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COMPARATIVE ADVANTAGE IN AGRICULTURE IN GHANA

by

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RÉSUMÉ

A l'heure de son indépendance, en 1957, le Ghana figurait parmi les économies les plus avancées de l'Afrique subsaharienne. Promis à de rapides et importants progrès, ses résultats se sont cependant révélés médiocres et, en 1982, son économie était réduite à un état de ruines. L'environnement extérieur et les conditions climatiques sont en partie responsables de cette évolution. La plus lourde responsabilité incombe néanmoins à la gestion intérieure qui, en contradiction avec les conseils d'Arthur Lewis de 1953, pénalisa l'agriculture et paralysa peu à peu les forces du marché. Depuis 1983, les autorités ont procédé à une réforme économique permettant de s'engager sur la voie du rétablissement. L'institution d'un taux de change réaliste a favorisé la restauration des forces du marché. Si l'on excepte un soutien aux planteurs de cacao, l'agriculture n'a pas été particulièrement prise en compte dans la politique économique. Pourtant, une recherche-développement soutenue par l'Etat dans le domaine agricole, un effort en matière d'infrastructures rurales ainsi qu'un développement industriel adapté pourraient s'avérer de la plus haute importance pour l'avenir du pays.

SUMMARY

In 1957, when independence came, Ghana was one of the most advanced economies in sub-Saharan Africa. It seemed well placed to make rapid and substantial progress. In the event, economic performance was dismal, and by 1982 the economy was all but in ruins. External conditions and the weather can carry some of the blame for this. However, the fault lay mostly in internal policy, which, contrary to sound advice given by Arthur Lewis in 1953, discriminated against agriculture and increasingly inhibited market forces. Since 1983 economic reform and recovery have been under way. Here a realistic exchange rate has been central, and market forces have been resurgent. Apart from encouraging the cocoa farmer, policies have not noticeably included agriculture. State-encouraged agricultural research and development and rural infrastructure could, however, be important, alongside soundly based industrial development.

PREFACE

In recent years, the OECD Development Centre's research on agriculture and development has focused on two broad themes. First, the impact of exogenous changes -- in bio-technology, the food system and international demand and supply trends -- on developing country agriculture. Secondly, the interaction between macroeconomic policies and agricultural development. Research on this theme comprised a series of country studies: China, Thailand, Pakistan, Mexico, Brazil, Argentina, Ethiopia and Ghana. A synthesis of these studies was conducted by Sartaj Aziz and published by the Development Centre in 1990.

This paper invesigates the economic development of Ghana over the past three decades, concentrating on agriculture, which is the central economic activity. It analyses the causes of the economic -- and perforce agricultural -- malaise. It explores the extent to which the dismal performance of the economy may be attributable to weakness of the natural endowments, to an unfavourable external environment, to policy failures, or some combination of all of these factors.

A key to development, the study reveals, is the establishment of appropriate private-public and agriculture-industry balances. In Ghana, the tilting of these balances away from agriculture and the market was the result of domestic political concerns, as well as the influence of economists who, in the late 1950s, were persuaded that government-supported industrialisation policies would pave the road to development.

The examination of Ghana's economic experience since independence is of a failed promise of economic growth, and the lessons drawn from Ghanaian economic failure stretch beyond its borders. The study offers important comparative insights for other sub-Saharan countries, many of whom have experienced similar policy disappointments.

Louis Emmerij
President
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October 1990

PREAMBLE

Since the first industrial revolution took place in Britain, the increasingly systematic application of science and technology to production has resulted in widespread and sustained increases in real incomes and real incomes per head. The diffusion of modern economic growth, however, has been neither even nor complete. "Why", it is possible to ask with Professor Easterlin, "isn't the whole world developed?"[1]. And since growth has been least impressive in sub-Saharan Africa, the question as to why that region has not developed is particularly pressing.

Easterlin's answer for the world -- that growth depends on the effective diffusion of new production techniques, which in turn depends on education -- may well hold *a fortiori* for sub-Saharan Africa. As summarised, however, this explanation is unduly cryptic, so that wider examination is in order. Thus the reasons for sub-Saharan Africa's dismal economic performance may be found in the poor inherited endowment as the different countries began their post-independence pursuit of modern economic growth, in an unfavourable external environment, in policy failures, or in some combination of the foregoing. And it would seem important to pin down the scale and character of the policy failures, and have as realistic awareness of policy potential as possible. After all, of the factors listed, policy is most amenable to change. What, the question then is, can governments achieve and, in so far as inactivity is a policy, what can free markets deliver in sub-Saharan conditions?

At independence it was widely believed that government should have the leading role, and so, for example, make good the gaps in savings and entrepreneurship associated with absent or weak capital markets and a pre-industrial past. More generally, it was felt that it should mobilise resources and plan their increase and allocation so as to secure rapid growth. However, since the policies followed did not clearly lead to marked increase in productivity and output, policy emphasis has shifted. Many now find the scope for government intervention more limited than earlier thought, believe that market-determined prices are critical to efficient performance, and suspect that allocating resources in pursuit of their highest return would give more attention to agriculture and less to industry than hitherto.

How well-founded is this shift? What role does it leave for the state and how important is government to wider success? Even if one goes all the way back to Adam Smith -- no bad thing to do -- government is left with law and order, defence, and the provision of public goods, and so no small agenda. What public goods are needed in sub-Saharan Africa? And how important are these to overall growth? Is, for example, national and location-specific agricultural research a public good? And could Africa hope to make much progress without it?

The present paper attempts, if not to answer, then at least to throw light on these questions raised through a consideration of Ghana's economic experience since independence. Ghana is, of course, but one of the large number of countries that comprise sub-Saharan Africa, so that lessons drawn from its modern economic history may be peculiar to that history. Still, Ghana was arguably among the first to show symptoms of economic distress that were later widespread[2]. And the consequences of the success or failure of Ghana's present efforts to achieve economic recovery will surely be felt well beyond its borders. Moreover Ghana's economic failure has been among the most tragic and graphic, and among those more easily associated with particular policies. It deserves repeated study in its own right, as the Ghanaian people deserve economic success.

The remainder of this paper is in four parts. The first provides a Ghana-specific introduction; the second recalls early policy advice that was to be largely ignored; the third examines economic performance between 1960 and 1982 in selected detail; and the fourth considers the measures now in place, evaluates their impact and draws conclusions.

I. INTRODUCTION

Ghana's economic future seemed bright when it came to independence in 1957. Income per head was then among the highest in sub-Saharan Africa, exchange reserves were substantial, government was lively and the civil service competent. And it looked initially as if the economic promise would be fulfilled. Between 1955 and 1960 real per capita income grew at an average annual rate of between 2 and 3 per cent. Economic and social infrastructure, already relatively impressive, was strengthened and industrialisation began to gather pace. Gross investment was 20 per cent, on average, of the GDP and mostly financed by domestic savings.

In the 1960s, however, the economy grew more slowly than the population -- notwithstanding (indeed, on one view, because of) a staggering increase in the capital stock in the first half of the decade. The 1970s saw the economy go into long-running decline: between 1960 and 1982 real income per head fell at an average annual rate of almost 2 per cent. At the beginning of this period Ghana had been at the same level of economic development as South Korea; by its end average income in Korea was almost six times greater than in Ghana. Yet in 1960 South Korea had figured in the economic development texts as a hopeless case, a poor country without prospects. In Ghana, by contrast, there were those who believed that with self-government it would be possible to transform what had been the Gold Coast into a modern economic state within a decade[3].

No such miracle took place. Instead by the early 1980s the Ghanaian economy had almost collapsed. Domestic saving was negative and capital was not being depreciated. Foreign exchange reserves were non-existent. There was no growth in agriculture and food production had been falling at an annual rate of 6 per cent for at least a decade. The decline in industrial output had, at 7 per cent a year, been even sharper; and transport and distribution were also in sad shape. The dismal performance of the productive sectors and a chronic trade imbalance -- Ghana had a debt problem before it was fashionable -- perforce squeezed private and public consumption. In independent Ghana real consumption per head had reached its peak in 1960 and by 1982 it had fallen by more than one-third from that level. Economic survival had become the main concern. For some -- especially those with externally-marketable skills -- escape lay in exile, so that, for example, two-thirds of medically-qualified Ghanaians now practise out of Ghana. For others salvation lay in smuggling and parallel markets. Few found a "secure" job in the formal sector an adequate base, though it often was a haven from which to undertake what were misleadingly called secondary activities. University lecturers, for instance, came to spend less time on teaching and research than on, say, transport services, market gardening or even small-scale subsistence agriculture. Poor households in Accra were spending four times the minimum wage, but were still considerably below the poverty line[4].

The proximate cause of this cruel outcome was bad economic management. A highly distorted structure of prices (including the exchange rate) constrained exports and so, beyond a certain level of debt, imports. Agriculture was generally discouraged and cocoa farmers were excessively exploited in order, *inter alia*, to finance large and unproductive public investments. Administrative controls gave rise to rent-seeking and widespread corruption and the limit was reached when Colonel Acheampong, in an unconsciously apt description of what he was about, declared that it was necessary to make war on the economy.

By 1982 it was evident that fundamental change was necessary if anarchy or a complete reversion to subsistence agriculture were to be avoided. Thus in April 1983 the present government, in collaboration with the World Bank and the IMF, formalised its efforts to address the plight of the economy. The first phase of the Economic Recovery Programme (ERP) covered the period 1984-1986, was intended to stabilize the system, and was followed by a second phase in 1987-1989. Measures to date have included exchange rate and trade policy reforms; steps to improve the efficiency of the tax system and budget allocation; policies to restore cocoa production and improve its marketing; attempts to reform state enterprises (including through divestiture and liquidation); and improvement in the making, coordination and implementation of policy[5].

Ghana's economic performance since 1984 has been better than for many years. Moreover a careful, but imaginative, *Programme of Actions to Mitigate the Social Costs of Adjustment* is in place to help ensure that, without impediment to much-needed growth-producing measures, the most disadvantaged benefit in the short run. It is thus to be hoped that progress will continue and that social cohesion will be maintained. In the meantime among the more interesting questions that are raised by Ghana's recent -- and indeed more remote -- economic history and present circumstances are the respective and related roles of agricultural and industrial development. How far, for example, did the pace and the pattern of the preference shown to industry contribute to the economic decline? And, due account taken of what has happened in the last 30 years, what parts do industry and agriculture have to play in economic recovery and growth?

How, it may be asked, could industrial development be causally linked to general economic failure? The short answer is through the wrong choice of strategy. Forced and tariff-protected industrialisation has been the central element in one widely used approach to policy, and for much of the time nowhere more so than in Ghana. "The vicious circle of poverty", wrote Dr Nkrumah, "which keeps us in our rut of impoverishment, can only be broken by a massively planned industrial undertaking"[6]. This is what he attempted, so that a parallel has been seen between his views and actions and the development theory in vogue in the late 1950s. The authors of this theory distrusted markets and were pessimistic about world economic trends, so that they too allowed much scope for the state in the economy and called for an industry-driven "big push". There was thus some similarity of opinion between, say, Rosenstein-Rodan and Nkrumah. But too much should not be made of this. Import substitution and protected industrialisation could surely be more efficiently arranged than they were in Ghana, so that to regard Ghana's performance as a definitive test of the theory would be unfair. Moreover Nkrumah's behaviour always derived more from politics than from economics; and it is doubtful if he ever acknowledged the limits that economic reality imposes on political power.

Still the main reason for being wary is that, on the eve of independence, Nkrumah had been eminently advised to follow a course that was very different from that which he was to pursue.

It is consequently interesting and useful to reconsider the untaken advice, and to see whether counter-factual indication can be obtained on what could have been. It is then convenient to examine what did happen. Thereafter the question is: what of the present and the future? After the trauma of the last two decades, is the economy now in good shape? If not will it, in the light of improved market signals, sort itself out? Or is there still room for government intervention beyond that which comes from general macro-economic policy? If there is, what form should the additional effort take, and should it be directed primarily at industry or at agriculture? Are there indeed other and over-riding considerations?

II. THE INDUSTRIALISATION OF THE GOLD COAST

For Adam Smith there was a natural progression from agriculture to manufacturing to foreign trade (in manufactures). In poor economies the great commerce was that between town and country. And though this was mutually beneficial, it was "the surplus produce of the country only, or what is over and above the maintenance of the cultivator" that allowed, and controlled the pace of, urban growth[7]. This constraint gave evident importance to agriculture.

Late in 1952 Professor W.A. Lewis (as he then was) was asked to report "on the problem of the development of secondary industries" in the Gold Coast[8]. Since he did not believe that there was surplus labour in the economy, his consequent advice echoed Adam Smith. Agriculture was the place to start, particularly in relation to industrial production for the home market.

The size of that market is determined by population and income. Poor people spend most of their income on food and housing, and so have little left over for manufactures. And what little there is normally goes on clothing. Thus:

> "The development of manufacturing for the home market ... depends upon improving the productivity of other economic activities ... From this point of view, the most usual path to progress is increasing efficiency in the production of food ... In unenlightened circles agriculture and industry are often considered as alternatives to each other. The truth is that industrialisation for a home market can make little progress unless agriculture is progressing vigorously at the same time, to provide both the market for industry and industry's labour supply. If agriculture is stagnant, industry cannot grow."

Nor was the meaning of this passage left in doubt. After noting that there was some concern lest the demand for food should outstrip supply, Lewis wrote that,

> "Even if the supply of food were fully adequate to meet all likely demands upon it, it would still be true that the principal road to progress would be through intensified efforts to improve efficiency in the production of food. Our concern is not with the amount of food available, but with food production per person engaged in agriculture. If the food supply were adequate, the Gold Coast should still be straining to have fewer farmers, each producing more, since this is the way to stimulate the other sectors of the economy. A vigorous agricultural programme is needed, not because food is scarce, but because this is the road to economic progress."

Thus the central conclusion was that "measures to increase the manufacture of commodities for the home market deserve support, but are not of number one priority". The first imperative was increased agricultural productivity, the second the improvement of the public services relevant to the attraction and operation of industry. Lewis thus thought that many years would elapse before large investments in industry could be justified economically. In the meantime priority should, as noted, be given to increasing agricultural productivity and the provision of infrastructure. Industrial support should be confined to activities capable of surviving without subsidy.

These were unlikely to be numerous. Industrialisation begins with the processing and export of agricultural goods or minerals previously exported in raw form, with import substitution in the (growing) domestic market, or with the production for export of light industrial goods. The main difficulty with the first route is in competing with efficient manufacture in already established centres. Competition is most often possible if productivity in relation to labour costs is favourable to the newcomer, or if the material to be processed loses weight in production and so confers a cost advantage in transport.

Since it is easier to gain an edge in transport costs than in productivity, the chief activities of the first kind in the Gold Coast were the timber and palm oil industries and "the removal of precious stones from the useless ores in which they were buried". And bauxite, timber, cocoa and oilseeds were deserving of further study. Bauxite, however, was outside Lewis's terms of reference; and cocoa (on technical grounds) and oilseeds (because of limited output) did not arouse great enthusiasm. As for timber, the industry was already well provided with capital and enterprise.

Import substitution is at the same disadvantage "of manufacturing in a place where fuel is costly, engineering services expensive, public utilities inadequate and so on". These constraints can again be overcome if wage costs adjusted for productivity are favourable or if transport costs are important and can be reduced through local manufacture. These considerations apart, the main determinant of viable import substitution is the minimum efficient size of the relevant plant. Moreover, since the likelihood of relatively low wages being a real advantage is inversely related to the capital intensity of production, the share of labour in total costs also hints at the probable efficiency of an industry.

The prospects for import substitution may thus be favourable if an industry uses local and heavy raw material or produces a good that adds bulk and does not suffer from markedly "unfavourable" features. By the same token, prospects are unfavourable in any one of four circumstances: where there is a need for an imported, weight-losing, raw material; where production is relatively fuel intensive; where very special skills, such as that of the watchmaker, are required; and where there is an unusually high capital-labour ratio. Industries that neither benefit nor suffer unduly from the transport factor may be regarded as marginal if their needs for capital, skills and fuel are average and if the local market is big enough. Such industries could be set up in the Gold Coast without subsidy "only if their wage cost is low enough to offset environmental disadvantages and also afford some protection against imports".

In the light of these general considerations and of detailed knowledge of particular industrial processes, Arthur Lewis scanned the import list. In all, inspection yielded eleven favourable and fifteen marginal industries. The numbers in and composition of these categories would not, Lewis judged, be much altered by the advent of aluminium and cheap power. The best prospects were, then, oil expressing, canned fruits and vegetables, salt, beer, bricks and tiles, cement, glass, lime, industrial alcohol, miscellaneous chemicals and wood products. The marginal activities were biscuits, soap, confectionery, cigarettes, boots and shoes, hats and caps, shirts, knitwear, weaving cotton and rayon, jute bags, foundry products, candles, paints and colours, travelling bags and rubber manufactures. The favourable list was short because the Gold Coast did not have many industrial raw materials, and the marginal list mainly because demand was small. It was expected to expand with the standard of living.

If the outlook for exporting processed primary products and developing the home market was not too bright, there seemed even less hope that the Gold Coast could move directly to the export of light manufactures. Success in this area depended on the possession of cheap fuel and weight-losing materials or on relatively low labour costs. The latter often come from a very high population to natural resources ratio -- hence the success in this respect of Japan, Hong Kong and Puerto Rico. The Gold Coast, however, was neither fortunate enough in its natural endowment to follow the first route to light export markets, nor under sufficient pressure to be driven to the second. If there were to be industrialisation it would have to come from domestic demand.

As this expanded, who was to identify and run the resultant industries? Was it to be government, indigenous entrepreneurs, foreigners, or some combination of these? Little industrial development of any kind, began the flat answer, would be possible without the knowledge of expatriates. Only the terms of their involvement and the extent to which foreign capital was also needed were in issue. If industrialisation were to be financed from domestic savings that would mean the farmers in the last analysis, so that the importance of a progressive agriculture was again underlined. Even with a stagnant agriculture, it was Lewis's judgement that adequate extraction -- to finance the limited industrial base thus required -- would be possible, but unpopular. One alternative was direct foreign investment, which can also be unpopular in countries that used to be colonies.

If foreign capital is needed but direct investment is to be avoided, money can be borrowed from abroad -- presumably at an interest charge lower than the rate of profit a foreign capitalist would look for -- and either put in government-operated factories or used to finance indigenous entrepreneurs. Most governments, however, need all that they can borrow or raise through taxation for "the more urgent purpose of expanding the public services". This priority is intrinsic, but is also supported by the fact that none but the government can provide the necessary services, while others can build and run factories. Thus:

> "there is no doubt ... that the Gold Coast Government can do more for development by spending its money on expanding the public services, which are woefully inadequate, and quadrupling that part of its agricultural services which relate to food production for the local market, than it can do by operating factories. If the Government were determined to exclude private foreign capital, it would do better to postpone industrialisation rather than divert money to it for these more urgent purposes. For the present Government should confine its ownership of factories to the inescapable minimum."

Since economic maturity requires "that the country can proceed on its own without needing any significant foreign help", the development of indigenous enterprise had to be a major aim of economic policy. The Gold Coast was deficient in technical knowledge, managerial capacity, and capital. Contrary to the common view that finance and a command of technology are the important things, "what makes a business successful is the efficiency of management, for, given this, all else will follow". Some management skills can be taught in business schools, but much can only come with experience. Thus foreign businesses should not be allowed into the country unless they trained and used indigenous managers. Moreover government lending to industry should mainly be the handmaiden of supervisory technical assistance, and should be concentrated on the extension of existing firms of promise rather than on the creation of new activities.

The policy stance of the Lewis Report is far from being wholly *laissez-faire*. Government had a duty to identify profitable industrial opportunities that would otherwise be missed, to encourage others to act on this identification, and to start up industries if others were unwilling and its conviction of long-run viability were well founded. It also had a duty to help industrialists overcome the limitations of their environment -- through the adequate and reasonably-priced provision of utilities, subsidies for training, and special help to newcomers. Moreover, temporary protection was allowable if it permitted learning-by-doing and overcame vested interests; and encouraging industries that employed mainly women could be justified by the low opportunity cost of female labour. Manufacturing as a whole deserved support as a hedge against unfavourable trends in agricultural prices.

Still, if the Report saw a role for government, it was a conspicuously modest one. A small programme was all that was justified. The important thing about any qualification to the rule that new industries must pay their way was that "the argument must not be pressed very far". In that government intervention was justified at all, it was mainly to be directed elsewhere. Thus:

> "the surest way to industrialise the Gold Coast would be to multiply by four or five the resources available ... for fundamental research into food production. And then, as the results became available, to multiply five-fold the funds available for extension work in the village."

Professor Lewis's advice was perhaps rather casual. Thus the strategic question of inter-sectoral allocation of investment was settled largely in favour of agriculture and infrastructure. Yet no empirical justification was offered for this. Indeed it was much later before Lewis confirmed that investment in each of the sectors should be taken "to the margin of advantage". Nor was Lewis's project appraisal very comprehensive. The government was advised to stay close to comparative advantage, where this was made to turn largely on productivity-weighted wage rates and transport costs. There can surely, however, be more to comparative advantage than that. In Japan and South Korea, for example, the economic competence of government has been very important in this regard. It may be, of course, that Lewis was implicitly denying that high degree of competence to the Gold Coast government. His cost-benefit analysis could nevertheless still be seen as crude. His investment criteria were far from precise and -- apart from noting the divergence between private and social costs in training -- he paid little attention to the possible biases in the private view.

That Professor Lewis could, and perhaps should, have provided stronger support for his argument in favour of agriculture and public services does not invalidate that argument. Nor does the weakness of his project appraisal necessarily mean that more rigorous analysis would have altered his results. With hindsight, his foresight does not seem to have been too defective. He could well claim that, had his advice been taken, Ghana would now be better off than it is. Such a claim would be counter-factual and so difficult to prove. It is, however, not too hard to make a plausible case, beginning with specific and costly projects that would have been avoided. Thus there would, for example, have been no rain-fed sugar industry. More generally Ghana would have better preserved its share of the world cocoa market, would have made more progress with non-cocoa agriculture, and would by now probably have had a larger and more efficient manufacturing sector than it has.

Quick indication of what may have happened may be had from reasonable assumptions about cocoa and the rates of growth of agriculture and manufacturing. In the season 1960-1961 Ghana supplied 37 per cent of the cocoa traded on the world market. That proportion had fallen to less than 12 per cent by 1982-1983, when production was 178 thousand metric tons. If Ghana had then been as competitive as in 1960-1961 it would have been able to sell 548 thousand tons -- with the increase coming, it is here assumed, at the expense of other producers, and so without consequence for the price level. Had that happened the gross domestic product would, other things being equal, have been 6 per cent higher in 1983 than it was. This, on the actual figures for 1965 and 1980, would have been equivalent to one-third of 1 per cent on the annual growth rate, so that it may not seem much.

This measures, however, only the direct impact of more cocoa exports. A condition of market share retention would have been higher producer prices, a more modest Cocoa Board, and so fewer distortions in the economy. The tax on cocoa exports would have been lower and the proceeds from it differently used. And the improvement of non-cocoa agriculture would have been among the different uses for them. As it was, agricultural output increased at an average annual rate of 1.6 per cent between 1965 and 1980, while manufacturing grew by 2.5 per cent per year. These figures are low compared to those for sub-Saharan Africa as a whole, those for all low-income countries, and those for the lower middle-income economies -- in whose ranks Ghana was at the beginning of the period in question. More economically-justified attention to agriculture would have raised output on the farms and had a greater multiplier effect on manufacturing.

In the World Bank classification, Ghana is now counted among the low-income economies. Its fall in status is another indication of its economic decline. Since better policies could have prevented this, it is defensible to believe that Ghanaian agriculture could have grown by 3.3 per cent per annum, and thus at the average for the middle-income group between 1960 and 1985. If Ghana had also enjoyed the same proportionate growth in industry as this group, then the relevant sectoral rate of increase would have been 7.3 per cent per year. If, in addition, handicraft production had increased at the same pace as agriculture and services had increased at the same rate as GDP, the overall rate of growth would have been 4.0 per cent per year, as against an actual 1.4 per cent. Agriculture would have seen its share fall from 44 per cent of GDP in 1965 to 39 per cent in 1985, compared to an actual 41 per cent. And manufacturing, which accounted for 11 per cent of GDP in 1985, would have increased from 10 per cent to almost 16 per cent.

These calculations are crude. They nevertheless tend to confirm that Ghana would have fared better if it had stayed closer to the advice given on the eve of independence. This stressed that the pursuit of industrial development should be gradual and paced by agricultural growth; that sensible, self-interested use should be made of foreign capital and skills; and that there should be little direct government involvement in manufacturing. With this in mind it is now convenient to recall what happened, to see how things went wrong.

III. THE INDUSTRIALISATION OF GHANA

Ghana's economic performance, particularly in the 1960s, is now relatively well-documented, so that lengthy repetition is avoided here. It is, however, convenient to recall some of the gains that were expected from a strong, state-led, focus on industry, and to consider how far these were realised. This is done in two stages. The first briskly specifies the expectations and briefly examines the general evidence for the 1960s. The second focuses mainly on the period 1970-1982. To put this into context, however, the performance of the economy and the manufacturing sector in this period is compared with that in the 1960s.

1. Some Theory and Early Practice

At the time that Arthur Lewis's report was written, a different adviser could well have made more of industry. In the light of interdependence in decision making, the pioneering work of Rosenstein-Rodan had spawned a respectable literature that called for explicit, non-market, coordination of resource allocation. Industry was seen as especially apt for realising dynamic benefits -- learning by doing, the externalities that flow from complimentarity, economies of scale and quickened technical progress. It is true that Rosenstein-Rodan and later Kaldor and others were to see a link between productivity-increasing possibilities and the level of development. Thus wise counsel would always have been cautious about the possibilities of purposively engineered structural transformation. Still, import substitution may be seen as a trade off. Some sacrifice of static efficiency in the allocation of resources is accepted as the cost of -- presumably more-than-compensating -- dynamic gains. Import substitution cannot, therefore, be successful if it fails to deliver the dynamic benefits expected of it[9].

In Ghana the advice given by Arthur Lewis was more or less respected until 1959, and agriculture-led industrialisation received at least lip service for some time thereafter. Policy shifted increasingly, however, to that of the "big push", with the state being directly active and protection being in place. By the time they were drafting their proposals, the authors of the Second Five-Year Plan (1959-1964) thought the public services adequate for a marked industrial spurt. They consequently called for high priority to be given to the setting up of 600 factories producing more than 100 products, and largely located in the newly-created industrial estates in Accra-Tema, Kumasi and Takoradi. Foot-loose industries were also to be established in some twenty rural locations.

The Second Plan was never implemented, but the number of manufacturing establishments with six or more employees increased four-fold between 1959 and 1962. This was already well ahead of Lewis's cautious pace, and the expansion was to continue. It was also associated with marked changes in ownership and the composition of manufacturing activities. Thus between 1962 and 1970 the number of medium- and large-scale establishments more than doubled, real value added grew at an average annual rate of 10.5 per cent, and employment increased by about 9 per cent per year.

In 1959 large-scale factories were confined to making beverages, tobacco and wood products. Some goods that were more important in the domestic market -- flour, food, textiles, printing, leather, rubber and chemicals -- were also produced locally. But none accounted for more than 4 per cent of the value added by manufacturing. Most of these activities were in the private sector. The Industrial Development Corporation had been lending and making direct investment since 1947. Its 22 directly managed subsidiaries and 9 associated companies were, however, mainly small- to medium-sized affairs.

Between 1959 and 1966 private Ghanaians and the state became more prominent than before. Consistent data for 1962 and 1966 show than Ghanaians with full or shared ownership accounted for 45 per cent of manufacturing value added in the latter year as compared to 32 per cent in the former. Over the same period the share of government in value added rose from 12 per cent to 15 per cent, and that of joint state-private enterprises went from 8 per cent to 14 per cent. These trends in ownership received a check from the different policy orientation of the NLC and Busia governments that followed Nkrumah, but in 1970 the government still accounted for 15 per cent and joint ventures for 17 per cent of manufacturing value added[10].

Apart from the commissioning of the petroleum refinery and the aluminium smelter at Tema, most of the expansion of production was in relatively simple consumer goods. Thus food, beverages, tobacco, textiles and footwear together increased their share in manufacturing value added from 40 per cent in 1962 to 60 per cent in 1970. The growth in output was thus based on what is normally seen as the easy phase of import substitution. Lack of success at this stage would consequently bode ill for the next, more difficult, stage. Yet, in the words of one highly-regarded student of the Ghanaian economy[11],

> "the overwhelming impression is of failure -- to generate growth, to invest resources wisely, to raise productivity. By the standards of other low-income countries, the performance of Ghana's economy was appalling."

Moreover,

> "the worst aspect of Ghana's poor showing was the failure of the big push of the Nkrumah years. High levels of capital formation failed to generate growth either in the short run or later in the decade ... Those who took over from Nkrumah inherited a sorry mess and their successes in restoring some balance in the economy were considerable. Nevertheless, their response was the essentially negative one of cutting investment (and imports); ... and by 1972 the economy seemed as mired in stagnation as it had been during the preceding decade."

Killick explicitly linked the failure of Nkrumah's industrialisation strategy to the stagnation of domestic agriculture and the discouragement of primary exports. He also noted that the management of state enterprises was so poor that even the lack of crucial imports was an inadequate excuse for their dismal performance. Nkrumah's policy instruments were direct state investment (in agriculture as well as industry), protection, and measures designed to contain the growing imbalance on the external account. Leith has shown that, perhaps unintentionally, the protection afforded to Ghanaian manufacturing was random rather than purposive. It still, of course, favoured industry over other sectors, as did the steps taken to ease the pressures on the balance of payments[12]. The latter were, moreover, far from random in their impact.

After 1961 domestic savings and gross domestic fixed capital formation tended to decline, and so -- more importantly -- did the efficiency with which capital was used. This was due in substantial part to the distorting effects of the balance of payments controls. For those favoured by relatively easy access to foreign exchange and import licences, capital was in effect subsidised. Its use was thus stimulated in industries that were not necessarily the most efficient. Thus in the industries that were favoured the rate of capital formation exceeded that of output growth, so that the productivity of capital fell. Moreover, the use of imported materials was also over stimulated. Nevertheless the impact of controls on the less-favoured sectors was adverse. Starved of capital, foreign exchange and material imports, they simply failed to grow.

More effective policies in the foreign sector alone need not have meant more growth in the economy. The controls compounded rather than caused more general errors in economic policy. Still they did introduce glaring distortions and it is not surprising that, in the years between Nkrumah and Acheampong, attempts should have been made to dismantle them. That these were, as Killick argues, more limited in fact than in rhetoric could explain their otherwise surprising failure. So also could the vested interests that had been created as a result of rent-seeking and corruption. And Leith has urged that the complex and sometimes random character of the controls, the consequent diversion of entrepreneurial and bureaucratic energy, and the habit of waiting until a crisis was full blown before tackling it were at the root of failure. It is, however, possible that what liberalisation lacked most was time. Whatever else may have inspired Acheampong's coup it was not -- as subsequent events were to show --profound economic insight.

2. 1970-1982

Disappointing as Ghana's economic performance may have been in the 1960s, it was destined to get worse before it got better. This may be seen from Table 1, which provides broad measures of performance over three decades. Thus the rate of growth of real income and real income per head fell more or less continuously; and income per head actually declined over the 20 years from 1960. The growth of agricultural output comfortably outpaced that of population in the 1960s. In the 1970s, however, the supply of agricultural goods per head went down. Manufacturing output grew at an impressive-seeming average annual rate of 11.6 per cent in the 1960s. This rapid rate is largely due to the low base in 1960, and disguises differential performance in the early and later years of the decade. And in any event the industrial expansion was not such that it could be sustained. Thus negative growth was recorded in the 1970s.

Table 1

SELECTED GHANAIAN GROWTH RATES, 1950-1980
(average annual rates, per cent)

	1950-1960	1960-1970	1970-1980
Real GDP	4.1	2.1	0.6
Agriculture	-	3.7	1.2
Manufacturing	-	11.6	-2.3
Population	1.5	2.4	2.3
Real Exports	3.2	-0.3	-2.7
Real Imports	8.9	-1.4	-3.8
Gross Domestic Investment	8.9	-3.2	-
GDP Deflator	2.2	7.6	33.6

Source: World Bank, *World Tables*, 1984, and *World Tables*, 1987.

To permit more detailed examination of economic performance, Table 2 gives information on real GDP, capital stock and employment, and capital and labour productivity. From this it may be seen that total output was little higher in 1982 than it had been in 1970 -- the relative increase in the 12 years being less than 6 per cent. This compares with a rise of more than 12 per cent in the 10 years between 1960 and 1970.

Table 2

OUTPUT, EMPLOYMENT AND PRODUCTIVITY IN THE GHANAIAN ECONOMY, 1960-1982

	GDP (1960 Prices)	Capital Stock (1960 Prices)	Employment (000s)	Productivity K/Y (1960 = 100)	Productivity Y/L (1960 = 100)
1960	953	842.15	2 559	100	100
1961	991	979.61	2 721	98	113
1962	1 034	1 091.30	2 803	99	120
1963	1 055	1 229.84	2 866	99	133
1964	1 076	1 363.33	2 958	98	144
1965	1 066	1 516.88	2 970	96	161
1966	1 021	1 616.19	2 719	101	180
1967	1 028	1 656.03	2 754	100	182
1968	1 036	1 681.36	2 918	95	184
1969	1 070	1 710.18	3 024	95	181

.../...

	GDP (1960 Prices)	Capital Stock (1960 Prices)	Employment (000s)	Productivity K/Y (1960 = 100)	Y/L
1970	1 108	1 790.33	3 130	95	184
1971	1 190	1 884.66	3 291	97	180
1972	1 187	1 994.32	3 452	92	191
1973	1 245	2 017.70	3 619	92	184
1974	1 323	2 038.56	3 798	94	175
1975	1 129	2 142.92	3 951	77	211
1976	1 089	2 204.60	4 099	71	229
1977	1 140	2 250.10	4 254	72	223
1978	1 269	2 330.02	4 426	74	209
1979	1 266	2 370.39	4 598	74	212
1980	1 297	2 395.51	4 774	73	210
1981	1 255	2 408.80	4 944	68	218
1982	1 180	2 401.69	5 104	62	232

Note: Capital stock data beyond 1970 estimated by perpetual inventory method.

Sources: World Bank, *World Tables* (various issues); CBS, *Economic Survey* (various issues), and *Industrial Statistics* (various issues); T.M. Brown, "Macroeconomic Data in Ghana", *Economic Bulletin*, 1971.

The growth of real output was also slow compared to the rate of growth of the labour force and the capital stock. Thus in the period 1970-1982 the former grew by 63 per cent and the latter by 34 per cent. The productivity of both factor inputs obviously declined -- at an average annual rate of 3.6 per cent for labour and of 2.0 per cent for capital. As would be expected, the data of Table 2 show year-to-year fluctuations, so that the movements in output, factor inputs and productivity are not entirely smooth. It does not require elaborate statistical analysis, however, to see that the long-run trends were, to put it generously, disappointing. Growth began to falter in the early 1960s. And although things obviously got worse later, particularly after 1974, there is no doubt that the dismal experience of the 1970s was a continuation of a pre-existing trend.

Just how dismal that trend was may be seen from a formalisation of what has just been said. Output may grow because of brute increase in factor inputs, because of a rise in the productivity of such inputs, or because of some combination of quantitative and qualitative improvement. And it is clear that the benefits claimed for forced industrialisation are such that productivity increase should be an important part of the growth story. This story is told for Ghana in Table 3. There the focus is on total factor productivity growth. Defined as the difference between the rate of growth of output and that of appropriately-weighted inputs, this is theoretically more appealing than the single factor productivity indices of Table 2. It is also, as noted, the logical measure on which to judge the success or failure of an industrialisation strategy.

Table 3

GROWTH OF OUTPUT, INPUTS AND TOTAL FACTOR PRODUCTIVITY IN THE GHANAIAN ECONOMY, 1960-1982
(Average annual rates, in per cent)

	All sectors of the economy				Manufacturing industry			
	GDP	K	L	TFPG	GDP	K	L	TFPG
1960-1982	1.14	4.21	3.15	-2.28	2.92	8.07	5.79	-4.58
1960-1970	0.87	7.33	1.26	-1.91	8.95	15.00	7.98	-4.30
1970-1982	0.54	2.49	4.05	-3.11	-3.18	1.81	2.51	-5.17

Note: Capital input share 0.25 for the whole economy; and 0.75 for manufacturing.
Source: see Table 2.

The striking feature of the table is that total factor productivity growth is everywhere negative. Over the whole period 1960-1982 and in the sub-periods 1960-1970 and 1970-1982 the efficiency with which resources were used declined, so that the recorded rates of growth in total and manufacturing GDP were significantly lower than the corresponding rates of increase in the factor inputs. On this measure, efficiency was lower in 1970-1982 than in the 1960s, and lower in industry than in the economy as a whole. In the 1960s the sheer increase in industrial inputs led to a rapid-seeming growth in manufacturing output. When, however, economic circumstances dictated a marked slackening in the frenetic expansion of manufacturing in the 1970s, the growing inefficiency of resource use caused output itself to fall. From first to last, and notwithstanding the hectic pace of capital accumulation in industry well captured in Table 3, there is no evidence that the Ghanaian economy benefited from the industrial drive at the centre of Nkrumah's economic policy. On the contrary the evidence is consistent with the view that such a drive was -- as Arthur Lewis had in effect predicted it would be -- premature.

It has already been noted that import substitution could surely be more efficiently organised than it was under Nkrumah and his successors. It may thus be tempting to blame Ghana's first President uniquely for the economic misfortunes of the country. Nor would yielding to temptation necessarily be wrong because things went from bad to worse as power passed from Nkrumah to others. The cost of resource misallocation under Nkrumah was considerable and cumulative, so that his bequest would have been a challenge to well-designed policies. That Acheampong and his collaborators were bereft of any notion of economic policy did not in the event help. Yet it is not clear that the false start made by Nkrumah would ever have been easily corrected. Ghana is, after all, still not out of the woods.

It is important to recognise that though Ghana's economic decline was arguably the most graphic and tragic in sub-Saharan Africa in the post-independence period, it was not entirely *sui generis*. As elsewhere the problem lay largely in policy faults -- in an exaggerated view of the beneficence and prescience of the state on the one hand and of the extent and importance of market failures on the other. Continuity should have been the watchword of much economic policy after independence, and such radicalism as was called for should have gone in the direction of lessening rather than increasing the economic role of government. The colonial marketing boards, set up in the wake of the depression of the 1930s and the contingencies of war should, for example, have been reduced rather than expanded. Unfortunately political and other pressures moved the newly-independent states in the other direction. Nowhere was this more true than in Ghana.

IV. TOWARDS ECONOMIC RECOVERY?

A doctor whose patient has pneumonia does not sensibly set about preparing that patient to run a marathon. The first concern is to return the invalid to health. So it must also be with a run-down economy. And, as in medicine, so in economics efficacy of prescription is likely to be related to accuracy of diagnosis. Ghanaians and foreigners who examined Ghana found symptoms of an over-extended state linked to growing economic irrationality. Resources were less and less being allocated in keeping with their scarcity values and more and more as a result of the random impact of irrational policy, personal connections and clout in an inherently corrupt system. There was consequently a pressing need to restore integrity to the price system.

Thus early attention was given to the exchange rate and the price paid to cocoa producers. Within six months -- between April and October 1983 -- the cedi had been devalued by 990 per cent, and by May 1985 the extent of the devaluation had risen to more than 1 800 per cent. In April 1983 the cocoa price was raised by 67 per cent and then by another 50 per cent in May 1984. It is noteworthy that the changes in the exchange rate were much sharper than those of 1971, which were widely but perhaps wrongly believed to have caused the Acheampong coup.

Within the first phase of the Economic Recovery Programme of 1983-1986 efforts were made to boost government revenue through, for example, more efficient collection of tax and duties. Civil service reform was also set in motion and included plans to reduce the size of the service while increasing salary differentials. Infrastructural renewal was set in train and included improvements that boosted cocoa collection and delivery. Consistent with a main thrust that was designed to widen the scope for and increase the efficiency of market operations, steps were taken to reduce the size of the public sector more generally. These ranged from pressures on the Ghana Cocoa Board to the decision to return a significant number of enterprises to private hands. This competitive thrust notwithstanding the importance of public policy was clearly recognised; and measures were brought forward to increase government economic competence.

Encouraged by the first phase of the Economic Recovery Programme, the government implemented a second that was due to run to the end of 1989. The concern with the exchange rate and the cocoa farmers has been maintained. The government aim is a market-determined rate. To this end it has organised an auction since September 1986 and, since February 1988, allowed foreign exchange bureaux to operate -- to encourage legal flows and to permit the provision of relatively small amounts of foreign exchange on a daily basis. The gap between the auction rate and that of the bureaux is a measure of the success in establishing a single rate. This gap has been narrowing but still comprises a differential of from 20 per cent to 40 per cent. The auction has worked well and relatively smoothly. The amounts handled rose steadily from $37 million in 1986 to $256 million in 1988, the coverage of goods has expanded (and includes an increasing range of consumer goods), and the depreciation of the cedi over time has been relatively gentle.

Providing cocoa farmers with growing incentive to increase production has been a major part of policy. The price increases recorded above were not the last to be awarded to farmers; and by end-1989 real producer price had increased by a factor of 2.5 since economic recovery began, so that an increasing share of the world price accrued to the farmer. Valued at the official exchange rate, this share stood at 23 per cent in 1986/1987, and it rose to 33 per cent in 1987/1988. There is evidence that these changes have led to rehabilitation and replanting.

Other steps taken to promote a competitive economy have included a review of the tariff structure. This resulted in some simplification of rates, but not in general reduction in the levels of protection. Indeed a 10 per cent special tax was introduced to give temporary protection to selected commodities.

As a complement to the measures that should make the economy more market driven than before, government has tried to improve efficiency in the raising and spending of public expenditures, the performance of state enterprises, and the quality of economic management. Thus a core of 20 public projects thought to be critical to recovery has been identified in order to ensure that these do not lack for funds. The aim for the state enterprises is to reduce their number and to improve the efficiency of those that are left. And the effort to raise the standard of economic management has largely run to institutional reform, including notably of the civil service itself.

Among sectoral measures in place are those designed to restructure the educational system, and to increase the cost to the immediate beneficiaries; to extend the coverage and raise the quality of the health service; and to put agricultural development on a more realistic footing than hitherto -- by, for example, raising the price of fertilizers and encouraging private trading in these.

In the immediate future the maintenance of economic growth is seen as the principal task. This, it is argued, calls for further increases in savings and investment. Such increases are in turn linked to marked improvement in the presently inefficient financial system and the control of inflation. Given these, it is expected that there will be an adequate response from the private sector. In the longer term the promotion of agricultural growth, the protection of the environment and population policy are judged to be important.

There is no doubt that Ghana is making a brave and serious effort to restore and improve its economic fortunes. And, on the face of it, the results to date are impressive. In an unprecedented sequence in the economic history of independent Ghana, the annual increase in GDP has comfortably exceeded the rate of population growth in six successive years from and including 1984. Per capita income has risen, as have real exports and imports. Debt management has improved, and confidence in the banking system is returning, though the financial sector is still worryingly inefficient[13].

Just as drought and a large deterioration in the terms of trade have to be included in any list of causes of the severe economic crisis of the early 1980s, so good harvests and improved export prices have to be counted in the explanation of the economic turn around in the second half of the decade. The luck that Napoleon prized in his generals does not come amiss in economic policy either. Luck was not, however, the decisive factor in decline or recovery. The question for the former is not whether the failure of the rains and particularly unfavourable movement in export and import price would have made for difficulties in the Ghanaian economy at the beginning of the decade, but why that economy was so ill prepared to meet these misfortunes. As has been seen, the answer has its roots in long-standing policy errors. Similarly, better weather and export prices could not alone account for the greatly improved economic performance of recent years. Moreover, if that performance owed much to capital inflow, this was itself policy induced, and so has to be counted as part of the policy success.

If the results of policy change have so far been encouraging, it is nevertheless still too early to assume that they will lead necessarily to sustained growth and development. The challenge is still daunting, so that even those broadly supportive of the present effort would do well to question this, to probe for weaknesses, and to consider alternatives, even if these comprise no more than changes in emphasis. What are the appropriate criteria of success? Has the pace of reform been too fast or too slow? Is the financial system really a bottleneck? Does the growing reliance on market forces take adequate account of Ghana's missing, incomplete and inefficient markets? Does it indeed overestimate the likely supply of entrepreneurs? Is Ghana's fate in any event within its own control?

A comprehensive attempt to answer these and other questions would require more time and space than are available. The broad market thrust of the present reforms is therefore accepted. It does not follow, however, that the emphasis and detail of the present programme are thereby endorsed. And, to submit those to some critical inspection, attention is focused on the role of cocoa, the response of industry, agricultural performance, and the respective roles of agriculture and industry in future development.

Is the strong emphasis on cocoa production and exports misplaced? The international demand for cocoa is growing slowly, and there is a possibility of falling long-run prices. Production and marketing do not obviously call for any great leap in technological capacity, and they seem to offer limited scope for learning by doing. Cocoa prices are lower now than at any other time in the last 15 years, mainly because of increased production in the Côte d'Ivoire and Malaysia. Thus the immediate impact of more Ghanaian output is likely to be a further fall in prices. And recent World Bank price projections have been none too cheerful. Nominal prices are expected to be 26 per cent and 14 per cent lower in 1990 and 1995 respectively than they were, on average, in 1984-1987. By the year 2000 the price level foreseen would be 19 per cent higher than in the mid-1980s. However, inflation of little more than 1 per cent per year would wipe out this nominal gain, so that the real price is certain to be lower at the end of the century than it was when Ghana's economic recovery began[14]. It is, of course, possible that future prices could be even lower than present projections of them. If they were, exports and GDP would also be lower than planned. Government revenue would therefore be squeezed, so that it would more difficult than anticipated to continue to raise the real price paid to cocoa farmers.

A fall in the terms of trade always, other things being equal, reduces real income. Such foreseen or unexpected fall in Ghana's income would be unwelcome. If unexpected it could cause a re-appraisal of priorities, occasion an increase in taxes, and put public spending under additional pressure. Still, nothing that has been said makes it necessarily wrong or even imprudent to continue with cocoa in the medium term at least. Cocoa production pays as long as production and distribution costs are covered by its selling price. And Ghana will have a comparative advantage for so long as its relative efficiency is greater in cocoa production than in other things. It will have a competitive advantage until its unit costs cease to be lower than those of its competitors.

Measured by domestic resource costs, Ghana still has a clear comparative advantage in cocoa. Its production would, of course, be even more attractive if export prices were higher, but it does not become unattractive simply because they are not. Moreover, given relative levels of development, the opportunity costs of cocoa production should be higher in Brazil, Malaysia and the Côte d'Ivoire than in Ghana. Thus the continued expansion of cocoa is justified as a sensible, foreign exchange earning, use of resources. And tight market conditions should intensify efforts to increase efficiency, not least in the Cocoa Marketing Board. This does not, however, imply that Ghana has to rely on monoculture. On the contrary, the argument is that Ghana will escape that fate the sooner, the more securely and the more vigorously the present advantage in cocoa is exploited.

More serious doubts may be raised by returning, as it were, to Arthur Lewis. It is, of course, more than 30 years since his advice was given. Yet some important things have not changed all that much. Although there are pockets of population pressure, Ghana is still not a labour surplus country. Nor, given the destruction wrought by neglect in the 1970s, has infrastructure expanded to the point that the priority Lewis gave it is no longer justified. Moreover income per head, and much that correlates with it, are not so very different from what they were at independence. And the relative size of manufacturing is little greater than in, say, 1960. What is more, the downward trend in total factor productivity growth suggests no great expansion of entrepreneurial supply, though it has to be recognized that the economic environment was hardly conducive to enterprise. That industrial firms have not been doing well is confirmed by a World Bank study, which found that two-thirds of the establishments operating in 1983 were inefficient when judged by their domestic resource costs (DRC). True, many of these would, according to the Bank, have been efficient had they been operating at full capacity. That begs an important question, however, since installed capacity was well in excess of demand in many lines. On the Bank's analysis the most promising industries were food, beverages and tobacco and others with a high local input or value added. Lewis would still seem to be in play[15].

This remains so even when it is acknowledged that manufacturing has been quite dynamic in recent years. Although there were fluctuations in year-to-year changes, expansion has been continuous since 1984, but not for all products. Much of the increase was due to better supply of raw materials and simply made up for previously lost ground. Capacity utilization increased -- from 18 per cent in 1984, for example, to 25 per cent in 1985 -- and was considerably higher at the end of the decade than at the beginning. Real output in 1987, however, was still 25 per cent less than in 1975. In the later year another World Bank survey reported a clear increase in the propensity to invest, with all but textile and pharmaceutical firms expressing confidence in their ability to compete with imports. Nevertheless a wide range of problems were recorded, with weak consumer demand and import competition heading the list. Thus though liquidity was also difficult -- including because of the high cost of imported materials -- it is plausible that the prospect for Ghanaian manufacturing still depends critically on the expansion of the domestic market, and thus on agriculture[16].

How then has agriculture fared? In Ghana most farming is still rainfed, with irrigation being used on less than 1 per cent of the non-cocoa acreage. Output has thus fluctuated, but has moved generally upward in the second half of the 1980s. This, year-to-year variations notwithstanding, was also true of cocoa, with production being close to a quarter of a million metric tons by the end of the decade -- compared to less than 160 000 tons in the season 1983/1984. As already noted, the real prices paid to farmers had also increased, and so had farm incomes after allowing for higher labour and other costs.

A major problem in analysing Ghanaian agriculture is the lack of timely, accurate and comprehensive statistics. In spite of this it seems clear that production of most staple foodstuffs grew rapidly in the second half of the 1980s, with most crops exceeding the levels of 1980 and, with the exceptions of millet and yam, even 1970. Rapid population growth, however, makes changes in food supply per head less satisfactory. Thus cereal production per head in 1986 was but 70 per cent of its 1970 level. Concern has consequently been expressed about the attainment of food self-sufficiency and food security. Such concern has stretched to include a deterioration in the terms of trade between food and non-food consumer goods, and the relative advantage exchange rate and other policies have given to the production of cocoa[17].

If these concerns are not exaggerated, they may be misplaced. Food self-sufficiency is not a defensible policy objective in all circumstances. Moreover, there being more than one route to food security, the point is to get there as efficiently and so as quickly as possible. The question, therefore, is not whether Ghana should self-evidently become food secure through self-sufficiency, but what the agricultural prospects are, and whether enough is being done to promote these. In this regard non-cocoa agriculture does seem to have received less policy attention than cocoa or manufacturing. This may be because it is thought that, as market forces bite, domestic food prices will rise relative to other prices and provoke an appropriate supply response.

This response may, however, be greater and quicker if there is a reasoned increase in public goods, which by their nature cannot be expected to materialise as a result of market forces. In this context relative efficiencies are suggestive. On the DRC measure Ghana has a strong comparative advantage in its tree crops -- cocoa, oil palm, rubber and coconut. Next in order of efficiency come cotton and tobacco, followed by maize and cassava, and rice, which does not perform well on any reasonably exacting economic criterion[18]. Thus an important question attaches to the future of rice. If this is put aside, there remains a group of export-directed tree crops, a pair of industrial crops, and two staple foodstuffs -- maize and cassava. Of these, it should be possible to produce the tree and the industrial crops profitably, while the staples are, as things are, on the margin of profitability. This suggests considerable scope for research and development and more and improved extension work. Returns to these activities should be high and the resultant growth in agricultural productivity should be reflected in increased export earnings, increased farm incomes, and greater food security, with an increased contribution from domestically-grown crops. Equity and efficiency thus seem largely to run in tandem, at least in the sense of ensuring that all participate in the growth process. And the growth in the domestic market for manufactured wage goods and farm inputs should provide a sound and growing foundation for expanding industry.

It has to be recognised that the foregoing does nothing more than create a presumption in favour of large public investment in agricultural development. Nevertheless the presumption is a strong one, even if caution dictates more and early research aimed at clarifying the scope for (different kinds and scales of) irrigation, the optimal character and pace of the expansion of infrastructure, and the kind and magnitude of agro-industrial links. In the meantime it may be recalled that training, like education more generally, has something of the character of a public good. Thus government may wish to bear in mind Arthur Lewis's caveat that while private entrepreneurs and capital should be welcome, the price of that welcome should be a clear agreement to train Ghanaians.

Attitudes toward growth and development have changed greatly in the last decade as more emphasis has been placed on the market and less on the state as an economic agent. Even for those who welcome this change, however, this cannot mean *laissez-faire*. Indeed to rely only on markets may mean that markets will fail. Granted that the economic role of government should shrink, what -- the question still remains -- should it be? It would be difficult to exaggerate the importance of this question, so that, as noted, more work on it is urgently needed. In the meantime, the conclusion of this paper is that if Ghana would give early public priority to the development of agriculture it would secure growth as rapidly as is possible, set sustainable industrial progress in train, and thus show the way for others to follow.

NOTES AND REFERENCES

1. EASTERLIN, R.A., "Why Isn't the Whole World Developed?", *Journal of Economic History*, March 1981.

2. See Dr J.L. ABBEY, "Ghana's Experience with Structural Adjustment -- Some Lessons", in James PICKETT and Hans SINGER (eds.), *Towards Economic Recovery in Sub-Saharan Africa*, Routledge, 1990.

3. For the hopelessness of South Korea, see B. HIGGINS, *Economic Development*, Constable, 1959. Nkrumah himself apparently believed that with independence it would be possible to "transform the Gold Coast into a paradise in ten years". See A.J. KILLICK, *Development Economics in Action*, St. Martin's Press, 1978, p. 34.

4. For useful short accounts of the Ghanaian economy, see ABBEY, *op. cit.*, John LOXLEY, *Ghana: Economic Crisis and the Long Road to Recovery*, The North-South Institute, Ottawa, 1988; R.H. GREEN, *Stabilization and Adjustment Programmes and Policies: Ghana*, World Institute for Development Economic Research, Helsinki, 1987; and John TOYE, "Ghana's Economic Reforms: Origins, Achievements and Limitations" in PICKETT and SINGER, *op. cit.* Longer accounts, covering various periods, include, R. SZEREZEWSKI, *Structural Changes in the Economy of Ghana*, Weidenfeld and Nicolson, London, 1965; W. BIRMINGHAM, I. NEUSTADT and E.N. OMABOE (eds.), *A Study of Contemporary Ghana: Volume 1 -- The Economy of Ghana*, Allen and Unwin, London, 1966; KILLICK, *op. cit.*, and J.C. LEITH, *Foreign Trade Regimes and Economic Development: Ghana*, Columbia University Press, New York, 1974. Unless otherwise specified, data in the present text on economic structure and growth are from the IBRD's *World Development Report* for various years; *Sub-Saharan Africa: From Crisis to Sustained Growth*, 1989; and *Toward Sustained Development in Sub-Saharan Africa*, 1984. The comparison with Korea also uses World Bank data.

5. As may be seen from their titles a number of the references in the previous note describe the ERP. Official sources include Government of Ghana, *Economic Recovery Programme 1984-1986*, Accra, November, 1984; and Government of Ghana, *A Programme of Structural Adjustment*, May 1987. World Bank documents include *Ghana: Industrial Policy, Performance and Recovery*, Washington, 1985 and *Ghana: Structural Adjustment for Growth*, Washington, 1989.

6. K. NKRUMAH, *Africa Must Unite*, International Publishers, New York, 1963, p. 167.

7. Adam SMITH, *Wealth of Nations*, Modern Library Edition, Random House, New York, 1937, p. 351.

8. The subsequent report is W.A. LEWIS, *Report on the Industrialisation of the Gold Coast*, Government of Ghana, Accra, 1953. All the quotations below are from this source.

9. See Paul ROSENSTEIN-RODAN, "The Industrialisation of South East Europe", *Economic Journal*, March, 1943, and, for an up-to-date statement of his position, "Natura Facit Saltum: Analysis of the Disequilibrium Growth Process" in G.M. MEIER and D. SEERS, *Pioneers in Development*, Oxford University Press, 1985.

10. The data in this paragraph are official statistics, as collated and presented by Kodwo EWUSI in *Industrialization, Employment Generation and Income Distribution in Ghana*, 1950- 1986, Adwensa Publications, Accra, 1986.

11. KILLICK, *op. cit.*

12. LEITH, *op. cit.*

13. For more detailed discussion, see World Bank, *Ghana: Structural Adjustment for Growth*, Washington, 1989.

14. World Bank, *Price Prospects for Major Commodities*, Washington, 1988.

15. World Bank, *Ghana: Industrial Policy, Performance and Recovery*, Washington, 1985.

16. The later survey is reported in the 1989 publication cited above.

17. See LOXLEY, *op. cit.*

18. Information on relative efficiencies is to be found in the World Bank, *Ghana: Agricultural Sector Review*, Washington, 1985.

BIBLIOGRAPHY

ABBEY, J.L., "Ghana's Experience with Structural Adjustment -- Some Lessons", in James PICKETT and Hans SINGER (eds.), *Towards Economic Recovery in Sub-Saharan Africa*, Routledge, 1990.

BIRMINGHAM, W., I. NEUSTADT and E.N. OMABOE (eds.), *A Study of Contemporary Ghana: Volume 1 -- The Economy of Ghana*, ALLEN and UNWIN, London, 1966.

EASTERLIN, R.A., "Why Isn't the Whole World Developed?", *Journal of Economic History*, March 1981.

GOVERNMENT of GHANA, *Economic Recovery Programme 1984-1986*, Accra, November, 1984.

GOVERNMENT of GHANA, *A Programme of Structural Adjustment*, May 1987.

GREEN, R.H., *Stabilization and Adjustment Programmes and Policies: Ghana*, World Institute for Development Economic Research, Helsinki, 1987.

HIGGINS, B., *Economic Development*, Constable, 1959.

KILLICK, A.J., *Development Economics in Action*, St. Martin's Press, 1978.

LEITH, J.C., *Foreign Trade Regimes and Economic Development: Ghana*, Columbia University Press, New York, 1974.

LEWIS, W.A., *Report on the Industrialisation of the Gold Coast*, Government of Ghana, Accra, 1953.

LOXLEY, J., *Ghana: Economic Crisis and the Long Road to Recovery*, The North-South Institute, Ottawa, 1988.

NKRUMAH, K., *Africa Must Unite*, International Publishers, New York, 1963.

SMITH, A., *Wealth of Nations*, Modern Library Edition, Random House, New York, 1937.

ROSENSTEIN-RODAN, P., "The Industrialisation of South East Europe", *Economic Journal*, March, 1943.

ROSENSTEIN-RODAN, P., "Natura Facit Saltum: Analysis of the Disequilibrium Growth Process" in G.M. MEIER and D. SEERS, *Pioneers in Development*, Oxford University Press, 1985.

SZEREZEWSKI, R., *Structural Changes in the Economy of Ghana*, Weidenfeld and Nicolson, London, 1965.

TOYE, J., "Ghana's Economic Reforms: Origins, Achievements and Limitations" in PICKETT and SINGER, *op. cit.*

WORLD BANK, *Ghana: Industrial Policy, Performance and Recovery*, Washington, 1985.

WORLD BANK, *Ghana: Structural Adjustment for Growth*, Washington, 1989.

WORLD BANK, *Price Prospects for Major Commodities*, Washington, 1988.

WORLD BANK, *Ghana: Agricultural Sector Review*, Washington, 1985.