



The United Nations
University

WIDER

World Institute for Development Economics Research

Research for Action

Structural Adjustment in Africa

A Performance Review of World Bank Policies
under Uncertainty in Commodity Price Trends:
The Case of Ghana

Tetteh A. Kofi

Research for Action

UNU World Institute for
Development Economics Research
(UNU/WIDER)

Research for Action

Structural Adjustment in Africa

A Performance Review of World Bank Policies under Uncertainty in
Commodity Price Trends: The Case of Ghana

Tetteh A. Kofi

An expanded version of a paper contributed to the United Nations University Conference on Challenges of African Development: Structural Adjustment Policies and Implementation, Tokyo, Japan, 1 October 1993.

UNU World Institute for Development Economics Research (UNU/WIDER)

A research and training centre of the United Nations University

The Board of UNU/WIDER

Said El-Naggar

Philip Ndegwa

Sylvia Ostry

Maria de Lourdes Pintasilgo, Chairperson

Antti Tanskanen

Ruben Yevstigneyev

Masaru Yoshitomi

Ex Officio

Heitor Gurgulino de Souza, Rector of UNU

Mihály Simai, Director of UNU/WIDER

UNU/WIDER was established in 1984 and started work in Helsinki in 1985. The principal purpose of the Institute is to help identify and meet the need for policy-oriented socio-economic research on pressing global economic problems, particularly those impacting most directly on the developing countries. Its work is carried out by staff researchers and visiting scholars in Helsinki and through networks of collaborating institutions and scholars around the world.

Copyright © UNU World Institute for Development Economics Research (UNU/WIDER)

Printed at Forssa Printing House Ltd., 1994

The views expressed in this publication are those of the author(s). Publication does not imply endorsement by the Institute or the United Nations University of any of the views expressed.

ISBN 952-9520-17-4

CONTENTS

	page
LISTS OF TABLES AND CHARTS	v
PREFACE	vii
ACKNOWLEDGEMENTS	ix
ABSTRACT	x
INTRODUCTION	1
I CONTROVERSY OVER SUCCESS OR FAILURE OF SAP	3
II DESCRIPTION OF SAP (POLICY REFORMS) MIX, TIMING AND SEQUENCING OF POLICIES	6
1. Stabilization phase	6
2. Rehabilitation phase	6
3. Liberalization and growth phase	8
III THE THEORY: COMPARATIVE ADVANTAGE AND THE RECOVERY MODEL	13
1. Problems with the recovery model: DRC ratios	14
2. An evaluation of the incentive strategy	17
3. ERP II policies – growth and development phase: 1987 to 1993	19
IV IMPACT OF SAP COCOA SECTOR POLICIES ON GHANA'S GROWTH PERFORMANCE	21
1. Were policies favourable to cocoa sector misplaced?	21
2. Brazil's cocoa policy in the 1970s	22
3. Côte d'Ivoire's cocoa policy in the 1970s	24
4. Malaysian and Indonesian cocoa policies in the 1970s	26
5. Cocoa: revolutionary expansion in the 1970s and price trends in the 1980s and 1990s	27

6. Policy performance review – cocoa sector policies	32
7. Why support an industry whose golden age has passed?	33
8. What type of agricultural policy under SAP?	34
9. Bank support for agricultural exports – a query	39
10. World Bank response to German query	40
11. Empirical analyses of price determination in the cocoa market	41
12. A model for a realistic cocoa sector policy	43
13. Income and terms of trade losses to cocoa producers: 1980 - 1990	44
14. Misapplication of theory and the consequent failure of recovery	45
15. Can export diversification solve the problem facing Ghana?	47
16. Agricultural transformation models – any lessons for Africa?	49
17. Which institutional model for Ghana?	51
CONCLUSION	54
BIBLIOGRAPHY	55

LIST OF TABLES

	page
Table 1 – Fastest cocoa growing countries: 1970 - 1988	24
Table 2 – Evolution of land areas planted with traditional and hybrid cocoa in major producing countries	25
Table 3 – Value and production of cocoa beans by major producing countries: 1983 - 1990	37
Table 4 – Estimated demand elasticity coefficients	38
Table 5 – Estimated long-run supply elasticities for cocoa	39

LIST OF CHARTS

Chart 1 – Cocoa prices: 1950 - 1991	22
Chart 2 – Evolution of land areas planted with traditional and hybrid cocoa in major producing countries	28
Chart 3 – Production of cocoa beans by country: 1982/83 - 1991/92	30
Chart 4 – Cocoa yield profile in Côte d'Ivoire and Malaysia	31
Chart 5 – Commodity crisis and developing countries	33
Chart 6 – World production and market price of cocoa beans: 1982/83 - 1991/92	35
Chart 7 – Production of cocoa bean in Ghana and world market price: 1982/83 - 1991/92	36
Chart 8 – Cocoa exports from developing countries: Terms of trade effects: 1980 - 1990	45

PREFACE

The decades of the 1960s have often been characterized as the 'golden age' of development and the 1970s as the decade of the great expectations related to the ideas of the new international economic order. The catchword for the 1980s was the 'lost decade' or the decade of painful adjustments. The developing countries, as 'price takers' in the international economic system had to 'adjust' to a number of external shocks and changes during the past decades: the higher costs of energy and capital; the deteriorating terms of trade; the global recessions; the emergence of new competitors; the increasing technological gaps; the evolving new international division of labour; the declining demand for their exports; the pressures for import liberalization; the new forms of protectionism implied general, regional or country specific challenges. In their domestic economy, they had to reformulate economic and social policies, reduce the standard of living, and restructure budgetary and investment priorities. The tasks of stabilization, restructuring and liberalization, which in some countries appeared simultaneously, coincided with the decline of export earnings and often resulted in major domestic political difficulties.

The strategic importance of the adjustment problems, especially in medium-term perspective, stimulated a number of academic experts to analyse the causes, the actual policies and the consequences of the adjustment process in general and in different regions of the world. The comparative analysis of the structural adjustment issues occupied a very important part in the past research programmes of UNU/WIDER. The research work on 'Stabilization and Adjustment Policies and Programmes' resulted in a number of important books. Most of them have focused on the Latin American experiences, but there have been a number of country studies covering also other regions.

The African experiences in the field of structural adjustment have been considered by many experts as much more difficult and less successful, due to the weaker position of Africa in the international division of labour, the greater domestic human, structural and institutional constraints. From among the African countries, the first country study in the research programme of UNU/WIDER was written on Ghana, published in 1987. The paper offered a historical background and stated that in the adjustment process of that country, there were positive experiences in spite of the great difficulties and problems. Since then, Ghana has gone through a very difficult period of policy changes.

This paper by Professor Tetteh Kofi deals with the more recent experiences of the African country and looks at them mainly from the interesting perspective of the changing trends in the cocoa market. While Ghana was able to reduce the degree of its dependence on the exports of cocoa (its exports concentration index changed from 0,729

to 0,450 between 1980-1990), this commodity still occupies a key position in the country as a source of export earnings, personal incomes and government revenues. Income elasticity of demand for cocoa in the developed country markets has been one of the lowest of all the main agricultural export commodities during the 1980s. Ghana has been considered as a successful adjustment case, the comparison of the earlier and more recent experiences revealed the still serious structural and institutional weakness and vulnerability of the country. It also indicated the limitations of domestic producer's actions in the commodity sectors, and pointed to some of the future tasks in policy changes, institutional improvements, and in the economic management.

Mihály Simai
Director, UNU/WIDER
June 1994

ACKNOWLEDGEMENTS

This paper has been based on an earlier research on Structural Adjustment Programmes supported by the FAO Regional Office in Africa based in Accra, Ghana.

The author is a Principal Research Fellow at the World Institute of Development Economics Research of the United Nations University and Professor of Economics at the University of San Francisco, San Francisco, California. An earlier version of this paper was presented at the European Association of Development Research Training Institutes (EADI) Conference in Berlin, Germany, 15-18 September 1993. The author would like to acknowledge helpful comments from Ayi Kwei Armah of Popenguine, Senegal and Dr Siddig Salih of UNU/WIDER. The author wishes to thank Mr Erkki Viitanen for computer assistance and Professor Mihály Simai for writing the preface.

ABSTRACT

The main purpose of this paper is to argue that Ghana's economic recovery under SAP would have been much brighter if policy makers had not made some obvious errors in the application of the theory of 'comparative advantage' and in the selection, timing and sequencing of commodities for export. Agriculture is the dominant sector of the Ghanaian economy. It generates 43% GDP, over 50% of export earnings, and provides 70% of employment. As a result any policy lapse in this sector is bound to affect economic performance negatively. The paper draws attention to a critical evaluation of agricultural sector policies. Specifically, it argues that cocoa sector policies and implementational priorities were misplaced, thus compromising economic recovery.

It is suggested that Ghana's economic recovery would have been much brighter if policy makers had been able to predict the cocoa price slump of the 1980s and 1990s and had sought to diversify the commodity export base of the economy away from cocoa exports. It is suggested, further, that diversification of the export base should be taken seriously so that the economy can move away from dependence on cocoa exports. In the past, violent fluctuations in cocoa export earnings created problems of economic instability for Ghana which, in turn, led to political instability, economic chaos and a virtual collapse of the economy in 1981. Diversification would go a long way to stabilize commodity export earnings and secure stable economic growth. Diversification by itself is not enough if supply response and institutional development in the rural sectors are low. Economic and noneconomic factors should therefore be included in designing models for economic recovery.

It is recognized that commodity diversification by itself is not enough to do the trick. Recent research by institutional economists have shown that the most important variable which accounts for economic growth is institutional innovations brought about by superior political organization and administrative competence in government. It is suggested that for Ghana (Africa) to solve the problem of low supply response in agriculture, she must find a way to develop efficient institutions, for example, by lowering transaction costs. The study provides empirical examples of institutional innovations and growth.

The suggestions developed in this paper, to ensure a viable SAP with the help of government intervention may be summarized as follows: (i) a superstructure of an agrarian development strategy 'with an institutional development face', for example a cooperative movement, must be put in place; and (ii) an agriculture-led growth strategy 'with an equity face' where the internal terms of trade are biased towards the agrarian sector, must be followed before rapid industrialization is begun.

INTRODUCTION

The Financial Times (London) reviewed economic conditions in Africa in a special issue on 1 September 1993. The newspaper provided facts to tell their own story:

After a dozen years of structural adjustment and more than \$170 bn in net development assistance, the sub-Saharan economy is still falling behind. Incomes per head fell by an average 1.1% a year between 1982 and 1992 compared to an average rise of 0.8% a year in all developing countries and 6.4% in the east Asian developing countries (*Financial Times* 1 September 1993, p. iii).

The World Bank reminds us that there are a few success stories. It argues that some of the countries which have taken structural adjustment advice to heart – notably Ghana, Uganda and Burkina Faso – have managed to register impressive GDP growth rates.

Ghana has been singled out for praise as a success story: 'Since Ghana's adjustment programme began, its gross domestic product has grown by an average of 4.9% a year, over twice the sub-Saharan average of 2.1%.' (Ibid) But there are economists and international agencies who do not believe in the Ghana success story. The sceptics believe that there has been little or no structural transformation in Ghana and that the welfare of the population has not improved appreciably since the economic recovery programme (ERP) or the structural adjustment programme (SAP) was initiated in 1983. The sceptics believe that the cost of SAP has been severe on some social groups in Ghana. They point to high rates of inflation averaging over 30% per annum between 1984 and 1992; a high dependence on a few commodities for export principally cocoa and gold; low rates of domestic saving and a strikingly low level of private investment.

The main purpose of this paper is to argue that Ghana's economic recovery under SAP would have been much brighter if policy makers had not made some obvious errors in the selection, timing and sequencing of commodities for export. Agriculture is the dominant sector of the Ghanaian economy. It generates 43% GDP, over 50% of export earnings and provides 70% of employment. As a result any policy lapse in this sector is bound to affect economic performance negatively.

It is suggested that Ghana's economic recovery would have been much brighter if policy makers had been able to predict the cocoa price slump of the 1980s and 1990s and sought to diversify the commodity export base of the economy away from cocoa exports. It is suggested, further, that diversification of the export base should be taken seriously so that the economy can move away from dependence on cocoa exports.

Violent fluctuations in past cocoa export earnings created problems of economic instability for Ghana and prevented a smooth secular increase in per capita income. This in turn led to political instability, economic chaos and eventual collapse of the economy in 1981. Diversification of the export base would go a long way to stabilize commodity export earnings and secure stable economic growth.

Part I of the paper presents a brief discussion of the controversy over the success or failure of SAP in Africa and especially in Ghana. Part II reviews SAP or ERP policy reforms and explains how they were implemented in Ghana from 1983 to 1993. Part III provides an evaluation of the theories behind agricultural policies undertaken under SAP. Part IV provides empirical evidence to show that agricultural sector policies were misplaced. It is argued that Ghana's economic recovery performance would have been better had mistakes in the agricultural sector been avoided and policy implementation improved.

I CONTROVERSY OVER SUCCESS OR FAILURE OF SAP

Several African countries and international agencies are watching the SAP experiment in Ghana with a great deal of interest. If the experiment is successful then the World Bank will continue and/or try to implement such strategies in other African countries. So far, opinion is divided over the success of the SAP programmes in Ghana. There are those, including the World Bank, the Financial Times of London and New York Times, who think that the programme has succeeded. On the other hand, there are those, including the United Nations Economic Commission for Africa (UNECA), who feel that the exercise in Africa is bound to fail. The controversy over the failure or success of SAP programmes in Ghana, or in Africa in general, is just beginning.

The World Bank's own studies and other studies commissioned by it seem to claim that the SAP programmes have been a success not only in Ghana but in Africa as a whole (see Coleman, Akiyama and Varangis (1993), Panagariya and Schiff (1991), Younger (1989), World Bank and UNDP (1989), World Bank (December 1988)). The Economic Commission for Africa (UNECA 1989) has issued two reports challenging the conclusions of the World Bank study. The first report is entitled: *Statistics and Policies ECA Preliminary Observations on the World Bank Report: Africa's Adjustment and Growth in the 1980's*. This report was presented before the ECA Conference of Ministers which met in Addis Ababa from 6 to 10 April 1989. A resolution was passed condemning the World Bank reports. The resolution praised the work of the Secretary General of the United Nations on the mid-term review of the United Nations Programme of Action for Africa Economic Recovery and Development (UN-PAAERD) as reflecting the true economic situation in Africa and that the World Bank report (1989) contained statistical inaccuracies and misinterpretations of the real situation in Africa. The ECA issued another report outlining an alternative strategy of development: *African Alternative Framework to Structural Adjustment Programmes for Socio-Economic Recovery and Transformation (AAF-SAP)*, (UNECA 1989).

The United States Congress commissioned a report on the performance of SAP in some African countries. The report found that:

In both Ghana and Senegal structural adjustment has contributed to the first real sustained per capita economic growth in many years and to an improved framework for future growth...structural adjustment has produced little enduring poverty-alleviation, and certain policies have worked against the poor (US Congress 1989).

Thus the Congress report sees some positive results as well as some negative aspects of SAP.

International newspapers including the New York Times have also evaluated the impact of SAP on the Ghana economy. The New York Times, January 3, 1989, in a lead article, reported favourably on the impact of SAP on the Ghanaian economy under the title *In Western Eyes*, Ghana is regarded as African model:

More than five years ago, when the World Bank decided to make the state-dominated economy here a model for free market innovation in Africa, Ghana was in the grip of stagnation. Since then, Ghana has boasted Africa's highest consistent growth rate, an average of 6% a year since 1983.

Some Ghanaian government officials are quite satisfied with the performance of the economy under SAP. Dr Joe Abbey, one of the architects of the SAP and current ambassador to Washington, was invited to give the 1989 IMF Per Jacobson lecture. He spoke highly of the impact of SAP on the Ghanaian economy. Dr Abbey argued that:

Throughout the seventies, the Ghanaian economy stagnated, exhibiting negative growth rates in real per capita income. The low point was reached in 1983. Since then real output has expanded by about 40%; real per capita income by more than 20%; the inflation rate, while still bothersome, has been dramatically reduced; the balance of payment is in surplus and the initial large stock of external arrears has been virtually eliminated.... [How] was this success achieved?... [To] answer this question we have to look to the strategy of adjustment that was pursued in the context of three successful standby arrangements with the Fund, which has now been succeeded by an enhanced structural adjustment facility arrangement, and the support provided by the various adjustment loans from the World Bank (Abbey 1989, p. 8).

Dr Abbey was so impressed with the Ghanaian performance that he wanted Ghana to share her experience with other countries. To do this, he wanted the IMF to set up an institute. He said: 'It is in furtherance of these objectives that I strongly urge support for an institute that could be set up on an interim basis for promoting growth oriented adjustment' (p. 15). Some economists will challenge the methodology used by Dr Abbey to assess the impact of SAP on the performance of the economy. The obvious criticism is the choice of the base year of 1983. Using the lowest point of the crisis, 1983, as a basis for comparisons with succeeding years will tend to exaggerate the performance of the SAP.

Professor Loxley, in a study commissioned by the North South Institute, a Canadian non-profit corporation, evaluated the performance of SAP by examining the thirteen objectives which the Ghanaian government had set for itself. Professor Loxley added four other criteria which he thought were extremely important to ordinary Ghanaians. Professor Loxley's methodology is different from that of Dr Abbey. He evaluated the performance of the economy under SAP by comparing the relative performance of specific targets or objectives set out at the beginning of the programme and at a later date.

Professor Loxley concluded: 'To this point in time, on the basis of the criteria outlined the adjustment programme in Ghana has been remarkably successful and has been a classic example of adjustment with growth' (Loxley 1988, p. 22).

There have been a few studies which focus on specific sectors and on social groups in evaluating the performance of SAP. One such study was done by the International Fund for Agricultural Development (IFAD). The report consists of a comprehensive summary, and a main report (IFAD Report No. 0105-GH, 1988). The IFAD report seems to suggest that some specific groups have not fared too well under ASAP. See also paper by Mireku and Jonah.

An interesting inference can be drawn from studies done by several people, reported above, on the impact of SAP on the Ghanaian economy:

- i) The researchers who based their analyses on specific sectors of the economy seem to conclude that SAP failed and/or had an adverse impact on that sector (IFAD, Mireku and Jonah).
- ii) The researchers who based their analyses on examining aggregate macroeconomic variables over time claimed that SAP was a remarkable success (Younger, Abbey, Green, Loxley, etc.).

Do we have a methodological and/or aggregation problem here? Studies based on specific sector analyses may be more appropriate than those based on aggregate macroeconomic variables. Oscar Morgenstern (1963) has discussed these issues.

To shed light on the issues raised above, this paper will attempt to evaluate the impact of a major policy designed and implemented in the agricultural sector in Ghana. To do this, we must first analyse policy reforms designed and implemented under SAP.

II DESCRIPTION OF SAP (POLICY REFORMS) MIX, TIMING AND SEQUENCING OF POLICIES

This section of the paper draws heavily on the 1984 World Bank country study entitled *Ghana Policies and Programme for Adjustment* (World Bank 1984). The SAP is divided into three phases:

1. Stabilization phase;
2. Rehabilitation phase; and
3. Liberalization and growth phase.

Each phase has a set of objectives to be achieved. What are these objectives? It is necessary to identify these objectives before impact studies can be undertaken or evaluated.

1. Stabilization phase

The main function of this phase was to reduce price distortions in the economy. Basically, the stabilization phase sought to:

- i) correct structural imbalances;
- ii) realign relative prices in favour of production and export sectors;
- iii) reduce Government budget deficit;
- iv) reduce inflation; and
- v) stimulate aggregate domestic supply and reduce imbalances in external and fiscal accounts.

It was recognized that a quick disbursement of assistance to finance inflow of supplies of food, fuel and other imports would be necessary to ensure the success of the programme. This was considered as a precondition for the success of the currency devaluation exercise.

2. Rehabilitation phase

The main objective in this phase was to improve the capacity utilization of existing assets. This phase called for the rehabilitation of the road, port, railway and transport infrastructure. It also envisaged the provision of essential raw materials and imported inputs to the productive sectors, with particular emphasis on exports.

The general macroeconomic policies carried out under this phase included programmes:

- i) to maintain the incentive structure;
- ii) to provide an appropriate exchange rate;
- iii) to streamline the import licensing system;
- iv) to ensure an adequate foreign exchange budgeting system;
- v) to realign the interest rate structure; and
- vi) to minimize the use of price and distribution control systems.

The policies carried out in this phase included what needed to be done at sectoral levels. The agricultural sector policies and programmes are presented below.

2.1 Agricultural sector policies and programmes planned for rehabilitation phase

2.1.1. Cocoa production policies

The policies which were suggested to be undertaken in the production sector are the following:

- i) inefficient operation of Cocoa Marketing Board to be studied and corrected;
- ii) increase in real producer prices to maintain them at incentive levels;
- iii) increase cocoa production from 180,000 in 1979/80 to 300,000 by 1986;
- iv) long-term plans for new plantings.

2.1.2. Agricultural sector performance

The reasons for poor agricultural performance are many. The major problems to be resolved are:

- i) the deterioration in transport services – roads, ports, etc.;
- ii) unavailability of inputs like fertilizer, seeds, skilled labour;
- iii) inadequate producer prices for industrial crops; and
- iv) unsatisfactory marketing arrangements.

2.1.3. Reforms to be undertaken by the government

The government needs to pay attention to:

- i) foreign exchange allocations for agricultural inputs and transport;
- ii) frequent readjustments in output pricing policies;
- iii) greater competition in the marketing and distribution of agricultural produce and input supplies; and
- iv) increased supplies of incentive goods in rural areas.

2.1.4. Policy for the forestry sector

'The forestry sector offers the greatest immediate potential for growth and foreign exchange earnings.' According to the Bank, this sector has been plagued by poor managerial performance, inappropriate organizational arrangements, shortage of imported equipment and spare parts, and an unrealistic exchange rate.

The policies to be undertaken in this sector include:

- i) exchange rate adjustments (recently undertaken) to make exports of logs and timber products attractive;
- ii) massive infusion of spare parts and logging equipment with the intention of earning quick foreign exchange; and
- iii) the exploration of vertical integration when industry returns to normal to benefit from higher value added in the channels.

2.1.5. External capital needs

External capital needs for the programme were worked out for the period covering the Three Year Investment Programme (TYIP) under two alternative scenarios – low and high. 'The low case assumes that the import programme will equal export earnings, net aid flows from existing commitments, IMF standby and new credits from IDA. The high case includes some bilateral assistance.' External financing for the three years of the TYIP was projected to be \$156 million, \$248 million and \$316 million for 1984, 1985 and 1986 respectively. It was hoped that under the above conditions, the external financing gap would be reduced to \$152m or about 5% of imports by 1993. Some of these projections have not been met.

3. Liberalization and growth phase

After successful implementation of the two phases – stabilization and rehabilitation – the next phase, liberalization and growth, would be implemented. The policies to be undertaken are spelled out below:

3.1 *Policies under liberalization:*

- i) liberalizing trade and payment controls;
- ii) reducing domestic price controls;
- iii) introducing competition in the public sector and removing rigidities, barriers and distortions in the economy;
- iv) removing barriers that inhibit production and growth; and
- v) upgrading management and technical efficiency in individual enterprises.

We have presented above the basic outlines of the SAP or the economic recovery programme. Next we present an analysis of SAP in practice.

3.2 *SAP in practice: macroeconomic stabilization phase 1984 - 86*

The Ghana military seized power in December 1981, and took on the name of the Provisional National Defence Council (PNDC). It took about one year for the new regime to set up a machinery to govern the country. At first it tried to implement a populist strategy for development. The PNDC populist programme was announced on radio and television in November 1982. But it was dropped four months later. An IMF/World Bank economic recovery programme (ERP) was announced in April 1983 and put into operation.

Why did the regime drop the populist recovery programme in favour of an IMF/World Bank supported programme? There was a disagreement between advisers to the PNDC regime over where and how to generate funds to finance the economic recovery exercise. It was argued that the populist programme would fail because it would take too long to produce any tangible results. It was argued further that the economic crisis could be solved quickly by borrowing money from the IMF and the World Bank to finance the recovery exercise.

There was a group of economists who had written papers on how to resolve the economic crisis facing the regime without depending solely on seeking financial assistance from the IMF and the World Bank. See for example papers written by Samir Amin and Kwame Amoah, former professors at IDEP, Dakar, Senegal, and Tetteh Kofi (1982). Those who argued for IMF/World Bank-assisted recovery programme won the day. The supporters of this view included Dr Joe Abbey, who became Ambassador to Washington, and Dr Kevesi Botchway, who became the Minister of Finance.

The major objectives of the IMF/World Bank-assisted Economic Recovery Programme were to:

- i) shift relative prices in favour of production (particularly for export) and efficient import substitution;
- ii) restore fiscal and monetary discipline;
- iii) initiate the rehabilitation of the country's productive base along with its economic and social infrastructure; and
- iv) encourage private investment.

How were the above programmes carried out in practice? We present below a general outline of how the ERP was implemented, followed by a detailed analysis of policies in the agricultural sector.

3.3 Loans from IMF and Bank sources

The ERP was developed by the Ghana government in close coordination with the IMF and the World Bank. The first order of business was to negotiate for cash to support the programme:

- i) two IMF Standby Arrangements totalling SDR 419 million were negotiated;
- ii) the Compensatory Financing Facility (CFF) provided SDR 179 million, on account of a shortfall in merchandise exports, to pay for imports including an excess in the cost of cereal imports;
- iii) next, two IDA Export Rehabilitation and two Import Reconstruction Credits totalling SDR 187 million were negotiated. These loans improved the financial situation of the country.

3.4 Towards a realistic exchange rate and a realignment of price distortions

Apart from loans negotiated to pay for imports, the most important measure taken was the decision to devalue the overvalued currency towards a more realistic exchange rate. The 'cedi' was devalued from 2.75 = \$1.00 in April 1983 to 90 = \$1.00 by January 1986. Throughout this period attempts were made to adjust administered prices to reflect changes in the exchange rate. For example, cocoa and petroleum prices were adjusted to reflect exchange rate movements. Cocoa producer prices were almost doubled in May 1985 and then raised by 50% more in May 1986.

Price controls for a wide range of commodities were dismantled. In April 1983, the Prices and Incomes Board administered 23 items. By 1985, the Board was administering only 8 'essential commodities'. These commodities were textiles, soap and detergents, matches, machetes/cutlasses, drugs, cement, beer and cigarettes.

Interest rates were raised gradually to the point that they became positive in real terms in 1985.

3.5 Fiscal policy – stabilization phase

In the area of fiscal policy, the stabilization phase of the ERP concentrated on eliminating subsidies, raising consumption taxes and charges on selected commodities, and improving tax collection measures, thereby increasing the revenue base of the government.

The devaluation of the currency resulted in the erosion of real incomes. Public sector salaries and wages, along with statutory minimum wages, were raised to offset part of the loss in real income. The government made some improvements in public expenditure in such areas as public administration, health and education.

It became clear at the beginning of the ERP exercise that Ghana would need substantial loans over the years to rehabilitate the economy. Thus following the announcement of the ERP, the Bank, in consultation with the Ghana government, decided to reactivate the Ghana Consultation Group, which had not met for the previous 13 years. The Group met in Paris in November 1983 and the prospective donors endorsed the Programme. Initial commitments in 1984 amounted to US\$ 478 million. This commitment played a role in defining the subsequent ERP or SAP strategy. Beginning in 1986 the government prepared a rolling three year investment programme. It made provisions for rehabilitation programmes in key sectors – cocoa, timber, gold mining and transport infrastructure. What was done at the sectoral levels during the stabilization phase? Only the agricultural sector will be analysed in this paper.

3.6 SAP in practice: the agricultural sector in the stabilization phase

The Ministry of Agriculture (MOA) prepared an agricultural development strategy in support of the economic recovery programme. The document was entitled *Ghana Agricultural Policy – Action Plans and Strategies 1984-86* (April 1984). The

document defined long-term objectives and a short-term objective for the period 1984-86. The aims of the short-term agricultural programme for the period 1984-86 were:

- i) satisfying 80% of maize, 60% of rice requirements and self-sufficiency in cassava production;
- ii) satisfying 50% of fish and 53% of meat requirements; and
- iii) maintaining reasonable production levels for other cereals, starchy staples, nuts, oil seeds, fruits, vegetables and industrial crops.

In the crop sub-sector the government's strategy was to emphasize maize, rice, and cassava production during the three-year period (1984-1986). Output was to be increased by improving yields in selected high potential areas including irrigation project zones. Attempts to modernize the agricultural sector in Ghana had been emphasized by several governments. The PNDC government was no exception. The emphasis of the PNDC under SAP was on irrigation. No strategy was developed to improve yields on peasant and/or traditional farms. The area of irrigated farms was estimated to be 4600 ha which was about 0.2% of the country's non-cocoa growing acreage. The MOA document targets for the period 1984 to 1986 were 3900 ha for rice, 400 ha for maize, and 300 ha for vegetables, totalling 4600 ha, the total available irrigated acreage. It was hoped that a further 4600 ha under various stages of development for irrigation would be completed by the end of 1986. It was planned to develop 23,500 ha by 1988 and 180,400 ha by 1993.

These were some of the strategies to be used to increase productivity in the agricultural sector. It was estimated that it cost US \$1500 to develop a hectare of irrigated land, using a large scale dam, for agricultural production in Ghana. Thus capital expenditure on 23,500 ha and 180,400 ha would be about \$35.2 and \$271 million respectively. This capital-intensive strategy of agricultural development may be technically efficient but not price-efficient. It seems that the emphasis on modern production methods at the expense of the traditional and 'peasant' systems of production was inappropriate.

The MOA action plan did not articulate a strategy for the traditional sector or peasants to increase productivity. The action plan talked in general terms about increasing extension staff density, effective distribution of inputs, establishment of rural service centres for the provision of inputs, credit, storage facilities, and processing equipment.

The general objectives of the MOA document were as follows:

- i) self-sufficiency in the production of cereals, starchy staples and animal protein to ensure adequate nutrition for every Ghanaian;
- ii) maintenance of adequate levels of buffer stocks of grains, particularly maize and rice, to ensure:
 - a) availability of food during the lean season (March-July);
 - b) price stability; and

- c) provision of maximum food security against unforeseen crop failure and other natural hazards;
- iii) self-sufficiency in the production of industrial raw materials, such as cotton, oil palm, tobacco and groundnuts to feed installed and future agro-based industries;
- iv) promotion of increased production of exportable agricultural crops, including cocoa, pineapple, coffee, sheanuts, ginger and kola; and
- v) promotion and provision of improved storage, processing and distribution systems to minimize post-harvest losses.

Which of the above objectives have been met? Very few. Before analysing of the impact of SAP on the agricultural sector is undertaken, it will be necessary to examine and evaluate i) how agricultural policy prescriptions were sequenced; and ii) the criteria used to determine agricultural decisions and their sequencing.

III THE THEORY: COMPARATIVE ADVANTAGE AND THE RECOVERY MODEL

World Bank consultants helped to design the Ghana government's strategy for agricultural sector rehabilitation and growth. The strategy was based on a modified theory of comparative advantage which was developed by Israeli economists including Michael Bruno (1972). The domestic resource cost (DRC) compares value-added in domestic and world prices. The domestic value-added to factors of production is measured in terms of the actual value to society – the opportunity cost or shadow prices of these factors:

$$\text{The DRC ratio} = \frac{\text{domestic resources and non-traded inputs valued at opportunity costs or shadow price}}{\text{net foreign exchange earned or saved by producing the goods domestically}}$$

The DRC ratio, as defined above by Tsakok, becomes a measure of domestic costs of earning or saving foreign exchange. World Bank consultants explained how the DRC ratio can be used for policy analysis as follows:

An analysis of comparative advantage of Ghana in major tradable crops using different techniques of production and an analysis of the incentive framework was undertaken. The comparative advantage was assessed by calculating Domestic Resource Cost Coefficients (DRCs) which measure the cost of domestic resources (land, labour, materials, etc.) used to save or earn a net unit of foreign exchange. The lower the DRC coefficient, the more efficient the activity; a DRC less than or equal to one (using shadow prices for land, labour, capital, and foreign exchange) indicates comparative advantage in a particular commodity and technique. A negative DRC indicates that value added at world prices is negative. The analysis of the incentive framework was undertaken both in terms of financial returns to land and labour and nominal and effective rates of protection (World Bank, Aug. 6, 1985, *Agricultural Sector Review*, p. ix).

The operational aspects of the model as described above were developed for the World Bank. The consultants included S. Pearson and J. D. Stryker of Stanford and Tufts Universities, respectively. The model was used 'to review the feasibility of the Government strategy mentioned above and provide a basis for policy recommendations on promotion of specific crops, cropping patterns, and techniques...' (Ibid, p. 9.)

The World Bank consultants believed that the DRC measurement could be used to make decisions on **periodization** of investments in commodity production in an African-type economy. The World Bank DRC calculation:

.... shows Ghana's strong comparative advantage in tree crops, viz., cocoa, oil, palm, rubber, and coconut (copra)... DRCs for tree crops remain favourable in a variety of scenarios including projected declines in world prices in real terms for cocoa, oil palm, and copra... The DRCs are also attractive for other industrial crops such as tobacco and cotton, except for irrigated cotton (Ibid, pp. 10-12).

It seems that the DRC results are biased against domestic food crops. Export commodities seem to have a stronger comparative advantage compared with local food items. The farmers had been switching over to domestic food crops from export crops. Despite this fact, the World Bank consultants concluded that: 'As for food crops, except for rice, which appears extremely uneconomic owing primarily to low yields, all other commodities are borderline cases' (Ibid, p. 13).

Can we interpret the DRC ratios as measures of comparative advantage? How much faith should we put in the results? Is the theory behind the concept of comparative advantage realistic? Did the consultants adapt the theory of comparative advantage properly so that it can be used to rank commodities in order of comparative advantage? We present below a discussion of the questions raised above.

1. Problems with the recovery model – DRC ratios

Brainard and Cooper (1968) discussed some of the questions raised above. They argue that trade theory which is based on the Ricardian concept of comparative advantage is a theoretical concept. To adapt the model so that it can be used for empirical work is a difficult task because of problems involved with predicting the future.

It may be argued that the model which was used to design the agricultural sector policy was inappropriate. The theory behind the 'decision making model' was based on economics of certainty. It should be based on economics of uncertainty as Brainard and Cooper suggested several years ago:

Classical trade theory fails to recognize the implications of risk aversion for the profitability of specialization and foreign trade. A few writers on trade theory have acknowledged in passing that uncertainty will influence the degree of specialization, but the formal theory has proceeded on the assumption that production costs and trading possibilities are known with certainty – or, alternatively, that there is no lapse of time between investment for production of a given product and its exchange for imports of foreign goods. Specialization in a product often involves investment in production facilities a substantial period of time before actual production

takes place. Investment decisions today affect future output, not present output, and they must be based on some estimate of (uncertain) future prices. The presence of uncertainty modifies the descriptive and normative conclusions of neo-classical trade theory (p. 260).

Brainard and Cooper underscore the fact that the international trade theory which is based on the Ricardian concept of comparative advantage is a theoretical concept. To adapt the theory so that it can be used for empirical work is a difficult task because of the problem involved in predicting the future. Bruno and others adapted the trade model for policy analyses. According to Bruno, one of the originators of the DRC methodology:

... the concept of DRC relates to a measure of real opportunity cost in terms of total domestic resources, of producing (or saving) a net marginal unit of foreign exchange. By comparing it with some measure of the economy's real or accounting exchange rate, it can be used as an investment criterion, just as the internal rate of return of a product is compared with some of the real rate of interest. The concept bears a close relationship with basic international trade consideration of comparative advantage (p. 16-17).

The last sentence in the quote above refers to the Ricardian doctrine of comparative advantage. The World Bank consultants seem to assume that the DRC concept can be used as a criterion to measure comparative advantage in the Ricardian sense. The Ricardian model is an abstract one. To use the comparative advantage model for policy analyses requires some more work. The restrictive assumptions must be removed in order to make the model operational. The basic problem with the model is that it is not based on economics of uncertainty.

Brainard and Cooper have explained this point as follows:

The pure theory of international trade has not incorporated uncertainty about prices at which trade will take place (or the quantities which will actually be available for exchange); it rests on assumption concerning the mobility of resources and knowledge about the future which reduce the questions of uncertainty to negligible importance. In the real world, however, lack of perfect knowledge about the future combined with a time lag between investment and returns to investment give uncertainty a very great importance in influencing economic behaviour (p. 277).

It is always difficult to bridge the gap between trade theory and applications of the theory. The exercise involves structuring and solving a well posed problem. How well was the theory adapted and applied to meet SAP agricultural sector objectives? We shall evaluate the performance of the model in Part IV, the empirical section of the paper.

Some economists find the DRC approach inadequate for measuring comparative advantage in the sense used by Ricardo. Other economists, like Prebisch, feel that development should not be looked at from the point of view of the allocation of real resources but from the balance of payments point of view. The approaches lead to different results. Real cocoa prices were projected to fall. Despite this fact, the consultants put cocoa at the top of the list of DRC measures of comparative advantage. The priority given to rehabilitation of the cocoa industry in all phases of the SAP was justified by the static DRC studies.

It may be argued that the margin of error that may be incurred in measuring the DRC variable is high. This makes dependence on DRC ratios suspect in the ranking of commodities. The World Bank study underscored difficulties in measuring variables:

Though the utmost effort was made to refine data and cross-check those from several sources, particularly large cost items such as labour cost, complete data accuracy cannot be claimed... Precise estimates of shadow exchange rate (SER) and opportunity cost of capital (OCC) are not available for Ghana... Given this uncertainty as to the SER estimation of the shadow wage rate (SWR), which requires valuation of the marginal product of labour in alternative activities at border prices was difficult... (Ibid, p. 9)

The margin of error in measuring these variables is high in African-type economies, which are not full fledged market economies. In many ways they are pre-capitalist in nature. For example, how do we value family labour when there is no wage sector? The problem is compounded when peasant farmers engage in double cropping. Thus it is difficult to apportion labour time to specific crops being produced. How do we find 'shadow prices' for land, labour and other variables in a semi-industrialized economy?

Another problem is the use of the 'marginal rule', in valuing DRC variables in a sector without market relations, let alone perfect competition. Microeconomic theory shows that resources are optimally allocated when under perfect competition each factor of production is employed up to the point where its marginal product is equal to its price. For the allocation problem at hand, it means that efficiency will be maximized when no agricultural commodity will be produced if it can be imported at a lower cost compared with the resources that would have to be sacrificed to produce it domestically.

Looking at it from this point of view, the use of DRC to rank commodities and to apply the doctrine of comparative advantage becomes a dangerous numbers game as far as resource allocation is concerned. This is so because the variables cannot be measured under perfect competition market conditions. There are other drawbacks with the application of the 'marginal pricing' principle:

- i) The marginal rule is a static criterion. Thus the maximization of present levels of output may not be the best for the society in the future;

- ii) The marginal principle is blind to external economies and increasing returns to scale. There is no way to quantify these dynamic variables or account for them; and
- iii) The application of the marginal principle does not automatically ensure 'optimal' distribution of income.

Thus, Pareto optimality may be violated. The question that needs to be answered is this: Can the DRC measure be used as an investment criterion in semi-industrialized or in agrarian economies? Bruno and others believe that DRC can be used as an investment criterion if we can measure an economy's real or accounting exchange rate:

Domestic resource cost has a relatively long history of practical use in at least one country, Israel, where it was being applied quite extensively by government planners ever since the early 1950s as a means of project evaluation under conditions in which the official rate of exchange and the prices of tradables were distorted. It can be rationalized analytically in an input-output or linear-programming general equilibrium framework (Bruno, p. 17).

It will be unwise to use the DRC measure as an investment criterion in an economy like that of Ghana. We do not have the data to construct an 'input-output' model for Ghana or use linear programming techniques to calculate optimal 'shadow prices'. Secondly, unlike Israel, the DRC method has not been applied by government officials for a long time so that the results could be tested and validated. It may be argued that it was a mistake for the Ghanaian economists and the World Bank consultants to use the DRC ratios as investment criteria for the reasons explained above. Thirdly, the stakes were too high for the DRC model to be used to make major investment decision which would impact heavily on the recovery effort of a whole economy or a whole country.

2. An evaluation of the incentive strategy

The World Bank Report claims to have developed an 'incentive strategy' to support the DRC-inspired selection of commodities for production. According to the World Bank's Agricultural Sector Review:

.... the comparative advantage analysis was undertaken to provide a basis for the formulation of an investment strategy, given extreme shortages of resources in Ghana at present and the need to concentrate these resources on crops and techniques which promise to be the most efficient. This was combined with analysis of incentive framework in order to determine whether the prevailing incentive was conducive to a successive implementation of the investment strategy resulting from the comparative advantage analysis. The incentive structure is at present highly distorted with high net taxation of some crops with a clear comparative advantage (cocoa, rubber, tobacco, and cotton) and high net protection to crops with

a clear comparative disadvantage (rice)... The overvaluation of the exchange rate over most of the 1970s and early 1980s discouraged export industries, including agricultural exports such as cocoa and timber (Ibid, pp. 14-15).

Thus the emphasis was placed on realigning the overvalued exchange rate. It turns out that the 'incentive structure' is nothing more than restoring the price distortions brought about by the overvalued exchange rate. No attempt was made to suggest any structural changes, such as land reform, to boost production. It is not clear why rubber, tobacco and cotton were selected for the DRC study and why incentive strategies were developed for these crops. Ghana does not export these crops. They are not important in domestic trade or international trade.

The DRC comparative advantage measures were used as the basis to advise the Ghana government to pay more attention to the development of export crops and/or industrial crops. The agricultural review had little or nothing to say about the development of food crops since DRC ratios for these items were too high. The emphasis on tree crops, especially cocoa, might have been misplaced, for several reasons. The world cocoa economy was poised for a long period of large surpluses: Brazil and Côte d'Ivoire took policy decisions to expand output in the 1970s both intensively and extensively. Both countries had large tracts of cocoa growing land. Thus output was increased by bringing more land into cultivation. Secondly, productivity was increased by the planting of the newly developed Amazon hybrid variety of cocoa. As a result, cocoa prices have been depressed since early 1980s because of over-production arising from bringing more land into cultivation and the use of high yielding varieties. It was, therefore, bad policy for Ghana to rehabilitate its industry and expand output under SAP since Côte d'Ivoire and Brazil have been increasing production rapidly. Thirdly, if foreign exchange is considered as a scarce commodity and growth is constrained by balance of payments, then it might be unwise to develop activities to expand the production of commodities like cocoa with a low price and income elasticities of demand in the world markets. Low price elasticities of demand and supply can cause violent fluctuations in export earnings with supply shifts and cause the terms of trade to move adversely when output is increased. This problem has been behind political instability and the collapse of several governments in Ghana since 1966. The Nkrumah, Busia, and Acheampong's regimes collapsed with military take-overs due to shortfalls in cocoa incomes as a result of price and income fluctuations (Kofi and Hansen 1983).

In the next phase of the SAP sequence, the cocoa sector was singled out for favours, even though the world market price for cocoa was declining because of over-production. The policies which were designed for the second phase of SAP are described below.

3. ERP II policies – growth and development phase: 1987 to 1993

The stabilization phase had been completed by 1986/87 with some degree of success. International agencies and donors commended Ghana for the achievements of the economic recovery programme from 1983 to 1986. Fiscal and monetary stability had been restored and external arrears had been reduced. At the same time it was recognized that the economy faced difficult structural problems. Public resources were not well managed. Banks were weak and inefficient. The rate of domestic savings and the level of private investment were strikingly low. These problems were not important as long as external finances were available from the World Bank. The time had come to move from the stabilization phase of the ERP to the growth and development phase.

The second phase ERPII was described as the structural adjustment and development phase. The first phase of the Structural Adjustment Programme (SAP I) covered the period 1987-88. The second phase, SAP II, covered the period 1989-90. The Third phase, SAP III, was to cover the period 1991 to 1993.

3.1 General policies

The aims of ERPII were spelled out in the *National Programme for Economic Development*:

In the context of the general aim of laying a firm base for sustainable self-reliant growth and long-term balance of payments viability, the specific goals of ERPII are the following:

- i) to ensure sustainable growth at between 5 to 5.5% per year over the medium term;
 - ii) to increase the level of public investment from about 10% of national income to about 25% by the end of this decade;
 - iii) to increase domestic savings from about 7% at the end of ERPI to about 15% by the end of the decade;
 - iv) to further improve the management of resources in the public sector; and
 - v) to effectively mobilize the resources thus generated to improve the social and overall well-being of the people of Ghana particularly the under-privileged, deprived, and vulnerable.
- (p. 10)

The main objective of ERPI was trade and exchange rate reform. The reforms were continued under SAP I and II. In September 1986, auction exchange rate systems were introduced to help reach a market-determined exchange rate. On February 20, 1987, the official and auction rates were unified so that all foreign exchange transactions were conducted at the auction rate (Younger 1989, p. 171).

In February 1988, plans were started to improve the exchange rate system by bringing the parallel market rate in line with the auction rate. To do this, the government

authorized the establishment of private foreign exchange bureaus – a de facto recognition of the existence of the parallel market for currency dealings. In 1989, the foreign exchange bureau rate was about 40% above the auction rate. In 1990, there was improvement towards unification of the two rates but the discrepancy was still large. The rates will be unified only when demand for and supply of foreign exchange are equal.

3.2 Agricultural sector cocoa policies: ERPII

In 1987, the balance of payments position showed a surplus of 140 million US dollars, despite relatively lower cocoa prices. Export earnings, led by timber and gold, rose by 10%. Agricultural sector policies favoured increased investments in timber production. Environmentalists would argue that the balance of payments surpluses were achieved by increased investment in capital equipment to cut the timber trees. As a result, the environment was damaged by high rates of deforestation. In this paper, our focus is on cocoa and not on timber.

ERP policies have favoured the cocoa farmer. For the 1986/87 main crop, the producer price was raised by 65%. This brought the farmers' share of the world price to 33% in 1987/88. This farmers' share of the FOB price was increased to 46% in 1988/89. These were some of the policies and incentive programmes which were designed for the cocoa sector with the aim of increasing cocoa output. The ultimate goal was to improve Ghana's foreign exchange earning position through the sales of increased cocoa output. In developing countries like Ghana, the development process is underpinned by the level of foreign exchange earnings. It is clear that a lot of preparation went into the design of the SAP agricultural policies. It is not intended to evaluate all these policies. In this paper, attempts will be made to evaluate the policies with regard to the cocoa sector, which is the most important sector in the Ghanaian economy from the point of view of income and employment generation. This is why the ERPI and the ERPII policies were designed to shift the internal terms of trade in favour of cocoa producers. Were the cocoa policies the right policies to undertake to achieve a faster rate of economic recovery and lay the foundations for viable growth in the future? This question will be discussed in the next section of this paper.

IV IMPACT OF SAP COCOA SECTOR POLICIES ON GHANA'S GROWTH PERFORMANCE

It may be hypothesized that economic recovery in Ghana from 1983 to 1993 would have been much brighter had policy makers taken steps to diversify Ghana's agricultural export base rather than intensifying Ghana's dependence on cocoa production and exports in a market facing declining prices. This section of the paper tries to present analyses to support the above hypothesis.

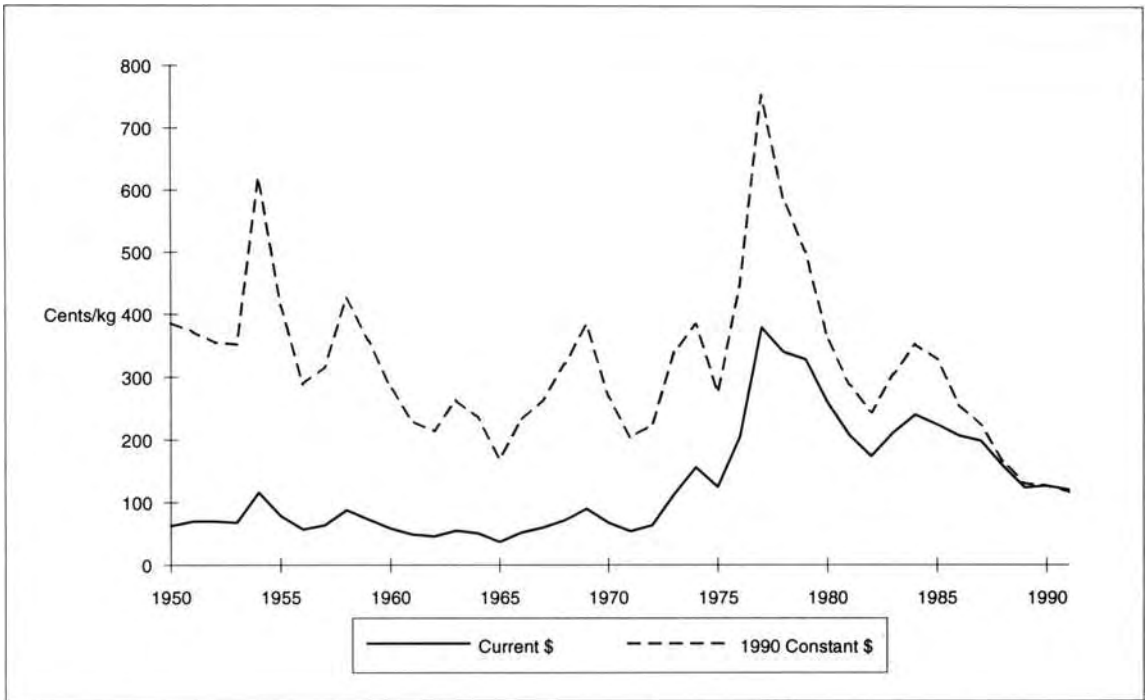
The paper argues that the World Bank's inspired policy to use the cocoa sector as the 'growth pole' to rehabilitate the Ghanaian economy was misplaced. We present arguments based on our knowledge of the world cocoa industry to explain that Ghana's economic performance in the 1980s and 1990s would have been better if the policy makers had placed less emphasis on cocoa production and had produced crops with relatively higher income elasticities of demand for export.

1. Were policies favourable to cocoa sector misplaced?

It is argued that the World Bank's SAP policies which favoured the cocoa sector were misplaced. The policy makers and their consultants failed to critically analyse future trends in cocoa prices. A sensitive student of the international cocoa market would have seen that in the 1970s Brazil, Côte d'Ivoire, Malaysia were poised to expand output both extensively and intensively as a result of very high prices on the market in the late 1970s. (See Chart 1.) These record high prices, in turn, encouraged new plantings extensively by clearing new forests and intensively by the use of newly discovered hybrid varieties of cocoa. Cocoa producers all over the world began using the hybrid varieties of cocoa in the 1970s. Evenson and Kislav undertook a survey and concluded that 'increased productivity of agriculture is due to improved technology inputs. Many of the new techniques of production were created by agricultural research' (p. 11). Research aimed at producing improved cocoa planting materials began in the 1930s in several countries including Ghana, Nigeria and Trinidad. Most cocoa producing countries developed their own breeding programmes. Lass and Wood report that:

... the national cocoa breeding programmes tend to have different aims and cannot be of much assistance to each other... One of the side effects of the Ghana breeding programme has been the common use of Upper Amazon types in other countries, resulting in new plantings with greater vigour than the previously used West African Amelondado and Trinitario material.

CHART 1
COCOA PRICES: 1950 - 1991



Sources: Gill and Duffus, *Cocoa Market Reports* (several issues);
ICCO Quarterly Bulletin of Cocoa Statistics (several issues).

It will be shown later that the use of the hybrid materials resulted in increases in output which can be attributed, in part, to increased productivity. In fact these countries purposefully developed and implemented policies to expand cocoa output. As a result the supply curve of cocoa began to shift to the right, after the normal gestation period. Since the demand curve did not shift that much, the prices of cocoa began to fall under the regime of over supply. Cocoa prices have been since 1983/84 registering record lows in real terms.

It is against this backdrop that the World Bank policy to expand cocoa production to resuscitate the Ghanaian economy must be viewed. The point, discussed above, could be made clearer by reviewing the policies which were undertaken by Brazil, Côte d'Ivoire, Malaysia and Indonesia to expand their output of cocoa production in the late 1970s.

2. Brazil's cocoa policy in the 1970s

According to a study commissioned by the International Cocoa Organization, the Brazilian government played a major role in directing activities in the cocoa economy:

The Brazilian policy for the cocoa sector during the 1970s was characterized by several objectives. The major ones were: to increase export earnings from cocoa beans and cocoa products; to define and

create new production areas in the country; to promote the diversification of traditional cocoa-producing regions by introducing alternative agro-industrial activities; to develop the infrastructure of cocoa areas; and to raise the country's share of the world cocoa output. Within this framework, CEPLAC was given the responsibilities of implementing national production policies, assisting in the marketing area and participating in the decisions regarding the International Cocoa Agreement (ICCO 1989, p. 64).

The Brazilian decision to expand production was based on the assumption that the demand curve would shift to the right and also new markets would open up in traditionally low or non-consuming countries. Thus high world equilibrium prices would be maintained to ensure continuous expansion of supply. This assumption turned out to be wrong because supply expanded too rapidly in other countries as well; whereas the demand curve did not shift that fast to the right.

Brazil's policy of expanded cocoa production in the 1970s was so successful that the policy was reversed in 1981. How was this achieved? The role of the state was very important in this regard. In the history of cocoa production in Brazil, two semi-governmental institutions were established to guide farmers to increase output via the provision of extension services, credit, rural infrastructure and marketing services: i) Institute de Cacau da Bahia (ICB) was established in 1931; and ii) in 1957 Comissau Executiva de Plano de Lavoura Cacaueira (CEPLAC) was established and given a bigger mandate than the ICB.

Two programmes were established in the 1970s in order to implement government policies. In 1971 the PROTERRA programme was established within CEPLAC. CEPLAC was given the mandate to supervise all credit given to farmers for cocoa production through the Banco do Brasil. In 1976, the PROCACAU programme was established with the aim of expanding production of cocoa up to 1985. It is the activities of the PROCACAU programme and the results it achieved which concern us here.

The PROCACAU programme was established under the assumption that cocoa production in West Africa, especially in Ghana, would remain stagnant. Given the fact that demand was rising, Brazil could expand her output and benefit from the prevailing high prices. (Brazil, however, underestimated Côte d'Ivoire's potential to increase output.) The initial target of the PROCACAU programme was to increase cocoa plantings by 300,000 hectares. It was estimated that by 1990 when the new trees were fully productive, output would reach 700,000 tons, compared with under 200,000 in 1975.

According to the ICCO study, 'the results achieved during the first five years of the programme were impressive. Production grew by 41% in relation to the six-year average of the period prior to the programme, while average yields rose by more than 30%. Average national cocoa earnings increased by more than \$ US 500 million during the same period' (ICCO 1989, pp. 66-7).

By 1981 it was clear that the PROCACAU programme needed revision. Other countries, notably Côte d'Ivoire, Malaysia and Indonesia had expanded output. As a result, prices began to decline due to overproduction (see Table 1 and Chart 1). Secondly, domestic costs of cocoa production had increased including increased cost of credit. As a result only 66% of the initial target which was set in 1976 was achieved at the end of the project in 1985.

TABLE 1
FASTEST COCOA GROWING COUNTRIES: 1970 – 1988

Production in 1000s of tons	1970/71	1974/75	Year 1980/81	1984/85	1987/88	1988/89
Côte d'Ivoire	180	242	403	565	665	850
Brazil	182	273	349	412	402	324
Malaysia	4	13	43	93	222	243
Indonesia	1	2	12	31	58	93

Source: ICCO (data)

Table 1 shows that Côte d'Ivoire, Indonesia and Malaysia had the best potential to expand cocoa output. The spectacular increases in output were achieved in part due to high productivity as a result of the use of hybrid varieties of cocoa.

3. Côte d'Ivoire's cocoa policy in the 1970s

Now we turn to an explanation of the institutional changes and price incentives used by Côte d'Ivoire to expand output in response to high prices in the 1970s. Côte d'Ivoire was able to expand cocoa output from 180,000 tons in 1970 to 849,000 tons in 1988/89 due, in part, to the work of SATMACI. SATMACI made the hybrid high yielding variety of cocoa available to cocoa farmers through the extension services. SATMACI launched a programme to expand cocoa output in 1971. By 1979, 138,000 hectares of new farms had been created. As a result output doubled in 10 years. (See *Afrique Agriculture*, March 1981, pp. 22-54). In 1977/78 producer prices were increased from 180 Francs per kilo to 250. This incentive given to farmers allowed them to expand their cocoa farms. As a result, the area planted with hybrid farms expanded from 221,000 hectares in 1977/78 to 544,000 hectares in 1982/83, in five years. By 1992/93 the area planted with hybrid cocoa had increased to 751,000 hectares (see Table 2). This represented over one-half of the total area planted with cocoa in the Côte d'Ivoire. Given the fact that hybrid trees produce yields of three times the normal cocoa trees, it is clear that productivity increases accounted for a large part of the increased output.

Côte d'Ivoire, like Brazil, decided to expand cocoa production because Ghana's output had been decreasing over the years. This was part of the policies outlined in the Five Year Development Plan of 1976-1980 (*Afrique Agriculture*, December 1976, pp. 24-65). The policy was so successful that in 1978, Côte d'Ivoire became the leading

producer of cocoa in the world. Plans were made to increase output further in the 1981-1985 Five Year Development Plan. The objective was to increase cocoa production from 320,000 tons in 1980 to 450,000 tons by 1985 and to 500,000 in 1990. This target was surpassed (*Afrique Agriculture*, February 1983, p. 52).

The cocoa expansion programme undertaken by SATMACI since 1971 outstripped planners' expectations. In the 1981-1985 Five Year Development Plan attempts were made to slow down the growth rate in output and produce 500,000 in 1990 but this could not be done. Farmers continued to plant the hybrid cocoa. The revolution in cocoa production in the Côte d'Ivoire was achieved because optimal pricing policies were undertaken to provide incentives to producers and at the same time land tenure policies were changed to make land easily available to prospective cocoa farmers, especially the Mossi migrant farmers: 'La terre appartient à celui qui la travaille'. This law which says that the land belongs to the one who tills it created, to some extent, a land tenure reform in Côte d'Ivoire. The modalities of this law have yet to be worked out. The Mossi, who are from Burkina Faso, are regarded as 'strangers' and they are forced to pay rent by some Ivorian chiefs.

TABLE 2
EVOLUTION OF LAND AREAS PLANTED WITH TRADITIONAL AND HYBRID COCOA
MAJOR PRODUCING COUNTRIES

	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83
Traditional													
Brazil	407	406	404	402	400	398	396	394	392	390	388	386	384
Ghana	1286	1285	1280	1275	1249	1218	1183	1145	1107	1067	1028	991	904
Côte d'Ivoire	632	656	677	693	704	751	780	816	826	836	844	851	855
Hybrid													
Brazil	11	14	21	30	45	60	80	109	147	189	242	283	305
Ghana	3	3	5	9	16	28	48	69	90	113	135	159	151
Indonesia	12	13	14	15	16	18	20	24	27	32	37	43	49
Côte d'Ivoire	2	5	13	25	42	84	137	221	278	347	415	487	544
Malaysia	7	12	18	23	29	35	41	49	61	89	124	159	209
Total													
Brazil	418	420	425	432	445	458	476	503	539	579	630	669	689
Ghana	1289	1288	1285	1284	1265	1246	1231	1214	1197	1180	1163	1150	1055
Indonesia	12	13	14	15	16	18	20	24	27	32	37	43	49
Côte d'Ivoire	634	661	690	718	746	835	917	1037	1104	1183	1259	1338	1399
Malaysia	7	12	18	23	29	35	41	49	61	89	124	159	209

Source: ICCO Quarterly Bulletin of Cocoa Statistics (several issues).

3.1 The Ivorian miracle in cocoa expansion

Cocoa production in West Africa has been dependent on migrant labour. This hypothesis was proved empirically by Polly Hill, an anthropologist, in her classic study on the system of cocoa farming in Ghana (see her *Migrant Cocoa Farmers of Southern Ghana* 1963). These migrants, mostly from Burkina Faso, provided the cheap labour

which helped Ghana to develop her cocoa industry. Ghana was the leading producer of cocoa in the world from 1911 until 1978. From the turn of the century until 1960s economic activity was more buoyant and real wages were higher in Ghana than in neighbouring Côte d'Ivoire. As a result, the migrants from the Sahelian regions preferred to come to Ghana rather than go to the Côte d'Ivoire. By 1970 the migrants preferred to go to the Côte d'Ivoire where wage levels had risen relative to wage levels in Ghana due to the overvaluation of Ghanaian currency. Secondly, in 1969 Ghana expelled these migrants. Thirdly, the new law in Côte d'Ivoire making it possible for the one who tills the land to claim its fruits made migration to Côte d'Ivoire much more attractive. These are some of the institutional reasons which created a new production culture and which made increased cocoa production in Côte d'Ivoire possible and enabled Côte d'Ivoire to become the leading world producer.

4. Malaysian and Indonesian cocoa policies in the 1970s

High cocoa prices in the 1970s together with the breeding and use of the Amazon hybrid variety have made cocoa production attractive in Malaysia and Indonesia. In Malaysia several attempts had been made to produce cocoa in this century but without much success until the 1970s. Production rose from 7,000 in 1970 to 344,000 in 1987. In Indonesia, cocoa production was insignificant until the hybrid variety came on the scene. Between 1980/81 and 1988/89 cocoa output increased from 12,000 tons to 93,000 tons respectively (see Table 1).

Production increases in Malaysia and Indonesia have been spectacular because the yields per hectare are relatively higher compared with the average yield in other countries. The reason is that Malaysian and Indonesian farms are relatively new, post-1970. All the tree stock is of the Amazon hybrid variety. Thus Malaysia and Indonesia are the beneficiaries of scientific selection and development of a high yielding cocoa tree stock. Secondly, Malaysia has been favoured by good local climate and soil. Thirdly, Malaysia and Indonesia are entering a market where a new product (Amazon hybrid) is suitable for the plantation system of production as opposed to traditional or 'peasant' form of production. It is assumed that under the plantation system of production scientific farming practices, including application of fertilizers, are implemented properly to ensure optimal yields from the farm. In Malaysia, three quarters of production is from estates. This may account for the high yields registered on Malaysian farms.

Ruf (1993) has argued that it is possible that Indonesia can become the world's biggest producer in a few years' time. More than two thirds of Indonesia's output is produced by small families who find current cocoa prices attractive. There are many of these farmers around. At the same time there is plenty of land available. Indonesia produced about 200,000 tons of cocoa in 1992/93 compared with 93,000 tons in 1988/89. Currently Indonesia is the fifth largest cocoa producer in the world.

As regards future prospects, if such a boom was only limited by disappearance of the Indonesian forest, all other producers might as well

abandon cocoa, as this tropical giant disposes of 180,000 km² under a humid tropical climate, 100,000 km² of which are still officially under forest. Millions of families are still ready to clear them (p. 247).

Cocoa production and expansion in Malaysia and Indonesia, like Côte d'Ivoire and Brazil, have been aided by government policies. The governments have funded research and developed and enforced bean grading standards and have taken steps to regulate the markets (UNCTAD 1991, p.14).

The development of the Amazon hybrid variety of cocoa and its use in the 1970s together with positive government policies in Brazil, Côte d'Ivoire, Indonesia and Malaysia have all contributed to create a revolution on the supply side of the world cocoa industry, since 1970. The supply curve has been shifting to the right. The demand curve, however, has not shifted that much. What are the implications of these shifts in the demand and supply schedules on world cocoa prices? What are the optimal policies available to an old cocoa producing country? What should this country do if it has a high percentage of 'non hybrid' stocks of cocoa trees? The main purpose of this paper is to provide insights and to answer some of these questions and to show that the World Bank made a mistake with regard to SAP cocoa policies in Ghana. To do this, we must first examine the impact of production decisions on cocoa prices in the 1980s and 1990s.

5. Cocoa: revolutionary expansion in the 1970s and price trends in the 1980s and 1990s

Chart 1, referred to earlier, shows cocoa price movements from 1950 to 1991. The record high prices registered in the 1970s provided an incentive for farmers, at times with government support, to increase plantings in 1970s and early 1980s. This was followed by increased output which in turn led to the price downturn in the 1980s and 1990s. This downturn in prices was written on the wall for all market analysts to see for the following reasons:

- i) Farmers all over the world began new plantings with the Amazon hybrid variety;
- ii) This Amazon hybrid variety has a potential yield of two to three times than that of the traditional varieties;
- iii) Governments in several cocoa producing countries undertook policies to increase output. As a result, the world supply curve of cocoa shifted to the right. It could be hypothesized that the shift of the supply curve represented the biggest structural change in the history of the world cocoa industry.

Table 2 and Chart 2 show the evolution of land areas planted with traditional hybrid varieties in the major producing countries. Chart 2 (see Table 2 for data) indicates that in 1970 very little or no hybrid cocoa was planted by the major producers. In late 1980s over one half of cocoa land areas in Brazil (Chart 2 a) and Côte d'Ivoire (Chart 2 c) had been farmed with the Amazon hybrid plant. In Malaysia and Indonesia

only the Amazon hybrid variety has been used in developing the cocoa industry. The cocoa industry in these countries began practically in the 1970s. In Ghana where cocoa farming lands have been used up, old farms have been rehabilitated, to a large extent, with the use of the hybrid varieties, as indicated in Chart 2b. As acreages of old farms fall, hybrid farm acreages rise. The use of hybrid varieties has been slow relative to the other countries.

CHART 2
EVOLUTION OF LAND AREAS PLANTED WITH TRADITIONAL AND HYBRID COCOA
IN MAJOR PRODUCING COUNTRIES

Chart 2A

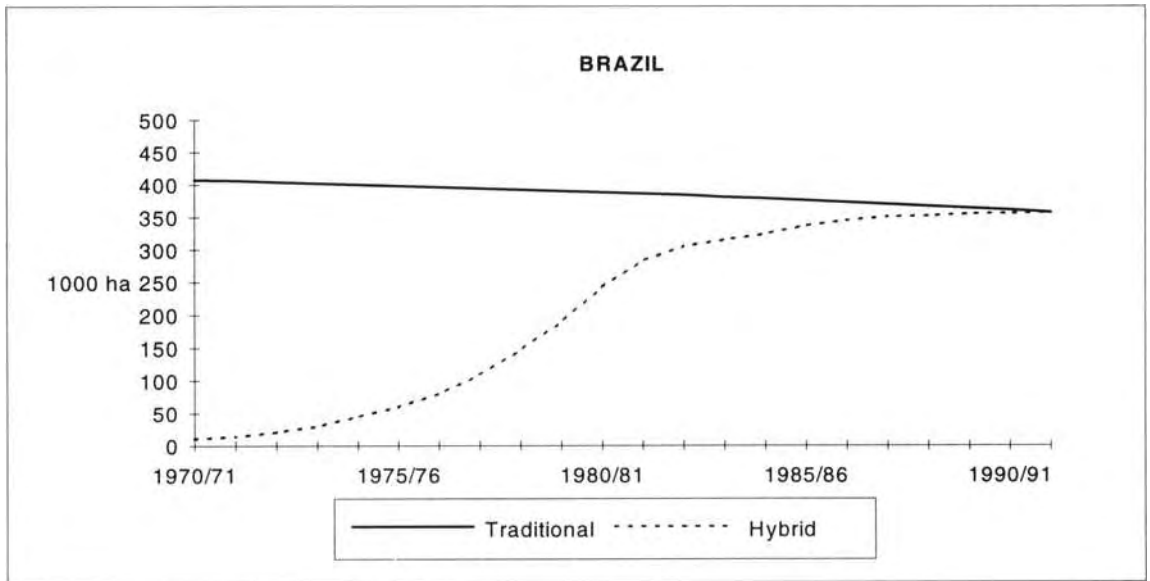
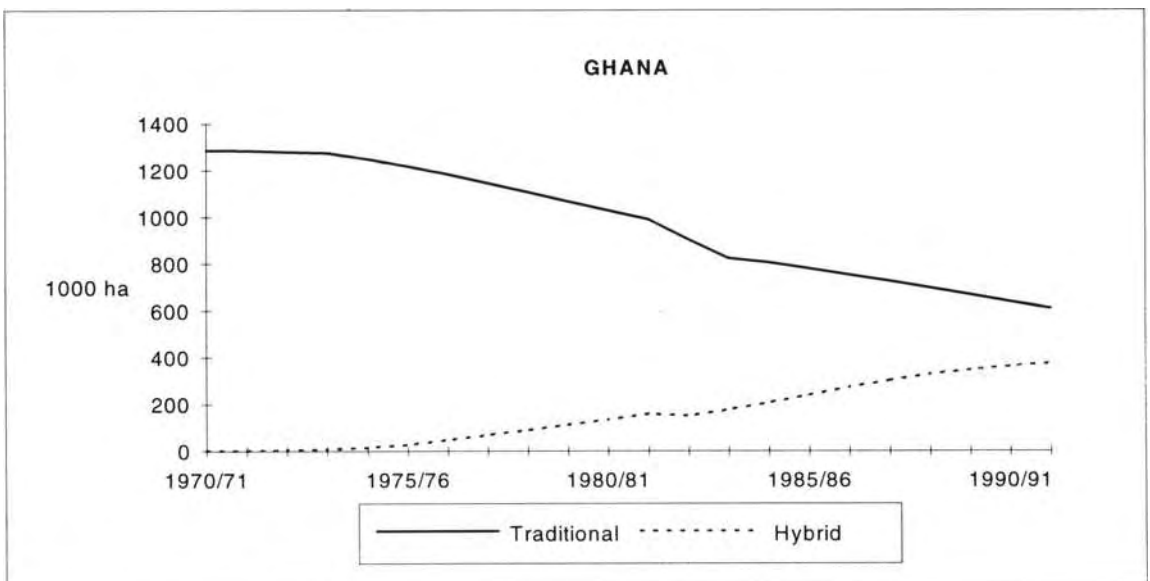


Chart 2B



Source: ICCO Quarterly Bulletin of Cocoa Statistics (several issues).

Chart 2C

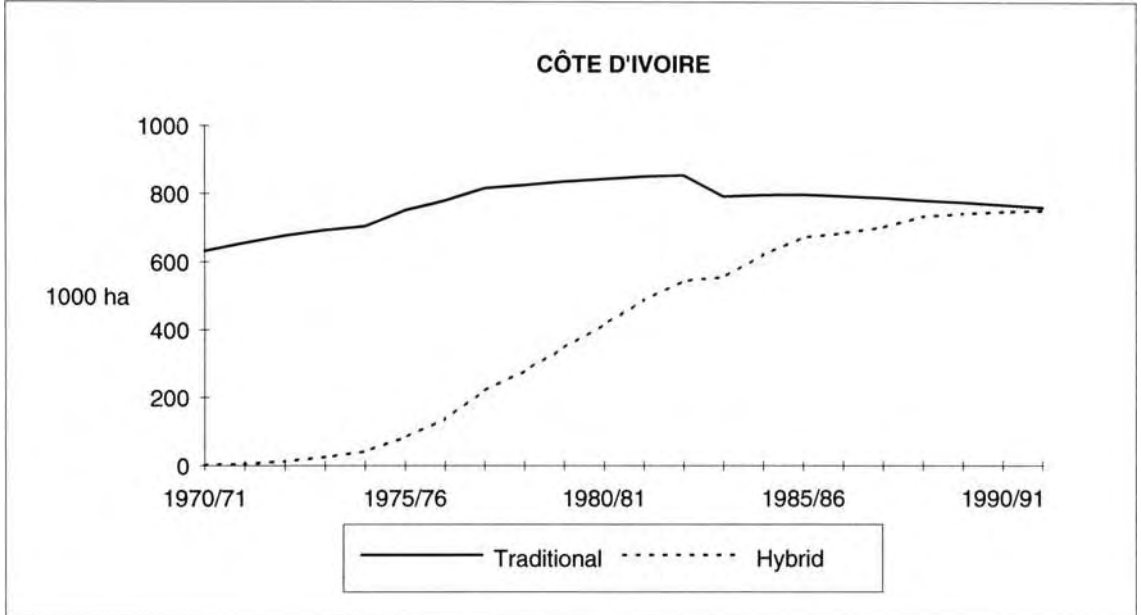
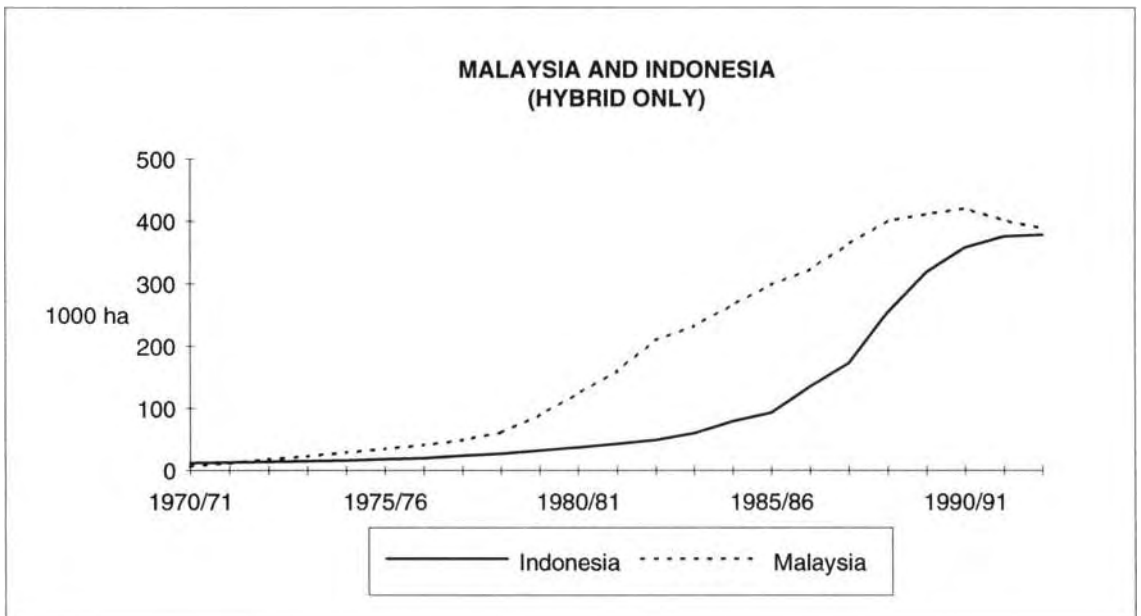


Chart 2D

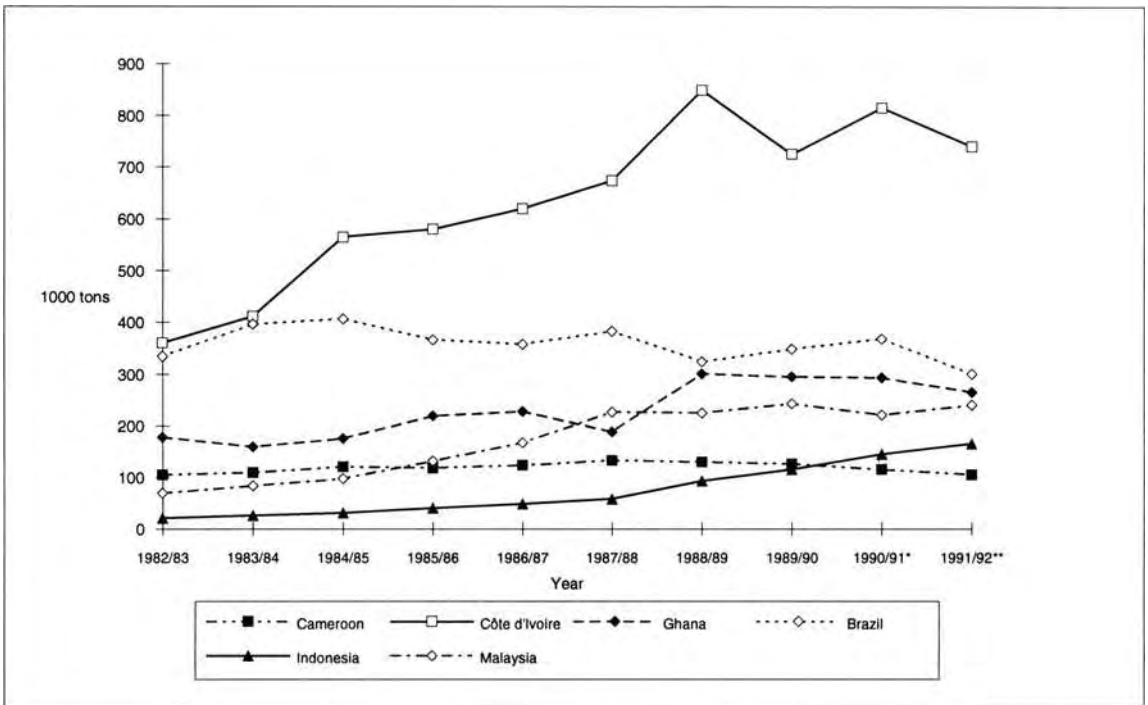


Source: ICCO Quarterly Bulletin of Cocoa Statistics (several issues).

Chart 3 shows the production of cocoa beans by country from 1982/83 to 1991/92. Chart 3 conforms to what one would expect, as a result of the policies undertaken by several governments in 1970, as far as cocoa production was concerned. As explained above, the Brazilian government began to take steps in 1981 to control the expansion of cocoa production. As a result, output has stabilized as indicated in Chart 3. In the case of Côte d'Ivoire, it was pointed out that the government was not able to control the expansion of output which began in the 1970s. It seems, however, that output has begun to stabilize since 1989. Indonesia and Malaysia show an increased

upward trend. Ghana shows a noticeable upward trend in 1988 and 1989. Output seem to have taken a downward trend since 1989.

CHART 3
 PRODUCTION OF COCOA BEANS BY COUNTRY:
 1982/83 – 1991/92



Source: Quarterly Bulletin of Cocoa Statistics, Vol. XVII, No. 2, 1992

Note: * Estimate; ** Forecast

Chart 4 shows the 'cocoa yield profile' of a hybrid variety for Malaysia and Côte d'Ivoire. Given the 'yield time' function of a hybrid variety, it may be assumed that the shift in the supply curve represents a structural change which will ensure high output of cocoa for 20 to 30 years. Prices will therefore remain low for a long time, discounting short-term price instability, until the demand schedule shifts to the right to pull up the equilibrium prices, and/or undertake policies to slow down shifts in the supply curve to the right.

It is against the above backdrop that we must evaluate the performance of cocoa sector policies in Ghana under the World Bank/IMF-sponsored structural adjustment programmes.

CHART 4A
COCOA YIELD PROFILE IN CÔTE D'IVOIRE

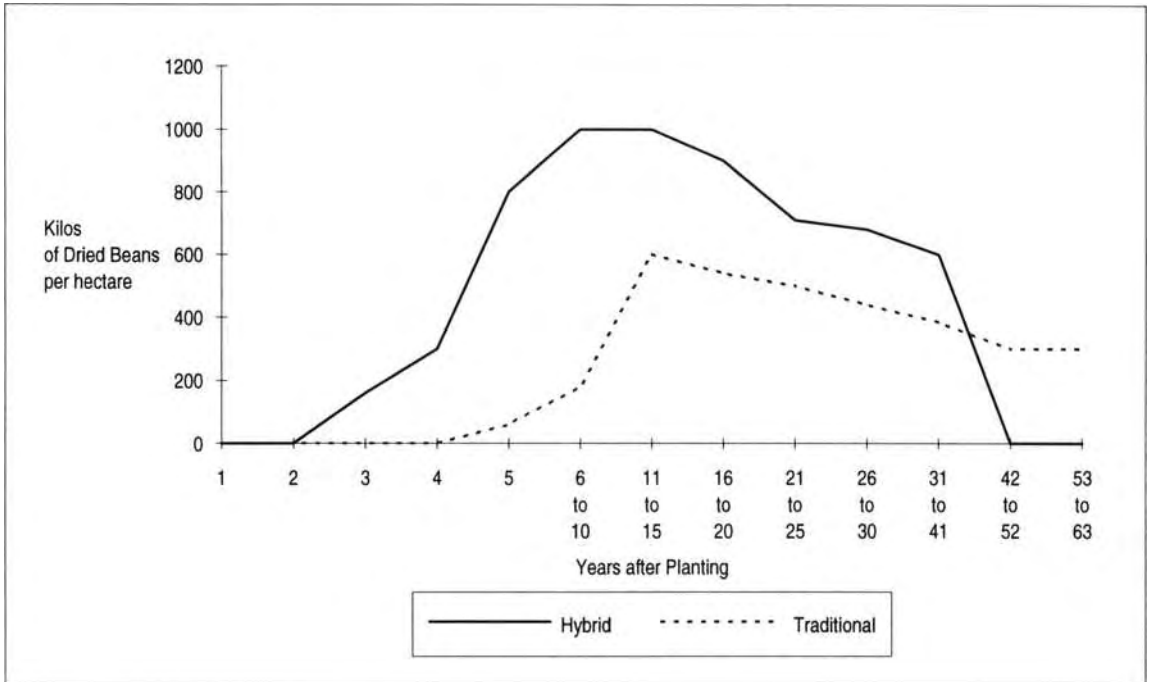
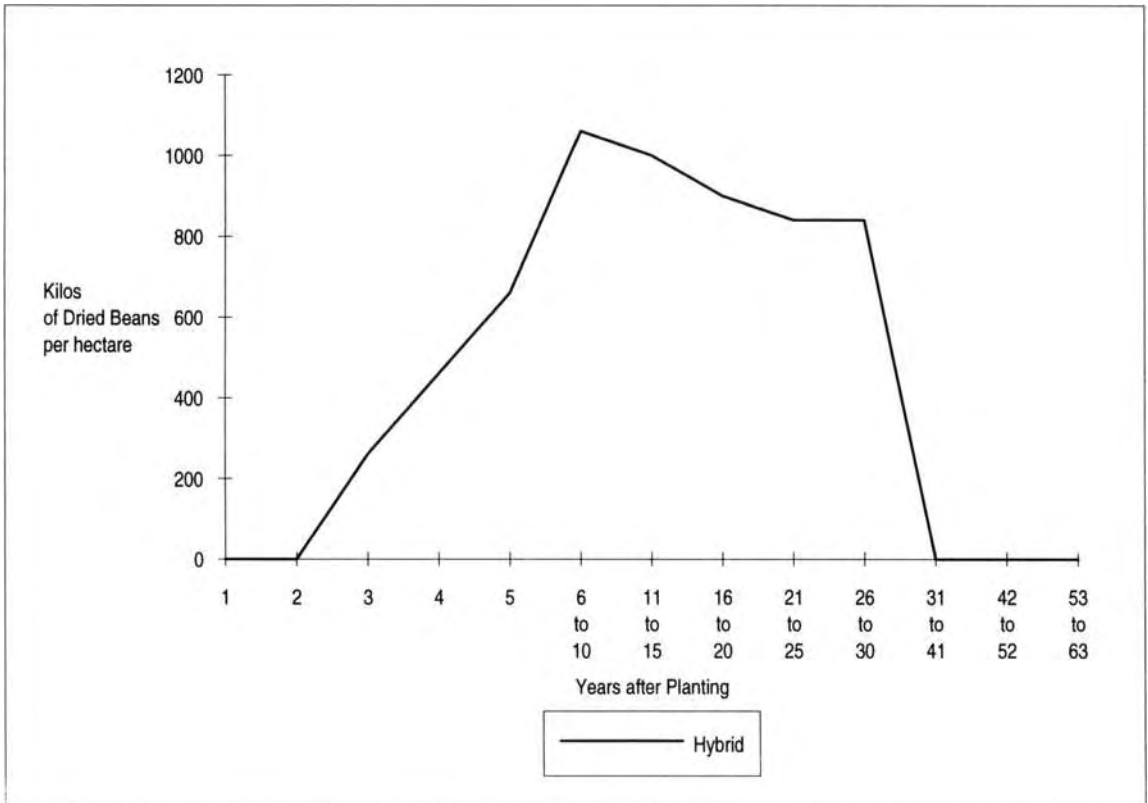


CHART 4B
COCOA YIELD PROFILE IN MALAYSIA



Source: UNCTAD (1991), *Prospects for World Cocoa Market until the Year 2005*, pp. 275 and 279.

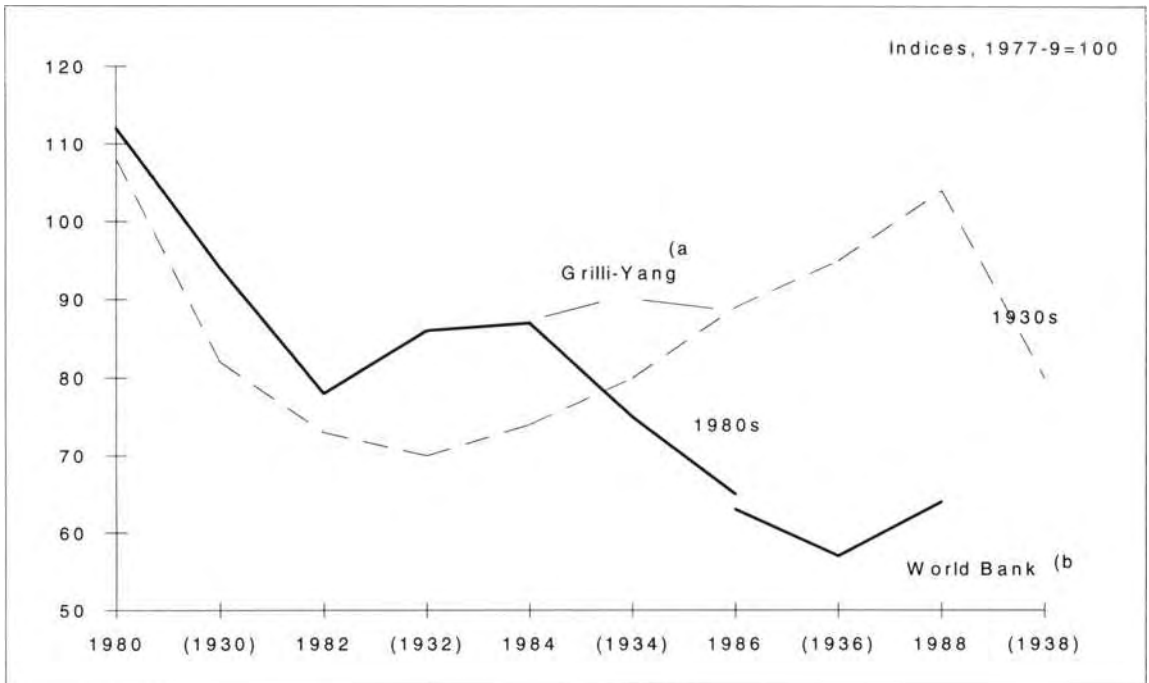
6. Policy performance review – cocoa sector policies

Structural changes in the cocoa industry in the 1970s should have indicated to policy makers that international prices for cocoa would be very low by the 1990s. It was clear that supply was going to outstrip demand in the near future. It is now clear that low cocoa prices in the world markets today are not short-term phenomena. During the 1930s depression when prices collapsed, they were followed by output declines and prices rebounded after three years (see Chart 5). The situation is now different. See Maizels (1992) for a full analysis of the factors behind this phenomenon. The commodity price collapse of the 1980s has continued into 1990s yet output has not declined. It has increased. In the case of cocoa, the increase in output is clearly due to the use of the hybrid variety. This problem has been characterized by Kofi (1993) as the 'new commodity problem'. Thus the Ghana SAP policy makers have made a serious mistake because they looked only at one side of the equation. They used the DRC results, assuming that the estimates were correct, to make a policy and ignored long-run downward trends in cocoa prices, due to the new commodity problem, which the market fundamentals were pointing at. Why should policy makers decide to allocate more resources to prop up an industry in decline and produce for export into a world cocoa market whose prices are declining? If the objective of the cocoa sector policy was to increase foreign exchange earnings then it has failed miserably.

The Ghana cocoa industry was in decline in the 1970s because of the over-valuation of the local currency which made investment in cocoa production unattractive to farmers. Secondly, as explained above, Ghana had lost to Côte d'Ivoire the source of cheap labour which used to come from Burkina Faso. Other sources of labour for the cocoa industry had dried up. For example, cheap peasant family labour is no longer available since nowadays the children go to school and prefer non-farm jobs. In short, urbanization and exogenous forces had destroyed the 'culture of cocoa production' in Ghana. Thus there were exogenous and endogenous reasons why the Ghana cocoa industry was in decline other than exchange rate distortions. Under these conditions, it may be argued that it was not economically sound to save the declining cocoa industry in Ghana.

The glaring fact that Ghana has lost her comparative advantage to producers like Malaysia and Indonesia did not bother the policy makers. The controversial low DRC estimates for tree crops in Ghana, especially for cocoa, blinded the policy makers to the prospects for world cocoa prices in the future before they made the decision to increase investments in cocoa production in Ghana.

CHART 5
COMMODITY CRISIS AND DEVELOPING COUNTRIES



Source: Maizels (1992), p. 12.

- Note:
- a) Prices of 24 commodities weighted by value of exports from developing countries, deflated by UN index of unit value of manufactures exported by developed market-economy countries.
 - b) World Bank index (33 commodities) using same deflator as for a).

The local farmers knew better. The farmers have proved that the DRC measures were wrong because they were getting higher returns for crops competing with cocoa for their labour and capital. As we have pointed out, these farmers have been cutting down cocoa trees and have been using the land to produce other crops. This policy mistake has cost Ghana dearly. This paper does not attempt to quantify the cost of the policy mistake. We may hypothesize that this policy had made the economic recovery time period longer than necessary. Next, we provide further evidence for the hypothesis presented above. It is also necessary to show that the policy mistake described above was a serious one.

7. Why support an industry whose golden age has passed?

The rapid expansion of cocoa production and trade in the world from the turn of the century until the mid-1960s was mainly the result of the rapid growth of production in Ghana. In 1890 Ghana exported 80 lbs of cocoa beans. In 1911 Ghana exported 40,000 tons of cocoa beans and became the major exporter of cocoa in the world, surpassing Brazil in output. In 1922/23 Ghana exported over 200,000 tons of cocoa. This output represented 44% of cocoa in world trade. In 1964/65 Ghana produced 566,000 tons of cocoa. This output was about one-third of world production. The British

economic historian McPhee had characterized commodity production and trade in West Africa in the 1900s as an economic revolution.

Cocoa accounted for over three quarters of Ghana's foreign exchange earnings from the 1920s until the mid-1970s when the cocoa industry began to falter. From the peak in 1964/65, production declined to 394,000 tons in 1976 and then dropped to 179,000 tons in 1983. The reason for the decreased production is not difficult to find. Since the statutory Cocoa Marketing Board was set up in the 1947/48 season, farmers had been taxed progressively until the farmers protested by not investing in cocoa production. From the turn of the century until the 1950s, farmers received 80% of the world price (Kofi 1974). In the 1970s Ghana farmers were receiving about 26% of the world cocoa prices. Ghana faced economic crisis from the mid-1960s onwards because of the progressive collapse of the cocoa economy. In the early 1980s Ghana experienced unfavourable terms of trade. From 1979 to 1982 the terms of trade deteriorated by about 12% per year. The drought of 1981-83 severely reduced agricultural production. In 1981 the military overthrew the democratically elected government. In 1983 Ghana agreed to accept help from the Bretton Woods institutions and SAP was designed and implemented.

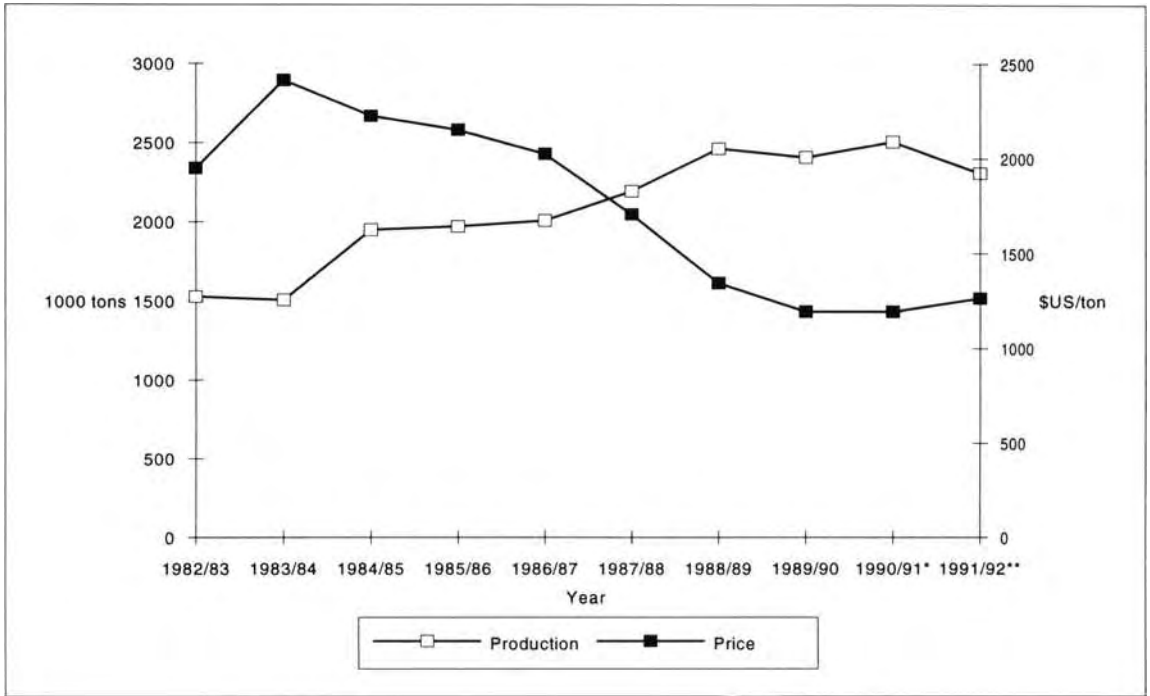
It has been pointed out that agriculture is still the dominant sector in the Ghanaian economy, representing 50% of GDP and employing over 70% of the labour force. Agriculture is the leading sector in the Ghanaian economy from the point of view of employment creation and foreign exchange income, which underpins the development process. Thus to turn the Ghana economy around, agricultural policy must be taken seriously.

8. What type of agricultural policy under SAP?

Under the conditions described above, should Ghana emphasize cocoa production? Should Ghana make cocoa production the leading sector for economic recovery? The answer is no. Given the evolving structure of the world cocoa economy, it was clear that prices were going to fall in the 1980s and 1990s and perhaps beyond. The shift of supply schedules to the right was not going to be matched by shifts of the demand curve to the right. The empirical evidence showed that the above description of probable price behaviour was what happened. Chart 6 shows the relationship between world cocoa production and world cocoa prices for the period 1983 to 1991.

Chart 6 shows that world cocoa prices started to fall in the early 1980s and have continued in the downward trend since then. Readers may recall that the SAP's economic recovery programme was implemented in 1983. Thus the recovery programme was greeted with the beginnings of a downward trend in cocoa prices. Prices have not recovered since 1983-84. World cocoa prices have fallen by more than 50% since 1986. It was therefore a mistake to base the economic recovery effort on rehabilitating the cocoa sector.

CHART 6
 WORLD PRODUCTION AND MARKET PRICE OF COCOA BEANS:
 1982/83 – 1991/92

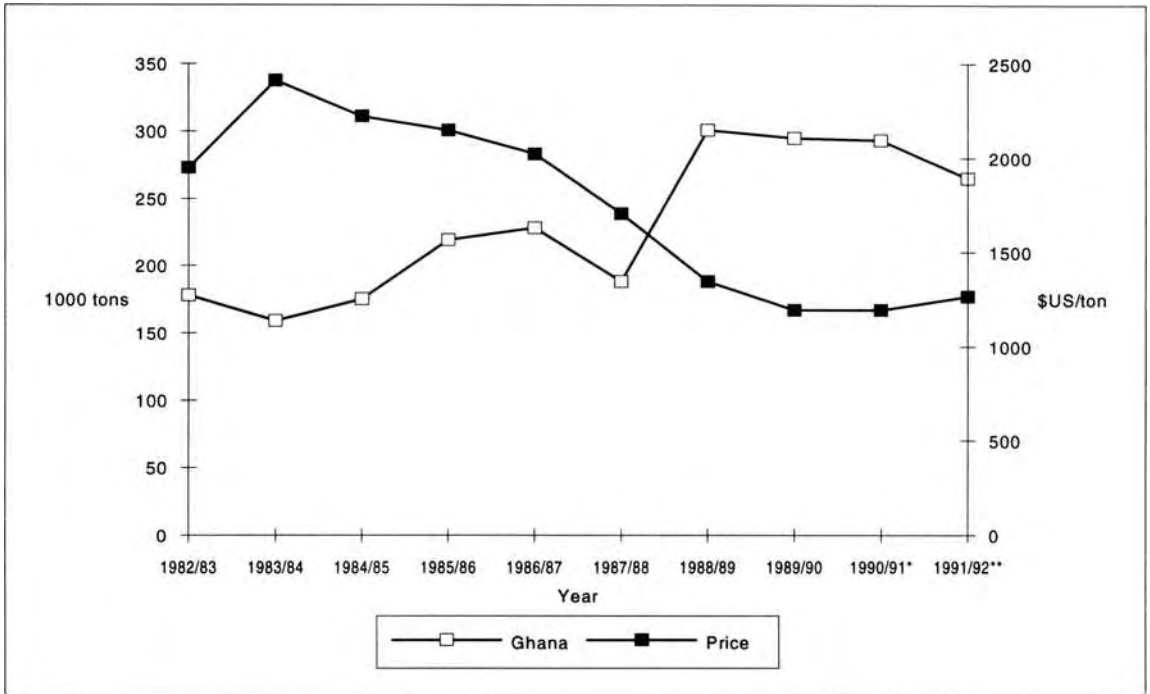


Source: *Quarterly Bulletin of Cocoa Statistics*, Vol. VXII, No. 2. 1992.

Note: * Estimate; ** Forecast

Chart 7 shows the results of SAP policies in practice in the cocoa sector in Ghana. Ghana cocoa production began to increase as a result of SAP policies at the same time that world prices began to take a nose dive. As world prices fell steeply, Ghana's output rose by about 100,000 tons in 1988/89, as indicated in Chart 6. It is clear that the investments in the cocoa sector could have been profitably spent elsewhere. The supply response in agriculture during the SAP period has been disappointing. Cocoa output has been falling since 1989. In fact the poor performance of the agricultural sector raises serious doubts about the usefulness of the SAP exercise.

CHART 7
 PRODUCTION OF COCOA BEAN IN GHANA AND WORLD MARKET PRICE:
 1982/83 – 1991/92



Source: *Quarterly Bulletin of Cocoa Statistics*, Vol. XVII, No. 2, 1992

Note: * Estimate; ** Forecast

Table 3 shows export earnings of major cocoa producers from 1983 to 1990. The data seem to support the concern of many development economists that the expansion of exports by many producers at the same time is likely to lead to a decline in their export revenues and real incomes. The empirical evidence shows that this is what has happened in the case of cocoa exporters. For example, Côte d'Ivoire expanded cocoa production from 555,000 tons in 1985 to 849,000 tons in 1988, an increase of over 30%, and current incomes fell from \$1,093,390 to \$840,861, a decrease of over 20% in revenues. In the case of Ghana, output increased from 205,000 tons in 1987 to 300,000 in 1989, and current incomes decreased from \$530,189 to \$413,251. We also note from Table 3 that in the case of Ghana, output increased progressively from 1987 to 1990 and at the same time current incomes followed a downward trend. This history has been repeated several times. For example, overproduction in the 1964/65 cocoa crop year resulted in record low prices. Although exports increased, revenues fell drastically. To solve this problem, an International Cocoa Agreement was ratified in 1972. Negotiation for such an agreement began under United Nations auspices in 1963. (See Kofi 1976 for a historical review of the agreements.) In an econometric simulation exercise Kofi (1972) showed that 'had producers and consumers ratified the 1963 Draft Agreement for three years or more, producing countries would have been better off in terms of earnings by about \$185 million, net of costs of running the stabilization scheme.' The violent fluctuations in prices and incomes of agricultural products have caused political instabilities in monoeconomies like Ghana (see Kofi and Hansen 1983).

The empirical data presented, which show an inverse relationship between output expansion and income, confirms what economic theory teaches us. The central problem faced by agricultural commodity exporters is that world demand for these exports is both income-inelastic and price-inelastic. As a result, growth in real incomes in the importing countries brings in relatively little growth in consumption. Whereas expansion of supplies results in lower prices and lower export earnings, because of low elasticities. Thus increasing supply tends to be self-defeating. Another problem is that the low price elasticities of demand, together with low short-term price elasticities of supply for agricultural commodities, result in violent short-term fluctuations in world prices.

TABLE 3
VALUE (1000 DOLLAR) AND PRODUCTION (TONS) OF COCOA BEANS
BY MAJOR PRODUCING COUNTRIES:
1983 – 1990

	1983	1984	1985	1986	1987	1988	1989	1990
Value								
Brazil	554,588	661,734	778,856	630,612	584,297	518,729	333,591	340,761
Cameroon	151,070	184,326	160,951	213,360	237,310	219,601	181,348	168,978
Ghana	268,600	383,356	399,264	497,884	530,189	470,035	413,251	393,781
Ivory Coast	525,656	1,073,854	1,093,390	1,211,877	1,222,400	840,861	1,151,492	952,682
Malaysia	122,019	195,577	218,564	248,710	340,750	340,109	260,045	269,059
Nigeria	361,112	294,719	268,046	320,914	195,900	346,679	144,065	145,965
Volume								
Brazil	380	330	431	459	329	392	393	355
Cameroon	109	121	119	123	133	129	126	99
Ghana	168	167	194	226	205	247	300	295
Ivory Coast	411	565	555	611	664	849	725	750
Malaysia	68	90	99	130	167	227	225	235
Nigeria	140	150	110	100	150	165	160	150

Sources: UNCTAD United Nations Commodity Year Book 1992, p. 1616 (production data);
FAO, Trade Year Book;
IMF, International Financial Statistics (value data).

Table 4 shows the long-run and short-run income and price elasticities of demand, which are less than one. Table 5 shows the long-run elasticities of supply. Given the low income and price elasticities of demand shown in Table 4, the spectacular increases in cocoa supply in the 1980s resulted in low cocoa prices and low producer revenues.

This point has been demonstrated by Godfrey using African cocoa and coffee data. Godfrey found that an increase of 1% in cocoa exports led to a 2.17% fall in world prices. For coffee, a 1% increase in exports led to a 1.14% decline in world prices. Godfrey concluded that it is a mistake for SAP policy makers to suggest export

expansion to African commodity producers. Rather, African governments should diversify their commodity export base and produce commodities with high income elasticities of demand. Ghana should have been given such policy advice at the time when the Economic Recovery Programme was implemented in 1983.

TABLE 4
ESTIMATED DEMAND ELASTICITY COEFFICIENTS

	Type of Model	Standard error	Price		Income	
			Short run	Long run	Short run	Long run
West Europe						
France	Log	4.4	-0.093	-0.168***	0.504	0.908**
Germany	Log	6.8	-0.120	-0.292**	0.231	0.561*
United Kingdom	Log	6.1	-0.302	-0.436***	0.205	0.296**
USSR and Eastern Europe						
USSR	Lin	18.6	ns	ns	0.257	0.427-
Eastern Europe	Δ Log	11.4	ns	ns	0.782	0.553**
America						
Canada	Log	8.6	-0.183	-0.279*	0.210	0.321*
United States	Log	6.3	-0.199	-0.295***	0.426	0.632***
Middle East / Asia /Oceania						
Japan	Log	9.4	-0.257	-0.413***	0.329	0.529**
World Models						
Conventional global model	Log	2.6	-0.103	-0.199***	0.255	0.493***
Different model with price level effects	Δ Log(S)	2.8	-0.091***	-	0.647***	-

Source: ICCO

Notes:

Model type: Log = log linear
 Lin = linear
 Δ Log = log difference model (i.e. annual change in value on the logarithmic scale)
 (S) = static; the regression model does not include the lagged dependent variable.

Statistical significance:

ns = not significant ($p > 0.2$)
 - = significant at 20 per cent ($p < 0.2$)
 + = significant at 10 per cent ($p < 0.1$)
 * = significant at 5 per cent ($p < 0.05$)
 ** = significant at 1 per cent ($p < 0.01$)
 *** = significant at 0.1 per cent ($p < 0.001$)

TABLE 5
ESTIMATED LONG-RUN SUPPLY ELASTICITIES FOR COCOA

	Behrman (1946-64)	Akiyama and Duncan (1965-80)	Groenendaal and Vingerhoets (1955-82)
Cameroon	1.81	0.59	0.73
Côte d'Ivoire	0.80	0.59	0.82
Ghana	0.71	0.13	0.38
Nigeria	0.45	0.11	0.47
Brazil	0.95	0.54	0.29
Ecuador	0.28	0.54	
Dominican Republic	0.15	... ^a }	
Venezuela	0.38	... ^a }	0.28
Other Latin America & Caribbean ^a }	
Papua New Guinea	...	0.54 }	
Rest of the world	...	0.21 }	0.50 ^b
World average	...	0.42	0.54

Source: Alfred Maizels, Robert Bacon and George Marrots, 'The Potential for Supply Management of Commodities Exported by Developing Countries: The Case of Cocoa' (Mimeo) UNU/WIDER May, 1992

Notes: a) Included in 'Rest of world'
b) Asia and Oceania.

9. Bank support for agricultural exports – a query

The fears of the 'export pessimists' are justified in the case of Ghana's experience. Panagariya and Schiff report that 'export pessimists' have raised this issue, in the context of World Bank-supported adjustment policies in Africa, in the German parliament. As a result, a query was sent to the Chief Economist of the World Bank for Africa. The query read as follows:

In the framework of structural adjustment programmes, many African countries endeavour to increase their exports of agricultural products. An increased supply of goods may soon lead to price declines of the correspondent products, so that additional revenue may not be realized. How does the World Bank justify its correspondent policy advice? What can be done to avoid the negative results? (As quoted in Panagariya and Schiff, p. 170-171)

This study has advanced arguments to support the questions raised in the German parliament. Ghana has not benefited from the SAP cocoa sector policies. The expected rehabilitation of the cocoa industry has not been successful. Supply response in agriculture has been low and cocoa export earnings have been falling.

It has been argued that the World Bank gave bad policy advice to Ghana to expand cocoa production at a time when other producers were expanding production rapidly. Ghana has not gained much from this policy advice. It is not clear what the Bank can do to correct this mistake and its impact on the Ghanaian economy. World Bank economists continue to write papers to show that SAP was beneficial to Ghana (Coleman *et al.*). Other Bank economists seem to express doubts about SAP's success (Panagariya and Schiff).

10. World Bank response to German query

A few studies have been undertaken by World Bank economists to evaluate the impact of structural adjustment cocoa policies on adjusting countries. Two studies on the subject have been undertaken by Coleman, Akiyama and Varangis (1993) and by Trivedi and Akiyama (1992). Coleman *et al.* concluded from their quantitative simulation analyses that: 'The benefits to Ghana from the adjustment programme were large. Had Ghana not implemented the programme, its production would have been almost one half of what it actually was in 1989/90. Producers' welfare (measured as producer surplus) would have been substantially lower in the absence of the programme and the governments budget deficit would have been at an unsustainable level' (Coleman *et al.* 1993, p. 40). This conclusion was arrived at from simulation exercises under the counterfactual assumption that Ghana and Nigeria did not undertake any policy reforms to redress price distortions in their economy. It was assumed, in the case of Ghana, that the currency over-valuation of 1972-83 was maintained throughout the rest of the 1980s. We do not think that the above assumption was a realistic one. The PNDC seized power to solve an economic crisis brought about by exchange rate distortion and over-valuation of the currency. The relevant question to answer is this: Has the adjustment programme resolved the crisis? They do not ask this question. However, they claim that without the SAP the 1989/90 world cocoa prices in real terms would have been about 45% lower than they were in the early 1980s, compared with an actual decline of 55%. They also argue that SAP policies in Ghana and Nigeria had a negative effect on other countries but not adopting the policies would have been economically irrational. The study concludes that the SAP was on balance good for Ghana. This conclusion may be challenged because some of the assumptions which were made for the simulation exercises were unrealistic. For example, it was assumed that 'the currency over-valuation of 1982/83 was maintained through the rest of the 1980s. This assumption is unrealistic. Some countries have undertaken currency reforms on their own without World Bank assistance, including Nigeria. Japan did this exercise during the early period of the Meiji Reformation. It was called the 'Matsukata deflation' (Macpherson, p. 33). Thus some countries can undertake policy measures to correct for domestic price distortions and exchange rate misalignment.

The study by Panagariya and Schiff examines, in part, some of the questions we have raised in this paper. Some of the questions they raised included the following:

What is the likelihood that export expansion resulting from better and fuller use of resources can lead to a decline in real incomes and export

revenues in African and non-African countries? For which commodities is this outcome plausible? What are the key parameters determining the impact of export expansion on the terms of trade, export earnings and real incomes? Empirically, how important is the issue of interdependence? For instance, while considering a further tax reduction on cocoa, should Ghana pay attention to policy changes in Côte d'Ivoire and Malaysia? In which commodities, if any, does interdependence play an important role? (p. 171)

These questions are realistic and, in fact, constitute some of the bases for the development of oligopoly theory. In the cocoa industry, the producers are not so many as to justify regarding each of them as having a negligible effect on prices. Parajariya and Schiff concluded their study by giving advice to policy makers who give advice to cocoa producing countries:

Our findings so far seem to suggest that in providing policy advice and support of investment projects in the case of commodities such as cocoa, the donor community should take into account the effects on and possible reactions of the other producing countries (p. 180).

This advice raises a question – was the agricultural sector policy designed properly in order to achieve positive economic payoff? To answer this question, it will be necessary to examine how prices are determined in the cocoa industry.

11. Empirical analyses of price determination in the cocoa market

The designers of the Ghana SAP failed to heed the advice of Panagariya and Schiff. They failed to look into problems of uncertainty and the implications of the strategic interactions of producers in making production and marketing decisions and their influence on world prices. It is surprising that the planners of the Ghana SAP failed to examine how their policy to rehabilitate the Ghana cocoa industry would affect world prices and producer incomes. If the policy makers had paid closer attention to cocoa price trends on the futures market, they would have designed a better agricultural sector policy.

First, we will examine how cocoa prices are determined in the real world. We will present empirical evidence on the performance of the price determination institutions. Next, we will explain why the World Bank consultants' decision making model was unrealistic and why they gave bad policy advice. Their model was unrealistic because it was not based on the economics of uncertainty.

Futures markets are important institutions for determining prices of commodities. For example, the prices of the majority of agricultural commodities produced in the USA are determined on organized futures markets. It has been shown that well established and properly regulated futures markets are superior to cash markets in price determination because they provide central market prices established in open

competitive bargaining, among other reasons' (Kofi 1973, p. 585). In these respects, the cocoa industry is lucky to have its prices determined via futures markets.

Despite the positive attributes discussed above, futures markets at times fail to determine prices optimally, especially during periods of prolonged excess supply. For example, the cocoa industry experienced a 'market failure' in 1964/65. The futures markets prices did not respond to market signals, the fundamentals of demand and supply during this period (Kofi 1972; 1977 and 1976). The market failure led to disorderly marketing of cocoa by producers which, in turn, led to further declines in world cocoa prices. It was recorded that some major producers sold tons of cocoa for as low as 9 cents per pound in 1965 compared with a record high of 72 cents a pound in 1954 (Kofi 1972; 1976). Middlemen and chocolate manufacturers stand to benefit when excess supplies create low prices under a market failure because their bargaining power increases in price negotiations in the 'actuals' market. Consumer bargaining power increases under a regime of market failure due to the fact that producers cannot store cocoa beans in the tropics for too long.

The problem with stocks management is a serious one for producers. In the 1960s the President of Ghana tried to build storage silos in Ghana to store cocoa beans so as to regulate sales. The silos were built but they have not been tested and used. In 1988/89, Côte d'Ivoire experienced the same problem Ghana had in 1964/65. After the bumper crop year of 1988/89, Côte d'Ivoire had difficulty in selling the output systematically. A market observer explained the chaotic marketing situation as follows:

The long rumoured block sales deal with French company Sucres et Dentrees has now been confirmed by both sides and will involve the immediate sale of 200,000 tonnes on to 'end users' including the Soviet Union. A further 200,000 tonnes is apparently to be stored for 'two years' in Europe while an additional block sale is rumoured to have been sold recently. The sales arrangement provides little relief for the cocoa market and arguably only a short-term solution to the financing problems of Côte d'Ivoire. The uncertainty that preceded the sales deal threw the local purchasing apparatus into chaos during the fourth quarter of 1988 (Gill and Duffus *Cocoa Market Report* No. 33, March 1989).

Cocoa producers do not receive remunerative incomes under conditions forcing them to engage in block sales. Unanticipated shortfalls in cocoa incomes generally create economic hardships in monoeconomies like Ghana and Côte d'Ivoire. In the case of Ghana, the economic hardships arising from the 1964/65 market failure made it possible for the Ghana military to overthrow the Nkrumah regime in 1966.

Given the above analytical market structure backdrop, it may be argued that it was unwise for the Ghana government and the Bank advisers to use the cocoa sector as the 'growth pole' to pull the economy out of the economic crisis. If the Ghana cocoa sector had responded positively to the correction of price distortions brought about by exchange rate misalignment, and also responded positively to the 'incentive package' and had achieved 1964/65 levels of output, the industry would have faced a more serious

market failure problem than it faces now. The market was already saturated even with the low levels of Ghana's output in 1980s and 1990s. Thus producer incomes would have been much lower if Ghana had been able to expand its output appreciably during the SAP period, 1983 to 1994.

Secondly, given the historical market structure analyses presented above, we fail to understand why the policy makers of the Ghana SAP did not review seriously the price trends revealed on the cocoa futures markets in London and in New York and their implications for policy reform in the agricultural sector. We pointed out earlier that if the consultants had done this, they would have suggested a different agricultural sector policy. It is important to explain this point further by using demand and supply expectations in the cocoa market between 1980 and 1970 together with futures market theory.

12. A Model for a realistic cocoa sector policy

'Price formation on futures markets at any point in time is the result of expert appraisal of past conditions, currently available information and expectations on supply and demand' (Kofi 1973, p. 584). The above quotation shows us how prices are formed on the futures market. Armed with the above fact, we can predict price trends by analysing and forming realistic opinions about demand and supply expectations. The demand curve does not shift that much in the short run in the cocoa industry. Thus a good analysis of supply expectations will give us a good prediction of cocoa stock expectations and therefore the probable direction of price trends. In this study we focused on analysing supply expectations in the cocoa market from 1970 onwards. We concluded that the cocoa industry was poised for a big structural change in production. As a result of technical progress (plant breeding) high yielding varieties had been developed. Cocoa producing countries began planting these high yielding varieties from 1970 onwards. Thus we were able to form a realistic opinion on supply conditions in the 1980s and 1990s. This then allowed us to conclude that the cocoa industry would experience a long-run downward trend in prices in the 1980s and 1990s. Further market structure analyses showed us that Ghana would not benefit from increased output of cocoa. We concluded that Ghana would earn less, not more, foreign exchange. We therefore provided evidence to support the hypothesis that it was unwise to base the recovery of the Ghanaian economy on resuscitating the cocoa economy. The reason is that if the cocoa supply response had been strong and output had increased, this would have resulted in lower prices and incomes for Ghana. It seems that the Bank consultants, who designed the cocoa sector policy, were not students of the cocoa industry. If they were active students of the world cocoa economy, they would have advised against the policy or the strategy to rehabilitate the cocoa industry in order to earn increased foreign exchange to finance the economic recovery exercise. Thus the DRC exercise was unnecessary. Ghana was led into a blind alley.

Next, we present the empirical evidence to show that the cocoa sector policy was unsound by looking at what actually happened in the cocoa market from 1980 to 1990.

13. Income and terms of trade losses to cocoa producers: 1980 – 1990

The analyses carried out so far prompt us to ask the following questions: Was the SAP cocoa sector policy advice sound? We provide the empirical evidence and then show that the theoretical foundation of the policy had a flaw in it. The empirical evidence indicates that the policy advice was unsound. Cocoa, coffee and tea prices declined in the decade 1980 to 1990. Cocoa prices declined by over 50% from 1986 to 1990. Maizels, Bacon and Mavrotas (1994) have estimated by way of simulation exercises the cumulative terms of trade loss to producers of world tropical beverages (cocoa, coffee and tea) from 1980 to 1990. They show the terms of trade loss to be over \$ 55 billion. This is more than three times the value of total export sales in 1980. Cocoa export earnings have been affected adversely by the fall in prices. Maizels *et al.* reported that 'compared with the position in 1980, export earnings were, on average, \$ 940 million a year lower during the succeeding decade as a result of the decline in prices, the reduced amount of earnings representing 25% of the 1980 level. Over the decade 1981 to 1990 as a whole the cumulative loss on this account (\$ 9.4 billion) being 2½ times the 1980 level' (Maizels, p. 15).

The foreign exchange and the terms of trade loss increased in the later half of the 1980s than earlier half. This was due to increased supplies of cocoa on the world market as a result of bumper crop years of 1987/88 and 1988/89, especially in Côte d'Ivoire. Technical progress (the use of high yield variety) has brought about a 'scissor crisis'.

Maizels *et al.* continued:

As a result of this scissor squeeze, real cocoa prices (in terms of manufactures prices) fell off sharply, causing a marked deterioration in the real foreign exchange earnings of cocoa-exporting countries. While the terms of trade effect over the period 1981-85 had been an annual average loss of \$ 0.10 billion (some 3% of the 1980 export value), the annual rate of loss increased in 1986-88 to \$ 1.86 (49% of 1980 exports), and increased further in 1989-90 to 3.15 billion (84% of 1980 exports) (p.16).

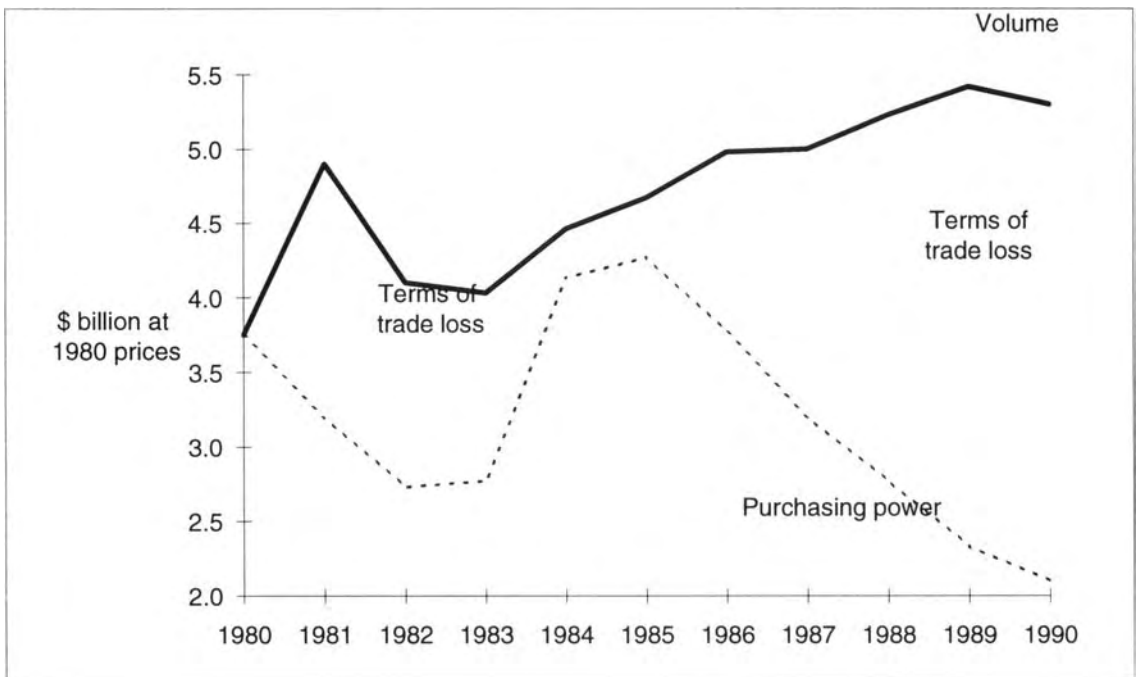
Given the conditions described above, it was clear that the objectives of the Ghana SAP agricultural sector policy designed to increase cocoa foreign exchange earnings were not being met in the market. Foreign exchange and terms of trade losses were increasing. As a result, the policy should have been changed. This is shown clearly in Chart 8. The chart shows that as the volume of exports increases, the purchasing power of producers declines. The terms of trade loss is more pronounced in the last half of the decade under study (1980-1990). If the DRC ratios had been updated from time to time, the policy makers would have changed the policy. As cocoa prices and earnings fell, the DRC ratios would have increased. Proper application of the DRC methodology require that the ratios be updated and policies drawn from the ratios accordingly.

Dr Maizels and his collaborators draw a conclusion from their study which goes against the objectives of the cocoa sector policy of the Ghana SAP exercise:

These losses have been particularly serious to those countries which are heavily dependent on cocoa for a major part of their export earnings. In 1989, for example, cocoa (including processed derivatives) accounted for 47% of export earnings for Ghana, 27% for Côte d'Ivoire and 17% for Cameroon. For these countries, the movement in world prices remains a major determinant of their ability to develop their economies (p.17).

Market conditions in the world cocoa economy as described above present a challenge to policy makers who have to design an economic recovery strategy for a mono-economy producing a commodity for export. This is a problem in the economics of uncertainty. Did the consultants design an optimal policy? The answer is no: the empirical evidence shows that supply response in the agricultural sector in Ghana has been sluggish. Output in the cocoa sector has remained stagnant. It seems that the consultants misapplied the theory.

CHART 8
COCOA EXPORTS FROM DEVELOPING COUNTRIES
TERMS OF TRADE EFFECTS: 1980 – 1990



Source: Maizels, A. et al. *Supply Management for Tropical Beverages*, Jan. 1994, p. 16 (mimeo).

14. Misapplication of theory and the consequent failure of recovery

The empirical evidence, after ten years of SAP in Ghana, shows that the agricultural sector policy designed by the consultants has failed to achieve the principal

objective. That objective was to make it possible for Ghana to develop the agricultural sector to export commodities, earn a lot of foreign exchange, and invest it to achieve economic recovery. It may be argued that the model which was used to design the agricultural sector policy was misapplied. The theory behind the 'decision making model' was based on the economics of certainty, as we have discussed in Part III.

The theory was misapplied because only a snapshot of costs and benefits was used by the consultants to make their policy recommendations. Tsakok (1990) explains how the theory should be applied properly before investment recommendations are drawn from DRC ratios. Two additional steps must be undertaken after the ratios are calculated:

The first step is to compute a set of DRCs rather than relying on just one. The set should be either over time or incorporate alternative assumptions about key parameters of the DRC. These parameters are often yields and exchange rates. This set of DRCs would indicate whether there is a good case for further exploring the efficiency aspects of expanding this commodity. The second step is to undertake a full cost-benefit analysis. The role of DRCs in policy analysis is therefore to identify the efficient as opposed to the inefficient so that policy makers will have a better rationale for discouraging or promoting production of various commodities (p. 123-4).

These additional steps were not undertaken by the World Bank. There are no records of other measures of DRC ratios and of full scale cost-benefit analysis. These steps are important because DRC is a measure of efficiency. The efficiency value will change as production and market structures change.

DRCs are snapshots and are only useful if the techniques of production, scale of output, level of demand in domestic and foreign markets and exchange rates remain unchanged. If these factors change, the DRCs will change. Tsakok explains that it is useful to distinguish between current and future DRCs, which incorporate expected changes. To the extent that the World Bank economists did not compute and use expected DRCs in making their policy recommendation, the operational model did not incorporate uncertainty analysis.

It is clear from the above analysis why the objective of the agricultural policy was not met. The cocoa sector policy was not changed for years although the world cocoa market faced declining prices for the entire SAP period, due to over supply of cocoa. As a result, export earnings declined whereas the objective was to increase foreign exchange earnings.

The consultants could be criticized from another angle; they based the recovery exercise on production and trade of a single commodity – cocoa. Thus they exposed the economy to the disadvantages – costs – associated with wide fluctuations in export earnings. This is what happened. See evidence provided by Maizels *et al.* on the commodity terms of trade loss and loss in export earnings from 1980 to 1990 by cocoa

producers. This is why export diversification has been suggested to reduce the risk associated with violent fluctuations in income. Diversification of the export base may stabilize export earnings. Brainard and Cooper argue that:

It is possible to reduce the risk associated with any portfolio of investments by adding investments with returns not highly positively correlated with those already in the portfolio. Thus a country may stabilize its export earnings by diversifying into exports which have uncorrelated or (preferably) inversely correlated movements in world prices. It may even make sense for a country to invest in a low yield-high risk export industry, if its price pattern has a high negative correlation with the prices of other products (p. 267).

15. Can export diversification solve the problem facing Ghana?

Not all the problems facing Ghana can be solved by diversification of the export base. The problem of uncertainties in commodity production and trade should be of great concern to monoeconomies like Ghana. The costs of unforeseen fluctuations in prices and incomes have been great. The economic crisis of 1983 has not ended despite World Bank-assisted SAP. Diversification of the commodity export base has been suggested as a solution for monoeconomies to escape the heavy dependence on one product for the bulk of their export earnings and thereby avoid the costs induced by uncertainty due to sharp fluctuations in export receipts. It may be argued that the SAP policy makers could have avoided their cocoa sector policy mistake where the objective was to increase foreign exchange earnings but not to decrease it, if they had opted for a diversification of the agricultural sector export base as a policy. Thus, it may be hypothesized that if the resources which were invested in the cocoa sector under the SAP had been used to produce many crops for export, Ghana would have earned more foreign exchange than it received from cocoa exports alone.

At the time that Ghana was rehabilitating the cocoa industry, Columbia was investing in flower production for export. In 1986, the floral industry in Columbia earned over US\$ 155 million in export earnings. This was more than one half and about one-third the Ghana cocoa export earnings in 1983 and in 1986 respectively. The World Bank seems to endorse the 'commodity diversification approach' to solve Ghana's commodity problems. In a World Bank study on Ghana, *Ghana 2000 and Beyond*, Bank officials reported favourably on the floral industry in Columbia: 'in fact a 1971 study by the Colombian Government estimated that the floral industry produced 600% return per year on the initial investment' (Yung Rhee and Therese Belot 1992, p. 51). Some World Bank economists seem to suggest a development strategy based on diversification of the export base in general. In a report entitled *Export Catalysts in Low Income Countries*, World Bank economists review eleven success stories of export diversification. The Colombian floral industry is reported as one of the success stories.

Can Ghana's agricultural sector repeat the success story of the development of the floral industry in Columbia? This is a difficult question to answer because the supply

response in agriculture under SAP has been sluggish. We have to identify the agricultural sector problem and solve it before we can apply the 'diversification' or the 'export catalyst' strategy to solve agricultural development problems in Ghana.

The SAP exchange rate adjustment, together with the implementation of the cocoa sector policy and the incentive programmes, has not helped to turn the cocoa sector around. The fact that the agricultural supply response is slow shows that the problem affects the entire agricultural sector. It seems that the problems ailing the agricultural sector have not been properly diagnosed. Perhaps we need to implement some institutional changes or incorporate some non-price factors. Ghana, like most African economies, is an agrarian economy. Georgescu-Roegen (1960) has surmised that 'agrarianism is a reality without a theory'. To find the key to unlock the problems of underdeveloped countries, in this case the problem of a low supply response in agriculture, we must look for empirical experiences, since there is no theory for agrarian development. For those who are concerned to find a strategy or models for the operation of agrarian economies, there is no substitute for concrete evidence from historical experience.

It seems that the World Bank wants to learn from historical experiences so it can develop better. To do this, the World Bank has launched a public policy research programme. The Bank has published the first book in the series entitled *The East Asian Miracle*. The book extols the virtues of the East Asian Model. In the foreword to the book, Mr Lewis Pearson, the President of the World Bank, explains the research findings as follows:

The success of many of the economies of East Asia in achieving rapid and equitable growth, often in the context of activist public policies, raises complex questions about the relationship between government, the private sector and the market. Understanding which policies contributed to their rapid growth, and how, is a major question for research on development policy. As reports on policy issues, we intend that they should help us to take stock of what we know and clearly identify what we do not know; they should contribute to the debate in both the academic and policy communities on appropriate public policy objectives and instruments for developing economies. The report also breaks some new ground. It concludes that in some economies, mainly those in Northeast Asia, some selective interventions contributed to growth, and it advances our understanding of the conditions required for interventions to succeed. The institutional context within which policies are implemented is as important to their success or failure as the policies themselves, and the report devotes substantial attention to the institutional bases for East Asia's rapid growth. Noneconomic factors, including culture, politics, and history, are also important to the East Asian success story. Thus, there is still much to be learned about the interactions between policy choices and institutional capability and between economic and noneconomic factors in development. Work in these areas will continue beyond this report (PV-VII).

The quote presented above indicates the new elements of a model which will be used by the Bank in advising developing countries. The Bank will relax its neo-classical paradigm and include institutional and noneconomical variables as well as some selective intervention in market operations by governments.

We pointed out earlier that efficient institutions are now seen as a key to economic success. There is even a new school of thought, New Institutional Economics (NIE), which propagates this view. See Adelman and Thorbecke (1989) and Nabli and Nugent (1989). It seems that enough ideas have been gathered by economists so they can begin to develop theories on agrarian strategies of development. Kofi (1974, 1975, 1979, 1981) has developed some ideas on institutional development strategies to transform the agrarian economies of Africa. Kofi (1979) examined some Japanese institutional variables, which were responsible for unleashing the development progress in that country. The Taiwanese model, the East Asian Miracle for rural transformation, has been studied by Oshima. Kofi (1994) has examined The Finnish model for agrarian transformation called the 'Pellervo Movement'. It was a cooperative movement which was used successfully to transform rural sectors in Finland and lay the foundation for industrialization after WW II. Can Africa benefit from some of these historical experiences?

16. Agricultural transformation models – any lessons for Africa?

Oshima (1987) explained the model used by the East Asian countries, especially Taiwan, to transform the agricultural sector and industrialize their economies. Oshima claims that expanding the internal market is a prerequisite for economic growth. External forces and international trade can be of considerable importance in the short run. Secondly, he underscores the fact that growth with equity was necessary in the case of East Asia. This provided the purchasing power to purchase the goods produced. Through government intervention full employment in agriculture was maintained and at the same time productivity in agriculture was increased. It must be pointed out that Japanese colonial intervention contributed positively to the Taiwanese agricultural transformation exercise. This, however, was done in favour of Japanese interests.

Ho (1984) has explained the role that Japanese colonial policy played in agricultural development in Taiwan and Korea. Ho argues that:

When Japan first began to modernize, it was able to increase agricultural productivity by exploiting internal growth potentials, thereby facilitating the transfer of resources from agriculture to the modern sector. These internal sources of agricultural progress were improvements in traditional farming methods and the transfer of better techniques (superior seeds, intensive use of fertilizer, and better farming methods) to backward areas of western and eastern Japan. By the 1910s these 'indigenous' sources of growth were exhausted, and output growth in agriculture slowed, declining from an average annual rate of 2.38 per cent between 1897 and

1901, to 1.91 per cent from 1901 to 1917, to only 0.44 per cent between 1917 and 1931 (p. 349).

Thus since 1897 the supply curve of agricultural output had been shifting to the right slowly or it has been stagnant. The demand curve, however, had been shifting to the right relatively faster, due to population growth and rising per capita income. As a result, food prices rose sharply and this led to riots in major cities in Japan in 1918.

Japan could solve the food shortage problem by three methods: i) importing food from abroad; ii) increasing food production at home; or iii) importing rice from colonies (Taiwan and Korea). Japan chose the third option. Why? To import food from outside was unattractive because Japan would become dependent on foreign sources of food supply. Japan preferred to be self-sufficient in food production for security purposes. Secondly, to import food from outside the empire implied that imports of capital and industrial supplies would have to be reduced. The option to increase food production in Japan was not attractive. The agricultural sector had exhausted its productivity growth, given the resources and the techniques of production. To improve productivity under these conditions would require substantial investments in research and development. This would take resources away from the modern sector. The third option was the one which was preferred by the Japanese policy makers. According to Ho:

The third alternative was more attractive. Because farming techniques were more advanced in Japan than in the colonies, agricultural productivity within the empire could be raised significantly by transferring superior Japanese farming techniques to the colonies.

By selecting this third option, the Japanese determined Korea's and Taiwan's economic position in the empire: they became agricultural appendages of Japan. They were to supply inexpensive rice to prevent Japan's industrial wages from rapidly rising. These colonies also serve as markets for Japanese manufacturers.

The product of this policy was that Korea and Taiwan were able to transform their agricultural sectors with the help of superior Japanese know-how. On the demand side, the colonial markets were available to buy Korean and Taiwanese agricultural produce. The circumstances were different in the case of British colonialism in Africa.

The African countries' agricultural sectors were not transformed with the help of superior farming techniques and institutional innovations of the imperial powers. African agriculture was not transformed at the end of British or French colonialism. In the case of British West Africa, Lord Lugard's 'dual mandate' policy worked to retard institutional innovations in the rural sector (Lugard 1922). The dual mandate allowed African chiefs to rule as before but their hands were tied. The chiefs had no power to innovate in legal areas and make substantive economic decisions.

East Asia and Africa (especially West Africa) came out of the colonial experience with different levels of agricultural development because the needs of the imperial system were different; as a result, the colonial policies were different. As far as

agriculture is concerned, Africa may have very little to learn from the East Asian Miracle.

The British settled in some parts of Africa. In these areas agricultural transformation took a different direction. The settlers developed agriculture on modern lines. In West Africa, where there were no settlers, agriculture was not developed by exploiting internal growth potentials to set the stage to transfer resources from agriculture to the modern sector. Thus West Africa missed an important and essential strategy which was used by the East Asian countries to transform agriculture.

How can West Africa fill this gap which is lost to history? The Japanese colonial strategy of agricultural development cannot be repeated. However, some elements of the model can be used. For example, elements of the Oshima explanation of the East Asian and Japanese strategies can be followed. What cannot be copied are the noneconomic factors including culture, politics, history and the initial agrarian and institutional bases of the former Japanese colonies. Every country has its own noneconomic variables to work with. What is needed is an institutional superstructure – an ideology and a practical movement within which institutional innovations can flourish and develop. Governments in these developing countries can play a crucial role in this regard. This point is made more clearly by Ranis (1989). He underscores the important role played by the Korean and Taiwanese governments in institutional development. Ranis argues that the 'role of government became more important in the course of the transition process in South Korea and Taiwan, and that the critical issue is the continuous flexibility of institutional and policy change in the effort to organize society's human and natural resources most effectively rather than any absolute preference for either a pure market solution or government intervention' (p. 1447).

We have suggested above that, perhaps, the main impediment to agricultural development in the African economies is the lack of institutional innovation capable of contributing to economic efficiency by lowering transaction costs for example. The empirical evidence shows that in Korea and Taiwan, the governments played the leading role to create the climate in which institutional innovations flourished to contribute positively to economic growth. Can Ghana (Africa) learn from the East Asian or similar models?

17. Which institutional model for Ghana?

The Korean and Taiwanese rural sectors were transferred under Japanese colonialism. In the case of the African countries, British or French colonialism did not give priority to agricultural transformation. African systems of production were adequate to supply the food needs of the population. In addition, Africa had surplus labour and land to produce crops for export.

Since industrialization of the colonies was not an objective of the colonial powers, there was no pressing need to improve productivity in agriculture to release labour for industrial development. Can the ex-colonial African countries step back into

history to develop their rural sectors quickly to raise productivity and embark on the industrialization process? Did the African countries miss the boat? Schotter (1981) has argued that 'every evolutionary economic problem requires a social institution to solve it' (p. 2). Schotter quotes Buchanan to endorse the position that institutions must be studied in a historical–evolutionary context. 'Once it is recognized that observed institutions of legal-political order exist in a historical setting, the attraction of trying to analyse conceptual origins independently of historical process is severely weakened' (as quoted in Schotter, p. 2).

How do we solve the African agricultural transformation problem? A solution may lie in studying the experience of other countries in a historical – evolutionary context. Looking into history, the Finnish experience seems to be the most appropriate one for an African government to study and learn from (Kofi 1994).

Kofi (1994) suggests that the Finnish cooperative movement (1899 to 1939), called the 'Pellervo Movement' by the Finns, was an agrarian strategy of development. This point of view had been underscored by scholars who studied the movement in the 1930s. Pellervo was a national and revolutionary movement put in place to develop the country and make it strong in face of external threats. In 1899, with the rise of Panslavism, it seemed that Russia would formally colonize Finland and absorb it into the Russian empire. Ohde (1933) observed that 'in that plight co-operation proved a means of salvation whereby resistance to such annihilation might be organised and democracy rescued' (Author's foreword).

The movement – Pellervo Society – was formed in 1899. Ohde records its achievements thirty years later as follows:

Cooperation in Finland ranks among the most successful applications of that principle to trade and business by an entire nation that our day can show... Cooperative organization has exceeded all expectations in minimizing expenses for the country population and increasing their sales returns, swinging the whole of production to where it is required and therefore profitable. Finland bids fair to become a leader in Europe in smallholdings and in creamery productions. Consumer cooperative has kept down the cost of living, thus immensely strengthening competitive effectiveness in the world markets (Ibid).

African governments would love to implement an agrarian development strategy which could bring about the results described above by Ohde on the Finnish experience and achievement.

Bakken (1937), an agricultural economist who taught at the University of Wisconsin, wrote a book with an interesting title *Cooperation to the FINNISH*. Bakken ended by explaining the achievements of the cooperative movement:

Thus we see how during these past three decades, the farmers and workers in Finland have built up powerful institutions which are gradually dominating finance, production and distribution. These cooperators are gradually manoeuvring themselves into where they as entrepreneurs can command control in the money market, operate their own factories, manage their own distributive agencies and direct research laboratories... (p. 203)

The Finnish Pellervo Movement was above all a social institution developed to solve an evolutionary economic problem. It solved the problem. It transformed rural Finland from a primitive low level of techniques of production to one of modern methods of production with much higher levels of agricultural productivity. Thus when the time came for Finland to begin to industrialize after World War II, she was ready.

World Bank Vice President, Mr Jaycox has pointed out that the missing link in African development experience is efficient evolutionary institutions, which he calls 'capacity building'. The concept definition is best explained in his own words:

I've lived and worked in sub-Saharan Africa now for over 25 years. Like you, I've seen the various changes in emphasis in development strategies – from state-led growth through basic human needs to structural adjustment. These different approaches to African development have had varying levels of success and failure. But the various approaches have all lacked one ingredient: they did not incorporate, as a central feature, the building of indigenous African skills, knowledge and institutions. Capacity building has been the missing link (p. 113).

The World Bank has set up an African Capacity Building Institute in Harare, Zimbabwe, with an endowment of 100 million dollars. This money will be distributed to African governments to 'build capacity'. It may be argued that capacity building can be accomplished only by evolutionary social institutions like the Pellervo Movement. One hundred million dollars cannot finance a Pellervo-type movement in one African country. It can be done through a revolutionary cooperative movement with minimal help from abroad.

The Finnish model seems to focus on institutional development. Perhaps Africa can learn more from the Finnish cooperative model than from the Asian model. It seems that the African SAP models need to be enriched with some aspects of the Finnish and East Asian models, among others.

CONCLUSION

This paper has used qualitative analyses to provide evidence to show that the SAP policy designed for the agricultural sector in Ghana was not an optimal strategy. Policy makers failed to design the policy by taking the future trends in world cocoa prices into account. As a result, a policy was designed for Ghana to increase cocoa output in a market where world prices faced a long-run downward trend. The resources devoted to rehabilitate the cocoa sector in Ghana could have been invested to produce alternative crops for export. It has been suggested that the economy of Ghana would have fared better than it is doing now.

It is recognized that commodity diversification by itself is not enough to do the trick. Recent research by institutional economists has shown that the most important variable which accounts for economic growth is institutional innovations brought about by superior political organization and administrative competence in government. It is suggested that for Ghana (Africa) to solve the problem of low supply response in agriculture, she must find a way to develop efficient institutions, for example, by lowering transaction costs.

The suggestions developed in this paper to ensure a viable SAP, with the help of government intervention, may be summarized as follows:

- i) A superstructure of an agrarian development strategy 'with an institutional development face' must be put in place; and
- ii) An agricultural-led growth strategy 'with an equity face' where the internal terms of trade are biased towards the agrarian sector, must be followed before industrialization is begun.

This model follows the successful East Asian experience. The World Bank advises the developing countries to learn from the 'East Asian miracle'. This paper suggests that the African countries can learn more from the Finnish model for agrarian transformation than from the East Asian model. The Finnish model was not directed by a colonial power as was the case of Taiwan and Korea. Finland faced a challenge, the threat of colonization by Russia, and it responded with a movement to develop her economy. Africa faces many challenges. She has yet to respond. This paper has suggested a novel way to respond to the economic crisis in African countries.

BIBLIOGRAPHY

- Abbey, Joe. *On Promoting Successful Adjustment – Some Lessons from Ghana*, IMF, Sept. 24, 1989. (The 1989 Per Jacobson Lecture)
- Adelman, I. and E. Thorbecke (eds.) *The Role of Institutions in Economic Development*, World Development Special Issue, Vol. 17, Nov. 8, September 1989.
- Afrique Agriculture*, March 1981.
- Afrique Agriculture*, February 1983.
- Bakken, Henry H. *Cooperation to the Finnish*, Mimir, Madison, Wisconsin, 1939.
- Brainard, William C. and Richard N. Cooper. 'Uncertainty and Diversification in International Trade' Ford Research Institute Studies, Stanford University, Vol. VIII, No. 3, 1968.
- Bruno, Michael. 'Domestic Resource Costs and Effective Protection: Clarification and Synthesis', *Journal of Political Economy* 80, January/February, 1972, pp. 16-33.
- Chhibber, Ajay. 'Raising Agricultural Output: Price and Non-Price Factors,' *Finance and Development*, Washington, DC. Finance and Development, Vol. 25, No. 2, June 1988.
- Coleman, Jonathan R., Takamasa Akiyama and Panos N. Varangis. 'How Policy Changes Affected Cocoa Sectors in Sub-Saharan African Countries, *Policy Research Working Papers* (WPS 1129), April 1993.
- Evenson, Robert E. and Yoav Kislev. *Agricultural Research and Productivity*, Yale University Press, New Haven, 1975.
- Financial Times* (London) 1st September 1993.
- Georgescu-Roegen, N. 'Economic Theory and Agrarian Economics', *Oxford Economic Papers*, vol. 12, No. 1., February 1960, pp. 1-40.
- Ghana Government. *National Programme for Economic Development* (Revised), 1st July, 1987.
- Gill and Duffus. *Cocoa Market Report* No. 33, March 1989.
- Godfrey, M. 'Trade and Exchange Rate Policy: A Further Contribution to the Debate'. In *Crises and Recovery in Sub-Saharan Africa*. (ed.) T. Rose, Development Centre of the Organization for Economic Co-operation and Development, 1984.

Green, Reginald. 'Ghana: Progress, Problematics, and Limitations of the Success Story,' in Christopher Clough and R.H. Green (ed.) *Stabilization – for Growth or Decay*, *IDS Bulletin*, Vol. 19, No. 1, January 1988.

_____. *'Stabilization and Adjustment Policies and Programmes Country Study No. 1: Ghana'*, WIDER, Helsinki, Finland. 1987.

Hill, Polly. *Migrant Cocoa Farmers in the Gold Coast*, Cambridge University Press 1963.

Ho, Samuel Pao-San. 'Colonialism and Development: Korea, Taiwan, and Kwantung' in Ramon H. Myers and Mark R. Peattie (eds.) *The Japanese Colonial Empire, 1895-1945*, Princeton University Press, Princeton, New Jersey, 1984.

ICCO. 'Study of Cocoa Production in Brazil' CS/Prod/01, 20 December, 1989

Jaycox, Edward V.K. 'Capacity Building in Africa: Challenge of the Decade' in Alexander A. Kwapong and Barry Lesser (eds.) *Capacity Building and Human Resource Development in Africa* (A Report on a Roundtable Convention by the Lester Pearson Institute for International Development, Dalhousie University, September 18-19, 1989), Published by The Lester Pearson Institute for International Development, Dalhousie University, Halifax, Nova Scotia, Canada, 1990.

Jonah, Kwesi. 'The Social Impact of Ghana's Adjustment Programme 1983-1986,' Paper presented to the Institute of African Alternatives, Conference on the Impact of IMF and World Bank Policies on the People of Africa, London, September 1987.

Kofi, Tetteh A. 'The Finnish Agrarian Development Strategy (Pellervo Cooperative Movement) Any Lessons for Africa?', mimeo, UNU/WIDER, 1994.

_____. *Commodity Crisis in the Global Economy: Towards A solution for African Recovery*, (mimeo) Paper presented at the UNU/WIDER-IDS University of Helsinki Conference on The Evolving New Global Environment for Development Process 28 June, 1993, Helsinki, Finland.

_____. 'Commodity Exchanges and Their Impact on the Trade of Developing Countries', United Nations Conference on Trade and Development TD/B/C.1/248. May 18, 1983.

_____ and Emmanuel Hanson. 'Ghana, A History of and Endless Recession' in Jerker Caulsson (ed.), *Recession in Africa*, Scandinavian Institute of African Studies, Uppsala, 1983.

_____. 'Alternative Development Strategy: A Structuralist Response to the Ghana's Economic Crisis'. Paper prepared for PNDC authorities, Mimeo, March 1982.

_____. 'Prospects and Problems of Transition from Agrarianism to Socialism: The Case of Angola, Guinea-Bissau and Mozambique', *World Development*, Vol. 9, No. 9/10, 1981 pp 851-870.

- _____. 'Peasants and Economic Development: Populist Lessons for Africa', *The African Studies Review*, Vol. XX, No. 3. 1977. Also in Aguibou Y. Yansane (ed.) *Decolonization and Dependency Problems of Development in African Societies*, Westport Connecticut, USA: Greenwood Press, 1980.
- _____. 'Institutional Models of Development and Underdevelopment: A Comparative Analysis of the West, Japan and the Third World' published by Institute of Developing Economies (AJIKEN) Tokyo, Japan, 1979.
- _____. 'International Cocoa Agreements', *Journal of World Trade Law*, Vol. 11, No. 1, January/February 1977. Also in John Simmons (ed.), *Economics of Cocoa Production and Distribution*, Praeger, 1976.
- _____. 'MNC Control of Distribution Channels: A study of Cocoa Marketing', *Stanford Journal of International Studies*, Vol. XI, Spring, 1976.
- _____. 'Towards the 'Abibirim' Strategy of Development: A Formal Articulation', *Universitas*, University of Ghana Publication, Vol. 5, No. 1. November 1975.
- _____. 'The Abibirim Strategy of Development: Historical Preliminaries to a Formal Articulation and a Reply to Dr. Oforiatta', *Universitas*, Vol. 4, No. 2, May 1975, pp 30-64.
- _____. 'Vertical Price Relations in the International Cocoa Market and Implications for Ghana's Marketing Policies in R A Kotey et al *Economies of Cocoa Production and Marketing* ISSER, Ghana University, 1974.
- _____. 'Development and Stagnation in Ghana: An Abibirim Approach', *Universitas*, University of Ghana Publication, Vol. 3, No. 3. March 1974.
- _____. 'A Framework for Comparing the Efficiency of Futures Markets', *American Journal of Agricultural Economics*, Vol. 55, No. 4, Part I, November 1973.
- _____. 'International Commodity Agreements and Export Earnings: Simulation of the 1968 Draft International Cocoa Agreement', *Food Research Institute*, Vol. IX, No. 2, 1972, pp. 177-201.
- Kofi, Tetteh and James Fry. 'Commodity Exchanges and Their Impact on the Trade of Developing Countries', (Report for UNCTAD Secretariat), United Nations Conference on Trade and Development, TB/B/C.1/248, 1983.
- Lass, R. A. and Gar Wood (eds.). *Cocoa Production: Present Constraints and Priorities for Research*. World Bank Technical Paper Number 39, World Bank, Washington, DC., 1985.
- Loxley, John. Ghana: Economic Crisis and the Long Road to Recovery, The North-South Institute, Ottawa, Canada, February 1988.
- Lugar, Lord. *The Dual Mandate in Tropical Africa*, Blackwood, 1922.

- Macpherson, W. J. *The Economic Development of Japan c. 1868 - 1941*, Macmillan, London, 1990.
- Maizels, Alfred. *Commodities in Crisis*. Clarendon Press, Oxford 1992.
- Maizels, Alfred, Robert Bacon and George Mavrotas. *Supply Management for Tropical Beverages*, UNU/WIDER, 1994 (mimeo, to be published by Clarendon Press, Oxford).
- McPhee, Allan. *The Economic Revolution in British West Africa*, George Routledge and Son Ltd, London, 1926.
- Mireku, Ebenezer. 'Assessing Structural Adjustment Programmes: The Case of Ghana', *IFDA Dossier* 72. July/August 1989.
- Morgenstern, Oscar. *On the Accuracy of Economic Observations*, Princeton University Press, 1963.
- Nabli, Mustapha K. and Jeffrey B. Nugent. *The New Institutional Economics and Development: Theory and Application to Tunisia*.
- New York Times, January 3, 1989, p. 1.
- Ohde, Thorsten. *Finland: Nation of Cooperators*, Williams and Nargate Ltd., 1931.
- Oshima, Harry T. *Economic Growth in Monsoon Asia – A Comparative Survey*, Tokyo, 1987.
- Panagariya Arvind and Schiff, Maurice. Commodity Exports and Real Income in Africa in Ajay Chibber and Stanley Fischer (eds.) *Economic Reform in Sub-Saharan Africa*. World Bank, 1991.
- Prebisch, Raul. *The Economic Development of Latin America and its Principal Problems*, United Nations, N.Y. 1950.
- Ranis, Gustav. 'The Role of Institutions in Transition Growth: The New Asian Newly Industrialising Countries', *World Development*, Vol. 17, No. 9, 1989.
- Yung Whee Rhee and Therese Belot, Export Catalysts in Low Income Countries: A Review of Eleven Success Stories', *World Bank Discussion Papers* (WPS 72), 1990.
- Ruf, F. 'Will Côte d'Ivoire Give Up Its Position of World Leading Cocoa Producer to Indonesia?' *Cafe, Cacao, The* Vol. XXXVII No. 3, Juil, Sept. 1993.
- Sarris, Alexander H. *Agricultural Stabilization and Structural Adjustment Policies in Developing Countries*, FAO Economic and Social Development Paper No. 65, FAO, Rome, 1987.
- Schotter, Andrew. *The Economic Theory of Social Institutions*, Cambridge University Press, Cambridge, England, 1981.

- Szereszewski, R. *Structural Changes in the Economy of Ghana, 1891- 1911*. Weidenfield and Nicholson, London, 1965.
- Tsakok, Isabella. *Agricultural Price Policy: A Practitioner's Guide to Partial Equilibrium Analysis*, Cornell University Press, 1990.
- Trivedi, Pravin K. and Takamasa Akiyama. 'A Framework for Evaluating the Impact of Pricing Policies for Cocoa and Coffee in Côte d'Ivoire', *The World Bank Economic Review*, Vol. 6, No. 2, May 1992.
- Tsakok, Isabelle. *Agricultural Price Policy, A Practitioner's Guide to Partial Equilibrium Analysis*, Cornell University Press, 1990.
- UNCTAD (1991) 'Prospects for the World Cocoa Market until the Year 2005', UNCTAD/Com/5.
- UNDP. *Human Development Report, 1990*, Oxford University Press, 1990.
- UNECA. *African Alternative Framework to Structural Adjustment Programmes for Socio-Economic Recovery and Transformation (AAF-SAP)*, E/ECA/Cm 15/6/Rev 3, ECA Addis Ababa, 1989.
- UNECA. Statistics and Policies ECA Preliminary Observations on the World Bank Report: 'Africa's Adjustment and Growth in the 1980's', ECA, April, 1989.
- US Congress (Committee on Foreign Affairs US House of Representatives) *Structural Adjustment in Africa: Insights from the Experiences of Ghana and Senegal (Report of a Staff Study Mission to Great Britain, Ghana, Senegal, Côte d'Ivoire and France, Nov. 29 - Dec. 20, 1988)*, US Government Printing Office, March, 1989.
- World Bank. *The East Asian Miracle: Economic Growth and Public Policy*, Oxford University Press, 1993.
- _____. Africa Regional Office. *Ghana 2000 and Beyond*, 1992, p. 51.
- _____. *Successful Development in Africa*, Washington, DC.: World Bank, 1989.
- _____. *Ghana: Structural Adjustment for Growth*, Jan. 23, 1989.
- _____. *Africa's Adjustment and Growth in the 1980s*, Washington, DC.: World Bank, 1989.
- _____. *The Nigerian Structural Adjustment Programme: Policies, Impact, and Prospects*, Washington, DC.: World Bank, 1988.
- _____. *Adjustment Lending: An Evaluation of Ten Years of Experience*, (Policy Research Series 1) World Bank, December 1988, p. 1. (Also called the Fisher Report)
- _____. (Country Study), *Ghana: Policies and Programs for Adjustment*. April 1984.

Younger, Stephen. 'Economic Recovery Program – A Case Study of Stabilization and Structural Adjustment in Sub-Saharan Africa' in *World Bank EDI Policy Case Studies. Analytical Case Studies No. 1, 1989.*

UNU World Institute for
Development Economics Research
(UNU/WIDER)
Katajanokanlaituri 6 B
00160 Helsinki, Finland

Telephone (358) 0-693841
Telex 123455 UNUEI FI
Facsimile (358) 0-6938548