	676	334	195	147	60	
1974	736	698	334	217	147	38	
1975	736	721	334	240	147	15	
1976	883	747	334	266	147	136	

The power rate to be charged to the smelter has been established at 2.625 mills per kWh for 30 years renewable for another 20 years. On the basis of the commitments so far taken by VALCO, revenues from sales to the smelter will grow from £G542,000 in the first year after delivery of power to £G2,464,000 in the seventh year.

Power rates for general consumer demand and for the mines will be established later. But on the assumption that the average revenue from sales to the general consumer would amount to about 15 mills (1.29d.) and that to the mines about 10 mills (0.86d.), non-smelter revenues would be greater in all years than smelter revenues. The growth of the non-smelter demand is therefore very important for the success of the project.

Table 10.2 gives the forecast summary income statements from 1966–76 from which it is shown that income from power sales is expected to increase steadily as the smelter and non-smelter revenues develop.

By the nature of the project Ghana cannot expect to earn a quick return on its investment in the Volta project. But eventually this will be a profitable investment, the return on Ghana's equity being estimated to amount to about 3.5 per cent by 1971 and to increase to around 10 per cent by 1975.

The Volta project has been designed in such a way as to be in itself a commercially profitable undertaking which is expected eventually to be able not only to repay the £G70 million invested in it but also to provide financing for the other power developments already planned—both on the Volta river itself and at other potential hydro sites in Ghana. Its indirect benefits of course will be even greater. The smelter project which is directly associated with it will, by the end of this plan period, be

THE VOLTA RIVER PROJECT

already exporting some 90,000 tons of aluminium a year worth more than £G16 million as ingots at 1962 prices. Since it is hoped at an early date to go into the fabrication of aluminium products the gross prospective earnings of foreign exchange will be even greater. As outlined in a previous section of this document it is also intended to develop alumina production based on Ghanaian bauxite to feed into the smelter. The capital investment and employment opportunities entailed in the construction and operation of the whole Volta complex of industries will be very large indeed.

But in addition the Volta project will create a situation of energy surplus which should prove a great attraction to industry and help to speed up the rate at which economic modernisation relieves the working man in Ghana of some of the less necessary forms of drudgery. Government is especially hopeful that the availability of cheap electrical power over large areas of the country will encourage the adoption of more modern equipment and techniques in the small-scale businesses in Ghana. The coming of electricity should also help to transform social life in many small towns and villages, while transport, agriculture, and fishery should all benefit from the project.

FURTHER DEVELOPMENTS OF THE VOLTA PROJECT

The present scope of the Volta project has been limited to the power and aluminium development which provided an economically viable package of convenient size from a financial point of view. But it was always intended that the project should evolve into a full multi-purpose undertaking in which the whole area of economic impact of the dam should be considered and developed as a unit. It is intended to initiate this process of evolution in the present plan period.

TABLE 10.2
FORECAST SUMMARY INCOME STATEMENTS 1966-76 £G

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
Operating Revenues: Smelter	—	407	1,164	1,575	1,643	2,055	2,396	2,396	2,464	2,464	2,464
Other	1,965	2,299	2,607	2,944	3,313	3,716	4,166	4,657	5,192	5,775	6,362
Total	1,965	2,706	3,771	4,519	4,956	5,359	6,221	7,053	7,656	8,239	8,826
Operating Surplus	1,145	273	1,338	2,086	2,523	2,926	3,601	4,409	5,003	5,579	6,021
Net Earnings or (Deficit)	(594)	(1,532)	(414)	389	918	1,470	2,109	2,975	3,666	4,385	4,823

THE VOLTA RIVER PROJECT

(i) Resettlement

The need to resettle some 70,000 people who will be displaced by the Volta Lake provides the first point of departure. In view of the speed with which the actual movement of population has to be done the initial resettlement effort will necessarily have to concentrate on the limited objective of getting the people into a new area and safeguarding their basic livelihood while doing so. But the resettlement is being treated as an exercise in positive economic development on a regional basis designed to transform the areas and the lives of the people involved. This means that new forms of farming, fishing and industry will be introduced into those areas, both for the people who are moved and the people already resident in the area of resettlement. The organisation of settlements, the types and standards of housing, and access to public services will all be modernised in the long range resettlement scheme. Provision has been made in the agricultural programme under the resettlement plan to finance the farming aspect of these proposals. Transport, industry and other aspects will be dealt with under the appropriate programmes. But it is intended that the development of the resettlement area should continue to be looked at as a whole and treated as a special undertaking within the overall national development plan.

(ii) Land and Water Use

In order to obtain the maximum advantages from the existence of the largest man-made lake traversing most of the country from south-east to north-west it is necessary to develop a comprehensive conception for the use of the land, water and other resources contained within the Volta area broadly defined. There is need to allocate each natural sub-division of the Volta Lake area to the uses for which it is best fitted—arable and livestock farming, forestry, game and nature reserves, industrial and urban areas and communications.

So far the distribution of the total supply of water likely to be available within the Volta basin each year has not been exactly planned. The dam will need to hold a certain head of water for driving the turbines and it is expected that the flow of the Volta below Akosombo will not be subject to as wide fluctuation as it used to be. But there are large tracts of rich farming land in the lake area whose productivity could be considerably increased by irrigation either from the lake itself or from some of the tributaries of the Volta. The Accra-Tema metropolitan area needs to draw water from the Volta on a scale which will increase steadily, while the new urban and village centres in the resettlement area will also have to be provided with water supplies. As now planned the Volta Lake will have a maximum variation in level of 28 feet. The use of Volta basin water for any of the above-mentioned purposes will change these calculations. But the utilisation of all water above the dam will have to fit into a unified system. Such a system will allow as much surplus water as possible to be

used in the drier parts of the country and for urban supplies, will secure a more even flow of water at the dam itself by controlling the flow in the headwaters, will minimise the waste of Volta water through the overspill at the dam thereby also regulating the level of the river below the dam and improving navigation, and finally could narrow the range of possible variation in lake level. All these point to the possibility of greatly increasing the benefits which the nation can derive from the Volta project and at the same time improving the scheme as now planned.

(iii) Industry and Transport

Apart from the industrial developments associated with the resettlement scheme the erection of the Volta Lake will present certain new opportunities for industrial development in Ghana. The relatively neglected middle part of the country will be opened up for exploration and development. The limestone deposits of Buipe and the iron ores of Shieni will become accessible to cheap water transport. The agriculture and fishing which should be spurred by the lake will provide the basis for food processing and packing industries, leather, sugar and perhaps textiles. The magnitude of the Volta power supply itself makes it necessary to decide what other heavy power consuming industries—chemicals, metallurgy, etc.—should be promoted in Ghana.

The creation of the lake will initially disrupt existing lines of road communication notably at Yeji and Kete-Krachi which will have to be replaced as indicated in Chapter 6 above. But apart from opening up new areas of the country and giving easier access to certain natural resources the lake itself will provide a major new artery of communication which it is proposed to incorporate in a rationalised transport system for the country as a whole. Studies are already under way looking towards the building of a number of lake ports and the installation of a lake transport system which should eventually handle as much of the north-south traffic as can economically be moved by water.

(iv) Proposed Volta Survey

In order to guide the further expansion of the scope of the Volta project along some of the lines indicated above government invited a team of internationally known experts, under the auspices of the United Nations, to make a preliminary survey in which the new multi-purpose conception of the Volta would be formulated and the necessary programme of research and planning laid down.

Following on their work it is now proposed to mobilise rapidly the manpower needed for these studies with a view to preparing an adequate number of projects for implementation as soon as the present phase of the Volta Project is completed in 1967 or, in the case of the Volta Lake transport and some other urgent schemes, even earlier than that.

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CHAPTER 11

PUBLIC ADMINISTRATION

I.—THE CENTRAL GOVERNMENT

It is proposed to continue with the development of the central ministerial area in Accra and other offices required for the services of the Central Government. There are also a number of outstanding civic buildings which it is hoped to construct in the course of the plan period including a new Parliament building, a national conference hall and other community facilities. An allocation of £G2·6 million is made for the construction of Government offices and other buildings, £G1·2 million for the construction of a new Parliament building and £G2·5 million for the national conference hall and allied facilities.

II.—REGIONAL AND LOCAL GOVERNMENT

For the development of the Regional Administrations, including grants to regional authorities for the construction of facilities for the use of whole regions, an allocation of £G2·4 million is made. Buildings for the regional headquarters of the various departments and for the housing of the public servants at regional centres will be provided for out of this allocation.

Under the previous development plans local government authorities have been responsible for a great deal of the progress that has been made in Ghana, especially in the field of road construction, school building and primary medical facilities. It is proposed to continue the system whereby local authorities have matched the grants and other contributions received from the Central Government with local contributions in the form of either money or communal labour. A separate allocation is being made under the infrastructure programme for the construction of feeder roads. In addition, an allocation of £G3·8 million will be made for assisting local government authorities in the construction of other communal facilities.

III.—THE MUNICIPAL AUTHORITIES

The municipal authorities need to be strengthened in order to be able to provide the rising level of municipal services that are demanded as the urban areas increase in size and become more industrialised. The public transportation facilities in municipal areas are not at present entirely adequate for the smooth functioning of the economies of those areas. In addition roads, drainage, sanitation and other local services for which municipal authorities are responsible are not now maintained at a level commensurate with the status of the cities of Ghana. It is intended to strengthen the treasurers' departments of the municipal councils in order that they may be able to make the collection of taxes more efficient and capable of supporting the required scale of municipal services. It is proposed that the Central Government will contribute £G1·3 million to supplement the efforts of the municipal

authorities. It is hoped that a major move for civic improvements will develop in the course of the coming seven years.

IV.—MISCELLANEOUS GOVERNMENT SERVICES

(i) *The Foreign Service*

The Foreign Service of Ghana is entering a period of consolidation after the rapid expansion of recent years. It is proposed gradually to make more permanent arrangements both at the various centres where Ghana is represented and at headquarters in Accra for the more effective conduct of Ghana's foreign policy. An allocation of £G2.5 million is made for this purpose.

(ii) *The Ministry of Finance*

In addition to improving its facilities for the keeping of the public accounts and for the collection of income, customs and excise taxes, the Ministry of Finance will have the important function under this development plan of promoting the inflow into Ghana of foreign private capital and giving other assistance to private investors both Ghanaian and foreign. For all these services an allocation of £G1.75 million is made.

(iii) *Economic and Statistical Services*

It will be necessary to extend the statistical services considerably in order to collect more of the information needed for effective planning and policy making. Information about the resources of Ghana and about the general industrial and agricultural potential of the country also remains relatively inadequate or scattered. It is proposed to develop a National Resources and Physical Planning Centre. An allocation of £G580,000 is made for the development of the statistical services and one of £G660,000 for the development of the field work required to service the National Resources and Physical Planning Centre.

(iv) *Other Central Government Services*

An allocation of £G650,000 has been made for the Government Printing Service and one of £G850,000 for libraries, archives and museums.

(v) *Police and Prisons*

The Police Service has undergone rapid expansion under the previous development plans. This has enabled police stations and police housing especially to be modernised over many parts of the country. A further expansion of the Service in order to make police protection available to an even greater number of people is envisaged in the coming seven years and an allocation of £G3.2 million is made for its development. Development and modernisation of the prisons and Prison Service has not been as fast as in the case of the Police Service. It is proposed to take this in hand under the present development plan and to modernise a number of central prisons and provide improved facilities for the staff of the Prison Service. An allocation of £G2.6 million has accordingly been made for this purpose.

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CHAPTER 12

FOREIGN TRADE AND PAYMENTS

The foreign transactions of Ghana constitute an important sector which is crucial for the success of the development plan, since exports generally account for about one-fifth, while imports supplement not less than one-fourth of our gross domestic produce. In the past, it was the export income, especially from cocoa, timber and minerals which provided the primary stimulus to economic activity. One of the major objectives of the Plan is to broaden the base of the economy. This attempt at diversification, however, should be so phased as not to involve excessive strain on the payments situation. In fact, the successful implementation of the Plan is possible only with a generally healthy payments situation. This is because, on the basis of the present productive pattern, the import elasticity of marginal increases in the income of Ghana is fairly high: thus, for instance, between 1954 and 1961 the *volume* of imports rose by 88 per cent or by over $8\frac{1}{2}$ per cent per annum as against the average growth rate of the economy at $5-5\frac{1}{2}$ per cent per annum. Besides, the investment envisaged during the period of the Plan would entail, in the first instance, a large increase in the value of imports of capital goods and intermediates (plant, machinery, spares, etc.), which form the essential foundation for the development of major sectors of the economy such as industry, transportation, communications, power and agriculture. Over and above this, the investment during the Plan period, would lead, apart from the rise in national income, to changes in the distribution of income which in turn would give rise to an upsurge in the demand for imports of food and other consumer goods. On the other hand, the present reliance of Ghana on a few items for a large proportion of her export receipts makes her highly susceptible to fluctuations in their market prices abroad. In view of these considerations, it is essential that there should be a careful harnessing of all foreign exchange resources available to the country. In the Plan frame, the highest priority is therefore accorded to those sectors and projects which either earn or save foreign exchange. Unless this guiding principle is fully reflected in the choice of the major projects and permeates the general programming of the Plan, the Plan is likely to face strains in the payments situation even in the early stages.

The reason for this is that the payments position of Ghana on the eve of the Plan is far from comfortable. The external transactions of a country are not to be treated as pertaining to one sector of the economy but reflecting essentially the state of health of the economy as a whole. If foreign payments exceed foreign receipts, it represents an excess of total expenditure over what is currently produced within the country and, if this trend persists over a period of time, signifies a fundamental

imbalance between aggregate demand and domestic output. So long as the external deficit is met through a reduction in the foreign exchange reserves of the country and money supply is tied to foreign reserves, this provides a self-correcting mechanism. The tender of local currency for foreign exchange for meeting the deficit itself results in a corresponding reduction in the country's money supply, and thereby in the level of aggregate demand. But if, while there is a payments deficit, the money supply in the country also continues to expand either as a result of persistent budgetary deficits or the extension of private credit by the banking system then the situation is not subject to automatic correction and requires the initiation of appropriate measures by Government to offset it. The payments position of Ghana in the last three years was characterised by such features and would have continued to deteriorate if it had not been effectively handled by the Government through appropriate measures.

I.—GHANA'S BALANCE OF PAYMENTS POSITION

The structure of Ghana's balance of payments has been generally unfavourable since 1956. Until then the trade surplus, stemming mainly from the relatively high cocoa prices, was more than adequate to meet the normal adverse balance in services transactions and thus helped to build up the country's reserves. Since then, partly because of the rise in imports, some of it caused by increased Government investment, and partly because of the steep fall in cocoa prices, not only did a deficit emerge in external payments but, except in 1958-1959, it grew from year to year leading to a sizeable reduction in the country's foreign exchange reserves. The draft on reserves, which had amounted to £G9 million in 1959, increased to £G16 million in 1960 and further to £G62 million in 1961. (See table 12.1). In 1962, however, the deficit on current account was reduced considerably in size as a result of measures taken in mid-1961 and late 1962 including the imposition of import restrictions, the raising of duties on most goods and the levy of purchase tax on certain durable consumer goods. Partly because of short-term borrowings from the International Monetary Fund and from banks abroad the foreign exchange reserves of the country did not have to be drawn down again and on December 31, 1962, stood at £G75 million which represents the value of over 7 months' imports (c.i.f.).

A number of factors govern the adequacy of a country's reserves, such as the pattern of its exports and imports and the possible range of fluctuations in both of these, the maturity distribution of its debt obligations abroad, and its capacity to borrow abroad, both on short and long term. As fluctuations in foreign exchange earnings are recurrent in Ghana because of the reliance on a few export items, it is essential that the reserves should be maintained during the plan period at a level which contains a cushion to meet unforeseen and sudden deficits in the balance of payments. During the plan period, it should be a matter of policy not to draw the reserves significantly below the end of 1963 level.

GHANA'S BALANCE OF PAYMENTS
TABLE 12.1

	1955	1956	1957	1958	1959	1960	1961	1962
	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.
CURRENT ACCOUNT								
1. Merchandise (including non-monetary gold)	100	83	85	82	93	89	107	78
2. Services	10	24	9	23	9	23	10	29
3. Donations (official and private)	—	1	1	2	1	2	1	2
Total	110	108	95	107	103	116	118	105
Balance on Current Account	2	—	12	—	13	—	9	—
CAPITAL ACCOUNT								
4. Direct Investment	—	—	—	—	—	—	—	—
5. Other long-term	—	—	—	—	—	—	—	—
6. Private short-term	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—
7. Commercial Credits	—	—	—	—	—	—	—	—
8. Subscription UN, IMF, IBRD, IFC	—	—	—	—	—	—	—	—
9. Governmental loans	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—
Official	—	—	—	—	—	—	—	—
10. Errors and Omissions	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—
11. Long-term	21	16	3	—	11	—	16	—
12. Short-term	—	—	—	—	—	—	—	—
13. Net Draft on Reserves	—	—	—	—	—	—	—	—
DRAFT ON RESERVES								
11. Long-term	21	16	3	—	11	—	16	—
12. Short-term	—	—	—	—	—	—	—	—
13. Net Draft on Reserves	—	—	—	—	—	—	—	—
DRAFT ON RESERVES								
11. Long-term	21	16	3	—	11	—	16	—
12. Short-term	—	—	—	—	—	—	—	—
13. Net Draft on Reserves	—	—	—	—	—	—	—	—

FOREIGN TRADE AND PAYMENTS

£G.Million

II.—THE EXTERNAL PAYMENTS CRITERIA IN GHANA'S PLANNING

Against this background of the general payments position, certain guiding principles governing the external financial situation seem to require stress during the plan period. At the outset, it is essential that expenditure on imports should not be allowed to exceed the anticipated income from exports and loans and grants available from international financial organisations and friendly foreign governments. Secondly the plan should accord the utmost priority to such projects in the plan as have the maximum impact on strengthening the payments position.

In broad terms, such projects may be either in the domain of promoting exports and earnings of invisible income, or saving payments for imports and other services. Of projects coming under these two categories, those which have the largest net advantages either in earning or saving foreign exchange should be accorded the highest priority. On a balance of considerations it is better to have a judicious combination of both types of projects in the Plan than to concentrate largely on either of them, especially on import substituting industries. A developing economy cannot but give rise to a rising volume of imports; import substitution, while eliminating some items, may not deter the rise in the volume of others in response to rising national income or the addition of new raw materials for the growing industrial and other sectors in the economy. What would happen is a shift in the composition of imports, the total of which would continue to rise, rather than a curtailment in its volume. To provide for the requisite rise in the imports of items essential for the development process, additional foreign exchange should be earned if the payments position is not to deteriorate. This can be achieved only if simultaneously exchange-earning projects are also included in the plan. In Ghana the immediate scope for this generally lies in the processing of raw materials which constitute the staple exports of the country: hence the industrial programme outlined in a previous section lays great emphasis on the transformation of the structure of Ghana's exports. Further, unless the country is endowed with adequate natural resources and producer-goods industries the establishment of import substitute industries often yields only negligible savings in foreign exchange outlays. It is therefore expedient to concentrate in the earlier stages of the country's development on those industries which have a relatively low import content in their output if the payments position is to benefit from the growth of local industry. On the other hand, investment to produce goods mainly for the domestic markets is less susceptible to price fluctuations than those primarily designed to be sold abroad.

III.—FOREIGN TRADE PROSPECTS 1963-1970

During the past ten years, Ghana's foreign trade has shown a significant increase, particularly in imports. Total imports (c.i.f.) rose from £G66·6 million in 1952 to £G142·8 million in 1961, an increase of nearly 115 per cent in ten years. The total

FOREIGN TRADE AND PAYMENTS

value of exports rose for the same period from £G86.4 to £G115.1 million, an increase of less than 34 per cent. In fact, in the last four years, Ghana's exports expanded by only 10 per cent, while the increase in imports amounted to 69 per cent. This is accounted for by the fact that the range of Ghana's exports is very narrow consisting almost entirely of raw materials the demand for which is generally inelastic, while the supply cannot be increased appreciably without the risk of a sharp decline in prices. On the other hand, Ghana's imports cover a wide range of goods consisting of food and other consumer goods, mineral oils, machinery, plant and equipment, the demand for all of which is generally elastic. In these circumstances, the best method of improving Ghana's balance of payments position is partly by increasing the local output of food and other consumer goods to replace at least a part of the imports, to the extent that this is feasible within the available resources of men and materials and subject to the economies of production, and partly by increasing and diversifying Ghana's exports.

(i) Imports

It is estimated that if imports of non-durable consumer goods were allowed to increase with rising incomes in the way that they did between 1959 and 1961 the bill for such imports during the plan period would total about £G550 million. Domestic production must be expanded to cater for as much of this demand as is feasible, and the programme for doing this has been outlined in Chapters 4 and 5 above.

It is possible to expand rapidly domestic production of food grains, fish, meat, sugar and similar items for which there are natural facilities in the country. Even so, taking into account the period of gestation for setting up the factories for manufacturing these products and also the time involved in the preparation of relevant blueprints, it is not likely that the entire rise in demand could be met during the plan period. It is assumed therefore that only about £G75 million of the potential rise will be saved in imports of food and other consumer goods due to the extension of production facilities within the country. The balance of the increase in demand will have to be partly suppressed and partly met through imports. For this, therefore, we need an expansion in commodities in which Ghana has possibilities of increasing exports such as cocoa, timber, gold, manganese and bauxite, so that there will be no undue difficulties in meeting the enhanced import bill. Part of the pressure on food prices as well as on certain raw materials can be eased through the conclusion of agreements for the import of surplus commodities under bilateral aid programmes.

In 1961 the import of consumer goods—manufactures, perishables and durable consumer goods—amounted to nearly £G70 million. It is necessary to study from the point of view of expanding domestic production which of these are essential and which are non-essential and whether or not they can be produced economically within the country. The development of manufacture of these items should be based

on certain criteria. First, the anticipated demand for the product must be so large as to lend itself to economical operations by a viable unit of the industry. Secondly, but equally important, the industry should be capable of using largely local raw materials. Thirdly its technology must be relatively simple to facilitate the greater absorption of local manpower.

(ii) Exports

Recent developments in Ghana's export markets, particularly the European Common Market, have imparted some uncertainty to the future of commodity trade. The Common Market constitutes an organised system of trade discrimination against countries like Ghana which reject attachment to Europe. The European Economic Community is at present the world's largest importer of cocoa, cotton, timber and grains and though, for the time being, the United Kingdom is experiencing difficulty in entering the Common Market, in the long run, she might become a member of the Community, in which case the share of the enlarged Community in the total world market for these and other commodities will be increased considerably. Thus, with a large percentage of the total exports of primary commodities going to the Community, Ghana and other primary producing countries will have to depend on the maintenance of high economic activity in the area or else look for other markets—though in the short run the latter is not a very promising solution. This may be partly mitigated through measures for setting up industries which consume some of the raw materials.

Ghana's second major export problem is its dependence on one major export crop, cocoa. The sharp drop in the world price of cocoa especially since 1959 affected Ghana considerably as roughly 60 per cent of her export income is derived from the sale of cocoa and its products. The average price of cocoa fell from £G285 per ton in 1959 to £G225 per ton in 1960 and to £G177 per ton in 1961. There was some recovery in the price in 1962. But the future of cocoa prices remains uncertain, although they are not likely at their present levels to record any further falls.

Cocoa production in Ghana has recorded a phenomenal rise since 1956-57: from 264,000 tons in 1956-57 it rose to about 450,000 tons in 1961-62. Ghana's share of world output increased during the same period from 29.6 per cent to over 38 per cent. Nonetheless, export earnings from cocoa have remained almost stagnant around £G70 million since 1959, because of the steady fall in prices. In the plan period, priority attention should be given to maximising cocoa production through an increase in the yield of cocoa within the present acreage and also further improving the quality of cocoa, so that it should be possible to bring down the costs of production and ensure a highly competitive position for Ghana in her cocoa exports.

Estimates of world crop for 1962-63 indicate a total of some 50,000 tons higher than that of 1.1 million tons for 1961-62. Although in the immediate future world

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production and absorption of cocoa may well nearly balance, there remains some uncertainty in the long-term prospects. It is desirable therefore that Ghana, with a high stake in the output and price of cocoa, should devote adequate attention to initiating and finalising, in consultation with other producers and the consuming countries, an international agreement on cocoa. A possible world shortage of cocoa for a short period might tend to weaken the producers' desire for price regulation and throw the world markets open again; this should be avoided in the interest of longer-run stability in cocoa prices.

In addition, there is scope for increasing consumption of cocoa in the following ways:—

- (1) A well-planned campaign should be launched to increase consumption in traditional markets as well as in Africa, Asia and other developing countries. This campaign should be sponsored by the Cocoa Producers' Alliance, the carriers of cocoa and manufacturers of cocoa.
- (2) The Socialist countries of Eastern Europe and U.S.S.R. should be encouraged to buy more cocoa from Ghana under the trade agreements already concluded with them.
- (3) Approaches should be made to certain Governments, especially members of the European Economic Community, for a reduction of the heavy taxes and tariffs imposed on cocoa and cocoa products, as a means of assisting less developed countries.

The timber industry in Ghana has shown a rapid development since 1954 when total exports at 16.5 million c.ft. were valued at about £G6.6 million. Exports of timber have increased steadily since then reaching a peak in 1960 when exports of 45.3 million c.ft. earned £G15.9 million. In 1961, however, exports dropped to 36.2 million c.ft. owing to certain administrative and selling difficulties experienced by the former Ghana Timber Marketing Board. The possibilities of increasing timber exports in future depend on internal as well as external factors:—

- (a) It is important that the exploitation of the forests should be carefully managed, if necessary by legislation and that the Forestry Division be strengthened to develop and protect the future of the timber industry. A fee may be charged to the concessionaires on each tree cut out by them to finance the forest service concerned with the regeneration of forests. Having taken steps to ensure the availability of trees the next step would be to accelerate the rate of production during the plan period in order to increase production by about 20 per cent. It will be necessary to conserve timber by ensuring that exporters have enough long-term sale contracts to cover the trees which are cut. This means that no trees can be cut which cannot be sold or used locally, thereby eliminating indiscriminate cutting of trees which are not in demand.

- (b) At the same time, as has been previously explained, methods must be found for encouraging demand both locally and in export markets for a wider range of species of Ghanaian timbers. This requires a vigorous promotion campaign.
- (c) The quickest way to increase Ghana's earnings from the export of logs is to fabricate them into veneers, plywood and other products before export. If there were more local manufacturing capacity then some of the logs that are now put through sawmills because they are not of absolutely prime grade could also be utilised in higher-value manufactures.
- (d) It is important that Ghana should itself make use of timber locally in order to save foreign exchange and to help sustain the timber industry. Henceforth, timber should be used for windows and doors frames, furniture, cabinets, and other such items except in the case of special construction works where for technical reasons steel frames and other metal members are to be used.
- (e) The establishment of a paper industry will also increase local consumption of timber and save foreign exchange since large quantities of paper are at present imported for local use. Meanwhile, it is essential that whenever possible wooden boxes should be used as packages instead of imported paper cartons.

Gold production from the group of gold mines forming the Ghana State Mining Corporation may continue to fall as their ore reserves are estimated at low levels unless new discoveries are made. On the other hand, it is safe to assume that gold production from the other gold mines will be higher in the near future as some of them are at present doing 20 penny weights of gold for each ton of stone crushed as against an average of 4 penny weights done by the group of companies forming the State Mining Corporation. There is need to explore a system of fiscal and other incentives to encourage these mines to increase their output and to exploit their concessions more in tune with the nation's balance of payments requirements. The establishment of a gold refinery in order to facilitate an increase in the export income on gold is planned for the near future.

The future possibilities of increasing the export of diamonds depend mainly on how far output will increase in the years ahead. As far as the diamond companies are concerned, output has been increasing steadily and their share of the total trade is now a little over 60 per cent. Diamond prospecting in Ghana, however, involves a large number of small licensed diamond winners whose production is subject to sharp fluctuations. As a matter of fact, there has been a steady decline in the production of

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diamonds by African diamond diggers because of steady depletion of known diamond deposits in the country and unless new diamond deposits are found, this declining trend in production will continue. Hence, in addition to finding new deposits, it is essential that known deposits should be more efficiently worked by encouraging African diamond winners to form co-operatives and to use simple modern implements and techniques. If the target of increased production and more efficient utilisation of existing capacity is implemented then Ghana can increase her export earnings from diamonds by establishing a factory for industrial diamond polishing. The marketing of diamonds has since January 1, 1963 been handled by the Diamond Marketing Board. The Board will have to ensure that long-term contracts are obtained for the sale of diamonds in order to avoid stock piling which leads to the locking up of capital in unsold stocks.

The marketing prospects of manganese ore and those of ferro-manganese depend mainly on the level of economic activity in those industrialised countries which use them. Ghana's exports of manganese since 1954 have had a downward trend, and Ghana which was once the leading producer of manganese in the world now occupies the fourth place on the list of exporters, led by India, South Africa and Brazil. Since 1957, exports have dropped from 641,343 tons, worth £G9 million, to 385,073 tons, worth £G6 million in 1961. It is possible that the superior grades of manganese which could previously be extracted by easy open-cast methods may not last much longer. Although large new deposits are said to be in existence, these may be of inferior grades. It is also suggested that the chemical processes required to make it possible to utilise these ores may reduce considerably their net foreign exchange earnings per unit. This problem needs careful study and analysis by the Department of Geological Survey and the Department of Mines. The system under which Ghanaian manganese is sold is at present unsatisfactory. Instead of the ore being graded into the usual number of grades according to purity, they are known to be sold in three grades only. In order to maximise foreign exchange earnings from the sale of manganese a finer system of grading should be adopted. Furthermore, it is necessary that the valuation of Ghanaian manganese ore should be strictly based on open market quotations instead of the present practice of registering merely the invoiced prices at which the local mines sell to their associated overseas buyers.

It is important that during the plan period new export commodities should be introduced and existing minor ones expanded wherever possible in order to increase the export earnings of Ghana and to strengthen her balance of payments. It is necessary to ensure that the export earnings from these minor and new commodities will steadily rise to about £G10-£5 million per annum at the end of the Seven-year Plan. Industries also can make a substantial contribution towards export earnings of Ghana. With the establishment of the aluminium smelter, Ghana can export to

its neighbouring countries large quantities of aluminium roofing sheets, cooking utensils and other aluminium ware. Early action is also necessary to revise the Trade Agreements between Ghana, Mali and Upper Volta to include a regular supply of petroleum products to these countries from the Tema oil refinery. Already Ghana has made a beginning in supplying Mali with petroleum products and this will be a useful precedent to be followed in the future. Furthermore, Ghana's rich kente cloth, wooden carvings and other handicraft products are already very popular with foreign visitors to the country and there is every reason to believe that this could be developed further as another source of export earnings.

Tourism is in many countries a very important source of foreign exchange earnings and this should be encouraged as a means of improving our invisible trade with the rich countries of the world. It is also important to emphasize the invisible aspects of Ghana's trade with other countries, as for example shipping and insurance charges which form a substantial part of our payments to other countries. The development of the Black Star Line in carrying an increasing share of the country's exports and imports will be given high priority so that by the end of the Seven-year Plan, Ghana's payments in respect of overseas freight will have been considerably reduced. It is also equally important to develop insurance facilities in the country especially when it is considered that a large proportion of Ghana's exports are shipped on an f.o.b. basis.

There is need to pursue the objective of economic integration of the African countries so that an African Common Market may be realised soon. For many years to come, Africa will continue to import machines and equipment from the more industrialised countries; there is, however, considerable scope for the development of trade between African countries in respect of manufactured goods. The success of the African Common Market will depend much on whether or not African countries produce such commodities as their neighbours require but do not produce themselves. This fact pre-supposes a co-ordination of the development plans of African countries especially in the setting up of the more modern and larger-scale industries most of which cannot successfully function if their market is not extended from the very beginning to a number of African states. Early action will have to be taken to ensure that African states do not competitively over-produce tropical and other primary commodities for the world markets as this inevitably leads to a collapse of prices. In this connection, Ghana will take necessary steps in ensuring co-ordinated action in the economic development of modern and complex industries to serve a number of West African states, Ghana is co-operating in these and should be able to increase her export trade through them. Work has also started on preparations for the African Common Market and this, when it matures, should provide a powerful stimulus to Ghana's trade.

IV.—IMPORT AND EXPORT CONTROLS

There is a paramount need that during the period of the plan the framework of export and import controls already initiated in 1961 is extended and operated effectively. In the field of exports the main emphasis will be on promotion in order to maximise Ghana's foreign earnings. Control over exports will be exercised primarily to ensure that Ghana is receiving the full foreign exchange value for her sales abroad. The control machinery will have to be such as to achieve this aim without hampering the smooth and rapid movement of trade. It will also involve the operation of a schedule of duties on exports to the extent desirable, with scope for making changes in the schedule from time to time to ensure the maximization of their yield. Export duties must be neither too high nor too low, for in the former case they will inhibit the growth of export earnings at the expense of Ghana, while in the latter case they will yield undue windfall profits to exporters.

Similarly, control over imports has to be exercised throughout the plan period, so as to make the most effective use of available foreign exchange resources; this is unavoidable until such time as domestic production catches up with demand and must be supplemented by measures of fiscal policy to keep imports within tolerable limits. The control will be operated to ensure imports of only such goods as are considered essential for the life of the community. In this category of goods are to be included food, clothing, and such other items as are necessary for maintaining minimum living standards of the public. The next important category will comprise plant and equipment required for development projects, as well as the spare parts, fuel and lubricants, and raw materials to maintain or augment the capital goods in the economy and to support production. The rest of the items (which are not essential for the life of the community, or for development projects, or for the running and maintenance needs of the economy) will be deemed as relatively inessential and their imports will be restricted or, in a few instances, banned. The ban or the restriction of the import of certain items can itself stimulate their domestic manufacture. To the extent that domestic production of food and other consumer goods expands in the country, the import of such goods will be subjected to ceiling limits depending on the size of the domestic output. Care will, however, be taken to retain a certain minimum of imports of such goods as are also domestically produced so that, at the margin, some competition prevails between the imported goods and the domestic products. Otherwise, the restriction of imports to a level where, together with domestic output, they can just satisfy the anticipated demand may in most cases lead either to an undue rise in prices charged to the public or a deterioration in the quality of goods produced in the country. Import control should thus be flexible to permit some margin in imported goods over what is considered strictly necessary to meet the demand.

Import controls can operate either through a system of quotas or the fixing of ceiling limits on various items or through a schedule of import duties. The quotas and duties may have to be varied from time to time in accordance with the changing economic situation, especially based on the movement of prices of the relevant items. In the framing of the schedule of import duties, it is pertinent to examine their impact on the cost of living. In order to avoid the situation where import controls lead to a burden on the consumers in the form of a rise in prices or the protection of inefficient units in industry, it may be necessary to set up an official body to examine and report on the working of such controls. Where specific protection for a limited period needs to be given to new infant industries, this should be examined and reported on by an independent body of assessors to be appointed for the purpose.

The import control machinery should be flexible and operate in such a manner that, whenever a scarcity of essential goods develops, it is adequately met through prompt arrangements for increased import of the items concerned. An essential requisite of import control is the periodical forecast of payments estimates for the country and the allocation of foreign exchange to the major import and service items so that licensing of imports can operate within the ceilings prescribed for the major import categories.

V.—THE MANAGEMENT OF FOREIGN EXCHANGE

In order to ensure a comfortable rate of foreign exchange earnings and expenditures, the Foreign Exchange Control Act passed in 1961 is being implemented by the Bank of Ghana so that the export proceeds of the country are realised fully in the shortest possible time and that payments for imports and other services are made only for approved purposes and for right amounts. A scrutiny of the external transactions is also essential to prevent the flight of capital. Amendments to this Act may also be called for to strengthen the Bank of Ghana's efforts in its main task of conserving the foreign exchange resources of the country in the light of the experience of its working. The Bank of Ghana will also have to exercise its influence in a positive direction by providing facilities of credit to promote exports and also ensure that reasonable rates are charged by the Commercial Banks in the negotiation of export bills, both demand and usance. The Bank may have to review also its policy regarding the scale of remittances permitted for some of the service transactions such as immigrants' remittances, tourist travel, capital allowances for emigrants going out of Ghana, etc. The Research Department of the Bank of Ghana will have to make special studies of the unit values of the country's exports and imports in relation to international prices and ensure that invoices for exports and imports are drawn in accordance with market prices abroad, apart from adjustments for commission. It will have to organise similar reviews of the payments agreements entered into with various countries to assess their relative benefits and costs and suggest modifications, if necessary, in the working and terms of the agreements.

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VI.—CAPITAL TRANSACTIONS

The total investment during the plan period is prescribed at a fairly high level in relation to domestic savings. A large part of the gap between domestic savings and investment is expected to be met through negotiation of grants and loans with foreign governments and international financial agencies. There is also considerable scope for enlisting the services of private foreign capital in such sectors of the economy as can harness it to the most productive use.

The problems of gaining access to, and making optimum use of, the requisite amounts of foreign capital are further discussed below. From the balance of payments point of view the most important aspects that deserve the close attention of Government would seem to be the following:

- (i) The total liability for debt servicing charges in the Government sector alone is already approaching levels for certain years of this Plan period—especially from 1964–65 to 1967–68—which, in relation to expectable export earnings for those years, are relatively high. Borrowing policy should therefore be adjusted accordingly from the very first year of the Plan period.
- (ii) Since project by project and contractor finance tend to be expensive, short term and not to cover the full foreign exchange costs to the nation of development projects, general financial support to the development plan has to be mobilised on a large scale. By enabling Ghana to buy from the cheapest sources through open competitive tender this should help to effect major savings in the cost of capital goods imports.
- (iii) Many projects which are supposed to save on imports actually cause a rise in imports, usually because large foreign payments have to be made before the project starts producing to replace the former imports and sometimes the import content of the ultimate domestic article remains high. The form of Government's contracts for projects in industry and agriculture has to be reviewed and a more careful analysis made of their foreign exchange implications in order to minimise these adverse effects of apparently desirable projects on the balance of payments.
- (iv) Foreign private investors naturally expect to receive dividends on their investments: at the same time these can set up a large and perpetual drain on foreign exchange. The interests of the nation and the investor must be reconciled. It is for this purpose that a Capital Investment Act has been passed. It is necessary for the due observance of priorities laid down in the Plan that the screening procedure adopted by the

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Capital Investment Board is such as to ensure that foreign investments are allowed in such fields as are considered appropriate by the Government and on terms which are mutually beneficial. Organisationally, the administration of this Act will be closely associated with the management of Government's own foreign borrowing so that the contribution of external capital to Ghana's economic development can be seen as a whole and directed to maximum advantage.

VII.—PROJECTIONS OF IMPORTS AND EXPORTS

It is possible to estimate approximately the likely development of imports during the plan period under major categories. One of the assumptions of these estimates is that part of the rise in non-durable consumer goods is to be met through increased domestic production. But it is also necessary that this rise should not be too great. At present for instance Ghanaians consume an average of 19 sq. yards of cloth per head per year, which must be among the highest in the developing countries. Obviously this rate of consumption is not really necessary to maintain a reasonable standard of living and its recent rapid increase can no longer be supported. Policy decisions must be taken in the field of taxation and supported by massive public education in order to keep the pressure of demand within tolerable limits. It is also assumed that imports of durable consumer goods will be subjected to strict licensing or the levy of high rates of duty so that their value does not increase appreciably during the plan period. Estimates of plant and machinery required for the development projects of the plan have been worked out in order to provide for the rapid rise that will inevitably accompany the process of increased investment and the greater emphasis on modern industry and agriculture envisaged in this Plan. These estimates of the amount of capital equipment needed for the Plan period require to be refined in the light of scrutiny of major projects. But it is clear that a great national effort is required to make room in our foreign trade budgets for these imports of capital goods by holding down the imports of non-essential consumer goods. This is one of the most essential cornerstones of development policy in the coming seven years and our success will depend upon how completely the whole nation accepts this policy.

STRUCTURE OF IMPORTS 1963/64-1969/70

	<i>Total Imports</i>	<i>Consumer goods</i>	<i>Capital goods</i>	<i>Producer goods</i>	<i>Services</i>
1960-62	455	193	76	121.5	64
Estimate for the plan ..	1,318	494	288	369	168



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Similar estimates have been made for the expected export proceeds of Ghana under important items in the light of the review made in the earlier section. Certain important policy measures are envisaged without which the expected increase in exports will not take place. The first attempt in the field of exports should be to expand the exports of the traditional items to the extent consistent with maximising their export proceeds. An increase in the output of cocoa and a reduction in costs of production are no doubt the first prerequisites. The policy of selling cocoa to new markets through the conclusion of special trade and payments agreements should be pursued, provided they are in the long-run interest of Ghana. Periodical reviews of these agreements will be made to see how they are being implemented and what benefits they confer on Ghana and, in the light of such study, modifications if found necessary, will be made from time to time in such agreements. One of the minimum requirements from the point of view of Ghana is that it should be possible to discharge repayment obligations of Ghana under credits sanctioned by trade agreement countries through the clearing accounts under these agreements.

It is earnestly hoped that an effective international cocoa agreement will soon be concluded, and that this will be able to hold up cocoa prices somewhere near their post-war average of £G240 per ton during the plan period. The estimates for this plan however have been based on the more conservative assumption that cocoa prices are unlikely to fall to an average much below £G200 per ton. If Ghana maintains her share of the cocoa market on which demand is likely to rise by about 4 per cent per annum then average exports during the plan period will run to about 490,000 tons per annum. An average yearly export income of £G98 million is therefore estimated for all cocoa products. Since a minimum of 100,000 tons per annum and probably more of the total cocoa exported will be in the form of cocoa products whose average net foreign exchange value should exceed that of beans by at least £G100 per ton it is possible to foresee a higher level of earnings from cocoa. But, in addition to any rise in bean prices above £G200 per ton that might occur, this has been held back from the estimates as a prudent reserve. The marketing of Ghanaian timber needs to be considerably strengthened; the possibility of concluding long-term agreements for sale of timber with importing countries should be explored. A unique opportunity is available for raising significantly exports of manganese ore and bauxite ore through suitable contracts with potential buyers overseas and a higher degree of local processing before export. A maximum of attention should also be devoted to the production of new export items and the expansion of existing minor ones such as bananas, coconuts, rubber and oil seeds, some of which can be produced with relatively little investment.

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ESTIMATED EXPORTS 1963/64-1969/70

(£G'million)

Item	Yearly	Projected Exports		Total
	average 1960-1962	1966/67	1969/70	1963/64- 1969/70
Cocoa and Cocoa Products	70	86	100	605
Timber and Wood Products	15	21	29	153
Gold	11	13	14	89
Manganese	5	5	7	38
Diamond	8	10	11	67
Aluminium	—	—	14	25
Re-exports	2.5	4	5	30
Services and Other Items ..	10	12	12	84
	122	151	195	1,090

VIII.—PROJECTIONS OF THE BALANCE OF PAYMENTS

In the light of the movements in the foreign trade of Ghana as indicated in the foregoing paragraphs the following represents a very rough picture of what the payments position would be like during the plan period.

BALANCE OF PAYMENTS DURING THE PLAN PERIOD

1963/64-1969/70

(£G'million)

Exports		Imports	
Visible	1,006	Visible	1,149
Invisible	84	Invisible	168
New Loans and Grants from Abroad		Amortisation of Existing Foreign Debt	100
Official	242		
Private	85		
	1,417		1,417



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The above estimates cannot claim any finality or exact precision. But they do show how difficult it would be for Ghana to implement this Seven-year Plan fully without a firm import policy, an appreciable increase in export earnings and a considerable inflow of foreign capital, both official and private. While improvements in the terms of trade and productivity of labour and capital might ease somewhat the magnitude of the contribution from export and foreign aid, they can in no way minimise the central role of these two factors in the successful execution of the plan. Besides, it seems clear that unless the amortisation of the loans received during this plan period is mostly postponed to later plan periods the projected levels of consumption and investment and the imports to support these cannot be attained.

Against the background of possible stresses and strains which may arise during the plan period in the balance of payments position of Ghana, it is salutary that a high-powered Foreign Exchange Committee has been set up and charged with the task of watching over the acquisition and the optimum utilization of foreign exchange. Within the framework of Plan estimates, the Committee has an important role to play in reviewing the changing situation of the balance of payments and taking appropriate measures from time to time in the light of its own assessment of the position. Its efficient working is one of the basic prerequisites for avoiding balance of payments crises which could cripple the entire development plan.

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CHAPTER 13

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TARGETS OF ECONOMIC GROWTH

In setting the target for national economic growth under this Seven-year Plan at a rate of 5.5 per cent per annum, Government has been guided by the following primary considerations. Firstly, the objective of planning and economic policy in the less developed countries such as Ghana should be to try and catch up with the standards of living and the level of productivity attained by the more developed countries. This closing of the gap between the wealthier and the poorer countries is only possible if the net rate of economic growth in the latter countries is greater than that in the former countries. The greater the margin by which the developing countries' rate of development exceeds that of the wealthier countries the more rapidly they can hope to narrow the gap between their standard of living and that of the wealthier countries.

The net rate of growth of a country depends not only upon the aggregate rate of economic development but also upon the rate at which the country's population is growing. In Ghana where our population is growing at an annual rate of approximately 2.6 per cent per annum we require a gross rate of economic growth of 5.6 per cent per annum in order to achieve a growth rate of 3 per cent per head per annum in real wealth. In a country such as the United Kingdom where the population is growing at a rate of less than 0.5 per cent per annum they require an aggregate growth rate of only 3.5 per cent per annum in order that real national wealth per citizen might grow at 3 per cent per annum. Thus the high rate of population increase which is characteristic of Ghana and other developing countries imposes an extra requirements for economic growth if these countries are to have any hope of ever approaching the standards of living of the wealthier countries.

In the contemporary world rates of economic growth of around 4 per cent have become generally accepted as the target of economic performance even in the least dynamic of the developed countries. To keep in step the developing countries generally require to maintain targets of economic growth in excess of 5 per cent per annum. In Ghana Government is determined that our rate of economic progress shall not only keep in step with that in the more advanced countries but that some of the gap between our standard of living and that of the more developed countries should be bridged within the period of each development plan.

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The target rate of growth has therefore been set at 5.5 per cent per annum in order to allow for a significant degree of modernisation in the next seven years. But these targets have also been set with an eye to the real economic potential of the country. On the one hand the natural resources of Ghana are very generous. The mineral resources of the country have not yet been comprehensively established and, even so, what is known is as yet very partially exploited. Over most parts of the country the natural supply of water is adequate to produce two harvests a year and in other parts the rivers are strategically situated to support water conservation and irrigation. The soils of Ghana are generally adequate and there is fortunately no pressure of population on the available land. The development of manpower in the last fifteen years has been so rapid as to ensure that an ambitious programme of economic development will not run into insuperable problems of manpower shortage.

On the other hand the present level of utilisation of these natural advantages is quite modest, as has been described in previous sections. The development of domestic industry even, to supply the known home demand has been relatively backward. The application of science and technology to the improvement of agricultural productivity has so far been limited to a small sector of the agricultural economy. The complement of infrastructure facilities produced during the last ten years of most rapid economic development is as yet not fully utilised. All these factors have given the Ghana economy a great potential for rapid economic growth in the immediate period ahead. For the longer run planning in this country we should aim at rates of economic growth in excess of 7 per cent per annum under subsequent development plans.

A. THE MOBILISATION OF RESOURCES FOR DEVELOPMENT

The rate of economic growth that the country can sustain will depend largely upon the rate of savings in the economy and the way in which these savings are utilised. The heart of the problem of economic development in the next seven years is therefore how to stimulate an adequate rate of savings and to mobilise these savings for the right purposes. The Government must develop and hold to appropriate policies in the following three fields:—

1. Consumption expenditures in the economy, both public and private, must be regulated in such a way that an adequate margin of savings is left each year out of the national income for purposes of investment.
2. Institutions must be created or strengthened and financial policies adopted which encourage a maximum of savings and make them available to the right fields for investment.
3. The structure of investment should be so directed as to be conducive to maximum rates of economic growth, given any amount of savings.

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I.—CONSUMPTION POLICY

In recent years a high level of economic activity has been maintained in Ghana. In the recorded sector private consumption rose at an annual rate of over 7 per cent between 1955 and 1961, the rate of increase having quickened considerably in the period 1959–61. Government consumption, that is government's recurrent expenditures including defence, also rose at an average rate of 7·5 per cent per annum during that period. Since the real productive base of Ghana's economy during those years was probably rising at a rate of no more than 4·5 per cent per annum the economy can be said to have been living beyond its means in the last seven years. It has been able to do this by utilising its past savings which had been accumulated during the period of favourable trends in the nation's international trade. These savings have now been drawn down to a level below which it is not prudent to go. Government policy since the middle of 1961 has therefore concentrated on bringing the rate of consumption properly into line with the current productive capacity of the economy. A large measure of success towards this objective has been achieved in the sphere of private consumption. But Government consumption has not been as successfully restrained. As we enter the period of the Seven-year Plan the country still remains in deficit and the first objective of financial policy must be to continue the quest for economic equilibrium by pushing consumption further back into line with production.

In order to increase the rate of economic growth to the 5·5 per cent per annum which has been set as the target of the Seven-year Plan the annual rate of growth in total consumption must be kept well below the annual rate of growth of the economy as a whole. The proportion of the national income that is devoted to consumption each year must fall from the present level of around 86 per cent to at most 80 per cent over the course of the Seven-year Plan. If this is successfully done and the target rate of economic growth is achieved then it will be found that in fact aggregate consumption will increase. The smaller share out of a very much higher national income will be in actual cash terms greater than the present high share out of a low national income.

The allowable rate of aggregate consumption must be distributed between Government consumption and private consumption in accordance with public policy. The proposals presented in various sections of this plan for increases in the essential public services such as education and public health will themselves entail a rate of increase in Government consumption of not less than 4 per cent per annum. If aggregate consumption is to be kept within the limits required for economic growth then increases in the total of other Government consumption expenditures, including defence, cannot be very significant in the course of the seven-year period.

Even so, in order to keep total consumption at a level that will allow of an increase in savings and hence in economic growth, private consumption will have to be restrained to an even greater extent than Government consumption. It is estimated

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that in the course of the seven-year period financial equilibrium cannot be maintained nor adequate resources realised for economic development if the rate of increase in private consumption exceeds 4.5 per cent per annum.

(i) Incomes Policy

The corollary of an appropriate consumption policy is an appropriate incomes policy. As far as concerns the element of wages in total disposable income policy recommendations have been presented in Chapter 7 above. Each year Government will ensure that the aggregate amount paid out in wages, both to the existing workers and to the new workers to be taken into the labour force, shall be kept within a limit which, taken in relation to the actual increase in productivity, assures a reasonable margin of savings for economic growth.

The sacrifice of the wage earners must be matched by sacrifices on the part of recipients of other types of incomes. Policies regarding profits, dividends and rents will be so managed that the recipients of such incomes also make an appropriate contribution to savings required in the economy.

A part of the consumption and therefore of the real incomes of the people is contributed by subsidies granted by Government in various forms. A policy of constraint on consumption through controlled incomes requires correct policies on subsidies. Potentially the most expensive items of subsidy are the subsidies on housing and on transport. Government therefore intends to review all policies regarding subsidies with a view to limiting such subsidies to the essential minimum. As is further outlined in a subsequent section on Government finance, most of the services provided by Government will have to be paid for at economic rates both in order to keep consumption at the desired levels and also to generate the resources for further development.

(ii) Foreign Exchange Policy

As has been indicated in the previous chapter the utilization of foreign exchange constitutes an especially important element in the financial policies for economic growth. Although it is proposed to start on a certain number of capital goods industries under the industrial programme in the Seven-year Plan, for this plan period Ghana will mostly have to rely on foreign sources for the capital goods required for economic development. It is estimated that for each £1 of increase in the national income that we desire we require £3.5 of capital goods in the recorded sector, almost £1.1 of which on the average has to be imported from abroad. It can be expected therefore that the total investment programme projected under this Seven-year Plan will require capital goods imports of around £290 million.

Ghana's foreign exchange earnings in the coming seven years will be increased as rapidly as is feasible by the programmes of extension in the production of agricultural and other raw materials for the export trade and by the progressive processing

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of primary commodities and some export of manufactures. This programme of export promotion however will take some time to show results and in the meantime the capital goods required to develop these new industries will have to be imported and already paid for to a considerable extent. Therefore in the short run the allocation of total foreign exchange resources between capital goods and consumer goods will have to be deliberately shifted in favour of capital goods.

This will mean real sacrifices on the part of everybody. All members of the community have to be prepared to do without certain imported items of consumption which they have hitherto been able to afford. This policy of constraint in the use of foreign exchange for the importation of consumer goods will not succeed unless it has the wholehearted support of all sections of the community. The foreign exchange budget accompanying the annual plan which will be presented every year therefore needs to have behind it the willing consent of all Ghanaians.

II.—THE STRUCTURE OF FINANCIAL INSTITUTIONS

As economic development proceeds there must be adequate institutions to mobilize savings and transfer them from those who save to those who are prepared to invest. This problem is particularly difficult where new types of investment and new forms of economic activity are involved. The role of the Government as the active agent in the development process and the scale of its operations also necessitate a reappraisal of the existing institutional framework with a view to expanding its functions and establishing additional institutions to reinforce the existing structure. In Ghana there exists a Central Bank, a reasonably well-established commercial banking system with the skeleton of a countrywide branch banking system, some insurance companies, and postal savings facilities. More recently, the Investment Bank has been established. Even a cursory glance at the operations of these institutions indicates that their functions need to be expanded and that further institutional arrangements should be made if adequate finance is going to flow smoothly from the savers into the productive sectors of the economy in order that a high rate of growth can be sustained.

(i) *Direct Investment*

An important element in total investment in Ghana consists of direct investment in farms and owner-occupied housing especially in the rural areas. The savings for such investments consist to a great extent of labour directly supplied by farmers and home-owners and therefore are not recorded, nor are such resources available for allocation within a general capital pool. Nevertheless these investments are the source of the whole of the food production of Ghana and also of our cocoa exports. Since these two elements accounts for nearly 50 per cent of the recorded national income the investment which produces them must be far more important than any

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other single element in total investment in this economy. While it is difficult to estimate the money value of such direct investments it is obviously necessary to evolve policies which offer maximum inducements for their increase:

For the individual farmer a programme of Central Government assistance by way of extension advice and production facilities has been outlined in Chapter 4 above. It is expected that these contributions on the part of the Central Government will call forth a correspondingly great effort on the part of the individual farmer in expanding his farms and making them more productive. It is the intention of Government to keep under review the level of its development expenditures devoted to agriculture and the effectiveness of such investment, and to make whatever modifications may seem necessary from time to time in order to encourage the most vigorous response from the individual farmer by way of increased investment.

Similarly a programme of assistance to home builders in the rural areas has been outlined in Chapter 9. This programme also will be reviewed from time to time and strengthened whenever necessary in order to stimulate the highest possible rate of direct investment in housing.

(ii) The Bank of Ghana

In a developing economy the Central Bank of the country has a responsibility which transcends that of traditional central banking functions. The Bank of Ghana currently performs many of the traditional central banking functions and is also responsible for administering as an agency of the Government exchange control and the issuing of Treasury Bills on behalf of the Government. If the Bank, in addition to performing these traditional functions more effectively, is to play its proper role as an adviser to the Government on economic matters and fulfil a role akin to other central banks in developing countries where the central bank has shouldered new responsibilities in assisting in the development process, it should expand its activities in the fields of (a) economic research and (b) the management of public debt.

In all countries, there is always a danger of an insufficient appreciation of the need for research and analysis to precede the taking of important decisions. In view of the heavy responsibility that falls on the central bank of a developing country to advise on a number of economic and financial policies which have far-reaching consequences, it is essential that the services of an adequate research staff should be available to the Bank. A strong economic research department could also be of assistance to the Ministry of Finance and other agencies and departments of Government in studying and reporting on economic problems on which decisions have to be taken.

In the management of the public debt the Central Bank at present performs the task of issuing Treasury Bills. The Investment Department of the Bank also manages all Government bonds including the former compulsory savings scheme. In recent

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years the Bank has floated three Government securities with maturities ranging from five to fifteen years. In this last connection there is need for considerable expansion, if part of the cost of the development plan is to be met out of bond revenues. The operation of the Exchange Control Act, 1961 has caused the shift of assets previously held abroad by bankers, commercial firms and other institutions, and the expansion of the public borrowing aspect of the Bank's work will enable such funds to be profitably invested locally. In this regard, however, careful attention must be paid by the Central Bank to the particular needs and wishes of the investors with respect to bond maturities and yields so that the increased bond issues will be taken up and either held by the commercial banks and other financial institutions or passed on to their customers. Maximum participation in these issues must be secured from real savers in order that the funds so mobilized are non-inflationary. In addition to the issue of Government bonds, it is also the responsibility of the Central Bank to sustain the market for Government securities as an important part of the process of expansion of the Government resources from bond sales.

There is another field in which the Bank can assume a new role in assisting in the financing of an important sector of development activity. With the main emphasis in the development plan on the development of the agricultural resources of the country and expansion in the area of land under cultivation it is also essential that suitable arrangements should be made to ensure that adequate credit flows into the rural sector. This type of credit carries a great deal of risk and as such it is not possible for the existing commercial banks to perform this function. Further, as personal knowledge and contact with the borrower is necessary the new Investment Bank, too, would not be able to shoulder this function. The actual giving of credit has to be done by some sort of co-operative credit machinery, organised and supervised by a well-established financial institution. At present there is a co-operative credit structure which attempts to give credit to the small farmers. This process should, however, be systematized and expanded, if shortage of adequate credit is not to be a bottleneck for the development of the small scale agricultural sector. In many developing countries the responsibility for studying the problem of rural credit, providing a part of the finance necessary for rural credit to the intermediary co-operative agencies, and supervising the grant of this credit through these intermediary channels is the responsibility of the Central Bank. The Bank of Ghana could assume this function through a small expansion in its own organization. It has, therefore, been proposed that the sums allocated for small loans in the field of agriculture and fisheries under this plan should be administered by the Bank of Ghana,

At present although most Government departments and other public institutions keep their accounts with the Central Bank many maintain accounts with commercial banks. Often there are credit balances on the accounts of Government departments with commercial banks while the Government is compelled to arrange for ways and

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means advances from the Central Bank. This system is wasteful insofar as it increases the cost of Government operations unduly while at the same time precluding full control of the expenditure of Government departments. The Central Bank will be able to assist in reducing the cost of Government administration and to prevent over-expenditure by Government departments through the centralization of all departmental accounts in the Bank.

(iii) The Commercial Banks

In Ghana the commercial banks are much better developed than the other types of financial institutions. This was due originally to the establishment of branches of well known foreign banks to finance the trading activities of foreign investors. Subsequently, the Ghana Commercial Bank was also established by Government. The commercial banks, however, still concentrate mainly on financing trade, particularly in the well-established foreign trade sector. They do to some small extent revolve a part of their short-term advances in such a way that they may amount to a medium-term credit, but this is not a satisfactory arrangement. In a developing economy, while several new institutions will be necessary for channelling finance for economic development, there is an advantage in utilizing, in addition, the existing commercial banks along with their branch system for this purpose.

Some supplementary arrangements would be necessary in order to induce the commercial banks to move away from short-term credits to traders into sustained medium and long-term finance for development. The instruments that are being developed in most underdeveloped countries are refinance arrangements and credit guarantee schemes. The refinance arrangement involves supplying the commercial banks with a part of the funds necessary for lending for a longer period of time from other sources. This helps the liquidity of the banks and the general soundness of their position by saving them from tying up their deposits in long-term commitments. Though the refinance system would result in the commercial banks having additional funds for lending, they would still have to carry the entire risk. Thus the device of the guarantee scheme is often also necessary. The credit guarantee scheme involves the absorption of part of the risk of lending for longer periods by some agency other than the banks themselves. The support to the commercial banks in performing this new function could come either from the Central Bank or from some other institution which can carry out both the refinance and guarantee functions. In Ghana it is intended that the Bank of Ghana will perform most of the refinance function while the commercial banks will be insured against part of the risk involved in lending for development purposes by the Investment Bank. Under certain conditions, of course, the two functions may overlap and the same institution may perform both functions.

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(iv) The National Investment Bank

The National Investment Bank which is described in Chapter 3 above should itself be a powerful tool for the mobilisation of savings. It is empowered to borrow both internally and externally to supplement the Government's investment in it. Perhaps even more important, by bringing together investment opportunities, capital and efficient management it should be able to bring into being many new developments which would not otherwise be precipitated in the absence of such a catalytic agency.

(v) Insurance and Pension Funds

In Ghana there is at present a small nucleus of insurance companies, whose primary business is general insurance rather than life insurance. The life policies that are issued are, for the most part, issued to the expatriate community in Ghana. Thus, the insurance companies have not been an effective instrument for generating increased savings in the community. On a request from two of the companies, the Government has taken them over and it is expected that this new institution will set out to stimulate the insurance habit among the people and become an effective instrument of savings. The compulsory savings scheme introduced in 1961 did to some extent perform this function, but as development proceeds and incomes increase it will be necessary that a number of other instruments also should be developed in order to collect a part of the increase in incomes in the form of higher saving. Once these savings have been generated appropriate action would be taken to mobilize them for development.

A number of private businesses and institutions operate contributory pension schemes. The accumulated reserves under these schemes are mostly invested overseas. It is necessary that at least in respect of those employees whose pension benefits are payable in Ghana these pension funds should now be invested in Ghanaian securities. When it becomes possible to institute a contributory pension scheme on a nation-wide scale this should also open up a major new source of investible savings.

(vi) Post Office Savings Bank

Already the Post Office Savings Bank by virtue of its wide distribution throughout the country has been successful in collecting savings from a large number of small savers. The spread of commercial bank branches has, however, tended to slow down the rate of development of the Post Office Savings Bank system. The low rate of interest offered by the Post Office Savings Bank relative to the commercial banks, coupled with its cumbersome method of withdrawal, have undoubtedly contributed to this decline. At the same time, however, the Post Office Savings Bank still remains an important instrument for encouraging voluntary savings particularly among the rural population of the country. It would be necessary, in order to stimulate the savings habit further, to make some changes in the terms and operations of the system.

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(vii) *Other Financial Institutions*

The Capital Investments Board already described in Chapter 3 should become one of the main instruments for channelling private funds from overseas into Ghana's economic development. Government intends to give it every facility and the full backing of the Government's authority in its work.

In addition the Foreign Credits Committee described in Chapter 14 should help to obtain for the Government's own investment programme the right amounts and types of foreign loans.

III.—INVESTMENT POLICY

Given any amount of total savings the rate of economic development that can be extracted out of it depends upon the pattern of investment on which these savings are spent. The greater the share of investment that is devoted to productive purposes the greater the rate of economic growth that can be expected. Similarly, among productive investments the greater the concentration on projects which have a high rate of return then the higher the rate of economic growth that can be maintained.

Under previous development plans Government investment has necessarily had to concentrate on infrastructure and social services, which have only the most indirect or long run impact on the growth of output. As explained previously the major innovation sought in the structure of Government investment under this plan is to bring the share of productive investment in the total up to a very high level.

Both in public and private enterprises the amount of capital required to support any given level of output may also vary within sometimes very wide limits. The choice of productive technique in such a way as to secure the highest return on investment is a problem to which Government expects the agencies responsible for productive enterprises to pay the highest attention. As has been indicated in other sections also every effort should be made to increase the rate of utilisation of existing capital equipment.

The economy must not only direct its investment into the right lines, it must also secure the correct timing between various kinds of investment. The strategy of development under this Seven-year Plan requires that in the initial period the greatest concentration should be on improving and modernising agriculture. In general agriculture is the field which should yield the highest return for any given volume of investment. The concentration on agriculture and fisheries in the first part of the plan should therefore ensure that the capital-output ratio is most favourable in the period when financial resources will also be most tightly stretched. The modernisation of agriculture should be accompanied by the development of consumer goods industry, whose capital requirements per unit of output will also tend to be relatively low.

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The development of heavier industry, especially in metal, machinery and chemicals should be concentrated in the latter part of the plan period, when also new infrastructure developments which generally impose high expenditures of capital should be undertaken.

IV.—EXTERNAL CONTRIBUTION TO GHANA'S DEVELOPMENT

In order to be able to attain the growth targets set out in this plan Ghana will require from the outside world two types of contribution:

- (a) The market for Ghana's exportable products must expand and maintain reasonable prices.
- (b) A sizeable foreign contribution by way of direct investment, loans and grants on public and private account must be raised in the course of the plan period.

(i) *Foreign trade and commodity prices*

Between 1956 and 1962 the world price of Ghana's cocoa averaged £G209 per ton c.i.f. The gross earnings from cocoa exports have amounted to £G432·1 million. If the price of cocoa had remained at the level of £G300 a ton which in 1955 was considered to be reasonable for both producers and consumers then Ghana would in the last seven years have earned £G187·6 million more from cocoa than she actually did. This lost income moreover would have been in the form of foreign exchange which is a particularly valuable resource for Ghana. Under the system of guaranteed prices to cocoa producers Ghana's cocoa farmers were cushioned against the wide fluctuations that have occurred in the world market price for cocoa since the inception of the marketing board system. In return for the stabilisation of price to the farmer Government has been able in good years to mobilise a large proportion of the world price in the form of savings which as indicated above have been used to finance recent increases in consumption and investment.

As the period of this Seven-year Plan opens the world cocoa market is only now showing signs of recovering from its deepest depression of the post-war period. The whole calculation of the financial resources for the implementation of this Seven-year Plan is overshadowed by uncertainties regarding the future course of the world cocoa price.

Along with other producing countries and the major cocoa importing countries Ghana is taking part in the concerting of methods to improve the world cocoa price. Whether or not the targets of economic growth in both the public and the private sectors under this Seven-year Plan are attained without great strain on both internal and external finances will depend very largely on the extent to which the price of cocoa can be maintained at a level near the post-war average of £G240 per ton for the duration of the plan period. This means that a sharp improvement on the present levels of cocoa price is of the utmost importance to Ghana.

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In the meantime it is hoped that some improvement in export earnings can be obtained by the increasing degree of manufacture of Ghana's exports. This prospect is also somewhat clouded by the generally unfavourable policies towards such exports which are followed by the more advanced countries. A liberalisation of conditions for Ghana's export trade is the greatest contribution that the outside world can make to the chances of rapid economic development here.

(ii) Foreign capital and grants

As indicated above in chapter three, Ghana looks to foreign private investment to contribute sizeable proportions of the capital resources needed for the implementation of the Seven-year Plan. Government policy aims at obtaining through grants and loans further foreign contributions. In the aggregate foreign public and private sources of capital will be expected to contribute not less than one-third of the total investment required under this plan.

B. THE FINANCING OF PUBLIC INVESTMENT—1963-64 TO 1969-70*

I.—SOURCES OF FUNDS

Government derives its resources for investment from the following main sources:

1. budget surpluses
2. domestic borrowing
3. foreign loans and grants
4. the utilisation of reserves

In attempting to implement the development programme outlined in this plan the Government of Ghana will have most difficulty with maintaining an adequate level of budget surpluses and with domestic borrowing. Besides, in contrast to the position under previous development plans, no contribution to investment resources can be expected from the running down of reserves in the coming seven years. As has been previously indicated the reserves accumulated in the first ten post-war years were mostly spent in the subsequent seven years, and as the plan period begins the most that can be expected is that through the exercise of stringent economy the reserves will not be further run down.

II.—BUDGET SURPLUSES

Table 13.1 indicates the development of the balance on Government account in the years since 1945. In the first ten post-war years, with the generally favourable trend in cocoa prices and with the Government's machinery short of the manpower and organisation with which to expand the public services, revenues tended to keep

* As far as possible changes in taxation and other fiscal arrangements introduced in the budget of October, 1963 have been taken into account in this section. But basically the plan proposals are based on the situation as of September, 1963.

The trends of revenue and expenditure whose mutual interaction determines the balance on Government account are analysed in greater detail in Tables 13.2 and 13.3 for the most recent period 1953-62. On the revenue side import duties have been the most dynamic of the major components and export duties both the most unstable and the most stagnant. This illustrates one of the great dilemmas of public finance in Ghana and other developing countries. Import duties have risen as Ghana has bought more and more goods from abroad, both to meet the basic needs of the people for food, shelter and clothing and to meet the refinements of the pattern of consumption as incomes have risen. Total imports rose from £G73.8 million in 1953 to £G119 million in 1962. Although this has helped Government revenues it has at the same time been one of the biggest factors undermining Ghana's balance of payments situation. For the future any increase in import duties that accrues must come by way of higher taxes on the less essential imports rather than further increases in the total import bill for such items. In general it would be easier for Ghana to deal with an internal budgetary deficit arising out of diminished imports and import duties than to deal with a further deterioration of the external position due to increased imports even if these contribute to a better balancing of the Government's accounts.

		Yearly average in £G million		
		1945-54	1955-62	1963-70
		<i>Estimates</i>		
Revenue	29	71	130	109
Current Expenditure	17	69	109	109
Current Balance .. .	12	12	21	21
Development Expenditure .. .	6	32	68	68
Overall Balance	6	-20	-47	-47

DEVELOPMENT OF GOVERNMENT ACCOUNTS SINCE 1945 AND UNDER SEVEN-YEAR PLAN

Table 13.1

ahead of expenditures. By the end of 1955 the accumulated balance of the Central Government, as represented by the value of its external assets, stood at more than £G80 million. Between 1955 and 1963 Government's capacity to absorb capital and to operate the social services expanded at a much faster rate than did Government revenues. By the end of 1962 Central Government reserves had been run down to £G7.4 million as compared to a total of nearly £G18 million at the end of 1949.

Table 13.2
TRENDS OF REVENUE

£ Million
1953-54 1954-55 1955-56* 1956-57 1957-58 1958-59 1959-60 1960-61 1961-62*

		Heads									
		12.00	12.94	18.28	16.36	14.98	16.11	18.90	25.52	36.86	
I. Indirect Taxation											
Import Duties		0.43	0.36	0.59	0.65	0.60	0.70	0.83	0.83	0.69	
Export Duties other than Cocoa		0.76	0.17	0.31	0.80	2.00	2.99	3.02	2.83	5.24	
Excise and Local Duties											
Purchase Tax										2.91	
II Direct Taxation											
Income Tax: Personal		5.80	6.10	6.26	5.34	5.61	6.20	5.84	1.11	1.36	
Company											
Minerals Duty		2.23	1.21	1.35	2.01	2.33	1.76	1.52	2.04	2.08	
Property Tax										0.11	
III. Sale of Goods and Services											
Electricity		0.63	0.68	1.05	1.05	1.35	1.54	1.84	2.45	3.64	
Posts and Telecommunications		0.83	0.87	1.19	1.16	1.45	1.80	1.83	2.03	2.52	
Water		0.17	0.17	0.29	0.25	0.28	0.34	0.46	0.51	0.75	
Transport		0.15	0.15	0.33	0.29	0.26	0.28	0.31	0.37	0.46	
IV. Interest		2.16	2.49	3.28	2.40	2.24	2.36	2.19	2.68	3.27	
V. Licences		0.68	0.71	0.91	0.91	0.89	0.97	1.07	1.30	1.49	
VI. Miscellaneous		3.38	2.24	2.39	2.58	3.02	4.58	4.20	9.83	5.83	
Total		29.22	28.11	36.23	33.80	35.01	39.63	42.01	56.96	79.03	
VII. Export Duty on Cocoa		18.13	48.91	24.10	11.93	10.00	10.85	15.14	14.61	16.72	
TOTAL ORDINARY REVENUE		47.35	77.02	60.33	45.73	45.01	50.48	57.15	71.57	95.75	

*15-month period.

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Export duties on commodities other than cocoa and minerals have, in relation to the value of such commodities in the national output and in Ghana's exports made a disappointing contribution to Government revenues. Efforts will be made to correct this situation in the immediate future.

But the crux of the problem of obtaining adequate Government revenues without thereby damaging the country's external position remains the state of the world cocoa market. Increased cocoa duties resulting from higher prices for cocoa would benefit both the balance of payments and the Government's finances. The revenue figures reflect the wide and erratic fluctuations that have taken place in the world cocoa market. These continue to play havoc with the Government's ability to manage the economy in a rational manner and to plan for an orderly development of the country. The whole strength of the Government will therefore be placed behind the quest for more reasonable levels of world cocoa prices and a greater degree of stability in the cocoa markets.

The rather disappointing trend in the yield from direct taxation has been due to two factors. On the one hand the level of personal income tax has remained very low, and the tax net is still in process of being widened and reinforced both to bring in the maximum feasible number of taxpayers, especially the self-employed, and to extract the due contribution from each person. On the other hand the modest rate of expansion of the productive base of the economy outside cocoa farming has resulted in a slow rise in the yield from company taxation.

In order to implement the present development programme without undue strain Government would require to raise its current account surplus to an average of around £G20 million a year during the next seven years. On the expenditure side, as indicated in the previous section, the economy cannot stand an increase in Government consumption expenditures at a rate of more than 5.5 per cent per annum. Since most of this rise will be required to meet the increased cost of the most essential services in education, agriculture and health, other items of Government consumption expenditure will need to be held at a relatively stable level for most of the plan period. This will be contrary to the trend of Government's operations in the recent past when high rates of expansion have been allowed in practically all lines of Government activity. The priority status assigned to agriculture, education and health under this seven-year plan imposes a need for choice and discipline. It means that other elements of Government expenditure will be definitely held back in favour of the increases in expenditure in these priority sectors which are vital for the achievement of economic growth.

In attempting to minimize the rise in Government recurrent expenditure during the plan period the maximum advantage will be taken of the willingness of local groups and local authorities to contribute to the provision of basic social services.

Many communities in Ghana are already able to support the medical and educational services in their areas and progressive decentralisation of the financial responsibility for these services will be instituted in the course of the plan period.

The element of subsidies in Government expenditures will be drastically reduced. As indicated above subsidies to the services provided for individuals such as in housing and transport will be reviewed at an early date. Hitherto some subsidies have also been given to cover the losses of Government enterprises which are ostensibly meant to be commercially viable. Proposals for changes in the tariff policies of the service agencies such as Post Office and Electricity Departments have been outlined in Chapter 6 above. Other public Corporations and enterprises will be cut adrift from the Central Government's recurrent budget at the earliest possible opportunity. Instead of the present position where these enterprises are net recipients of funds from Government they will be expected to become net contributors of funds to Government.

The outlook for budgetary surpluses in the coming seven years is intimately bound up with the prospects of Ghana's export trade and especially with the trend in cocoa prices. A comfortable balance on Government account could be safely projected if, in addition to the restraint on expenditure indicated above, the world price of Ghana cocoa could maintain an average equal to that of the post-war period of around £G240 per ton.

As the plan period opens however the cocoa market remains weak and for the first three years at least of the plan other sources of revenue will have to feature more prominently in the pattern of Government revenue. Since the middle of 1961 increases in direct and indirect taxation have been imposed and have succeeded in arresting somewhat the deterioration of the Government's budgetary position. Even so the prospective deficit on Government's current account for the financial year 1962-63 is about £G3 million and further increases in revenue will be required if a start is to be made from the first year of the plan period in attempting to regain a position where the current account shows surpluses.

Although specific measures of taxation will have to be decided from year to year in the light of current economic conditions it is generally clear that the level of direct taxation in Ghana remains low by comparison with most other countries. The tax-gathering machinery also has some way to go before it can be said to be getting hold of the maximum revenue that is feasible. There seems to be a general willingness on the part of exporters of products other than cocoa to make a greater contribution to tax revenues than they now do. Given a satisfactory state of the world market for lumber, diamonds and the major mineral products an appreciable increase in revenue from that source could be expected.

Savings on the cost of Government services and development projects as a means of financing Government expenditure is an item that, in relation to the contribution that it can make to the financing of a development plan, is often

mistakenly overlooked. Of the Government's total projected investment programme of £G476 million approximately 55 per cent will consist of building and construction. If no more than a 2 per cent per annum increase in productivity in the construction industry was maintained over the course of the plan period then the total estimated cost of the Government's investment programme could be reduced by a total of some £G20 million. This fact lays an especially heavy burden on the Ministry of Communications and Works and other agencies responsible for the designing and the construction of public facilities.

III.—DOMESTIC BORROWING

Proposals for the strengthening of the institutions for the mobilisation of local savings have been outlined in the previous section. The experience of other countries makes it possible to expect that if an adequate number and variety of financial institutions were available in Ghana then the volume of domestic savings would grow at a rapid rate. In this regard policies on taxation, the rate of interest and other factors which influence the supply of savings will have to be reviewed in order to offer the maximum inducement for people to save and to make their savings available for investment.

It is often the experience of other countries in an early stage of economic development that increases in the mobilisation of domestic resources by the Government have been achieved only at the expense of a reduction in private investment. This is especially true where the trends of private and Government consumption are not kept sufficiently under control so that, within the available resources, increased Government investment can only be obtained at the expense of reduced private investment. The aim of Government policy in domestic borrowing must therefore be to secure a net addition to the amount of savings available rather than a diversion of savings from private to public uses.

The way in which Government sets about mobilising domestic resources for its own spending determines whether economic development takes place in an atmosphere of stability or is accompanied, distorted and eventually undermined by inflation. The contemporary scene is littered with developing countries whose chances of national economic growth have been wrecked by unrestrained inflation. Inflation benefits the owners of capital and penalises the workers. It distorts the structure of production and investment: scarce capital which should be put into producing necessities is frittered away on luxury buildings and fancy consumer goods. The incentive to save disappears under the pressure of mounting losses in the real value of savings. Ghana intends to avoid the mistakes made by other countries. Government's financial policy will aim at increasing and mobilising the volume of real savings rather than merely increasing the volume of money demand in order to finance Government activities.

IV.—FOREIGN LOANS AND GRANTS

Before 1961 the Government of Ghana had little need for or access to foreign sources of loans and grants. In contrast to other former colonies of the United Kingdom Ghana did not obtain any appreciable loans or grants from the United Kingdom before independence or at the moment of independence. On the contrary, Ghana's loans to the United Kingdom capital market stood until recently at a high level. Since 1961 greater recourse has been had to foreign borrowing and on the eve of this Seven-year Plan it is possible to foresee a sizeable foreign contribution to development resources.

In February, 1962 the Volta loan agreement was signed making available to the Government of Ghana a total of some £G35 million for the construction of the Volta Dam and to the Valco Consortium £G58·6 million for the construction of the Tema smelter. By the end of 1962 Ghana Government had also utilised credits from other sources, mostly the United Kingdom, Western Germany and Russia, to a total of £G48 million.

On the frame agreements so far concluded with Western Germany, Russia, the Eastern European countries and China there was outstanding at the end of 1962 an unutilised balance of £G100 million. There were also at that date discussions going on about credit facilities for a large number of other projects.

Four aspects of Government's overseas borrowing will be the subject of special attention.

(1) Foreign Exchange Costs of Development Projects

Like other developing countries Ghana has had difficulty in obtaining loans to cover all the true foreign exchange costs of development projects. Many sources of credit finance are open only for the purchase of equipment exported from the lending countries. Most development projects however also involve foreign exchange expenditure in respect of buildings, civil engineering works and other ancillary requirements. Even where the money equivalent of these additional items can be provided from internal budgetary and other sources the foreign exchange is not always available to back up this domestic contribution. In the administration of foreign borrowing Government will be anxious to ensure that credits are granted and taken for an adequate proportion of the true foreign exchange cost of projects.

The proportion of the cost of the development project that is paid out for local labour and materials does not necessarily represent the net domestic cost of the project. Much of these local payments finds its way into a demand for imported commodities. Hence the total balance of payments impact of a development project is greater than the foreign exchange cost of the project looked at by itself. On a national scale this is a particular aspect of the general problem resulting from the

fact that a programme of heavy investments creates demand for consumer goods before the investments can themselves supply such consumer goods. Of the various methods known for dealing with this problem the use of food surpluses and other consumer goods to supplement international capital loans is probably among the most effective. Ghana will therefore take the fullest advantage of such programmes in order to be able to contain the foreign exchange and general demand problems arising out of the projected investment programme.

(ii) Tied Loans

Despite the recent moves towards greater convertibility among the currencies of the industrialised countries the largest proportion of foreign credits available is still tied to the purchase of machinery and other capital goods from the lending country. This could be the source of considerable economic disadvantage if the prices of such goods are higher than could be obtained on the basis of unrestricted choice regarding the source of capital goods.

In this development programme, as indeed in any other programme for the development of a whole nation, there are many necessary projects which are by their nature not eligible for foreign credits as long as these are granted on a project by project basis tied to commercial considerations. The only way to provide external assistance for these non-bankable projects whose absence could nevertheless impede the whole development programme is to obtain loans by way of general financial support to the development plan as a whole. Government expects that lending nations and institutions will be able to extend such general development support to Ghana in order to achieve the objectives of this Seven-year Plan.

(iii) Terms and Conditions of Loans

The present conventions among lending countries regarding the terms of international credits are highly restrictive and, as has been seen in a number of cases for instance in Latin America, could defeat economic development by the amount of pressure that they impose on the balance of payments of the developing countries. Many of these credits require heavy down payments and have periods of repayment which are often too short even for the simplest industrial projects. In most cases equipment bought with such credit has to be paid for well before the project begins to make any profits, thereby defeating the very purpose of using credit.

In the period since 1961 when Ghana has used an increasing amount of foreign credits to finance her development projects a sizeable load of forward commitments for the repayment of loans has built up. It will therefore be a prime objective of Government's policy regarding foreign borrowing to try and spread out the period over which repayment liabilities are being incurred and especially to relieve as far

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as possible the pressure on the balance of payments between 1963 and 1967. This would require that the periods of amortisation of loans should be considerably lengthened and the rates of down-payments and other payments in advance of the utilization of facilities financed by such credits reduced.

(iv) Pre-Investment Activities

So far Ghana has not found enough credit to finance necessary pre-investment studies and post-investment assistance with the management of projects financed by foreign credits. Ghana has indeed benefited from the operations of the United Nations Special Fund in undertaking three pre-investment studies. For the most part however external assistance has not been available for the financing of project studies independently of foreign companies and other organisations which are commercially interested in the projects themselves. Assistance in the design and analysis of projects in the fields of industry, agriculture and infrastructure is urgently required in order to ensure that such projects really meet the criteria of economic eligibility which it is hoped all projects accepted for implementation will be able to pass.

(v) Foreign Grants

Foreign grants as a supplement to foreign loans have been found to be necessary in a large number of cases in order to enable the loans to be utilised most effectively. Ghana will look forward to a fair amount of foreign assistance by way of grants especially for the development of education and agriculture. Such grants will be sought, not only by way of the supply of technical personnel from abroad but also by way of the provision of equipment, tools and buildings.

C. AGGREGATE FRAMEWORK FOR SEVEN-YEAR PLAN

Broad estimates of the resources that are expected to become available to Ghana in the coming seven years and the way in which these should be used to promote economic growth and the welfare of the people to the best advantage are set out in Table 13.4.

These estimates cannot of course forecast exactly how the Ghana economy is likely to develop in the next seven years. In a country where the level of economic activity is so much influenced by random weather conditions and changes in foreign commodity markets all forecasts must remain tentative. Besides, the supply of statistical data on which to base such forecasts is as yet incompletely developed. Nor does such a framework provide a substitute for those decisions of policy that must be made from time to time in the light of actual circumstances.

But the pursuit of the economic goals outlined in previous sections of this plan necessarily entails certain courses of action which are revealed by such estimates. If agricultural and industrial production are to grow to the extent desired then a certain

Table 13.4
PROJECTIONS OF NATIONAL RESOURCES AND THEIR UTILISATION, 1963/64 TO 1969/70

£G MILLION BASED ON 1960-1962 AVERAGE VALUES

	Average 1960/62	% of total 1960/62	1963/64	1964/65	1965/66	1966/67	1967/68	1968/69	1969/70	Total Plan Period	% of total
<i>Sources of Supplies</i>											
Gross Current Output ¹	507	77.0	564	591	621	659	698	744	796	4,673	78.0
Imports of Goods and Services	152	23.0	154	163	172	185	199	214	231	1,318	22.0
Total Current Resources	659	100.0	718	754	793	844	897	958	1,027	5,991	100
<i>Utilisation of Supplies</i>											
Private Consumption Expenditure ..	379	57.5	416	430	444	470	491	514	543	3,308	55.2
Domestic Goods	280	42.4	323	334	344	365	383	403	428	2,580	43.1
Imported Goods	99	15.1	93	96	100	105	108	111	115	728	12.1
Government Consumption Expenditure ..	55	8.4	66	70	75	81	88	95	103	578	9.6
Gross Fixed Capital Formation	109	16.5	110	119	131	142	156	172	186	1,016	17.0
Net Recorded Investment	83	12.6	83	90	99	108	119	133	144	776	13.0
Depreciation Recorded Sectors	16	2.4	17	18	19	20	21	22	24	141	2.3
Direct Investment	10	1.5	10	11	13	14	16	17	18	99	1.7
Exports of Goods and Services	122	18.5	126	135	143	151	162	177	195	1,089	18.2
Total Demand for Resources	665	100.9	718	754	793	844	897	958	1,027	5,991	100
Current Surplus	6	0.9	—	—	—	—	—	—	—	—	—
<i>Domestic Savings</i>											
Total Investment	109	16.5	110	119	131	142	156	172	186	1,016	17.0
Import Surplus	30	4.5	28	28	29	34	37	37	36	229	3.8
Domestic Savings	79	12.0	82	91	102	108	119	135	150	787	13.1
Savings Ratio²	12.0	—	11.4	12.1	12.9	12.8	13.3	14.1	14.6	13.1	

¹ This is defined as Gross Domestic Product + Change in Stocks + Direct Investment. These adjustments to the national accounting estimates are made in order to arrive at a concept closer to that of the current value of the active items projected—consumption, investment and foreign trade. Expenditure in recent years has been augmented to a considerable degree by dissaving, both internally and externally. See also footnotes to Table 13.7.

² Domestic Savings as a proportion of total current resources.

level of investment should be made. This will require a certain amount of savings, which means both Government and individual Ghanaians cannot spend more than a certain proportion of their incomes on current items. The capital equipment to implement the investment projects must be imported; this means a certain level of exports must be attained, or loans to a certain amount raised if these imports are not to be paid for out of our reserves with a consequent weakening of the Ghana pound. The inter-relationships between different sectors of an economy are always difficult to keep track of. For the policy makers in Government and private life these estimates should serve to direct attention to the salient points of the many inter-connected decisions that must be made in order to implement the plan successfully.

1.—EFFORTS FOR DEVELOPMENT

The present estimates show that the greatest difficulties in attempting to implement this plan will be encountered in the following fields:

(i) *Foreign Trade*

To support the total volume of investment projected under this Plan a large increase in the imports of capital goods will be required. In addition, until domestic sources of raw materials for industrial production are better developed, equally rapid increases in the imports of raw materials will be needed. On the other hand, while the programme of export promotion through the local processing of Ghanaian raw materials before export and the increase in the volume of production of these commodities can be expected to make a substantial contribution to the foreign exchange needed for these imports, an overall shortage of foreign exchange can be clearly foreseen. This implies that a definite choice must be made in the allocation of foreign exchange for the importation of consumer goods on the one hand and capital and producer goods on the other. The successful implementation of this plan requires the imposition of a definite regime of austerity in the consumption of imported goods by Ghanaians. Already in the first year of the plan it will be necessary to limit the consumption of textiles and consumer durables.

As in other developing countries Ghana can expect that in the first few years of its development programme investments made for the production of food will not show very rapid returns, while at the same time the wages and salaries paid out to the people engaged in this development programme create an increased demand for food. The import policy must therefore repress expenditure on non-essential items in order to leave a margin for the importation of food should this become temporarily necessary. There exist of course avenues for obtaining food supplies without the need to expend foreign exchange immediately and these should be fully exploited. But a safe self-reliant national policy will be to make provision within our foreign exchange budget for the importation of basic necessities by limiting the expenditure on non-essential imports.

Average 1960-1962 of Total %
 1963/64 1964/65 1965/66 1966/67 1967/68 1968/69 1969/70
 7-Yr. Total of Total %

C.F. VALUES IN £GM.

Table 13.5
 PROJECTIONS OF IMPORTS 1963/64-1969/70

	1960-1962 of Total %	1963/64	1964/65	1965/66	1966/67	1967/68	1968/69	1969/70	7-Yr. Total of Total %
Consumer Goods	64	62	64	67	70	74	80	494	37.5
Food	17	18	19	21	22	25	26	158	12.0
Textiles	21	21	21	22	22	23	23	153	11.6
Other Items	26	23	24	25	26	27	30	183	13.9
Capital Equipment	26	28	31	35	40	45	51	288	21.8
Producer Goods	40	42	45	47	51	55	61	368	28.0
Fuel	6	6	7	7	8	8	9	54	4.2
Other Items	34	36	38	40	43	47	58	314	23.8
Services and Miscellaneous	21	22	23	23	24	25	26	168	12.7
Imports	151	154	163	172	185	199	214	1,318	100.0
Total Imports of Goods and Services	100.0	100.0	100.0	100.0	100.0	100.0	100.0	1,318	100.0

(ii) Government Savings

In order to support the ambitious level of social services the Government is determined to provide for the people, provision has to be made in the nation's housekeeping for an increase in the volume of resources that are transferred from private hands into the hands of the Government. On the other hand there are definite limits to the extent to which the levels of taxation can be raised. At the same time, if it is to end up in 1970 with a greater measure of participation and control over the economy than it has now, then the Government must find within these limitations of tax revenue a surplus which it can apply to development expenditure, especially in productive enterprises.

This clearly means that Government must impose an overall limit on the rate at which recurrent expenditures increase.

If the level of taxation were kept at its 1962-63 rate and recurrent expenditures only allowed to rise at the minimum rate required to provide for an expansion of the services with the highest priority then the Government's budget over the plan period as a whole would end up with an accumulated current deficit of £G66 million. In other words no contribution from taxation could then be expected towards the financing of development expenditure. It is clearly necessary to increase the level of taxation in order that out of each year's budget a certain contribution towards development can be provided, to be supplemented by the loans which the Government can raise. It also means that the seeking and utilisation of foreign loans and grants must be managed on a systematic basis always remembering that these loans themselves create liabilities for the future, especially when they are of a short-term and an expensive nature.

(iii) Domestic Savings

Hitherto Ghana has been able to sustain a high level of investment by running down its external reserves. Under this plan the rate of economic expansion is sought to be increased. At the same time no further contribution from external reserves can be expected towards the financing of investment. This clearly implies that both the absolute level and the proportionate rate of domestic savings out of current incomes must be raised substantially.

An important principle of national policy is involved here. The country could conceivably sustain a high rate of development by increasing its borrowing from abroad and increasing the share of foreign investment in the total development effort. But Government is committed to a policy which will gradually increase the control of Ghana over its own economy. Hence the financial scheme for this plan provides that the annual level of domestic savings should increase by over 100 per cent during the plan period while the national income increases by approximately 48 per cent.

(iv) Investment

The estimates show that in order to be able to afford the requisite amount of savings to implement this plan the investments made in any one period must be so managed as to yield an increase in income in the next period out of which a further increase in savings may be made by the economy. If the effects of investments are neutralised through inadequate management in any one period then the whole development process must grind to a stop in subsequent periods because the savings effort required to sustain economic growth would then become impossible for the people to bear.

There are two aspects of this. First, the investment must be placed where it will yield the highest returns. Secondly, the investment once made must be utilised to the full in order to produce increased incomes. In a development programme such as this one which entails the introduction of a number of new forms of activity in both agriculture and industry the possibility of investments being wasted is especially great. Already in some parts of the country investments that have been made in irrigation facilities are not being fully utilised with the result that the people for whose benefit these facilities were created have not derived the economic returns that they could have derived. A considerable amount of industrial capacity in Ghana is currently underutilised. Practically all industrial enterprises operate on one shift with equipment that could readily be run for two shifts. The result is that the returns from these industrial investments are considerably less than they could be.

In making estimates of the national output that can be expected from the investments projected under this plan, a conservative view has been taken of the success with which these investments will be managed. Such a conservative approach is adopted in order to forewarn ourselves of the full extent of the difficulties with which we might be faced. But of course these difficulties will be much lessened if greater success is attained in the planning and management of investments. Based on the technical possibilities and on the amount of investment provided for the agricultural sector under this plan, agricultural output by 1970 could be two-thirds higher than it is now. This would correspondingly reduce the degree of our dependence upon foreign sources of food and raw materials. But if agricultural investments are put in the wrong places, or are too expensive, or are not managed in order to extract their full potential, then as has happened in other developing countries the agricultural investment will be made but agricultural output will remain stagnant. As the population grows and the people demand more food recourse will have to be had to foreign sources of food with the consequent disruption of the balance of payments position and an increase in the degree of dependence of the economy.

These are the main difficulties that are brought out by an examination of the probable course of the economy and of the consequential decisions that must be made in the coming seven years. The estimates presented suggest the inter-related system of targets that must be aimed at in the various sectors of the economy if the overall economic objectives are to be attained. They indicate the level of output in agriculture and industry that we must strive for. They show the amount of investment that will be needed to attain these levels. They show how much private consumption, especially of imported luxuries, Ghana can afford while implementing such a development programme. They indicate the levels of exports that must be reached year by year if external equilibrium is to be maintained, and they show the levels of savings that both the Government and private investors must aim at in order to attain the desired rates of economic development. It will be the function of those who manage the implementation of the plan to follow the nation's performance in these various directions; to draw the necessary conclusions from the actions and decisions that are taken in any one sector as to the corresponding results and adjustments in other sectors, and to adjust the targets from time to time in the light of changing circumstances.

II.—RETURNS FROM DEVELOPMENT

In return for the efforts and pains outlined above, this Seven-year Plan is also designed to result in the following main improvements in the economic and social life of the country.

(i) Private Consumption

With Ghana's population increasing at a rate of more than 2.5 per cent per annum the main task of economic policy is to ensure that production grows at such a rate as to be able to provide food, clothing, housing and other necessities in amounts which will both cater for more people and for a rising average standard of consumption. The level of private consumption in 1969/70 should be nearly 35 per cent higher than it was in 1962 if the targets in this plan are successfully implemented. Within this increase, domestic products, both industrial and agricultural, should rise proportionately faster than imported commodities. As previously explained however the economic policy of this Seven-year Plan envisages the reduction in consumption of imported goods as falling on luxuries and other non-essential items. Similarly the programmes of production of food and manufactures at home are concentrated on the basic staples of mass consumption. The net effect of these two lines of policy should be that the level of consumption among the poorer sections of the community and of the more basic necessities of life should increase relatively to the level of consumption among the wealthier sections of the community or of less essential items of demand.

Table 13.6
STRUCTURE OF PRIVATE CONSUMPTION 1963/64-1969/70

	1960	1961	1962	Total %	1963/64	1964/65	1965/66	1966/67	1967/68	1968/69	1969/70	Total %		
Domestic Goods	242	283	314	839	74	323	334	365	383	403	428	2,580	78	
Food	139	167	181	487	43	185	192	196	208	216	232	1,451	44	
Industry and Services	103	116	133	352	31	138	142	157	167	181	196	1,129	34	
Imported Goods	97	110	91	298	26	93	96	105	108	111	115	728	22	
Food	20	25	26	71	6	27	29	34	36	37	39	234	7	
Manufactures	77	85	65	227	20	66	67	71	72	74	76	494	15	
Total Private Consumption	339	393	405	1,137	100	416	430	444	470	491	514	543	3,308	100

(ii) Government Consumption

The real welfare of the average citizen depends as much upon the adequacy of public social and other facilities as it does upon the level of his private consumption. Government's recurrent expenditures have risen very fast in recent years and outrun the growth of Government revenues with consequent pressure on the stability of the Government's budget. They cannot therefore be allowed to rise as fast during the present plan period as they have done before. But it is still necessary for the economy to generate enough resources so that the trend of improvement in the social services can continue upwards. If the production targets sought under this plan are attained then by the end of the plan period the level of provision of Government services will be considerably higher than it was in 1962.

These hoped-for increases in the levels of both private and public consumption are of course dependent upon the extent to which the economic returns from the investments contemplated under this plan are adequately realised, otherwise there will not be the resources to sustain an increase in public or private expenditure at anywhere near these rates.

(iii) External Dependence

The extreme dependence of the Ghana economy upon foreign sources of supply of both staple consumer manufactures and capital goods is one of the most difficult problems in maintaining economic and political independence and solvency in the balance of payments. As indicated above it should be possible, given good management of the economy, to reduce considerably Ghana's dependence on foreign sources of supply for the major staples of consumption. On a larger plane it is also an objective of this plan that the present imbalance between foreign expenditures and foreign earnings as a whole should have been reduced considerably so that by 1970 Ghana's current earnings should more adequately cover Ghana's current expenditures on imports.

(iv) Further Development

The structure of investment envisaged under this plan is geared to lay the basis for a further development of the economy in the period beyond 1970. If an adequate base for domestic supply of consumer goods and building materials can be laid; if the educational programme succeeds in improving the supply of skilled manpower capable of running a modern economy; if the transport, electricity, water and other infrastructure facilities are brought up to a position where they can sustain a considerably higher level of economic activity: then the ground will have been laid for further substantial development in the economic and social life of the nation in the period after 1970.

D. AGGREGATE FINANCING SCHEME FOR THE PLAN

In order to implement the targets of economic and social development set under this plan Ghana will need to invest a total of £G776 million in new assets in the recorded sector of the economy. In addition £G141 million of investment money has to be provided for depreciation in order to maintain or replace the existing productive capacity of the economy. As indicated in a previous section a large part of the total supply of rural labour is devoted every year to the clearing of new farms and extension of old ones and to the many other local improvements which have produced the whole of our dominant agricultural and export sectors but which do not now enter the national accounts statistics. These direct investments which are estimated at approximately 5 per cent of the total value of rural labour time on the eve of the plan period should also be encouraged to grow and provide a contribution of some £G99 million towards investment in the plan period. In the aggregate it is sought to increase the yearly level of investments in the Ghana economy from the average of £G109 million per annum recorded in the recent past to an average of £G145 million during the period of the Seven-year Plan—an increase of a third in the rate of investment. Since in the seven-year period preceding that of the present plan aggregate investment almost doubled this target for an increase in the rate of investment during the 1960's is not overly ambitious.

The circumstances in which this increase in investment is to be sought however are a good deal more difficult than those in the previous period. In the 1950's an inadequate capacity to absorb capital, especially in the public sector, was often as effective a brake on investments as shortages in the supply of savings. Lack of engineers, doctors, teachers and administrators often set a limit on what new productive or social facilities could be usefully constructed. By contrast, for part of that time foreign trade prices were moving upwards, which made it possible to achieve a high marginal rate of savings, in both the public and the private sectors. When the commodity markets began to turn sour after 1958 there were still left enough accumulated reserves overall and in the Government sector to cover the annual deficit on the budget many times over. Private consumption, especially of imported goods, was still moving up into line with incomes.

By contrast, in the coming seven years the savings effort will have to be more consciously directed and will prove more strenuous and difficult. Instead of having to worry mostly about how to get necessary development projects implemented Government will also have to worry constantly about which of the many desirable and possible projects can be afforded at any one time: this means careful balancing of the relative benefits to be expected from different lines of expenditure as a prelude to difficult choices. For the individual Ghanaian with growing opportunities for consumption and income levels which are unlikely to grow as fast increased savings

TABLE 13.7
 PROJECTIONS OF THE STRUCTURE OF DOMESTIC OUTPUT 1963/64-1969/70*
 EG MILLION BASED ON 1960/1962 AVERAGE VALUES

	Average		Percent- age of total output							Percent- age of total output	
	1960-62	1960/62	1963/64	1964/65	1965/66	1966/67	1967/68	1968/69	1969/70	Total output Plan Period	Total output during Plan Period
1. Agriculture	249	49.1	276	287	301	321	339	359	381	2,264	48.4
Food Production, Processing and Distribution	162	32.0	186	191	197	207	215	223	232	1,451	31.0
Agricultural Exports	87	17.1	90	96	104	114	124	136	149	813	17.4
2. Mining	25	5.0	26	26	27	29	32	35	38	213	4.6
3. Industry and Construction	120	23.6	138	146	156	163	178	197	219	1,199	25.6
4. Direct Investment	10	2.0	10	11	13	14	16	17	18	99	2.1
5. Other Sectors	103	20.2	114	121	126	130	133	136	140	900	19.3
Total Current Domestic Pro- duction	507	100.0	564	591	623	659	698	744	796	4,675	100.0

*The following adjustments in the usual methodology have been in order to suit the available data:

1. *Agriculture*.—Food production for domestic consumption is shown at market prices in the absence of reliable "farm gate" prices. Production is assumed equal to consumption. Estimates of the wholesale and retail values of locally produced food indicate a retail margin of about 85 per cent, this being highest on yams, plantains and vegetables and lowest on rice and maize. Agricultural exports include the value added in domestic processing as well as the value of the agricultural raw materials. No estimate of locally consumed agricultural raw materials, or firewood is included.

2. *Value of Mining*.—Estimate of output of mineral exports at f.o.b. values. No adjustment is made for consumption of foreign or domestic inputs. Output of quarrying is excluded.

3. *Industry and Construction*.—Estimates are based on figures for value added in *Industrial Statistics* (1958 and 1959) adjusted with the preliminary results of the Industrial Census, 1962.

4. *Direct Investment*.—This is taken equal to approximately 5 per cent of the value of rural labour time.

5. *Other Sectors*.—Residual item.

6. *Total Current Production*.—This is adjusted to exclude stock changes which are not considered for 1963/64-1969/70 projections.

The projections for the plan period are derived by straight line extrapolations from:

- target values of agricultural and industrial output and exports,
- targets of direct investment and
- targets of aggregate output, which have been separately estimated for 1966/67 and 1969/70.

As compared to the targets in chapters 3, 4 and 5 above the targets for 1969/70 have been discounted as follows:—

(i) *Agriculture*: 43 per cent increase as against 54 per cent; of which food only: 28 per cent increase as against 58 per cent.

(ii) *Industry, Construction, Mining and Power*: 53 per cent increase as against 135 per cent. This is partly explained by the estimated slower rate of growth of small-scale industry—32 per cent total increase in the plan period—which contributed an estimated 65 per cent of value added in industry in 1962.

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will have to become a more explicit act of choice, assisted by the development of the financial institutions proposed above and a tax system which will be geared to encourage savings.

The volume, structure and timing of proposed Government investments during the plan period have been set out in Chapter 2 above. The investment programme will be implemented subject to the financial and other considerations discussed in this and previous sections, and can therefore be regarded as the core of the plan. On the other hand it is clearly necessary for the Government's own investment outlays in the various sectors to be supplemented by private and local investments totalling altogether £G540 million if the overall growth targets of the plan are to be met.

In addition this plan has attempted to specify how the overall growth in the economy is to be made up (Table 13.7). To fulfil the targets for the individual sectors of the economy, especially for agriculture, industry, mining, and housing, will require certain amounts of capital investment, both public and private, and estimates have been made of these as far as the data will permit. From these estimates and the planned distribution of Government investment some guidance can be obtained as to how to distribute the total of private investment so that, in co-operation with the Government investment; it might contribute towards realising the sort of pattern of development which we desire. As indicated at the beginning of this document this and successive development plans must contribute significantly towards a change in the structure of production and employment in Ghana if the long-range aims of our economic policy are to be realised. The sort of distribution and timing of investment which, always assuming good management, goes with the targets in the various sectors under this plan is shown in Table 13.8.

It is to be noted that these estimates of private investment cannot be expected to take place exactly as scheduled, being subject to a large number of individual choices and to differing logistics of various investment projects. For a few major investments such as the Valco smelter, some mining and some other industrial ventures the information exists regarding the amount of investment that can be expected at different dates during the plan period. For the rest of private investment these estimates only show how much development we should be trying to induce people to undertake. But it is clear that if a certain amount of the estimated private investment in, say, agriculture has not occurred by a certain date then the production targets for that date and for the whole plan period cannot be realised and that this will affect consumption, foreign trade, employment and other related aspects of the plan. It will therefore be necessary for those charged with the implementation of the plan to ensure that the projected volume of private investment in the various sectors is achieved at the same time as they regulate Government investment in accordance with the priorities of the plan.

FINANCING OF THE PLAN

I.—GOVERNMENT SECTOR

On the eve of the plan period the contribution to the financing of public investment that can be expected from the various sources identified in a previous section has been assessed as follows:—

(i) *Budget Surpluses*

Throughout the post-war period Government has been able to collect more revenue than it spent on recurrent items, leaving a surplus to be applied to its development expenditures. As this plan period opens, however, an entirely new and unfavourable situation faces the country in this regard. The tax revenues are currently insufficient by about £G3 million a year to pay for the recurrent budget alone. Internal loans raised by Government are therefore being applied not only to finance development projects but also in part to cover the current deficit. Based on the 1962/63 levels and structure of taxation it is estimated that the current budgets during the plan period would carry a total deficit of £G66 million which would have to be covered before any resources could become available for development expenditure.

Government has committed itself to the policy that domestic tax revenues should be adequate to cover the recurrent budget and the local costs of the development budget. In order to be able to hold to this policy it will clearly be necessary both to raise new taxes and to limit the rate of increase of recurrent expenditures. The levels of both direct and indirect taxes will have to be raised and new taxes introduced; for instance excise duties on the increasingly wide range of domestic manufactures whose imported equivalent would attract import duty. These new burdens will be most onerous in the first few years of the plan. The deficit on the current budget with which the plan period opens is relatively large. In these early years incomes and employment in Ghana will not have attained the high level which it is the purpose of this plan itself to promote and which would lead to increased revenues at an unchanged rate of taxation. Thus increasing the revenues of Government in order to bring the current budgetary position anywhere near balance will present the Government with the most difficult problems of taxation from the very beginning of the plan period.

(ii) *State Enterprises*

Government already owns a large portfolio of investments in productive enterprises, both in the old service departments like the post office, water, electricity, road and rail transport and in the new industrial, commercial, construction, transport and agricultural enterprises which have more recently been established. Any business-like organisation with such large and varied investments would expect not only the accumulation of sizeable reserves to replace their capital but also a

steady flow of profits from their operation. At present Government can count on an increasing return each year on the operation of the Ghana Commercial Bank. It is not yet certain how much profit will accrue on Government's investment of £G6 million in the Ghana National Trading Corporation. The railways generally make a surplus and can finance most of their new investments out of internal resources. The Black Star Line can make a small contribution to the replacement of its ships. But the airline, the state farms and state industries are generally unable to cover their operating expenses, let alone provide for the proper amortisation of capital or a return of profit to the state budget.

It is pertinent to keep in view that one of the main advantages that accrue from public ownership of productive enterprises in the socialist states is that these enterprises make increasing and assured contributions to state revenues and provide most of the means by which the state can provide an expanding level of social services to the people. In some countries indeed this contribution has become so ample that the abolition of personal income and other taxes can be confidently foreseen in the measurable future. If a business-like tightening up of the management of Ghana's state enterprises could be instituted, and if the review of the tariffs and charges of service departments proposed in a previous section were carried out effectively, then a major contribution to developmental resources could be expected from that quarter. For the present a realistic estimate of the potential contribution of Government enterprises to resources for economic and social development will have to remain fairly conservative. But if adequate arrangements could be made to ensure the profitable operation of these enterprises then they could become a major source of strength in the financial arrangements needed to support this plan.

(iii) Domestic Borrowing

In addition to raising money from its citizens by way of taxation the Government can also persuade them to transfer some money into its hands by offering them inducements of various sorts, but mostly adequate interest payments. The post office savings bank is the largest established channel for collecting such savings. But its contribution of investible funds to the economy thus far has been quite negligible and as indicated above its operations will have to be drastically reorganised to make it more effective. Together with the other steps suggested in section II for creating and managing a suitable volume of Government internal debt it should be possible for Government to stimulate and mobilise a sizeable addition to domestic savings.

(iv) Foreign Borrowing

As indicated in previous sections Ghana will have to have recourse to foreign loans on a large scale in order to be able to finance this 7-year Plan. The important thing about these loans is not merely their volume but the purpose to which they are applied and the terms on which they are obtained. With her natural resources and previous development of the physical and social infrastructure Ghana should be able to absorb large amounts of the right kinds of foreign loan with great benefit. As Government embarks on a major programme of expansion into productive enterprise its capacity to use foreign loans profitably is much enhanced. With the new strengthened machinery that has been installed in the Ministry of Finance to seek and mobilise foreign loans it can be reasonably expected that in addition to the £22 million of the Volta loans that remains to be spent and the £100 million-odd that is available already under frame credit agreements, another £145 million of foreign grants and credit can be raised in the course of the plan period.

(v) Deficit Financing

As the financial position stands at the beginning of this plan period it would seem necessary for Government to resort to methods of deficit financing to provide some of the resources for its investment programme. The amount of such financing that can be prudently used in Ghana is limited mostly by the fact that there are no domestic sources of supply for most of the commodities on which such money would tend to be spent and the effect of too much deficit financing will be either an inflationary collapse or a balance of payments crisis or probably both.

The most probable yield from all these sources on the present indications is shown in Table 13.9. After all the resources that can now be foreseen have been mobilised there would still remain a deficit of £54 million if the present world price of cocoa does not improve. In that case a downward adjustment would have to be made in the investment programme.

In making such adjustments Government intends as far as possible to safeguard its plans for productive investment as against those for investment in social and physical infrastructure. Accordingly the decisions about implementing some sections of the lower priority social and physical facilities will be made conditional upon the raising of certain minimum amounts from new or special taxes or from borrowing. Thus the productive investments will have first call on the yield from existing taxes and Government borrowing.

The present calculations make it apparent how important it is for Ghana and other cocoa producing countries to succeed in the steps which they are now concerting in order to obtain a substantial improvement in, and a stabilisation of, cocoa prices. If the world price of cocoa in the rest of the 1960's were merely to maintain

PROJECTIONS OF GOVERNMENT FINANCE FOR DEVELOPMENT PLAN

TABLE 13.9

	1963/64	1964/65	1965/66	1966/67	1967/68	1968/69	1969/70	Total
Expenditures								
Recurrent Expenditure	86	91	96	102	109	117	126	727
Contribution to Reserves	—	2	3	4	4	5	5	23
Capital Expenditure: Volta	16	11	5	1	—	—	—	33
Ordinary Development	43	50	56	58	65	66	73	411
Debt Service on Existing Loans	145	154	160	165	178	188	204	1,194
	11	12	10	8	6	5	3	55
Revenues								
Yield of Existing Taxation	79	84	89	94	99	105	111	661
Yield of New Taxation	16	17	20	23	25	28	31	160
Profits of State Enterprises	1.8	1.8	2.4	2.8	3.5	4.5	6.0	23
Sale of Goods and Services	8.2	8.2	8.6	9.2	9.5	10.5	11.0	65
Capital Account								
Domestic Borrowing:								
New Issues	1	1	2	2	2	3	3	14
Small Savings	0.9	0.7	1.0	1.5	2.1	2.8	3.8	12
Foreign Loans and Grants:								
Other	10	6	3	1	—	—	—	20
Volta	22	25	28	31	35	38	40	219
Total	33	33	34	35	39	44	47	265
Overall Budget Surplus or Deficit	-18	-22	-16	-9	-8	-1	-1	-75
Deficit Financing	10	9	8	8	7	7	7	56
Budget Outcome	-8	-13	-8	-1	-1	6	6	-19
Miscellaneous, Contingencies and Margin	3	3	4	4	6	7	8	35
Financing Gap	-11	-16	-12	-5	-7	-1	-2	-54

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its average postwar level then both the Government and private Ghanaians would be able without undue strain to achieve all the social and economic goals sought under this Seven-year Plan.

II.—PRIVATE SECTOR

The private sector is expected to provide a total of £540 million or about 53 per cent of the total investment projected under this plan. Of this, direct labour investments should account for nearly £100 million, resident private capital both Ghanaian- and foreign-owned should be able to supply just over £400 million, and the remaining £100 million should be accounted for by the inflow of new foreign private capital.

(i) *Major investments*

The largest single private investment expected to be undertaken under this Seven-year Plan is the £G58 million smelter to be built by Valco at Tema. This investment, which should be mostly completed by the end of 1967, will not only represent a large part of the expected total of foreign private investment but will also make some contribution to the earnings of foreign exchange by Ghana.

The Valco smelter obviously needs to be supplemented by a major new project to produce alumina to feed the smelter. It is estimated that the cost of a plant of adequate size will be of the order of £12 million. If discussions already in train are successful then it could be expected that sizeable private foreign investment in an alumina plant would have been undertaken in the period between the commissioning of the Tema smelter and the end of this plan period.

The other major new project which is under consideration for this plan period is also in the field of aluminium production. Present estimates suggest that there is room on the world market for the products of another aluminium smelter in Ghana. With the power supply situation likely to be in surplus for such a long period ahead, and with major new sources of power at Bui and other sites waiting to be developed, it has seemed expedient to give consideration to the possibility of a second aluminium smelter. Decisions on this are not expected before 1966 but if the preliminary studies now being conducted are favourable then some investment on this project can also be expected before the end of the plan.

(ii) *Resident private investment*

The contribution of existing private savers, both nationals and foreigners, to total investment has in recent years been running at a level in excess of £45 million per annum. The rate of domestic savings under this Seven-year Plan is expected to increase from around 14 per cent of gross current output at the beginning to about 18½ per cent at the end of the plan period. In order to correct the existing imbalance in the Government's accounts, savings in the Government sector will have to be

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increased at a faster rate than this and savings in the private sector at a rather slower rate. But if the growth of resident private savings continues along the trend observed in recent years then, even though a large proportion of domestic savings has to be transferred to the Government sector in order to meet the deficit in the Government account, the remainder should be enough to provide an average of £55 million per year over the plan period.

Direct investments in agriculture and the utilisation of human capital in community development activities have in recent years contributed a sizeable proportion of the total amount of investments made in the economy each year. With the encouragement that it is proposed to offer to private farmers to increase their output and with the strengthening of the local government system the mobilisation of human capital as an aid to investment should make a contribution worth nearly £100 million during the plan period.

(iii) New inflows of private capital

The proposals for new capital investment from foreign sources that are already under consideration cover a wide spectrum of industry including especially cement, metals, textiles, household goods, wood products and mining. The volume of foreign investment proposals has been much stimulated by the Capital Investments Act. With the establishment of strong machinery under this Act to encourage and assist private investment in Ghana it is expected that new inflows of foreign private capital into Ghana will increase from the £5 million per annum level which has been observed in the past to nearer £8 million per annum.

The aggregate of new private investment under this plan is expected to be distributed as to one-third each in agriculture and industry and one-sixth in housing. Together these three sectors should account for nearly £300 million of net new investment.

(iv) The Financing of Private Investment 1963-64—1969-70

The financing scheme for all private investment may be projected approximately as follows:

			£ million
Total Projected Private Investment	..	..	540
Direct Labour Investment	..	..	99
			<hr/>
			441
Resident Private Savings	..	400	
New Foreign Capital: Valco	..	45	
Other	..	55	
		<hr/>	500
Capital Repayments and Margin	59

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CHAPTER 14

PLAN IMPLEMENTATION AND MANAGEMENT

A development plan, however carefully worked out, is only as good as its implementation. The new tasks in economic growth outlined in previous sections make it imperative to institute some major changes in the machinery of Government to enable it to control economic development efficiently.

I.—THE CIVIL SERVICE ⁽¹⁾

In recent years the civil service establishment has expanded very rapidly. The numbers of Government employees had increased from 93,327 in 1951 to 127,419 by 1961. Also, and especially since Independence, there has been a considerable turnover of personnel. The result is that in recruitment general standards of ability and experience have necessarily had to be relaxed. In these circumstances, and in the absence of certain corrective measures, the efficiency of administration has tended to fall.

The first requirement to maintain efficiency is to provide enough training facilities so as to enable people to grow into their jobs. It is no longer possible to assume that new recruits will learn their jobs from older hands. In many establishments all hands will be new hands; training has to be instituted deliberately for all levels of personnel. In previous chapters programmes have been outlined for the up-grading of middle and higher level personnel through various training schemes. For the Civil Service itself Government intends to institute new schemes for training at all levels.

An essential principle of all such training will be that the standards for eventual attainment should not make any concessions to the fact that standards for entry may initially have had to be lowered. This means that personnel training has to span a larger gap in skills than it otherwise would. Unless this principle is adhered to the tendency towards the lowering of the standards of administration will continue and the implementation of the economic and social goals of planning could be seriously threatened.

The other requirement for administrative efficiency is to standardise procedures sufficiently so that the individual civil servant knows precisely what is required of him and his superiors can tell clearly whether his performance is adequate. The solution of such general defects in the civil service machinery through standardised and effective procedures could contribute greatly to the level of efficiency.

⁽¹⁾ So far as the future is concerned, these proposals also cover employees in non-commercial state enterprises.

PLAN IMPLEMENTATION AND MANAGEMENT

A third reform which Government intends to implement is to ensure that merit is recognised and rewarded and that inefficiency carries penalties. This is a problem touching on the wider issue of wages policy and has been dealt with in Chapter 7.

The Civil Service is the area of employment where shortage of personnel has recently been most severe and this has accentuated the dangers arising from inefficiency and lack of a sense of responsibility which are always inherent in the traditional pay, promotion and disciplinary systems of a Civil Service. In order to ensure that the machinery of administration can cope with all the new tasks which will fall on it in the implementation of a development programme of the size outlined in this plan Government will introduce suitable schemes for recognising diligence and efficiency.

II.—THE FLOW OF INFORMATION AND THE SPEED OF ACTION

Other important weaknesses in the machinery of the civil service as it now functions are the general lack of factual and statistical information, the difficulty of obtaining information which exists, and the slowness with which action is taken on the basis of information. No civil service agency can be said to know what it is doing if it does not have from day to day adequate statistical information regarding the functions for which it is responsible. The failure to develop an adequate supply of information has meant that some agencies have had to discuss policy when little was known factually about the thing or situation which their policy was designed to modify, improve or create.

(i) *Financial data*

The first kind of information required for effective administration is how much money the Government and its various agencies are receiving and spending. In the past such information has tended to fall seriously behind with the result that Government has had at any given moment no reliable information about its own financial position. The collection of such information is being improved at the centre by the re-organization and mechanisation of the work in the Accountant-General's Department. However some individual departments still seem to be insufficiently aware of the importance of the financial operations under their own control, with the result that certain primary information is not passed on to the central reporting agencies. It is necessary that there should be a much wider acceptance throughout the civil service as a whole of the importance of the diligent collection and transmission of such information.

(ii) *Real data*

Financial considerations are, of course, always very important, and they should never be overlooked; but government's most fundamental concern should not be with money but with real things; with the people and their welfare, with sickness,

housing, education and so on. At present most Government agencies have little exact information regarding those real subjects which are their responsibilities. Experience has shown that in many important departments and ministries the machinery does not exist to enable them to obtain the information they need.

There is fortunately a growing realisation that such information is necessary for efficient administration. Some ministries have established statistical units which will soon tell them more about the exact measurable characteristics of their functions. The Central Bureau of Statistics, whose facilities will be greatly expanded in the course of the coming seven years, will assist all ministries and departments in devising simple and effective methods of statistical control.

The working of such reporting systems however always depends upon the regularity and accuracy with which information from individual units and officers is transmitted to a collecting centre. Only constant attention by heads of departments and ministries can ensure that reporting mechanisms do not gradually clog up and grind to a halt owing to indifference at lower levels. Such attention will only be forthcoming if heads of departments themselves appreciate the importance of this to the efficient performance of their duties.

It is hoped that during the coming years papers prepared for consideration by Government and other documents used for policy making will reflect an increasing awareness of the need for statistical data, without which questions can only be dealt with in an imprecise manner.

(iii) Norms

The next step is to concentrate on improving operative efficiency in the various agencies. This can be measured by statistical norms. How much work a typist should do, how much it should cost to maintain one vehicle or provide one hospital bed, how many children should be passing examinations every year, what supply of corn per week is needed to feed Accra—all these are matters on which it is possible to establish standards against which to measure performance in the various areas of administration.

For the productive enterprises in the public sector the problem of norms of performance will be tackled in conjunction with incentive and cost control systems as outlined in chapters 3 and 7 and in a later section of this chapter. For the junior and routine operations within the civil service, norms will be established through work study and other investigations of the Organization and Methods Secretariat. The enforcement of these norms will be secured through improved supervision of work and an attempt will be made as far as possible to relate remuneration to performance.

For the higher levels of administration, however, norms are not static standards. They are ideals which the Government should try to approach. They must be dynamic, progressive and responsive to changes of public policy.

PLAN IMPLEMENTATION AND MANAGEMENT

A country like Ghana which enters late on the process of economic and social development has the advantage that it can set as norms of policy the higher standards that other countries have already attained. The job of the administrator is to know his own present performance, to know the performance of similar administrators in other countries and to make a realistic but progressive decision as to how much of the gap between his performance and that of other people can reasonably be bridged in any given period.

In this and subsequent development plans some of the choice about the feasible rate of progress in different fields has been made implicitly in a general way through the financial allocations made. Nevertheless the individual head of a ministry or department still has the responsibility of setting his own norms in the standard of effectiveness with which this allocation is to be used. The knowledge in a quantitative manner of where they are going and how fast they can get there is also the most useful way of fitting the activities of individual agencies of Government within the framework of a plan.

In the immediate period after the inauguration of this Seven-year Plan ministries and departments will be invited to participate in working out the details of the perspective plan for Ghana described in Chapter 1. Their best tools for making such long range plans will be a set of long term norms chosen with realism and purposefulness.

(iv) Central Bureau of Statistics

The enlarged facilities of the Central Bureau of Statistics will be used:

- (i) to assist ministries, departments and other agencies in organising adequate statistics for their own use as indicated above,
- (ii) to assemble and publish information from different sources so that all other bodies can keep themselves informed of relevant information not collected by themselves,
- (iii) to conduct censuses and other major surveys which are normally beyond the capability of individual agencies and
- (iv) to keep the Government informed in a factual way of the current situation in important areas of the nation's life.

As indicated above the accuracy and usefulness of information depends upon the efficiency and speed of primary reporting. The Bureau of Statistics is equipped to process and publish speedily information that is supplied to it. But where the reporting is inefficient and tardy then the summary information put out by the Bureau will be either misleading or else only of historical interest. What is needed for effective administration is knowledge of things while they are happening so that corrective action can be taken while it is still relevant. Otherwise policy is always far behind facts and therefore ineffective when it comes to influencing events.

No satisfactory means now exist for ensuring that information collected by one agency will automatically be made available to others which are interested. One solution is that the Central Bureau of Statistics will increase the coverage of information published in its general bulletins and statistical digests. As Government agencies become more aware of the sorts of statistical information that they need both as a general background to intelligent policy-making and as controlling data of more direct relevance, it is hoped that they will acquaint themselves more regularly with such published information.

(v) Other Exchanges of Information

A good deal of the factual information that must be exchanged between agencies however is either confidential or not suitable for general publication. Already there exists a network among certain groups of agencies for the regular dissemination of such information. It is to be hoped that many more regular channels for the routine exchange of information between agencies on every subject in which they have a mutual interest will be established. This is a vital precondition for more effective co-ordination.

A lot of information that agencies need from each other is of a qualitative rather than quantitative nature. It would seem that the cheapest way to facilitate a more dependable and rapid exchange of such information is to make greater use of the possibility of sending copies of letters and minutes to all agencies which can be presumed to have an important interest in the matter dealt with in the correspondence. Such carbon copies of letters do not cost much to produce and are often quite adequate to keep an agency informed about any matter under discussion between other agencies.

(vi) The Speed of Action

While a lack of information accounts for the failure to make the needed adjustments on many occasions, there have also been occasions in the past even where information was available when action in important economic matters was taken very slowly.

It is obvious that the earlier action is taken to meet any developing situation the smaller and the less painful is the adjustment which is sufficient to meet it. But when a situation has developed too far the necessary corrective action is more severe and more painful. Besides, by creating an atmosphere of crisis it disturbs that equable feeling of stability which is such a great asset for sustained economic growth.

Discussions will have to be held between the various agencies concerned with economic policy with a view to making such changes in the civil service machinery as are required in order to ensure more rapid response and action in this area.

III.—CO-ORDINATION

Co-ordination and consultation between different agencies of the Ghana Civil Service leaves much to be desired and needs to be strengthened if this plan is to be successfully implemented. All civil services suffer from this tendency; heads of individual departments may tend to regard their own interests from too narrow a point of view and an agency may fail to share with other government agencies the information which is available to it. This can clearly be a fatal impediment to progress. The most effective way to overcome it is to institutionalise as far as possible all the necessary inter-agency co-ordination and not to leave it to the discretion of individual officers, however senior.

Every industrial plant needs water, energy, drainage, transport and finance. There is generally an optimum sequence in which these must be provided if the project is to be implemented with the greatest speed and economy. In such cases orderly and readily verifiable routines for co-ordination must be laid down and enforced.

In the particular field of co-ordination in planning, specific proposals for new machinery are presented below.

It is necessary for all agencies of Government to accept freely that such co-ordination is necessary to the more efficient performance of their own duties. The more this is accepted and acted upon the faster and more efficient the whole Government machinery will become at accepting, processing and implementing new ideas. But above all efficient co-ordination is the only way of avoiding expensive mistakes. Ghana has before now paid dearly for the failure of one agency to ascertain information which was readily available in another agency. In many such cases co-ordination has only taken place when it has become necessary to determine how much money need be spent to correct the initial mistakes.

Proper co-ordination will be enforced at three points, namely at the consideration of a proposal for Government decision, at the allocation of finance, and at the ratification of undertakings made on behalf of the Government.

(i) The Processing of Projects

Rules have already been promulgated regarding the steps that all Government agencies should take prior to submitting proposals for Cabinet approval. Government intends to enforce these rules rigidly. No proposal will even be considered unless its financial and economic implications have been cleared with the Ministry of Finance and the Office of the Planning Commission. Every Cabinet paper must contain a clear statement of the cost, in local and foreign currency, to Government of the proposal contained in it, as well as a certification that it has been accepted by the budgetary and planning authorities. These agencies in turn will ensure that their approval of proposals will only be given after all other bodies which are

properly concerned have been fully consulted. This rule will be interpreted in such a way that it will not be possible for agencies to obtain agreement in principle to a proposal and then to claim finance for it simply on the authority of such agreement. A detailed justification will always be required before funds are provided.

(ii) Financial Control

The second point of enforcement will be at the provision of finance. A number of development projects which have been started in the past without proper co-ordination have in the end cost Government many times more than they should have done. In many cases too they have resulted in the creation of uneconomic establishments which have then had to be permanently subsidised, thus constituting a perpetual drain on Government resources. The temptation to allow such projects to start often arises from the fact that the sponsoring agencies initially ask for only a small sum to start on the project while further consultations are held. This temptation will be resolutely resisted. A project once started can hardly ever be halted. The initial mistakes are often not reversible by means of extra expenditures.

Problems of the location of enterprises are especially intractable. A farm or factory once established in the wrong place will forever have to operate at a disadvantage; spending more money to correct the initial mistake only means that the real economic cost of the products of such an enterprise will always be higher than they ought to have been. It is very much cheaper not to allow such projects to get started in the first place and the only way to ensure this is to refuse the initial request for a "small sum". This the Ministry of Finance will do wherever in their view the degree of preparation and co-ordination has been inadequate.

In order to ensure that proper financial control is exercised over all Government expenditure accounting staff in all ministries and departments will be under the control of the Comptroller of the Treasury, who will be responsible to the Minister of Finance. It will be the duty of the accounting staff to make sure that no unauthorised expenditure takes place.

(iii) Agreements and Contracts

There is always a temptation for an agency of Government charged with the direct responsibility for the arrangement of agreements and contracts with third parties to attempt to save time and trouble by finalising the arrangement first without due consultation with the other agencies which are properly concerned, at a late stage only informing these other agencies. Faced with a *fait accompli* the latter have naturally shown little interest in the subsequent consultations. Alternatively, so little time has sometimes been allowed for consideration of the agreements by the other Government agencies concerned that no really effective examination has been possible.

In order to avoid this situation the following procedure will be enforced. All agreements and contracts submitted for approval will have to carry the approval of

the co-ordination division of the Planning Commission before they can be accepted for consideration by the Cabinet or the Control Commission.

(iv) Speed in co-ordination

It is of course true that inter-agency co-ordination takes up time and can be dragged to inordinate lengths. But a reasonable amount of time spent on proper pre-planning and co-ordination is well worth while because in the long run it saves both time and money. A large building project that has to be stopped in the middle while electricity, drainage and water problems are discussed, and an expensive facility that has to be demolished because of inconsistency between the plans of different agencies relating to the same piece of land are both wasteful and a sign of administrative inefficiency. Yet such situations could easily develop as Ghana proceeds to implement her ambitious development plan; it is the duty of the Government machinery to ensure that such waste is avoided.

It will be the duty of the co-ordination division of the Office of the Planning Commission to see that effective co-ordination is maintained at all times and, equally important, that such co-ordination is organised with the maximum speed compatible with efficiency so that it does not itself become a drag on the implementation of development projects

IV.—PLAN ADMINISTRATION: CENTRAL INSTITUTIONS

(i) The Planning Commission

Government will appoint a new Planning Commission which, under the chairmanship of the President, will have the authority and the responsibility for seeing that this plan is successfully implemented. The Vice-Chairman of the Commission will be the Minister charged with responsibility for planning, and there will also be up to three full-time members with executive responsibility, as Development Commissioners, for the implementation of assigned sections of the plan.

The Planning Commission will keep in the forefront of all policy-making the essential principles of this plan, viz:—

- (i) The rapid expansion of agriculture to meet domestic requirements as the first objective;
- (ii) The production in Ghanaian industries of the major staples of domestic demand for manufactured goods;
- (iii) The optimum degree of processing of Ghanaian commodities now exported in the raw state, followed by a start in basic industry;
- (iv) The expansion of technical and higher education;
- (v) The consolidation of Ghana's previous progress in the field of infrastructure and social services;

- (vi) The establishment of a greater measure of state control over the national economy.

The Commission will carry further the changes recently inaugurated in the Government machinery as it affects the productive sectors. In this they will seek to:—

- (a) devise rules governing the operation and control of productive enterprises to ensure that they are managed as efficiently and profitably as possible, and
- (b) secure the maximum allocation of available manpower, especially of those trained for skilled work, to the productive sectors of the economy.

The Commission will each year announce an annual plan comprising targets for all the economic tasks to be implemented in the year. These will include, especially, production targets in agriculture and industry, manpower and employment projections, a foreign exchange budget and an investment allocation plan.

This annual plan will be reflected in the state budget and in the operating budgets of individual productive enterprises. It will be formulated after full consultation between the agencies concerned with its implementation and the Office of the Planning Commission.

Periodically and in the light of accumulating knowledge the Commission will undertake major revisions of current seven-year plans as well as preparing new short-term and perspective plans as required.

(ii) The Office of the Planning Commission

The Secretariat of the Commission, the Office of the Planning Commission, will be strengthened and charged with responsibility for the following functions in planning and plan implementation:—

- (i) The preparation and revision of the seven-year plans and, equally important, of the annual plans through which the longer-term policies will actually be implemented.
- (ii) The regular verification, with the help of the Central Bureau of Statistics and other appropriate agencies, of plan performance, and the analysis of the reasons for any deviation from plan targets. In this connection the Office will also keep the Government informed of the general development of the economy and suggest necessary modifications of policy in the light of its analyses of the economic situation.
- (iii) Co-ordination of the activities of all agencies concerned in the implementation of the plan's objectives, including local councils, using for this purpose the planning officer to be appointed in each agency.
- (iv) The organization of the necessary research and studies towards the preparation of subsequent annual, short-term and perspective plans.

(a) The formulation of plans

This Seven-year Plan represents the first attempt in Ghana to formulate a development plan with a wide concern for the growth of the economy as a whole in contrast to previous planning which has been largely limited to programmes of public works and social development. There has been no previous experience to draw upon and hence the plan has had to be left flexible and, in important respects, incomplete.

But the broad line of development which Ghana must follow in order to attain a rapid rate of economic growth is clear enough and has been outlined in Chapter 1. With the further growth of experience in planning in each ministry and department as well as in the Office of the Planning Commission this broad policy of economic growth should be filled out with specific development projects and policies, while preparations go forward for the elaboration of subsequent development plans and a perspective plan to guide them.

In order to assist all participating bodies to work out their detailed designs in relation to the national plan, a National Physical Development Plan will be set forth. It will translate the policies of economic and social plans into tangible designs of economic geography, allocations of population, labour force, potential industrial locations, urban growth allocations, major transportation corridors, power and water zones and other essential infrastructure. It will be supported by data showing the geographic deployment of the plans, manpower, costs and timing, ranging from immediate future projects up to long range possibilities. It will act as a collecting point for collateral requirements of resource development, industrial openings, settlements and infrastructure. The form of the physical plan will provide both a long-range picture of possibilities and a short-range detailed design indicating the status of all current projects and immediate future recommendations.

Preparation of annual plans is the occasion for the actual realisation of the policies of the seven-year and perspective plans. This function is the most important continuing assignment of the Office of the Planning Commission. The annual plan will attempt to guide the growth of production, to maintain overall stability and the desired tempo of general economic activity in the country; to allocate the scarcest resources such as manpower and foreign exchange, and to influence the allocation of the national income in a manner which is most conducive to the further growth of the economy itself. The skill with which the essential elements in the annual plan as described in the previous section are formulated will in the final analysis determine how fast Ghana's economy will expand.

(b) The verification of performance

An attempt has been made in the most strategic sectors of agriculture, industry and manpower to set definite quantitative targets of production and to assign res-

possibility for the attainment of these targets to specific agencies. The physical plan will express these targets in geographic form. The success of the plan can only be measured by the degree to which these targets are attained and physical projects are accomplished.

The measurement of success by the use of such indices is a new departure in Ghana. Hitherto the implementation of development aims has been largely thought of in terms of the attainment of given expenditure levels. There is very little information anywhere as to whether the social and economic objectives sought through these expenditures were in fact attained or, even more important, whether the results actually attained could not have been achieved with less expenditure in money and real resources.

Proposals have been made in a previous section for new statistical procedures which will enable ministries, enterprises and departments themselves to measure their real performance against plan targets and longer-range norms. In addition to this the Office of the Planning Commission in consultation with the Central Bureau of Statistics will devise a system of statistical measurement for the more important indicators of plan performance—agricultural and industrial production, employment, wages and prices, foreign trade and balance of payments.

It is in the light of this performance data and the analysis of it by the Office of the Planning Commission that the Commission will take corrective action wherever indicated and, when necessary, determine changes in the short-term and annual plans themselves.

(c) Co-ordination

The importance of this function in the making of correct decisions and their most rapid and economic implementation has been set out in the previous section. The co-ordination division of the Office will need all the authority of the Planning Commission to ensure both that in the formulation of their plans and projects all agencies are aware of the relevant plans of other agencies and consult them properly and, no less important, that one agency does not unnecessarily hold up the development or production activity of another agency through failure to provide a previously agreed service or commodity.

In organising this inter-agency co-ordination it will be necessary to devise effective systems of programming for the fulfilment of development and production schedules. It is not uncommon on a construction site in Ghana for workers to have to idle away time because materials have not arrived or because one group has to wait for another to finish their operation first. Buildings may stand unoccupied for long periods owing to lack of connections to the electricity or water supply. Processing factories stand idle owing to lack of co-ordination with farming activities. The examples are many, and always the explanation is that insufficient attention has been

paid to the rule that it is as important to plan when to do a thing as what to do. A particularly serious result of this inattention to timing and programming is the waste of scarce capital resources. Much of such waste involves a loss of foreign exchange as well. Supplies and equipment which have to be stored for long periods through being delivered at the wrong time tend to deteriorate during storage. The Programming Division of the Office of the Planning Commission will have the responsibility of working for the elimination of such waste.

(d) Major Projects

Certain major developments cut across so many departmental lines of responsibility or are of such importance to the national economy that their planning and implementation must be handled by a central body. In some instances in the past the answer has been to set up special bodies to deal with this sort of project such as the Volta River Authority. Not all major projects however will be the size of the Volta Project or be suitable for handling by an *ad hoc* body. In such cases it will be the responsibility of the Planning Commission to ensure that adequate machinery is established for the planning and implementation of the projects.

(iii) Foreign exchange and credit

The Foreign Exchange Committee, under the general direction of the Ministry of Finance, will keep constant watch over the foreign payments and obligations of the country and the external reserves available to meet our commitments.

The committee will prepare for adoption by the Planning Commission a foreign exchange budget for every half year and such other periods as the Commission may direct. This budget will be implemented by the agencies responsible for import and exchange controls.

The committee will initiate action for effecting minor adjustments in foreign exchange operations as the situation demands. Where major changes in policy or operation are deemed to be necessary the Commission will advise Government on the appropriate steps to be taken.

A Foreign Credits Committee will be set up with representatives of the Office of the Planning Commission, Ministry of Finance and the Bank of Ghana to examine the foreign borrowings of Government, to negotiate with foreign sources of credit on behalf of Government, and to supervise the implementation of such credit arrangements.

All proposals for foreign borrowing by any agency of Government or by public productive enterprises will be submitted to this committee for screening, and Government will not accept or sanction any foreign commitments undertaken without preliminary screening and negotiation by it.



The functions of this committee will form a part of the general operation of debt management for which primary responsibility has been assigned to the Bank of Ghana as explained in Chapter 12.

V.—PLAN ADMINISTRATION: DEPARTMENTAL MACHINERY

Every department and ministry of Government will have a planning officer who will generally be its deputy head. The planning officer will be responsible for the co-ordination of the activities of his agency with that of other agencies, as well as generally for the efficient performance of its other planning responsibilities, thereby ensuring that the objectives of the plan are brought to bear constantly on all departmental activities.

Planning officers will be concerned in the setting up of an adequate statistical system in their agencies and the reporting of information to the Central Bureau of Statistics; they will be the channel through which the new idea of factually-based administration will filter into all those areas where administrators now either act on hunches owing to an unnecessary absence of data, or may not trouble to ascertain available facts. Obviously administrators will always be required to use judgement and experience. But in a modern administrative system the occasions on which judgements have to be made on a basis of inadequate information should be relatively infrequent, while in many cases the availability of factual information regarding cognate fields increases the possibility that non-statistical judgements will be right when they have to be made.

(i) The preparation of projects

At present a number of projects have to be accepted into the development estimates every year on faith (i.e. before detailed estimates have been worked out), and also to ensure that certain lines of activity, like agriculture or industry, which it is particularly desired to encourage, are adequately represented in the expenditure pattern of the year. This situation is especially undesirable because it is precisely in the field of productive enterprise that the most careful consideration ought to be given to projects before they are implemented. Admittedly some improvement can be expected as experience increases. But if certain reforms were introduced now they could bring about an immediate improvement.

First, bad projects will pass as long as there is more investment money seeking projects than there are projects seeking finance. In order to change the pattern of its investments in a direction more favourable to economic growth the Government is compelled to allocate increasing amounts of money to these productive sectors. The agencies concerned will be operating in a seller's market as long as sound projects remain in short supply. The only way to avoid this is for the ministries and departments responsible to develop a large portfolio of projects between which the



Government can choose. This requires a high degree of forward vision and planning, but it should not be impossible of attainment. The more these ministries and departments can appreciate the possibilities of development in their fields the more feasible projects will suggest themselves. The planning officers should assist in promoting this greater awareness of potentialities by directing departmental thinking towards long range objectives.

A second line of approach is to regularise the procedures for analysing the feasibility of projects, their economics, and the geographic location and the necessary supporting infrastructure. The list of essential tests which projects, especially in the productive sectors, must satisfy is not difficult to specify. It will be the function of planning officers to apply the national economic targets and physical plan designs to the functional plans of various bodies, and to assist in the formulation of a suitable list of such tests for their respective agencies and to ensure that these tests have been adequately applied before any project is put forward by their department or ministry for Government approval. If this is done efficiently at the departmental level then the subsequent processing of such proposals by the Planning Commission and other bodies could also be speeded up.

A third proposal is that the pre-budget examination of development projects should be spread over a much longer period than is now done—say, six months. Under current practice there is hardly enough time to take screening of departmental estimates for development beyond the stage of deciding in general terms whether the project itself is sufficiently important and whether it can be fitted into overall financial limits. But this procedure is quite incapable of determining whether the particular project put forward is economically sound and properly located and supported. Under the present arrangements there is never sufficient time during the pre-budget examination to have a project re-formulated in a way that would improve its technical and economic characteristics. If planning officers of sufficiently senior rank could be made to spend a long enough time on this process of pre-budget screening then it would become possible to frame the annual development budget with more certainty that its targets could be fulfilled. Without this, planning in Ghana will never become really effective in promoting specific economic goals.

It cannot be overlooked that the existence of an adequate pipe-line of sound and well-prepared development projects is the greatest attraction for foreign credits that a nation can present. Most of the sources of credit both bilateral and multilateral that Ghana will have to resort to for foreign financing of parts of this development plan lend on a project by project basis. Though this is not necessarily a good thing it implies that Ghana must build up a long list of eligible projects in order to be able to attract the large volume of credits that is needed. Even where the foreign lender does not enquire too closely into the feasibility of a project it is an advantage

for Ghana herself to be able to choose the best from a large portfolio of projects, because it is only such projects which can be sure of generating the revenues with which the loan must be serviced.

(ii) The setting of priorities

Forward planning and the accumulation of a list of sound development projects is vital to economic planning in an even more intimate sense. Since planning must imply priority and choice a situation where there are not enough possible lines of development to choose from is one which frustrates planning itself. In such a situation even where adequate examination of the individual projects is conducted the fact that the few projects which are ready must all go forward implies that there can be no choice or priority. Since the most essential projects are not necessarily the ones for which it is easiest to formulate satisfactory development schemes the absence of an opportunity to choose between projects could mean that development programmes consist largely of projects which have no particular strategic significance for the growth of the economy.

A special aspect of this problem concerns the use of foreign credit. Whenever departments and ministries do not themselves have an adequate portfolio of projects they want to implement they will tend to accept suggestions on projects with ostensibly attractive credit offers attached to them which are made by foreign exporters anxious to sell machinery and other equipment. This problem of course is not peculiar to Ghana; a former President of the International Bank has described its general prevalence in developing countries. Ghana must avoid this situation which serves the interests of foreign exporters and creditors rather than those of the borrowing country. The only way to do so is to have our own set of projects which we want to implement and then to seek credit to finance them. If the projects are well prepared the credit will always be forthcoming eventually and the means of repaying it will be assured.

(iii) The cost of projects

It is obvious that the less each development project costs the more projects can be obtained for any given aggregate of investment. It is therefore proposed to set up a costing unit in the Office of the Planning Commission charged with the job of seeking economies in the cost of development projects. This unit will work in close co-operation with the specialist officers in the various ministries.

Even in the wealthiest countries the saving of cost is a major function within government. For instance, there exists a large and constantly growing body of thinking and research on the question of the designing and costs of new schools which are everywhere a major item of developmental expenditure. Many other areas of expenditure are kept under close watch and show the beneficial effects of this attention to costs. In Ghana up till now not enough systematic work has been

done in this direction and international comparisons now show that the costs of our projects are relatively high. Government intends to change this situation radically. Ministries and departments will be required and assisted to think constantly and effectively about the cost of projects as well as their general desirability. For enterprises in the productive sectors an examination of costs is—or should be—an organic part of the process of examining project proposals since excessive costs are reflected directly in lower profitability. For the non-commercial sectors, however, there is no such compulsion to consider costs. Yet since the construction of social infrastructure facilities is, and will always remain, a major element in the Government's investment programme it is obvious that closer attention to costs in these non-commercial projects could be a correspondingly important source of savings in the implementation of a development plan. There are two questions that need to be asked all the time:

- (a) Could not the same social purpose be attained for less expenditure?
- (b) Are we getting as much value in terms of social utility as is possible with the outlay?

The second question especially tends to be most often ignored because to answer it we require the ability to visualise how things could be done differently and objective information regarding our relative performance as compared with that of other people. Both of these lie outside the routine of administration and hence involve considerable effort.

Many of the processes in a development programme are repetitive and are estimated at standardised costs which departments and ministries use continually—the cost of clearing an acre of bush, or moving so many cubic yards of earth, or putting up an office block or house. The most important part of the work to be done in costing consists not of examining the costs of individual projects but of standardising the cost of these most common operations at lower levels than exist at present. Once a lower cost of clearing an acre of bush has been established then there is a permanent saving on all the many subsequent occasions when bush has to be cleared. Money spent on research and other studies required to reduce the costs of standard items in a development programme can therefore yield returns infinitely greater than the original outlay.

As mentioned in a previous chapter costs in the building and construction industry are of strategic importance since almost every development project involves a building of one sort or another. The work of improving productivity in building and hence reducing costs will concentrate on the major individual operations, on materials and on the designing and managerial aspects of building with a view to producing cheaper units of the standard types of building as well as cost—reducing techniques of more general application. Individual ministries and departments may

however have to evolve, in co-operation with the central costing unit, similar solutions for the types of building peculiar to themselves—health centres, schools, factory buildings, etc.

For a start, however, and before these cost studies can begin to yield fundamental results it is already apparent that some social and infrastructure facilities are now planned on too elaborate a scale or at a level of technical sophistication that is better suited to an economy much wealthier than Ghana's. Ministries and departments must recognise the value of functional and simple designing and relate their norms more closely to the successive stages of the development of the nation's economy.

VI.—PLAN ADMINISTRATION—PRODUCTIVE ENTERPRISES

The three elements determining the productivity of an enterprise are the skill of the labour, the skill of the management and the quality of the equipment.

(i) *Equipment*

As indicated in the sections on agricultural and industrial development state enterprises will generally be supplied with equipment for most processes of production which is as efficient as that in use elsewhere. At present, however, much of the machinery and equipment of business and non-business organizations within the public sector is under-utilized. Most modern equipment for production is built to be capable of double-shift working. In the setting up of agricultural and industrial enterprises therefore considerable savings on capital can be made by planning for the operation of equipment for at least two shifts in every working day.

(ii) *Labour*

The supply of labour for agricultural and industrial enterprises available in Ghana should generally be adequate for the expansion of productive enterprise foreseeable in the next few years. The full implementation of the programme for technical and higher education under this plan will ensure that by and large there should be no large-scale or persistent shortage of skilled labour in most of the usual lines of occupation. It will however be the responsibility of the ministries and other agencies sponsoring state investment to identify sufficiently far enough ahead their requirements for skilled labour and to institute appropriate training schemes to produce such labour if it will not be forthcoming in adequate numbers under existing arrangements. It is of course inevitable that the industrial experience of Ghana's labour force should be gained at the factory bench. There is no real substitute for this kind of training on the job. What is necessary however is that those who are responsible for introducing the workers to new techniques should themselves be capable of training them.

(iii) Management

Management is the greatest determinant of business efficiency. The present level of management in Ghana is very far from satisfactory, and this, as has already been emphasised, is especially true of state industries, agriculture and construction. In the first place the systems of control in most enterprises are inadequate. This is often attributed to the scarcity of middle level management, but even in enterprises where top level management operates in direct contact with the labour force efficiency is not very high. In a number of cases middle management is available but does not really perform the function of middle management and therefore does not add much to efficiency.

Accounting systems have in the past been a particularly weak aspect of the management of public enterprises. Many managements have gone for long periods without any adequate information about their costs or even their revenues. The Ministries of Agriculture and Industries and other sponsoring agencies will be required to institute forms of reporting and statistical control suitable for the enterprises under their supervision. In many cases the inadequacies of financial control are the result of the fact that industries have been set up without detailed preparatory consideration as to what their capacities, costs and profitability are expected to be. Adequate pre-planning therefore should go a long way to improve the efficiency of management by setting out at the very start definite goals of output, costs and profitability. Estimates of profitability will in all cases be based on an economic charge for services, including rent; and income tax will be payable on profits at the normal rates.

In order to be able to meet their economic targets the managements of these enterprises should be capable of assessing the components of their costs, of planning action for reduction in costs where necessary and of implementing such measures. The National Productivity Centre described in a previous section is designed to assist enterprises in the performance of these management functions. Shopfloor practice, the flow of work, co-ordination of the movement of materials and goods, labour relations,—all these are aspects of management in which it is hoped that the productivity centre in co-operation with the sponsoring ministries will be able to assist Ghanaian management.

For many enterprises it will be necessary in the initial stages of industrialization and agricultural development to use foreign personnel under schemes of technical assistance or management contracts. As long as these management arrangements go hand in hand with schemes for the training of Ghanaian personnel to take over such management, Government will have no hesitation in employing non-Ghanaians in the management of public enterprises. In general sponsoring ministries should aim at arranging management contracts in such a way that the foreign managers have some incentive for making the enterprises a commercial success.

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The selection and training of Ghanaian management is a subject to which Government intends to devote the most serious attention. The managements of productive enterprises will be entrusted with Government investments in amounts far greater than is normally handled by senior civil servants. They cannot therefore be recruited on the basis of standards lower than those that have to be met in the civil service. In fact Government intends by systems of transfers and secondments to use in the management of state enterprises a considerable number of skilled personnel now absorbed in the civil service. In agriculture the re-deployment of high-level trained manpower from civil service into productive activities has already been started. The success of the agricultural programme will depend upon the degree to which these managers will be able to re-orientate themselves and learn the new skills necessary for their new jobs. It is intended that the Office of the Planning Commission should organize management training through off-season courses and management advice given during the actual process of production, in order to assist with the improvement of the managerial standards of state farms.

The Universities are now producing each year a fair number of graduates trained in general business administration, in economics and in engineering, some of whom ought to be recruited into industry. The Government's plan for the utilization of the output of these higher institutions during the next seven years contains a large element of directing some of these graduates into industry in the same way that most of them are now directed into civil service employments. The Office of the Planning Commission and the National Productivity Centre will provide intensive programmes of post-graduate training in management in order to fit these young men and women for positions of responsibility in industrial enterprises. As indicated above Government's management contracts with non-Ghanaian individuals or groups will always stipulate the training of Ghanaian personnel in management as an essential condition of all such contracts. The training to be offered by the central institutions of Government will be in addition to such contractual training and to the consulting services that the productivity centre will render to Government business.

It is intended that final decisions will be taken during 1963 regarding the systems of payment for both management and labour in state enterprises. This will definitely involve a break with the civil service system of pay which it is now the tendency to carry over into productive enterprises of Government. The essential principles that will govern the pay system of productive enterprises will be:

- (a) Employees in productive activities will not earn less than their counterparts in non-productive activities; more especially, managers will not be placed at a disadvantage in matters of pay as compared with the members of the civil service.

PLAN IMPLEMENTATION AND MANAGEMENT

- (b) Average earnings of managers will be proportionate to the size of the establishment they control. The present system of putting most managers in state enterprises more or less on the same salaries will be eliminated.
- (c) Actual earnings of both managers and workers in each enterprise in any given year will reflect their economic performance during that year. This will be achieved by a system of incentive payments or bonuses based on profits or production.
- (d) The minimum wages and salaries guaranteed to workers and managers in productive enterprises will be significantly less than the actual earnings that they will be expected to command in an average year of adequate performance.
- (e) The top wages and salaries, especially of the managers of the largest state enterprises, should be allowed to reflect adequately the economic importance of such managers to the state. Only thus can Ghana assure herself of the most efficient and loyal performance in the management of these enterprises, which have a crucial significance for the economic well-being of the nation.

The planning of constant improvements, diversification and expansion should be as much the function of the managements of productive enterprises as it is of the ministries and departments. One of the failings of the state enterprises is their relative inability to analyse cost, production and market factors or to plan modifications of these factors that can benefit their enterprises. Dynamic management is partly a skill which goes with experience, but it is also largely a matter of the general attitude to management. There is no doubt that if managements were put under a constant and intensive pressure to improve productivity, to reduce costs and to plan a more effective survey of their markets a considerable improvement in the performance of state enterprises could be assured year by year. It is the feeling within most managements that it is sufficient to continue year after year doing the same things in the same way even when the enterprises are running at a loss which accounts for a large part of the poor quality of management observable in some state enterprises.

A large proportion of the investments of the state in productive enterprises will be vested in the National Investment Bank to hold as trustees. The financing of the operating expenses of state enterprises will be transferred to the normal commercial banking system. By subjecting state enterprises to the discipline of the bankers' criteria it is hoped to avoid the feeling that can so easily grow up, and that is such a danger to efficient management, that state enterprises are exempt from the normal considerations of prudence and success that are applicable to all productive

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activities. In performing their function of supervision over the productive enterprises the banking system will not adopt the sterile methods of commercial relationship that sometimes exist between business and banking finance. The Investment Bank and the commercial banks will themselves be expected to become a source of positive assistance by way of advice and encouragement to the managements of state enterprises which will be placed under their financial supervision.

LIST OF MEMBERS OF THE NATIONAL PLANNING COMMISSION

OSAYEFO DR. KWAME NKRUMAH	..	..	..	<i>President of the Republic of Ghana, Chairman.</i>
MR. V. ADEGBITEY	..	..	..	<i>Chief Architect, Ghana National Construction Corporation, Accra.</i>
MR. J. O. T. AGYEMAN	..	..	..	<i>Managing Director, Ghana National Trading Corporation, Accra.</i>
MR. L. K. APALOO	..	..	..	<i>Principal Secretary, Ministry of Communications and Works, Accra.</i>
MR. K. K. APEADU*	<i>Principal Secretary, Ministry of Industries, Accra.</i>
MR. S. C. APPENTENG	..	..	..	<i>President, Ghana National Chamber of Commerce, Accra.</i>
MR. K. AMOAKO-ATTA*	<i>Deputy Governor, Bank of Ghana, Accra.</i>
PROF. E. A. BOATENG*	<i>University of Ghana, Legon, Accra.</i>
MR. B. A. BROWN	..	..	..	<i>Chief Education Officer, Ministry of Education, Accra.</i>
MR. J. E. CUDJOE	..	..	..	<i>Director, Geological Survey, Accra.</i>
MR. C. A. DADEY	..	..	..	<i>Chief Agricultural Officer, Ministry of Agriculture, Accra.</i>
PROF. JAN DREWNOWSKI	..	..	..	<i>University of Ghana, Legon, Accra.</i>
MR. G. K. B. DE GRAFT-JOHNSON	..	..	..	<i>General Manager, Ghana Railway and Harbours Authority, Takoradi.</i>
DR. C. O. EASMON*	<i>Chief Medical Officer, Ministry of Health, Accra.</i>
MR. A. K. KWATENG	..	..	..	<i>Principal Secretary, Ministry of Finance, Accra.</i>
MR. S. LA ANYANE	..	..	..	<i>Lecturer, University of Ghana, Legon, Accra.</i>
MR. J. H. MENSAH†	..	..	..	<i>Chief Economics Officer, Office of the Planning Commission.</i>
MR. H. MILLAR-CRAIG	..	..	..	<i>Reader, Institute of Public Administration, Achimota.</i>
MR. H. P. NELSON*	<i>Principal Secretary, Ministry of Trade, Accra.</i>
MR. S. T. NETTEY	..	..	..	<i>Commissioner of Labour, Labour Department, Accra.</i>
MR. E. W. NORTEY	..	..	..	<i>Trades Union Congress Headquarters, Accra.</i>
MR. E. N. OMABOE*	<i>Government Statistician, Central Bureau of Statistics, Accra.</i>
MR. E. J. PRAH	..	..	..	<i>Chief Transport Officer, Government Transport Department, Accra.</i>
MR. E. A. QUIST-ARCTON	..	..	..	<i>Principal Secretary, Ministry of Agriculture, Accra.</i>
MR. J. RIBY-WILLIAMS*	<i>Principal Secretary, Ministry of Social Welfare, Accra.</i>
DR. F. T. SAI*	<i>Deputy Chief Medical Officer, Ministry of Health, Accra.</i>
MR. J. THERSON-COPIE	..	..	..	<i>Chief Industrial Promotions Officer, Ministry of Industries, Accra.</i>
MR. P. N. K. TURKSON	..	..	..	<i>Chief Town Planning Officer, Town and Country Planning Accra.</i>
PROF. K. TWUM-BARIMA*	<i>Kwame Nkrumah University of Science and Technology, Kumasi.</i>
MR. E. A. WINFUL	..	..	..	<i>Principal Secretary, Ministry of Communications and Works, Accra.</i>

*Chairman of Committee.

†Executive Secretary of the Planning Commission.

**LIST OF ECONOMISTS INVITED TO A CONFERENCE IN APRIL, 1963
TO DISCUSS THE SEVEN-YEAR DEVELOPMENT PLAN**

PROF. IBRAHIM HELMI ABDUL RAHMAN	..	..	..	<i>United Arab Republic Planning Institute, Cairo.</i>
MR. WALTER BIRMINGHAM	..	..	..	<i>Leicester University, United Kingdom.</i>
PROF. CZESLAW BOBROWSKI	..	..	..	<i>University of Warsaw, Poland.</i>
PROF. JOZSEF BOGNAR	..	..	..	<i>University of Budapest, Hungary.</i>
PROF. H. C. BOS	..	..	..	<i>Economische Hogeschool, Rotterdam, The Netherlands.</i>
DR. DAVID CARNEY	..	..	..	<i>Ministry of Development, Sierra Leone.</i>
PROF. ALBERT O. HIRCHMAN	..	..	..	<i>Columbia University, New York.</i>
MR. NICHOLAS KALDOR	..	..	..	<i>Kings' College, Cambridge University, United Kingdom.</i>
PROF. ARTHUR LEWIS	..	..	..	<i>University of West Indies, Jamaica.</i>
MR. H. M. ONITIRI	..	..	..	<i>University of Ibadan, Nigeria.</i>
PROF. K. N. RAJ	..	..	..	<i>Delhi School of Economics, India.</i>
MR. DUDLEY SEERS	..	..	..	<i>Economic Commission for Africa, Addis Ababa.</i>
DR. ABDALLA SIKTA	..	..	..	<i>Development Council, Tripoli, Libya.</i>
PROF. OSVALDO SUNKEL	..	..	..	<i>Economic Commission for Latin America, Santiago, Chile.</i>
PROF. PEDRO VUSKOVIC	..	..	..	<i>Economic Commission for Latin America, Santiago, Chile.</i>
MR. JAMES M. WEEKS	..	..	..	<i>Office of the President, Monrovia, Liberia.</i>