Diversifying Exports

The Supply Response of Non-Traditional Exports to Ghana's Economic Recovery Programme

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Introduction

Background

Ghana began a structural adjustment programme in April 1983. That the economy was in serious crisis by the end of 1982 and that it required an equally serious policy turn-around was obvious to many impartial observers. The gradual decline of Ghana's economy began in the early 1960s. A combination of several years of economic mismanagement and an adverse international economic environment had laid the foundation for economic retrogression in the 1970s and early 1980s.

While the population was rising rapidly during this period, the economy was registering very low GDP growth rates. The average annual rate of decline was -0.5 per cent. The index of food production per capita (1969-71 = 100) fell sharply to a 1980-82 average of 72, due mainly to adverse weather conditions, inadequate roads for access to producing areas, low farm–gate prices for producers and rural–urban migration of the educated youth seeking modern sector jobs. The rate of inflation increased steadily reaching a peak of 117 per cent in 1981 despite a price control regime partially aimed at dampening inflation. Gross domestic investment also declined steadily, recording an average annual decline of -5.1 per cent during the period. Negative real interest rates and fear of adverse government policy (e.g. freezing of assets) drove many potential savers away from the banking system. Investible funds for long-term growth were either kept outside the formal banking sector, re–channelled into short–term profitable commercial ventures or, in the extreme case, found safe havens abroad. The overvalued currency made imports of both final and intermediate goods cheap, thus raising the country's import bill. Meanwhile, output of cocoa, Ghana's largest foreign exchange earner, fell substantially, mainly because of low producer prices. High incidence of smuggling, mainly of cocoa, to neighbouring countries further reduced the economy's foreign exchange earning capacity. By 1981–82, the country was in severe balance–of–payments crisis. The data in the Appendix Table portray the trends of some of the key economic indicators mentioned above.

The Economic Recovery Programme (ERP)

The economic trends as depicted above indicate that the economy was on the way to total collapse and that a major policy turn-around was required for the 'arrest and reversal of over a decade of precipitous decline in production in all sectors of the community ... [and] the rationalisation of the exchange rate in order to stimulate exports ... and make the scarcity of foreign exchange a factor in official pricing' (National Programme for Economic Development, July, 1987). Consequently, the Economic Recovery Programme (ERP) was launched in 1983, with support from the International Monetary Fund and a structural adjustment programme sponsored by the World Bank.

A major plank of the ERP/SAP is the adoption of an outward–oriented development strategy with explicit emphasis on export expansion as the primary channel for eliminating the current account deficit. This is based on the rationale that if the export sector responds strongly to the incentive structure, this could help restore the external balance. The emphasis of the Programme on export growth indicates that the response of the export sector to policy changes is crucial to its success. The literature on the links between exports and development is still far from reaching a satisfactory conclusion (Colombatto, 1988). However, for an import–strangulated economy, export growth will be essential for increased economic activity.

More recently the focus has shifted to the special desirability of non–traditional exports (NTEs) as a basis for export diversification. The importance of NTEs lies in the role that export diversification can play in promoting economic revival. Even though the causal linkages are complex and far from certain, export diversification has been found to contribute to the growth of export earnings, to the reduction of their instability and to increased domestic economic activity (Bond and Milne, 1987).

A large number of studies of the Ghanaian economy have tended to focus on macro level issues such as general economic performance (Abbey and Clark, 1974; Killick, 1978; Loxley, 1988; Rothchild and Gyimah–Boadi, 1986), exchange rate policy and inflation (Ghartey, 1987; Jebuni, Sowa and Tutu, 1991; Jebuni, Oduro and Tutu, 1991; May, 1985; Pinto, 1985 and 1988; Teal, 1985), and the public sector deficits (Islam and Wetzel, 1991). Leith's (1974) study of trade regimes and economic performance emphasised macro level issues, though some micro level studies were undertaken. Most studies relating to the export sector have also had a bias towards macro issues, for example Jebuni, Sowa and Tutu (*op. cit.*) and Leith (*op. cit.*). Sectoral and micro level studies have largely

been on the cocoa sector, with little emphasis on NTEs as defined here (Bateman, 1965; Franco, 1981; Nyanteng, 1980; and Rourke, 1974). The present study departs from the bias of most of these earlier studies of the Ghanaian economy because of its emphasis on NTEs and its use of micro (firm) level data to arrive at its conclusions. Its main focus is to examine the supply response of NTEs to the policy changes introduced since 1983. The interest in the NTE sector is determined primarily by the need to diversify the export base of the economy. The decline in the world real price of cocoa, Ghana's major export, and the constraint this has placed on the economy underlines the need to diversify not only the export base but also the production base of the economy and so contribute to reducing its vulnerability to changes in the international economy.

Traditional exports are defined here as those commodities which have historically been produced (i.e. dating back to the pre-Independence era) primarily for the external market, and for which a consistent government policy existed in respect of their production. Activities which fall into the category of traditional exports are the production of cocoa and cocoa products, minerals, and timber, which have traditionally constituted the principal foreign exchange earners, plus coffee and sheanuts, and electricity and exports of aluminium from the Volta Aluminium Company.[1] Non-traditional exports are defined as all other export activities.

Export Performance in Ghana

Export performance over the period 1970–90 is summarised in Tables 1.1 and 1.2. In real terms, exports declined from a peak of ¢16,089m (1980 cedis) in 1974 to only ¢907m in 1982 before increasing gradually to ¢10,374m in 1989. In 1990, however, they declined to ¢7,677m. This behaviour can be attributed to a number of causes, among them the real effective exchange rate, problems affecting the cocoa industry and external factors. Prior to the inauguration of the ERP, the exchange rate was grossly overvalued. As can be seen from Figure 1.1, as the real effective exchange rate appreciated from 1970 to the early 1980s exports became highly unprofitable and their volume declined. This decline was also due to the poor performance of the cocoa sector and the inability of other exports to expand to fill the gap. As the rate of inflation soared in

1. We have added aluminium from the Volta Aluminium Company to our category of traditional exports because it has featured among Ghana's chief exports since the early 1970s and to include it among 'non-traditional' exports would give misleading results.

Table 1.1
Export data

	Aluminium (¢ m)	*NTEs (¢ m)*	*Total exports (¢ m)*	*Real NTEs (1980 ¢ m)*
1970	0.0	42.7	460.2	1,255.9
1971	0.0	43.7	363.1	1,181.1
1972	60.7	18.8	549.4	458.5
1973	67.2	29.3	697.4	610.4
1974	96.7	39.2	916.9	687.7
1975	99.7	49.7	995.0	671.6
1976	107.6	47.2	932.6	410.4
1977	156.4	54.1	1,152.3	217.3
1978	159.0	46.0	1,559.8	106.7
1979	210.3	75.9	2,720.0	114.0
1980	370.1	31.3	3,130.9	31.3
1981	424.1	929.4	3,087.5	429.3
1982	519.2	376.0	2,402.0	142.0
1983	0.0	3,329.7	10,223.2	564.3
1984	0.0	1,153.3	19,274.6	139.9
1985	0.0	3,887.5	33,169.4	427.6
1986	9.8	2,109.8	94,437.0	186.3
1987	112.0	4,427.8	143,166.6	279.7
1988	1,240.4	7,329.1	201,887.4	352.4
1989	685.8	8,688.6	270,181.0	333.6
1990	3,194.8	17,148.6	284,266.1	454.3

	Value of cocoa (¢ m)	*Value of timber (¢ m)*	*Value of minerals (¢ m)*	*Export GDP ratio (prop.)*	*Export volume index (1980=100)*	*Export unit value (1980=100)*
1970	331.6	37.0	48.7	0.2037	220.90	42.81
1971	237.0	32.7	49.2	0.1452	155.20	34.25
1972	328.0	68.2	84.9	0.1952	166.60	32.53
1973	397.3	142.6	116.8	0.1991	169.20	45.19
1974	535.4	106.1	138.4	0.1968	139.50	61.56
1975	637.2	83.7	121.4	0.1883	142.80	65.49
1976	593.1	80.0	118.9	0.1429	149.70	62.21
1977	797.3	92.2	109.2	0.1032	123.30	93.65
1978	1,110.1	84.3	152.5	0.0743	101.60	113.95
1979	2,029.5	114.0	279.4	0.0964	96.80	119.84
1980	2,172.9	92.5	613.7	0.0731	100.00	100.00
1981	1,145.3	101.4	487.3	0.0426	103.10	82.78
1982	1,118.6	44.0	344.2	0.0278	116.50	65.42
1983	4,257.2	279.8	2,356.5	0.0555	84.00	65.62
1984	13,582.9	446.5	4,091.9	0.0712	85.70	83.10
1985	21,844.6	1,510.2	5,927.1	0.0967	103.70	76.56
1986	44,876.1	33,513.0	13,918.6	0.1847	114.90	82.78
1987	75,076.3	36,669.2	26,958.0	0.1919	123.80	84.28
1988	93,753.4	45,556.7	54,217.3	0.1908	139.00	82.97
1989	111,085.9	103,258.4	46,463.5	0.1903	166.60	-
1990	115,847.2	38,833.3	79,624.5	0.1390	176.90	-

Sources: *Quarterly Digest of Statistics*, March and September, 1990; Ewusi, K., *Statistical Tables for the Economy of Ghana* (1986); Ghana Exports Promotions Council (for non-traditional exports between 1986 and 1990).

Table 1.2
Share of selected products in total exports (%)

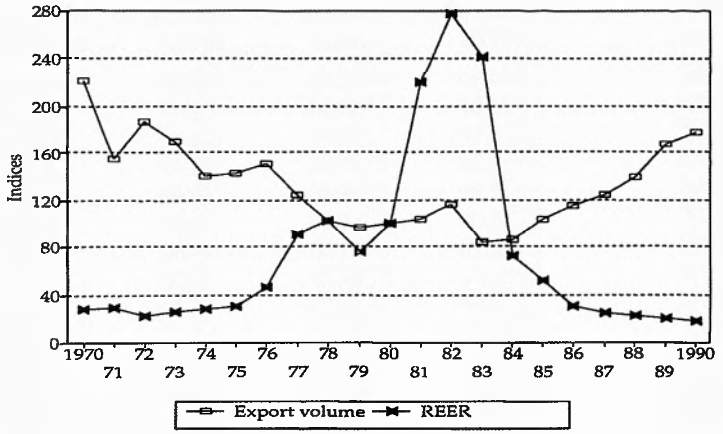
Year	*Share of NTEs*	*Share of cocoa*	*Share of timber*	*Share of minerals*
1970	9.30	72.10	8.00	10.60
1971	12.00	65.30	9.00	13.50
1972	3.40	59.70	12.40	15.50
1973	4.20	57.00	20.40	16.70
1974	4.30	58.40	11.60	15.10
1975	5.00	64.00	8.40	12.20
1976	5.10	63.60	8.60	12.70
1977	4.70	69.20	8.00	9.50
1978	2.90	71.20	5.40	9.80
1979	2.80	74.60	4.20	10.30
1980	1.10	69.40	3.00	19.60
1981	30.10	37.10	3.30	15.80
1982	15.70	46.60	1.80	14.30
1983	32.60	41.60	2.70	23.10
1984	6.00	70.50	2.30	21.20
1985	11.70	65.90	4.60	17.90
1986	2.20	47.50	35.50	14.70
1987	3.10	52.40	25.60	18.80
1988	3.60	46.40	22.60	26.90
1989	3.20	41.10	38.20	17.20
1990	5.90	40.80	13.70	28.00

Sources: As for Table 1.1.

the early part of the 1980s, the real incomes of cocoa farmers and labourers fell sharply and many of them left the farms. Increases in nominal producer prices were not enough to compensate for the resultant loss in real income. Many farmers diverted their activities to the cultivation of other crops or went to neighbouring countries in search of better opportunities. Many farms were abandoned or overgrown with weeds. Broken–down bridges, bad roads and frequent breakdowns of vehicles all contributed to creating a transportation bottleneck, which hindered the evacuation of cocoa to the ports.

World export unit values have not changed much since the ERP began. However, export volumes have responded favourably to the economic incentives under the ERP, especially to the exchange rate adjustment which has enabled the government to reward exporters

Figure 1.1
Export volume and real effective exchange rate



adequately. An example of this is the periodic upward revision of the nominal producer price of cocoa. As shown in Figure 1.1, the depreciation of the real effective exchange rate since 1984 has led to an increase in the export volume.

With respect to the composition of exports, cocoa continues to dominate (Table 1.2). In the 1970s, its share of total exports averaged 65.5 per cent, dropping between 1980 and 1983 to 48.7 per cent. Since the ERP, this share in total exports has declined continuously, accompanied by an increase in the share of timber products, which prior to the ERP averaged less than 4 per cent. Timber's share tumbled to 13.7 per cent in 1990 probably due to the ban on export of logs of certain species. However, the figures show a continuing dependence on a few traditional exports, notably, cocoa, minerals, and timber.

Two commodity concentration ratios have been calculated—the Hirschman index[2] and the entropy index[3]—and these are shown in

2. The Hirschman index is defined as $H = \sqrt{(\Sigma_i w_i^2)}]$, where w_i is the share of commodity i in total exports. The index ranges between 0 and 1 with the higher values indicating a higher degree of commodity concentration.

3. The entropy index is defined as $E = -[\Sigma_i w_i \log_2 w_i]$, where w_i is the share of commodity i in total exports. It has a lower limit of zero. The lower the value of E, the higher the degree of commodity concentration.

Table 1.3. The figures show a continued heavy dependence on a small number of traditional exports, with little variability over the years. However, there has been some degree of diversification. The three–year moving average of the Hirschman index declined from 0.610 in 1971 to 0.556 in 1988 while the entropy index decreased from 2.171 in 1971 to 2.071 in 1988. These results are also consistent with those of UNCTAD (1989) where the degree of concentration using a normalised Hirschman index declined from 0.752 in 1970 to 0.544 in 1985.

Table 1.3
Concentration ratios and instability index

	Hirschman index	*Entropy index*	*3-yr moving average Hirschman index*	*3-yr moving average entropy index*	*Instability index* [(a)]	*3-yr moving average instability index*
1970	0.668	1.90	-	-	0.087	-
1971	0.602	2.15	0.610	2.171	0.298	0.011
1972	0.559	2.46	0.570	2.407	0.243	-0.007
1973	0.548	2.61	0.543	2.516	0.034	0.107
1974	0.522	2.48	0.550	2.455	0.142	-0.028
1975	0.581	2.28	0.562	2.364	-0.160	-0.142
1976	0.582	2.34	0.594	2.301	-0.307	-0.202
1977	0.619	2.29	0.617	2.216	-0.140	-0.178
1978	0.649	2.02	0.653	2.043	-0.086	-0.025
1979	0.691	1.82	0.666	1.928	0.153	-0.056
1980	0.659	1.94	0.619	2.007	-0.234	-0.150
1981	0.506	2.26	0.566	2.120	-0.368	-0.377
1982	0.531	2.16	0.528	2.143	-0.528	0.160
1983	0.548	2.01	0.582	1.959	1.377	0.340
1984	0.675	1.71	0.618	1.882	0.170	0.544
1985	0.633	1.93	0.630	1.848	0.085	0.353
1986	0.582	1.91	0.593	1.956	0.805	0.304
1987	0.566	2.03	0.563	2.032	0.022	0.257
1988	0.541	2.15	0.556	2.071	0.057	-0.052
1989	0.561	2.02	-	-	0.120	

Note: (a) Percentage deviation from an Exponential Trend.

Measures of export earnings instability[4] have also been calculated and these show continuing instability of export earnings over the years (see Table 1.3). This instability is due to the high level of concentration, the openness of the economy, and the proportion of agricultural commodities in exports. A regression of instability on concentration, openness and agricultural exports, showed significant results whether one used the Hirschman or the entropy index. The results are as follows:[5]

U =	−1.4543	+5.7667Z**	−1.0754RA	+3.0167H*	Adj. R^2 = 0.7461
	(−1.7118)	(3.5531)	(−1.5972)	(2.3374)	DW = 1.8728
U =	3.0267**	+6.7343Z**	−1.1341RA**	−1.4073E**	Adj. R^2 = 0.8242
	(6.3558)	(6.6755)	(−3.4395)	(−6.9745)	DW = 1.7895

** significant at the 1% level
* significant at the 5% level
t–ratios are in parentheses

where:

U = instability index (3–year moving average)
Z = measure of openness, proxied by the share of merchandise exports to GDP (3–year moving average)
RA = share of agriculture in total exports (3–year moving average)
H = Hirschman index (3–year moving average)
E = entropy index (3–year moving average)

The openness parameter is significant at the 1 per cent level in both equations and has the right sign. This result is not unexpected because the greater the proportion of merchandise exports to GDP, the greater the transmission of external shocks, especially in declining commodity prices, to export instability. A given change in the openness parameter increases instability seven–fold when the entropy index is used as a regressor; the effect is slightly lower (six–fold) when the Hirschman index is used. The

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4. The instability index, U_t may be defined as the percentage deviation of yearly total export earnings from trend: $U_t = [X_t - X_t^*]/X_t^*]$, where X_t is the total export value in year *t*, and X_t^* is the trend value of exports in year *t*. Over a given period, it may be defined by the standard deviation of the residuals from the trend. An exponential trend was fitted.

5. To remove the wide fluctuations in yearly figures, a three-year moving average of all the variables in the model was used.

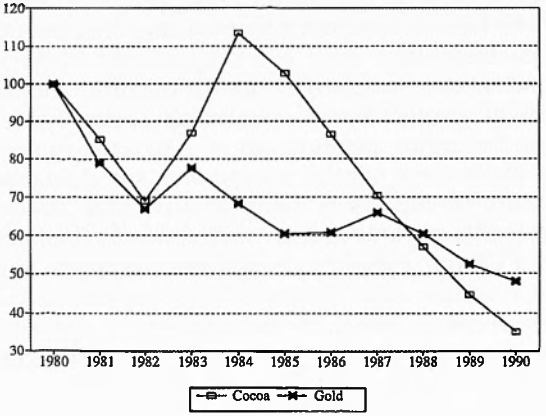
entropy index is significant at the 1 per cent level and the Hirschman index at the 5 per cent level and both have the right signs. The share of agriculture is only significant in the entropy equation.

Wide fluctuations in export earnings generate domestic instability, complicate the task of development planning, and reduce the efficiency of resources. Instability may exert significant repercussions on the balance of payments, especially on developmental imports (intermediate and investment goods). For a developing country like Ghana, export earnings are the major determinant of import capacity; Ghana cannot manipulate short–term capital movements by changing interest rates. Thus instability in exports is likely to adversely affect developmental imports. Secondly, government revenue tends to fluctuate with the level of exports. In Ghana, export taxes account for about 20 per cent of total government revenue. Also, fluctuations in exports, through their effects on domestic income, result in fluctuations in domestic savings. The cumulative effect of all these is likely to have adverse effects on the overall economic performance.

While past attempts at measuring the adverse economic consequences of export concentration and instability have been inconclusive (see Leith, 1971; Lim, 1976), more recent evidence supports the hypothesis that export instability has a negative impact on economic growth through the channels discussed above. Using a sample of 34 countries in sub–Saharan Africa over the period 1960–86, Gyimah–Brempong (1991) regressed a measure of economic growth on export instability including other variables to show that each of the three different measures he used had a statistically significant negative effect independent of which export instability index was used in estimating the growth equation or whether the growth rate was based on total GNP or GNP net of exports.

Since 1983, Ghana's export volumes have more than doubled (see Table 1.1). Export values, however, have increased by a much smaller proportion. As a result, the proportion of merchandise imports covered by merchandise export earnings without adjustment for debt–service payments, declined from 81 per cent in 1983 to 68 per cent in 1990. The less than proportionate increase in export values is due to the decline in the real prices of major traditional exports. As shown in Figure 1.2, the real prices of both cocoa and gold have exhibited a downward trend during the 1980s, becoming much sharper and continuous since 1984. Using 1980 as the base year, the index of real cocoa prices declined continuously from 113.2 in 1984 to 35 in 1990, and for gold, from 68.2 in 1984 to 48.2 in 1990. Efforts to increase export earnings by expanding traditional exports have thus been undermined by the corresponding decline in their prices due to the weakness in the world market.

Figure 1.2
Real prices of cocoa and gold on world markets*



Note: World market prices deflated by index of export unit values of industrial countries.
Source: IMF, *International Financial Statistics Yearbook, 1991.*

The strong case for export diversification is therefore based on the inherent weakness of the world markets for Ghana's traditional exports, i.e. cocoa and gold, and the chronic tendency for over–supply and, therefore, for long–term declines in their real prices in those markets. A second reason for diversification is the adverse effect of export instability, due to commodity concentration of exports, on the growth of the economy.

Export diversification can be described as 'an increase in the number of distinct products in the export base, combined with a reduction in dependence on any one product as a source of foreign exchange earnings' (Bond and Milne, *op. cit.*).

Objectives of the Study

The objective of this study is two–fold. First, to analyse the supply response of NTEs to the policy changes brought about by the ERP/SAP. In order to do this we shall:

- measure the effect of sectoral and economy–wide policies under the ERP/SAP on the incentive structure of the export sector;
- estimate the supply response of the non–traditional export sector.

The second objective is to provide policy recommendations based on the results obtained from our empirical investigations. Policy recommendations will be concerned with the potential for diversification of the export base. The estimation of supply elasticities will give some indication as to whether or not non–traditional exports are responsive to the policy changes.

The examination of price and non-price incentives and the extent to which each is important in determining supply response will be important in informing policy–makers as to what the appropriate policy package should be in order to attain policy objectives. This is a particularly important issue within the context of the current debate concerning the size of the price changes and whether or not they are important in bringing about the expected output response.

Data Sources and Problems

This study uses both secondary and primary sources of data for its analysis. A field survey of NTEs was conducted between August and September 1990, followed by supplementary field work to fill gaps in the questionnaires. To avoid a bias in the analysis both exporters and non–exporters were interviewed. The analysis in this report is therefore based on both time series using secondary data and cross–sectional data using the results of our field survey.

Most of the secondary sources of data are official. Such sources record official figures for exports and imports and other macroeconomic data. Under a controlled regime with parallel markets, official transactions may represent only a portion of total transactions in the economy. As the gap between the official exchange rate and the parallel market exchange rate increases, smuggling of exports, for instance, increases, so that official exports may decline, even though total exports may remain the same. By the same argument, as the official and parallel exchange rates merge and the economy is liberalised, a counter movement from smuggling to official exports may be observed. Interpretation of results based on these data, particularly as they relate to summary econometric coefficients, has to be done with caution, since they may capture both shifts and trends. Data on NTEs were hard to obtain. Except for the period 1986–90 when a serious attempt at organising data on NTEs was begun by the Ghana Export Promotion Council (GEPC), NTE data were obtained from official estimates as a residual, i.e. after deducting total traditional exports. The data were broken down into eleven export categories as follows: cocoa beans, cocoa paste, cocoa butter (including cocoa cake), timber logs, sawn

timber, gold, manganese, diamonds, bauxite, aluminium, and NTEs.[6] For some years the sum of the components did not add up to the total reported. In such cases, adjustments were made to the totals.

Questionnaires were distributed to approximately 400 firms in the Greater Accra, Volta, Eastern, Western, Central, Ashanti and Brong–Ahafo regions of Ghana. About 300 questionnaires were returned, but only about 160 were valid for quantitative analysis, although the others were useful in terms of analysing the perceptions of entrepreneurs.

Of the firms surveyed, 35 per cent were non–traditional exporters. The majority of Ghanaian enterprises are non–exporters. The structure of our sample is therefore a reflection of this, and need not impart any special bias to the analysis. Approximately 72 per cent of the firms were located in the Accra/Tema metropolitan area. Of the exporting firms surveyed, 48 per cent were in manufacturing, most of them producing wood or aluminium products or involved in agro–based activities. Agricultural activities and fishing each accounted for 12 per cent of the exporting firms surveyed; 9 per cent were salt exporters and 15 per cent of the enterprises were not producers but purchased for exporting. The majority of firms surveyed, both exporting and non–exporting, were limited liability companies, i.e. 80 per cent of exporters and 74 per cent of non–exporters. The majority of both categories were also Ghanaian–owned, i.e. 64 per cent of exporters and 67 per cent of non–exporters.

The non–traditional exporters were identified through the GEPC's list of registered exporters. In a number of instances interviewers found that the registered exporters were unknown to the residents of the area, had long since stopped production or had never been involved in any exporting activity. The impression obtained was that some exporters operated on an ad hoc basis. Problems arose in the collection of data because of the unwillingness of some firms to answer the questionnaire. There was an (unjustified) fear that the information might be leaked to competitors. This was particularly the case amongst large and well established firms. The manner in which the questionnaires were filled in was also hampered by the literacy level of some respondents, as well as by whether or not they kept records. The problem of non–existent records was more serious amongst entrepreneurs in the agricultural sector. The ad hoc nature of the exporting activities also affected the ability to fill in the questionnaires adequately. It was also difficult to use information from the furniture and handicrafts industries because there was no standard unit of measurement.

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6. This categorisation was based on the availability of data.

2
Policy Towards Non–Traditional Exports

The first section of this chapter will examine the policies introduced to encourage non–traditional exports in the post–colonial period up to 1982. It will be followed by a survey of the policies pursued since 1983, followed by a conclusion.

Export Diversification Policy in the Pre–ERP Period

The need to diversify the export base of the Ghanaian economy had been recognised since colonial times. Whereas in the colonial period the diversification strategy concentrated on diversifying within the agricultural sector, in the post–independence period the strategy included industry. For example, in the Seven Year Plan for the period 1963/64–1969/70, one of the central tasks was to achieve 'an increase in the value of exports by the processing of raw materials and the sale of manufactured goods'. Nevertheless, it was not until 1969/70 that any specific policy measures were introduced to promote non–traditional exports (NTEs).

In accordance with the objective in the Two Year Plan for the period 1968/69–1969/70—to expand the production and diversify the commodity structure of exports—the 1969/70 budget introduced an incentive package in response to the disappointing past performance of non–traditional export items. This consisted of four main components. First, a scheme under which manufacturing firms were to receive an income tax rebate, the size of which was dependent on the percentage of total output exported: a 50 per cent rebate if 25 per cent of total output was exported, 33.3 per cent if 15–25 per cent was exported, and 10 per cent if 5–15 per cent was exported. The second component of the export package was an export bonus; producers would receive a 10 per cent bonus equivalent to the value of the increase in export earnings compared with the previous year. The third component was the automatic renewal of import licences for raw materials of importance to manufacturing firms. Finally, there was a waiver of local taxes (i.e. sales and excise taxes) on goods which were exported. Exporters were also

eligible for a refund of the local duties paid on raw materials used in the manufacture of exports.

The emphasis of the incentive structure was to encourage the export of manufactured products. As part of the promotion package the Ghana Export Promotion Council (GEPC) was set up in 1969, with the objective to 'promote, assist and develop exports in any manner which the Council thought necessary or desirable.' The GEPC has been concerned primarily with the NTE sector. It was empowered to perform the following duties: an advisory role to exporters and the government; marketing and promotion; financial, through the provision of insurance facilities; provision of information to exporters concerning markets; the development of new exports. The government also established the Ghana Export Company, which was to be concerned with the sale abroad of goods manufactured in Ghana. It is noteworthy that its functions overlapped with those of the GEPC.

Export licence requirements were abolished in 1970, thus reducing the bureaucratic obstacles which increase the costs and time involved in actually exporting. The export bonus was increased to 25 per cent in the 1970/71 budget, and the way in which it was calculated was changed to base it on the annual value of exports. With the devaluation of the cedi in December 1971, however, the bonus scheme was removed. It was re–introduced in the 1972/73 budget and was made applicable to all exports except timber (including sawn timber), cocoa and cocoa products, and all minerals and primary metals except diamonds bought from local miners. It was equivalent to 30 per cent of export proceeds less the cost of imported raw materials used in the production of the exported commodity. In conjunction with the introduction of the bonus scheme, customs duty drawback on imports for processing for export was abolished.

In a further effort to improve the institutional framework around which export promotion was to be organised, the budget statement for 1972/73 proposed the reorganisation of the Ghana Export Company. It was charged with purchasing and exporting all agricultural crops with export potential (i.e. ginger, avocado, pineapples, pepper, cassava and yams) and a department was set up in the Ministry of Agriculture responsible for the development of the crops identified.

Despite the introduction of the incentive package and the creation of institutions to encourage exports, there was very little growth of NTEs. With growing concern at the economy's dependence on cocoa, the National Redemption Council Government introduced another incentive package in the 1974/75 budget, with the aim of reducing the cost and time dimensions of export activities. The package comprised all the

incentives of the 1969/70 scheme; the export bonus was made equivalent to 20 per cent of the gross value of export proceeds and the lower limit of the corporate tax rebate was increased to 25 per cent. New elements included the re–introduction of the customs duty drawback scheme and the provision of bonded warehouses for exporters. The duty drawback scheme allowed the exporter to obtain a refund of 95 per cent of the import duty paid on raw materials used in the production of exports. Application for the refund could be made within a twelve–month period from the date of exportation. To benefit from this scheme the exporter needed to have: evidence of the payment of import taxes; evidence that the materials had been used in the production of goods for export (this is done by providing the Customs department with a statement of the composition of the exported product); evidence that the item had been exported (i.e. the A2 form and the landing certificate received at the export destination).

The bonded warehouse scheme is a facility available to all importers, which allows them flexibility in the payment of import duties. Fully insured warehouses are located all over the country in locations approved by the Customs Department, and duties are paid as and when the items are released. Certain costs are inevitably involved: rent (a charge per ton irrespective of the value of the items); interest charges calculated on a simple basis of the value of duties still to be paid; and handling charges. Items can be kept in the warehouse for an initial period of two years; thereafter, re–application for storage must be made on a yearly basis.

In the 1977/78 budget the export bonus was increased from 20 to 30 per cent for NTEs, remaining at 20 per cent for all other exports except cocoa. However, it was unified and reduced to 10 per cent in 1978 when the currency was devalued, and was raised again in 1981 to 20 per cent. Table 2.1 shows the amounts paid in 1977–79, the majority of which went to timber and mineral exporters.

In an attempt to reduce the impact of the import licensing procedures on export activities the Bank of Ghana introduced a scheme in August 1975 which provided special import licences for certain raw materials to manufacturers who had received firm export orders.

As a further step to reduce the impact of the import control system on exporters of minerals, timber and NTEs, a foreign exchange retention scheme was introduced in 1981 and became operational in 1982. Its objective was to enable exporters to circumvent the procedures of applying for foreign exchange and import licences to obtain their inputs, by allowing them to hold 20 per cent of their export earnings in a special account with Ghana Commercial Bank in London. These earnings were

Table 2.1
Export bonus payments, 1977-79

Year	*Value (cedis)*	*Average subsidy rate* [(a)] *(%)*
1977	8,404,563	1.72
1978	34,177,636	5.76
1979	44,513,652	4.99

Note: (a) Average subsidy rate calculated is the ratio of the export bonus received to non-cocoa export values.

Source: Ghana Commercial Bank (1980) *Quarterly Economic Review*, Vol. 3, No. 1, January-March, p.10.

to be used to purchase machinery, equipment, spare parts and raw materials required in the production of NTEs. In addition, the GEPC was issued with a bulk import licence worth 100,000 cedis for the importation of packaging materials and chemicals.

Despite this array of instruments to encourage NTEs, not much progress was made in increasing their share in the commodity structure of trade. An assessment of the export promotion package shows that it did not incorporate all the components necessary to ensure a consistently positive response, although they were typical of incentive packages introduced in other countries, for example Kenya and Tanzania (Lyakurwa, 1991) and Turkey (Milanovic, 1986).

Rhee (1985) has suggested a framework for analysing export promotion policies. Firstly, the policy should aim to provide a neutral status for exporting, i.e. it should enable the exporter to 'achieve equal footing with ... foreign competitors' (*ibid.*:7). Secondly, the package should extend this neutral status. Equal footing with foreign competitors may not imply equal footing with producers for the domestic market when there is import–substitution industrialisation. The incentive structure should therefore be neutral between exporting and import–substituting activities. The policy package providing a neutral status vis–à–vis foreign competitors should comprise four main components. First, a realistic exchange rate. Second, a free trade regime, the objective here being to make available to exporters imported inputs at international prices as well as to allow them to sell their products at international prices. Third, automatic access to export finance, especially pre–shipment working capital; if constraints on production capacity limit exporting, emphasis should be put on the provision of investment loans

to export industries. The final component is keeping primary input prices competitive.

Table 2.2 shows that a realistic exchange rate policy was not pursued during most of the period. By 1982 the index of the real effective exchange rate was approximately ten times its 1970 level and, as shown in Figure 1.1, this was a large disincentive to export production. Attempts were made to create a free trade regime through the customs duty drawback scheme and the waiver on local taxes. However, the bureaucratic hurdles needed to be overcome in order to take advantage of these schemes made them unattractive to some exporters.[7] There was no automatic access to export finance. The provision of finance to meet the short–term requirements of exporters was important in explaining Korea's success in improving its export performance (Rhee, 1985:93). Access to the requisite type of finance was another important missing element in Ghana's export promotion package during the period.

The institutional framework is also an important part of any export promotion programme. The GEPC, as already mentioned, was set up in 1969 with the objective of encouraging NTEs. However, it was not set up to administer the incentive package. The experience of Turkey shows that centralising all export promotion activities in one institution can reduce administrative costs in terms of time, as well as increasing potential recipients' awareness of the existence of the scheme (Milanovic, 1986:5). It can also keep the agency in continuous touch with information about the programme's success.

The extended neutral status was also not achieved during a greater part of the period prior to 1983. Because of the difficulty in obtaining relevant data the information provided in Table 2.2 can only be considered as a guesstimate and an indication of the direction of policy. A measure of the bias in the trade regime is the ratio of the effective exchange rate of exports (EERx), namely, the amount of domestic currency the exporters receive as a result of earning one unit of foreign exchange, taking account of any taxes and/or subsidies paid or received, to the effective exchange rate for imports (EERm), namely, the amount of domestic currency that has to be paid in order to obtain imports worth one unit of foreign exchange.

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7. This point was made by a representative of the Customs, Excise and Preventive Services at the First Exporters' Forum in 1988. In some instances, Customs took up to six months to process a refund to an exporter.

Table 2.2
Exchange rates and the bias in the trade regime

Year	*Exchange rates:*		*Estimates of the bias:*	
	Nominal	*REER*	*The trade regime*	*Non-cocoa exports*
1970	1.02	28.1	0.441	0.486
1971*	1.02	28.4	0.520	0.780
	(1.81)			
1972*	1.28	22.1		
	(1.31)			
1973	1.16	25.7		
	(1.15)			
1974	1.15	27.4	0.701	0.86
1975	1.15	30.8	0.590	0.879
1976	1.15	46.8	0.748	
1977	1.15	90.8		
1978*	1.514	102.0		
	(2.75)			
1979	2.75	75.7		
1980	2.75	100.0	0.705	0.885
198	12.75	220.5	0.704	0.839
1982	2.75	276.8	0.812	0.811
1983*	3.449	242.0	0.608	0.825
	(30.00)			
1984	35.33	72.2	0.680	0.824
1985	54.05	52.6	0.637	0.857
1986	89.28	30.6	0.718	0.871
1987	162.37	25.2	0.726	0.889
1988	202.35	22.2	0.775	0.880
1989	270.0	19.9	0.777	0.877
1990	326.33	17.2		

Notes: * Year in which there was a change in the official exchange rate. Figures in parentheses are end of year values.

Source: Real effective exchange rates (REER, 1980=100) obtained from World Bank. Information on nominal exchange rates and import and export tariff rates to calculate bias in trade regime obtained from Statistical Services *Quarterly Digest of Statistics* various issues.

The equations can be spelt out as:

$$EERx = Ex\ (1 + s - tx)$$

and

$$EERm = Em\ (1 + tm + q + P)$$

where:

- Ex is the nominal official exchange rate for exporters
- Em is the nominal official exchange rate for importers
- s is any trade subsidies going to the export sector
- tx is export taxes
- tm is import taxes
- q is import surcharges etc
- P is the premium due to the quantitative restrictions (i.e. import quotas)

A value less than one means that there is a bias against export activities. A value greater than or equal to one implies a bias in favour of export activities. A value greater than one is sometimes referred to as an ultra–export promotion strategy (Bhagwati, 1988).

In calculating the bias in the trade regime, information on the export bonus was not readily available for most of the period; for the three years for which it was available, the actual subsidy rate was rather minimal so that it would not significantly affect the results. An important omission from the calculations was the import premium.[8] The estimates therefore substantially underestimate the extent of the bias. For the seven years for which information was available, the estimates suggest that the trade regime was biased against export production activities and towards import–substituting activities (Table 2.2).

The bias remained even when cocoa was excluded from the calculations. It was less severe, however, because non–cocoa exports face a lower export tax rate compared with the cocoa sector (see Table 3.1), although it should be remembered that our estimates understate the extent of the bias by excluding the import premium.

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8. The premium may be measured as the ratio of the difference between the domestic price and the border price (inclusive of tariff) to the border price (inclusive of tariff). However, the information on domestic prices presented in the wholesale price index will not give an accurate measure of the premium since they are not market prices. Prices during the period were subject to controls so that officially recorded prices may underestimate the size of the premium. Another measure would be the black market premium. This, however, is subject to some errors since the size of the premium may be influenced by criminal activities, for example drug trafficking.

Finally, the export promotion policies pursued in Ghana prior to the ERP/SAP were extremely inadequate in terms of their composition. Levels of certain benefits were subject to frequent changes and, given the lumpiness and irreversibility of investment outlays, this did not make for long–term investment by entrepreneurs to take advantage of the package. Furthermore, in spite of the sector–specific measures the disincentive to exporting created by the macroeconomic environment counteracted these incentives. For instance, the marginal tax on exports as a result of the overvalued exchange rate, i.e. the parallel market premium, between 1970 and 1983, is estimated by Pinto (1989) to have ranged between 31 per cent in 1970–74 and 91 per cent in 1979–83.

Export Diversification Policy Since 1983

The first major policy change associated with the introduction of the ERP was the nominal devaluation of the exchange rate. The appreciation of the real exchange rate in the pre–ERP period was recognised as a contributory factor in explaining several of the problems facing the economy, for example, the foreign exchange crisis (Republic of Ghana, 1983:16).

In April 1983 a multiple exchange rate system was introduced. The nominal exchange rate remained fixed at its 1978 level, but a system of bonuses and surcharges was introduced which increased the effective rate. Traditional exports and imports of crude oil, essential raw materials, basic foodstuffs and capital goods were subject to an exchange rate of 23.75 cedis = US$1.00. NTEs and other imports had a rate of 25.975 cedis = US$1.00. Six months later the exchange rate was unified at 30.00 cedis = US$1.00. Three nominal devaluations took place in 1984 bringing the rate to 50.00 cedis = US$1.00, it was again devalued three times in 1985 to a rate of 60.00 cedis = US$1.00, and in January 1986 it was devalued to 90.00 cedis = US$1.00.

A dual system was introduced in September 1986, with the objectives of allowing the exchange rate to be determined by demand and supply factors, promoting trade liberalisation and diverting foreign exchange held outside the banks into the banking system. The rate at the first window was the prevailing official rate set in January of that year and governed the purchase of essential raw materials and crude oil, all official transactions and cocoa earnings. The rate at the second window was determined by weekly foreign exchange auctions held by the Bank of Ghana. The two–window system was removed in early 1987 when all transactions were subject to the same rate at the Bank of Ghana. In 1988 the system was further liberalised when foreign exchange bureaux were

established which allowed individuals to trade freely in foreign exchange (using spot rates only).

In addition to these changes in exchange rate policy, the government maintained most of the components of the incentive package that was already in place. However, the export bonus scheme was abolished with the introduction of bonuses and surcharges in April 1983 and has not been re–introduced. The percentage of foreign exchange that could be retained was increased in 1987 to 35 per cent for non–traditional exporters. The scheme as it originally operated was quite restrictive. This was because the retained earnings could be kept only in the special account of the Ghana Commercial Bank in London, and could not be used without the approval of the Bank of Ghana. Initially they could be used only for specific purposes, i.e. the purchase of machinery, equipment and spare parts. However, the scheme has been liberalised (with the coming into existence of the forex bureaux) so that now the 35 per cent is handed over the counter to the exporter and there is no restriction on the end–use to which the retained earnings may be put. The corporate tax rebate scheme is no longer restricted to manufacturing firms, but applies also to producers in the agricultural sector at the following rates: 30 per cent rebate for 5–15 per cent of total production exported, 50 per cent rebate for 16–25 per cent, and 60 per cent rebate for 25 per cent and above of total production exported. For manufactured products the rates are: 25 per cent for 5–15 per cent of total production exported, 30 per cent for 16–25 per cent, and 60 per cent tax rebate for 25 per cent and above of total production exported. In the 1991 budget statement, the 60 per cent rebate was raised to 75 per cent.

The bonded warehouse scheme, the customs–duty drawback and the waiver of local taxes on exports have all been maintained. The waiver of local taxes is now an exemption scheme and does not operate on a drawback basis as previously. The refund on customs duty drawback was raised from 95 per cent to 100 per cent in the 1991 budget statement.

A new incentive in the present export promotion package is the exemption from duties on packaging materials. In order to benefit from this scheme the exporter needs to be registered with the GEPC, and then to get a letter of exemption from the National Revenue Secretariat.

The GEPC has prepared a three–year development programme which has as its objective the improvement of exported products by means of quality, handling, and packaging in order to improve their competitiveness. It has also organised 'export schools' to provide technical and advisory support for producers and exporters. Fora have also been organised whereby exporters and producers are able to discuss their problems with the GEPC in order to inform the relevant

government bodies of the problems they face as well as obtaining solutions to these problems.

Although the requirement of an export licence has not applied since 1970, the exporting procedure is still not devoid of costs nor of bureaucratic obstacles. Before a commercial export is approved, the exporter requires to have the sales contract between the seller and the buyer, the final export invoice and the customs entry form if the goods were originally imported. In addition he needs to have filled in an A2 form which must be approved by the Bank of Ghana or other authorised banks. The completion of the form, which is in eight parts, is time-consuming since its different parts have to be sent to different institutions, for example the Bank of Ghana and the Ministry of Trade and Tourism.

For certain items it is necessary to obtain special permits before the A2 form is processed. Timber and timber products must be inspected by the Forest Inspection Board and/or the Timber Export Development Board; a fee is payable to the former board. Handicrafts and antiques need a permit from the Ghana Museums and Monuments Board, plants and seeds a permit from the Ministry of Agriculture's Plant Quarantine Department, and the exportation of live animals requires a permit from the Department of Game and Wildlife. The process of exporting can therefore still be a tedious one and may adversely affect the costs of small producers.

There is a significant difference between the current programme and previous export promotion policies in terms of the accompanying macroeconomic, trade and payments policies. The period since 1983 has seen a decline in import tariff rates. By 1988 import duties on capital goods and intermediate goods were about half their 1983 levels, the advantage of this for the exporting sector being that it can significantly reduce the costs of production associated with imported inputs. The issue of access to credit has been a sensitive one (which will be discussed later) and has only recently been addressed by the creation of the Export Finance Company. However, an extended neutral status has not been achieved. Table 2.2 estimates of the bias in the trade regime show that it is still biased against exporting. However, the figures do indicate a reduction in the degree of the bias since 1986 for total exports. This improvement may be explained largely by the significant drop in export taxes since 1983 (see Table 3.1). Average export tax rates in 1986 were 36 per cent below their 1983 levels, and by 1989 had declined a further 37 per cent. Average import taxes have also declined but not by so much; in 1986 they were 19 per cent below their 1983 levels, and they have not changed significantly since then. The lack of information on the size of

the import scarcity premium means that the contribution of import liberalisation to the reduction in the anti–export bias has been underestimated, as has the extent of the improvement in the anti–export bias since 1983. As a result of this lack of information, estimates of the bias in the trade regime for non–cocoa exports (Table 2.2) are misleading in showing very little change in the bias between 1983 and 1988, compared with the period prior to 1983.

Conclusion

Since the introduction of the export promotion package in the 1969/70 budget, basically the same instruments of export promotion have been introduced, withdrawn and re–introduced in an effort to encourage exports in general and to diversify their commodity structure. Until 1983 there were few major changes in the components of the incentive package for exports (the major new instrument being the foreign exchange retention scheme).

The failure of the package to achieve results prior to 1984 can be explained largely by the existence during most of the period of an exchange rate policy which was at cross purposes with the objective of export promotion espoused by all policy–makers. Secondly, it must be noted that very few of the components of the incentive package create an explicit advantage for NTEs vis–à–vis other exports. Most of the incentives, for example the foreign exchange retention scheme, were applicable also to the timber and mineral exporting sectors which are both traditional exports. In fact, the percentage of foreign exchange earnings which can be retained by some mineral exporting activities is greater than is the case for NTEs.

3
The Incentive Structure

The response of economic agents to the policies discussed in the previous chapter depends partly on how these affect the incentive structure and their perception or awareness of the incentives. This chapter will therefore examine the degree to which the changing policies have affected the structure of incentives for the export sector. This can be done by measuring the total effect of protection which is made up of the direct and indirect effects, the domestic resource cost ratios (DRCs) and the effective protection rates. The chapter will also investigate the exporters' perception and awareness of the export promotion scheme.

The Direct Effect

This is equivalent to the nominal rate of protection of a particular commodity or sector resulting from commodity/sector–specific policies, which can be formulated as follows:

$$Ti = [Pi - (Pw.E - M)]/ (Pw.E - M) \quad (1)$$

Let

$$Pb = Pw.E - M \quad (2)$$

then

$$Ti = (Pi/Pb) - 1 \quad (3)$$

where:

Ti is the direct effect on commodity *i*
Pi is the domestic price of commodity *i*
Pw is the border price of commodity *i*
E is the official nominal exchange rate (cedis per US$)
M is the transport, storage and other costs

Thus the difference between the domestic and border prices of commodity *i* may be composed of trade taxes and/or subsidies and domestic taxes and/or subsidies (i.e. production, excise and sales taxes, etc.). Estimates of the direct export tax are shown in Table 3.1. The large difference in values between the total and non–cocoa taxes is because

Table 3.1
Average export tax rates [(a)]

	Total exports	*Non-cocoa exports*	*Cocoa exports*
1983	28.69	2.15	70.18
1984	21.73	5.20	31.08
1985	27.38	2.29	44.51
1986*	18.12	0.77	33.17
1987*	18.34	0.02	39.77
1988*	11.89	0.00	28.50
1989*	11.34	0.00	30.08

Notes: * Provisional
(a) Average tax rates were calculated as the ratio of export duties to export values.

Source: Statistical Services *Quarterly Digest of Statistics*, March 1990 and March 1991, Accra.

cocoa taxes account for the bulk of export taxes. The taxes of non–cocoa exports are made up primarily of taxes on timber. The average export tax rate for total exports and non–cocoa exports has declined since 1983. In 1988 and 1989 no taxes were recorded for non–cocoa exports.

The Indirect Effect

The indirect effect captures the incidence of other sectoral policies and economy–wide policies on the sector studied. This is best obtained in a three or more sector model where the price of one of the sectors is used as a numeraire. In an economy with three sectors (i.e. importables, exportables and non–tradables), the indirect effect may be measured by examining the change in the price of exportables relative to non–traded goods' prices caused by a change in the price of importables relative to non–traded goods' prices. In the literature on effective protection (e.g. Corden, 1971) the indirect effect is measured by the net protective rate. This incorporates (assuming the nominal price of non–traded goods remains fixed) the exchange rate change which takes place when a distortion is introduced between domestic and border prices of traded goods. The net protective rate (NPR) not only measures the distortion between traded goods but also the relative price changes between traded and non–traded goods.

Clements and Sjaastad (1984), Garcia (1981) and Sjaastad (1980) have developed another method of estimating the indirect effect of trade and exchange rate policies. They estimate the equation

$$\ln(Ph/Px) = c + w \ln(Pm/Px) + u \qquad (4)$$

where:

Ph is the price of non–traded goods
Pm is the domestic price of importables
Px is the domestic price of exportables
c is the constant
w is the incidence parameter
u is the error term

The coefficient *w* indicates the extent to which trade and exchange rate policies, through changes in relative prices, impinge on the export sector. The extent to which protection of one sector will penalise another is determined by the degree of substitution in production and consumption between exports and non–traded goods, on the one hand, and imports and non–traded goods, on the other. The equation is derived from a three sector general equilibrium model (which assumes equilibrium in the non–traded goods sector and so, by definition, equilibrium also in the traded goods sector). The demand and supply of non–traded goods is a function of relative prices (Pm/Ph) and (Px/Ph). Supply of non–traded goods is a function also of real income, capital and labour, which are assumed to remain fixed. Thus *w* is derived from the model and is defined as

$$w = Ym/(Ym + Yx) \qquad (5)$$

where:

Ym is the relative price elasticity of excess demand of non–traded goods with respect to imports
Yx is the relative price elasticity of excess demand of non–traded goods with respect to exports

Equation (4) may be disaggregated to examine, say, the incidence of import policies on the cocoa, timber, and non–traditional export sectors (Garcia, 1981). Ideally this is what should have been done in the present study. Unfortunately a price series does not exist for NTEs. Therefore the estimation of the incidence parameter was done for the export sector as a whole.

The equation estimated using annual data for the period 1970–90 is shown as:

$$\ln(Ph/Px) = c + w_1 \ln(Pm/Px) + w_2 \ln Y + w_3 \ln BOT + u \quad (6)$$

where:

Y	is the real income
BOT	is the balance of trade

Real income and the balance of trade were introduced as explanatory variables since it cannot be assumed that they remained constant during the estimation period. The equation was estimated using two proxies for the price of non–traded goods. The first was an index of prime building costs. This was used in a similar study for Zaire (Tshibaka, 1986). The rationale for the use of this variable was that the prices of sand and gravel are usually determined by domestic demand conditions. The second non–traded good price variable was that of cassava, a local food crop. Unlike other foods, cross–border trade in this crop is comparatively small.

The results of the estimation of equation (6) are presented in Table 3.2. The estimates were obtained after correcting for auto–correlation using the Cochrane–Orcutt procedure. Both equations have a good fit and the incidence parameter is correctly signed and significant at the 1 per cent level.

While the values of the incidence parameter differ between the equations, the evidence suggests that a substantial share of the import tax—approximately 74–85 per cent—is shifted to the export sector. These estimates are within the range obtained for other countries (Garcia, 1981; Oyejide, 1986; and Tshibaka, 1986). Oyejide (1986:47), for instance, obtained estimates for Nigeria ranging from 0.5518 to 0.9021. The estimate of the incidence parameter for seven countries, including Australia and Brazil, ranged from 0.53 for Uruguay to 0.95 for Colombia. The shift parameter for Australia was estimated at 0.7 (Clements and Sjaastad, 1984:26).

In Table 3.3 estimates are provided of the direct, indirect and total export taxes for the period 1983–89. The indirect export tax was obtained by calculating the proportion of the average import tax for each year which was shifted to the export sector. Despite the fact that direct export tax rates declined sharply after 1986, the effect of the implicit taxes meant that the burden of taxes was greater than the direct taxes implied (Table 3.3). In fact, in 1989 the implicit export tax rate, based on the value of the incidence parameter using prime building costs as an explanatory

Table 3.2
Regression results for the incidence parameter

Independent variable	*Dependent Variable:* *ln(Phi/Px)*	*ln(Pc/Px)*
constant	-0.0425 (-0.0029)	41.3213 (2.0066)
ln(Pm/Px)	0.8557 (7.8588)	0.7380 (5.8091)
lnY	0.1474 (0.0845)	-4.1180 (-2.3331)
lnBOT	-0.000048 (-2.0076)	0.001013 (0.7315)
adjusted R squared	0.795	0.789

Notes: Phi is the price of prime building costs
Pc is the price of cassava
The values in parentheses are t-ratios

Table 3.3
Total effects of the protective structure on total exports

	Direct	*Indirect*	*Total* [(a)]	*Indirect*	*Total* [(b)]
1983	28.69	14.61	43.20	12.59	41.28
1984	21.73	12.68	34.41	10.91	32.64
1985	27.38	11.85	39.23	10.19	37.57
1986	18.12	11.74	29.86	10.08	28.20
1987	18.34	10.40	28.74	8.93	27.27
1988	11.89	11.51	23.40	9.89	21.78
1989	11.34	11.89	23.23	10.21	21.55

Notes: (a) Indirect tax calculated using incidence parameter obtained from regression using prime building costs as explanatory variable.
(b) Indirect tax calculated using incidence parameter obtained from regression using cassava prices as explanatory variable.

variable, was larger than the explicit tax rate. Despite this, the trend in the total tax rate of the export sector has been downwards. The decline in both the average import and export tax rates over the period explains this.

Direct taxes were estimated for products produced by the firms surveyed. The results are provided in Table 3.4. The domestic price of the product used in the calculation was the ex–factory price plus the sales tax in the case of importables.

For some non–traditional exports, e.g. salt, the export price has been higher than the domestic price, thus explaining the negative NPRs. For those exporters who do not sell on the domestic market, the NPR was equal to zero because there was no export tax. However, for those exporters that serve both markets the NPR was positive. The differential is explained by the sales tax on domestically sold items but which does not apply to exported goods. All non–exporters (except for producers of mixed fruit juices in 1988 and 1989) experienced positive rates of protection.

The NPR for the animal feed and fish industries has increased compared to estimates obtained by the World Bank for 1981. In the agro–industries the NPR for orange juice and pineapple juice has increased since 1986 (Jebuni, Asuming–Brempong and Fosu, 1990).

The effective protection rate, unlike the NPR, measures the difference between domestic and international value added resulting from the structure of protection. An examination of the EPR shows that most exporters were faced with negative protection on value added. This is to be expected since exporters do not face a free trade regime for their inputs. Some of their imported inputs enter tax–free and the rest are subject to an import duty not exceeding 20 per cent, if they are imported directly. If the imported inputs are purchased on the domestic market, then the difference between the domestic price and the cif price may exceed the stated tax rate. Petrol and petroleum products are also taxed, with rates ranging between about 38 per cent and 65 per cent in both years. For those exporters for whom these products constitute a substantial proportion of their costs of production, this may also contribute to generating substantially negative effective protection.

A ranking of activities on the basis of EPRs does not indicate a consistent bias against exporters. Both exporting and non–exporting activities appear at the bottom and the top of the scale and both are subject to negative EPRs, for example salt and animal feeds. In 1989 for all industries on which information was available the EPRs were negative. In the case of animal feed and salt there was an improvement in the EPR compared with 1988; for the other industries on which

Table 3.4
Industry-level protection rates

	1988		*1989*	
Industry	*NRP*	*EPR*	*NRP*	*EPR*
Pineapple*	0.00	-8.24	0.00	-8.56
Palm oil	208.45	-110.2		
Salt	-1.25–17.27	-141.2–15.06	-0.78–19.61	-67.8
Fish:				
Tuna*	330.12	584.55		
Bottom fish	15.32	8.34		
Cuttle fish*	0.00	29.51		
Bellow fish*	0.00	29.36		
Fruit juices:				
Mixed fruit	-52.3	-60.98		
Orange juice	25.08	52.39		
Pineapple juice	25.08	10.72		
Animal feeds	34.1	-260.29	24.47	-38.90
Paints:				
Oil			-59.64	-100.57
Emulsion			30.09	-170.63
Aluminium products:				
Pots*	22.52	557.2		
Casserole	22.52	-38.49		
African prints	28.99	-8,023.29		
Cement paper*	77.54	-241.94	86.83	-283.13

Note: * Exports have increased since 1986 (Jebuni, Asuming–Brempong and Fosu, 1990).

information was available the EPR worsened. Again there was no consistent bias against exporters in the ranking of industries.

Comparative Advantage and Efficiency

In order to examine the efficiency of economic activities Domestic Resource Cost (DRC) ratios may be calculated. The DRC measures the value of domestic resources used in an activity at its opportunity cost

and compares it to the value added at international prices. It is defined as

$$DRC = (wL + rK)/ VA$$

where:

- w is the opportunity cost of labour, L
- r is the opportunity cost of capital, K
- VA is value added at border prices

Economic activities with DRCs of less than one are deemed 'efficient' and DRCs greater than one are 'inefficient' at any given exchange rate. Negative values indicate that input values at border prices are greater than the value of output at international prices.

In calculating the DRCs for the firms surveyed, the shadow price of labour was defined as the reported wage plus benefits discounted by 50 per cent. This measure of discount rate was obtained from the National Investment Bank which uses it in its project evaluation or investment analysis. No adjustment was made for skilled labour and management. The book value of fixed assets reported by the firms was used as a basis to measure capital. Border prices for individual items were obtained by making use of the average price of a comparable good at the SITC 6–digit level.

Of the industries which did not have negative value added the ranking for 1988 and 1989 is shown in Table 3.5.

The effect of current policy has been to increase the efficiency and comparative advantage of a number of products. Previous studies found a number of activities with inefficient DRCs. For example, a 1981 study found that fruit and vegetable production and soft drink manufacturing had DRC values greater than one. Estimates obtained in the present study have found these activities to have become efficient. The DRCs calculated for the animal feed and pineapple industry improved between 1988 and 1989. The rate of taxation of these industries through their imports had declined as a result of the liberalisation programme.

From the above we may identify some non–exporting industries for which there is an apparent comparative advantage for exporting, e.g. paints and animal feed. The GEPC has identified aluminium products as a potential export, and this is confirmed by our results. None of the firms manufacturing these products was producing at full capacity. This was a feature of most of the firms surveyed, with 82.5 per cent stating that they were operating below full capacity. Therefore, an expansion in exports will contribute to reducing unit costs by improving capacity utilisation, further adding to comparative advantage.

Table 3.5
Estimated domestic resource cost ratios

Industry	*1988* *Short run*[(a)]	*Long run*[(b)]	*1989* *Short run*	*Long run*
Salt*	0.01-0.51	0.14-0.83	0.01-0.09	0.09-0.83
Fruit Juice				
Orange juice	0.07	0.16		
Mixed fruit juice	0.09	0.18		
Fish				
Tuna*	0.03	0.15		
Bottom fish	0.24	0.25		
Paints			0.05	0.06
Animal Feed	0.20	0.36	0.11	0.20
Pineapple*	0.53	0.89	0.38	0.63
Aluminium Products				
Household pots*	0.89	0.86		

Notes: (a) In the short run capital is a fixed cost and is taken as given by the firm. The short run DRC is therefore defined as the ratio of labour costs to value added at international prices.
(b) Long run DRC is defined as the ratio of labour and capital costs to value added at international prices.
* Exported

Exporters' Perceptions of the Incentive Package

An export promotion package can only influence the decisions of actual and potential exporters if they are aware of its existence and if the costs of taking advantage of it are not prohibitive. In order to find out how knowledgeable firms were about the existence of Ghana's export promotion package, they were asked to state whether or not they were aware of the individual components of the scheme. Table 3.6 presents a summary of their responses, indicating the percentages of firms which answered in the affirmative and the ranking of knowledge of the components of the promotion package.

The retention scheme, which was the most recent to be introduced, was the best–known component. This may be because it tackled directly a problem of immediate relevance to both exporting and non–exporting

Table 3.6
Knowledge of export incentives

All firms:		*Exporters only:*	
Component	*Frequency**	*Component*	*Frequency**
Retention scheme	79	Retention scheme	100
Bonded warehouse	53	Customs duty drawback scheme	53
Income tax rebate	51	100% duty exemption on packaging	45
Customs duty drawback scheme	50	Income tax rebate	40
100% duty exemption on packaging	50	Bonded warehouse	35.7

Note: * Percentage of firms which answered the question.

producers, i.e access to foreign exchange. It may also be because it is the best–publicised. All the exporting firms which answered the question were aware of its existence. Thus of the total sample all those not aware of its existence were non–exporters.

It is obvious from the table that exporters as a sub–group tended to be less well–informed about the existence of the other components of the incentive package than was the case for all respondents. This suggests that more efforts need to be made to inform producers about the incentives. Two firms questioned on how the incentive system could be improved mentioned a need for greater publicity about the entire export promotion package. The ranking of the other items of the package differs for the sub–group of exporters as compared to the entire sample. The bonded warehouse scheme was the least well–known incentive for the exporters. This may be because the exporters in the sample tended to have lower imported inputs–to–output ratios compared with the non–exporters (who formed a larger share of the total sample of firms interviewed).

Most of the exporting firms surveyed had experienced an increase in production in recent years. The firms were asked to identify the reasons for this, and their responses are given below in order of importance. The exchange rate was the most frequently cited reason. The other components of the export promotion package were not identified by most respondents as important explanatory variables. This is not surprising, given the ignorance of many exporting firms of their existence. The advantage of the exchange rate as a policy instrument is that it is highly visible and very little special publicity is required in order to make entrepreneurs aware of its existence. Access to finance ranked third in

importance as an explanation for increased production. However, it was also the most frequently cited reason why some producers considered they did *not* achieve an increase in production.

Reasons for increased production	*Reasons for decreased production*
Better cedi value for exports/ exchange rate	Non–availability of finance
Better price on domestic markets	Non–availability of inputs
Availability of finance	Lack of skilled personnel
Availability of inputs	Exchange rate
35 per cent retention scheme	
Improvement in demand	
Favourable weather conditions	
Tax rebate	

Conclusion

The findings of this chapter demonstrate that the incentive structure is not uniform for all industries. Even though at the macro level there is still an anti–export bias, at the industry level some exporting activities are in a more favourable situation compared with others. This, to some extent, is a function of the structure of taxes and subsidies as well as the technical efficiency of the firms themselves. Certain industries have a potential for exporting, some of which are in the manufacturing sector.

The exchange rate was considered by most firms in the survey to be particularly important in influencing the increased level of production. The other components of the export promotion package did not seem to be important from the firms' point of view. This is not necessarily because the measures are ill–conceived but may be because of ignorance about their existence.

4
Non–Traditional Export Supply Response

Introduction

In the previous chapters we saw that policies towards non–traditional exports were subject to frequent changes during the 1970s and early 1980s. Since the initiation of the Economic Recovery Programme in April 1983, the policy towards NTEs, indeed exports generally, has been consistent and more stable. It has tended to create an enabling environment for exporting, through macroeconomic polices and sector–specific incentive schemes. In this chapter we examine the response of exports. This is done using both time series data and cross–sectional data from our field surveys.

The experience of other countries suggests that an appropriate macroeconomic environment is critical. Foremost in this is the maintenance of a realistic exchange rate. All the successful exporters of South East Asia have pursued aggressive exchange rate policies which have prevented an overvaluation of the domestic currency. The evidence available suggests that during the period when South Korea allowed its exchange rate to become overvalued, its export performance suffered. The exchange rate was found to be an important variable in explaining Colombian exports (Ffrench–Davis and Pinera, 1979). A review of the evidence by Helleiner (1988) suggests that the key to a successful expansion of exports seems so far to have been a realistic and stable real exchange rate and sustained government support, rather than import liberalisation and a *laissez–faire* policy.

Despite the fact that non–traditional export policy in Ghana dates far back, the major real response occurred only recently. One explanation is that macroeconomic policies counteracted the benefits of sector–specific incentives.

Performance of Non–Traditional Exports Since 1984

NTEs seem to have responded favourably to the set of economic incentives under the ERP. The performance of NTEs from 1986 to 1990 is shown in Tables 4.1 and 4.2. Three main features emerge from examining the trends. The first is the growth in the value and the

Table 4.1
Value of non-traditional exports, 1986-90 (US$ m.)

	1986	*1987*	*1988*	*1989*	*1990*
1. **Agricultural exports**	**17.82**	**18.79**	**27.06**	**21.17**	**28.78**
Share in total NTE (%)	(75.0)	(67.2)	(63.9)	(61.0)	(46.2)
Tuna	12.75	11.10	14.30	5.46	12.39
Other fish	1.88	3.55	6.68	7.78	9.20
Cocoa waste	2.07	2.44	2.89	2.24	0.00
Pineapples	0.43	0.90	1.41	2.10	3.83
Kolanuts	0.47	0.48	1.03	1.48	1.03
Yams	0.08	0.11	0.18	0.39	0.97
Others	0.14	0.21	0.57	1.72	1.36
2. **Processed and semi-processed exports**	**5.91**	**9.11**	**15.23**	**13.35**	**33.11**
Share in total NTE (%)	(24.9)	(32.6)	(36.0)	(38.5)	(53.1)
Wood Products	1.51	2.17	3.27	3.76	5.55
Aluminium Products	0.11	0.69	6.13	2.54	9.79
Salt	0.73	1.92	2.49	3.13	7.00
Natural Rubber sheets	0.99	0.84	0.46	1.02	3.96
Metal Scrap	0.08	0.17	0.64	1.68	2.25
Palm Oil	0.01	0.01	0.05	0.06	1.42
Others	2.48	3.31	2.19	1.16	3.14
3. **Handicrafts**	**0.03**	**0.06**	**0.06**	**0.20**	**0.45**
Share in total NTE (%)	(0.1)	(0.2)	(0.1)	(0.6)	(0.7)
Total	**23.76**	**27.96**	**42.35**	**34.72**	**62.34**

Source: Ghana Export Promotion Council.

number of firms involved in NTEs. The value of total NTEs increased from $23.76m in 1986 by 17 per cent to $27.96m in 1987 and by 51.5 per cent to $42.35m in 1988 before declining by 18 per cent to $34.72m in 1989. The fall was mainly due to a large, but temporary, fall in exports of tuna. In 1990, the value of NTEs bounced back dramatically by 79 per cent to $62.34m. Part of this rapid growth is a statistical result of the very small base from which it started.

Table 4.2 shows that the total number of exporters increased from 725 in 1987 to 1381 in 1989. The distribution of firms according to the value of exports shows, however, that the majority of firms export less than $1000 worth per annum. Between 1987 and 1989 less than 5 per cent of

Table 4.2
Number of non-traditional exporters and items

	1987	*1988*	*1989*	*1990 (Jan.–Sept)*
Total number of exporters*				
Agricultural	377	708	627	n.a.
Processed and semi-processed	284	473	448	n.a.
Handicraft	64	150	306	n.a.
Total	725	1,331	1,381	
Total number of export items				
Agricultural	55	65	61	46
Processed and semi-processed	65	82	85	88
Handicraft	12	19	21	15
Total	132	166	167	149

Note: n.a. = not available.
* The total number of exporters in each product category. This implies that multi-product firms may be counted more than once, and therefore the disparity between the number of firms in Table 4.3 and number of exporters in this table.
Source: Ghana Export Promotion Council.

the firms were responsible for more than 80 per cent of the total value of exports (Table 4.3).

A second feature is the change in the composition of NTEs towards processed and semi–processed products. Table 4.1 shows that by 1990 the value of processed and semi–processed exports exceeded that of agricultural exports, demonstrating that the expansion of NTEs is lessening dependence on primary commodity exports. With the exception of aluminium products, all major processed and semi–processed exports increased continuously between 1986 and 1990. Handicrafts, which consist of wood carvings, cloths (Kente, Adinkra, Batik, Tie and Dye), baskets, drums, etc., even though forming a very small proportion of NTEs, increased from $0.03m in 1986 to $0.45m in 1990. It is important to note that the total number of processed and semi–processed items increased from 65 to 88 between 1987 and 1990 (an increase of 26 per cent) while agricultural items decreased from 55 to 46.

Table 4.3
Profile of Ghanaian non-traditional exporters
(number and value of per annual shipment bracket)

	Value of annual shipments (in US$):					
	1,000 and less	*1,001 –5,000*	*5,001 –10,000*	*10,001 –50,000*	*50,001 –100,000*	*over 100,000*
1987						
Number of firms	234	130	46	98	16	27
% of total	42.5	23.6	8.3	17.8	2.9	4.9
Total value (US$ m)	0.075	0.323	0.339	2.321	1.097	23.80
% of total	0.27	1.16	1.2	18.30	3.93	85.13
1988						
Number of firms	421	197	68	96	20	33
% of total	50.4	23.6	8.1	11.5	2.4	4
Total value (US$ m)	0.082	0.424	0.513	2.197	1.353	37.778
% of total	0.19	1.00	1.21	5.19	3.20	89.21
1989						
Number of firms	638	214	76	117	27	47
% of total	57.0	19.1	6.8	10.5	2.4	4.2
Total value (US$ m)	0.158	0.530	0.554	2.839	1.776	28.863
% of total	0.46	1.53	1.60	8.18	5.12	83.13

Source: Ghana Export Promotion Council.

Thus in terms of growth in the value of NTEs and increase in the number of exporters of products exported, it would appear that the non–traditional export sector has responded extremely well to the policies under the ERP/SAP. It is particularly important to note the shift in the composition from agricultural to processed and semi–processed products. However, earnings from traditional exports have also responded well, so NTEs have not generally increased their share in total export earnings (Table 1.2).

Industry Characteristics and Survey Results

To a large extent the enterprises involved in NTEs are medium–sized, employing 30 or more workers and with fixed assets in excess of 50m cedis. A third of the firms were small–scale, employing fewer than 30 workers, and approximately 10 per cent employed over 200 workers. Using the value of fixed assets as an indicator of size, only 19.6 per cent had assets of less than 11m cedis, while 51 per cent had assets worth 50m cedis and over. The exporting firms established after 1984 tended to be smaller, if employment is used as an indicator; in fact, all but two of them employed fewer than 30 workers.

For the majority of the firms exports form a small proportion of their total sales. In 1988, 43 per cent of the firms exporting non–traditional items sold less than 11 per cent of their total output abroad, whilst 35 per cent of them exported more than half. A classification of export performance by sector showed that enterprises involved in agricultural activities tended to export more of their output than did manufacturing firms, with 93 per cent of the latter exporting less than 11 per cent of their total output.

A majority of all firms in the sample answered in the affirmative when asked if they were self–financing. Of the exporting firms approximately 57 per cent were self–financing, and 64 per cent of the remainder said they had received all the financing they had applied for from the banking system. Most of these non–self–financing firms obtained credit at interest rates ranging between 23 and 28 per cent, with a repayment period of between 12 and 24 months. Three–quarters of the exporting firms which did gain access to bank credit were established before 1984; the same proportion were limited liability companies and 62 per cent were Ghanaian–owned.

The ratio of the value of imported inputs to total output was lower for exporting firms compared with non–exporting firms (Table 4.4). The majority of exporting firms had import ratios less than 20 per cent, which contrasts with the non–exporting firms of which only about a third had

Table 4.4
Ratio of imported raw materials to output

	Exporters %	*Non-exporters* %.
< 11%	61.6	22.65
11-20%	29.9	9.3
21-30%	5.25	12.05
31-40%	0	13.35
41-50%	2.65	11.95
> 51%	2.65	30.65

ratios less than 20 per cent. This suggests that Ghana's revealed comparative advantage is in the production of items which use local inputs.

Types of Responses and Reasons

Three types of responses could be expected to the measures introduced under the ERP. The first would be an increase in exports by firms which were already exporting NTEs before the ERP. However, because of the unreliability of the time series data provided in our survey we are unable to provide a measure of the extent of such an increase.

The second response would be a shift into exporting by already established non–exporting firms. We found that 62 per cent of the exporting firms established before 1984 shifted into exporting after the ERP. Indeed, there were some firms which were established between 1950 and 1959 which started exporting only after 1984.

The third response would be for the establishment of new firms to take advantage of the new profit opportunities. From our survey, it appears that this has indeed occurred; 51 per cent of the sampled firms established after the ERP were involved in exporting, as compared with only 29 per cent of firms established before 1983.

From our survey it appears that the most definite shift into exporting occurred between 1987 and 1989. This coincides with the liberalisation phase of the government's programme. The lag in response to the introduction of the new policies suggests that firms must have waited to judge the government's commitment to implementing these measures. This is consistent with the conclusion from other countries that firms' perception of government commitment to policy reforms is important in

explaining their supply response. For example, Milanovic (1986) showed this to be important for Turkey.

Those firms which began exporting after 1983 were asked to identify the factors which determined their decision to start exporting. Three main shift factors were identified. The package of incentives, and particularly the exchange rate and the foreign exchange retention scheme, emerge from the survey as the most important. In the initial stages of the ERP exporting conferred extra benefits arising from the retention of scarce foreign exchange, which was seen as a means of ensuring a regular flow of inputs to enable capacity utilisation and smooth operations. This phenomenon seems more general than the experience of Ghana alone. In Zimbabwe, for example, similar arrangements which made foreign exchange available to non–traditional exporters were an effective incentive to export (Riddell, 1991).

The second most frequently cited reason for the move into exporting was the existence of market opportunities abroad. It is possible that the perception of improved profit opportunities induced some entrepreneurs to look for markets abroad. One respondent cited stiff competition in the domestic market as pushing his firm to take advantage of external demand. For another, saturation of demand in the domestic market and the timely assistance of a relative living abroad in providing information on market opportunities were the reasons for moving into exporting. The need to utilise excess capacity was also important in influencing the decision to export. Domestic market conditions have been important in influencing the decision to export in other developing countries. In Zimbabwe, for example, exporting was a means of increasing capacity utilisation within the context of depressed domestic demand (Riddell, 1991). This was also an important shift factor in the case of Turkey in the 1980s (Milanovic, 1986).

Exporting to satisfy a specific order was the third major shift factor. For some of the firms in the furniture industry, it was their exposure at the GIFEX fairs which enabled them to obtain their first export order. Access to finance was also of importance. Other reasons mentioned were the existence of favourable prices and access to necessary inputs. One firm stated that the launching of the ERP and the decision to export were purely coincidental.

Estimation of the Supply Response

Both the general data on NTEs (see Tables 4.1 and 4.2) and the firm–level data suggest that there was indeed a positive supply response to the measures introduced under the ERP. This section investigates whether a

statistically significant relationship exists between macroeconomic variables and the performance of NTEs, using econometric techniques.

Various approaches have been used in estimating supply response equations. These run from the more sophisticated flexible functional forms to simple Cobb–Douglas functional forms. An example of the former is the approach used by Newman, Lavy and de Vreyer (1990) in analysing the response of firms to relative price changes in Côte d'Ivoire. The work by Khan and Knight (1988) extended the basic model to incorporate these effects. Our model is therefore based on their work.

Since our focus in this study is on the response of NTEs, a trade model approach is more appropriate. The form of the export supply and import demand models is fairly well known (Bond, 1985; Moran, 1989).

On the exports side the standard model assumes that producers base their decision on domestic capacity and the relative profitability of producing for export relative to producing for the home market. This model therefore expresses exports as a function of domestic capacity constraint and price effects. However, it does not take into consideration the importance of intermediate imports and the consequences of import compression. Khan and Knight (1988) extended the basic model to incorporate these effects is therefore based on their work. In view of the fact that we have both time series and cross–sectional data based on the field survey, two versions of this model will be estimated.

For aggregate non–traditional exports, the model assumes that the export sector's production function for gross exports, X^s, can be represented by a log–linear Cobb–Douglas function as

$$\text{Log } X^s_t = a_o + a_1 \log MX_t + (1 - a_1) \text{ Log } VX_t \qquad (1)$$

where:

MX is the volume of imported inputs

VX is value added by domestic factors of production in the exports sector

a_1, $1 - a_1$ are the elasticities of supply of gross exports with respect to imported and domestic inputs

It is assumed in this model that:

(a) the price elasticity of imported input demand is the same as for total import volume, (M);

(b) domestic value added in exports (VX) is a function of the relative export price and the stock of fixed capital (KX) in the export sector; and

(c) that fixed capital in the export sector is a constant proportion of trend GDP, (GDP*).

Using a partial adjustment mechanism of the form:

$$\Delta \text{ Log } X_t = Y_1 [\log X^s_t - \log X_{t-1}], \quad O< Y_1 <1 \qquad (2)$$

where:

X^s is optimal supply
X_t is volume of exports

the reduced form equation can be obtained as:

$$\text{Log } X_t = b_o + b_1 \log M_t + b_2 \log PX_t - b_2 \log P_t + b_3 \log GDP^*_t + b_4 \log X_{t-1} \qquad (3)$$

where:

PX is the price of exports
P is the price of non–traded goods

This form of the export supply function is used to estimate the non–traditional export supply response using time series data from 1970 to 1990.

In the case of firm–level data, where both imported inputs and capital stock data are available, assumptions (a) and (c) are not needed. The export supply equation hence reduces to

$$\text{Log } X_{it} = C_{o1} + C_1 \text{ Log } MX_{it} + C_2 \log P_{-xit} - C_2 \log P_{it} + C_3 \log KX_{it} + C_4 \log X_{it-1} \qquad (4)$$

Equation (4) is used to estimate the supply response from our firm–level data.

Our first results using data from 1970 to 1990 are presented in Table 4.5. The first set of results relate to all exports, i.e. both traditional and non–traditional exports. Most of the variables have the right signs and are statistically significant. Trend GDP, however, has the wrong, i.e. negative, sign. One would expect that as GDP increases, exports would increase so that trend GDP would have a positive sign. Our negative result could reflect the generally negative GDP growth between 1970 and 1980.

Of special interest to our analysis is the real effective exchange rate (REER), which has a negative sign and is statistically significant. This suggests that as the exchange rate depreciates, the real value of exports

Table 4.5
Time series regression results for all exports

Dependent variable		*Equations*	
All Exports	*(1)*	*(2)*	*(3)*
Constant	4.4674**	4.9784	4.6101*
	(2.8852)	(2.1168)	(2.4230)
REER	-0.3019**	-0.3134*	-0.3106*
	(-2.6316)	(-2.2507)	(-2.2021)
Trend GDP	-0.0779**	-0.0666**	-0.0680**
	(-4.3464)	(-3.6418)	(-3.0973)
Imports	0.7179**	0.6581**	0.6915**
	(4.7167)	(3.5711)	(3.7342)
Lag Exports	-0.0036		-0.0038
	(-0.0446)		(-0.0369)
Lag REER		-0.0289	
		(-0.2641)	
adjusted R^2	0.9702	0.9720	0.9718
DW Statistic		2.0525	
'h' statistic	-0.7130		-0.0392

Note: Values in parentheses are t-ratios.
** Significant at the 1% level.
* Significant at the 5% level.

increases. The short–run elasticity of total exports is around 0.31. Import availability has a positive impact on total exports, with a much higher short–run elasticity. The short–run elasticity of exports with respect to imports ranges from 0.65 to 0.69.

The results for NTEs in Table 4.6 show much greater responsiveness to exchange rate variation than for total exports. However, the overall results for NTEs have poor explanatory power. This could be due to the fact that prior to 1986 statistics for NTEs were obtained as a residual. Table 4.6 shows that depreciation in the exchange rate stimulates NTEs with a larger short–run elasticity of 0.46 compared with 0.31 for all exports, but with lesser significance. This difference in responsiveness could be explained by the fact that most non–traditional exporters produce for both the domestic and foreign markets, compared with cocoa

Table 4.6
Time series regression results for non-traditional exports

Dependent variable *Non-traditional exports*	*Equations:* (1)	(2)
Constant	8.8736** (7.4716)	-7.7135 (0.9055)
REER	-0.4611* (-2.2830)	-0.6868 (1.0622)
Trend GDP	-0.1224 (1.5853)	
Imports		1.1314 (1.6129)
Lag NTE		0.1498 (0.6464)
adjusted R^2	0.2101	0.1874
DW Statistic	1.9131	***

Notes: Values in parentheses are t-ratios.
*** Durbin's 'h' statistic is not valid because the number of observations multiplied by the variance of 0.1498 is 1.078, which is greater than 1. But the alternative test showed no autocorrelation.
** Significant at the 1% level.
* Significant at the 5% level.

and minerals which are produced only for the external markets. Thus the non–traditional exporter can switch between exporting and domestic sales, so increasing his responsiveness. As shown in the previous chapter, non–traditional exporters by no means depended exclusively on the external market for revenues. For both years, 1988 and 1989, just over a third of the firms surveyed exported more than half of their output.

Even though import availability has a positive sign, it is statistically insignificant in both non–traditional exports equations. This suggests that NTEs are less dependent on imports compared with traditional exports—a hypothesis worth further investigation. It also reminds us of our earlier result showing exporters to be much less reliant on imported inputs than producers for the domestic market (see Table 4.4).

The results of regression analysis based on our field survey of NTEs are presented in Table 4.7. To overcome possible heteroscedasticity due to differences in the size of establishment, we divided all the variables by the value of fixed assets. Within the cross section context, since the real effective exchange rate will be the same for all establishments within a year, we had to use the ratio of the export price (P_x) of the product to its domestic price (P_d) as an indicator of the relative profitability of foreign sales relative to domestic sales.

The results as presented are statistically satisfactory. The R^2 is quite high for cross–sectional analysis. P_x/P_d has the right sign and is statistically significant. As the export price of the product increases relative to the domestic price, the level of exports increases. This shows that non–traditional exporters respond positively to relative price changes. Such relative price changes could be induced by changes in the exchange rate, changes in the external prices of the exported product or fiscal incentives that increase the relative profitability of exporting. The elasticity of supply, however, is only around 0.2. This compares with a low short–run elasticity of supply of cocoa of 0.165 for Ghana and 0.3 for Côte d'Ivoire (Loxley, 1988:31).

Constraints to Exporting

The regression analysis has shown that supply response to policy measures is inelastic in the short run. While price measures create the incentives, the ability of entrepreneurs to respond to these incentives may also depend on non–price variables. Removal of constraints arising from this source as well as other sources could increase the price elasticity of supply. In this section therefore we discuss the constraints limiting the response of firms on the basis of answers from our field survey.

In discussing constraints to exporting one has to be careful to distinguish between constraints faced by existing exporters and those faced by non–exporters who might export. We shall as far as possible try to keep this distinction in view.

In the field survey, exporting firms were asked to outline the problems they faced as exporters and non–exporting firms were asked to indicate the reasons why they were not currently exporting. Their answers are given in Table 4.8 in order of importance.

Finance is the most common factor perceived by firms as a constraint to exporting, applicable to both exporters and non–exporters. In the case of exporters, the type of finance envisaged is export finance and working capital. Some exporters stated specifically that they needed finance to re–capitalise their companies. Evidence from South East Asian countries

Table 4.7
Cross-sectional regression results

	Equation:	
Non-traditional exports	*(1)*	*(2)*
Constant	-1.0074*	-0.7733
	(-2.3342)	(-1.7887)
$Log(P_x/P_d)$	0.2375**	0.1849**
	(3.3688)	(2.7059)
Log (M)	-0.2208*	
	(-2.0974)	
log(Y)	0.8734**	0.7037**
	(4.6211)	(3.9725)
adjusted R^2	0.3952	0.3495

Note: Values in parentheses are t-ratios.
** Significant at the 1% level.
* Significant at the 5% level.

Table 4.8
Constraints identified by actual and potential exporters

Problems of exporters:	*Reasons for not exporting:*
1. Finance	1. Markets
2. Infrastructure	= 2. Finance
3. Marketing	= 2. Domestic market has not been satisfied
4. Cumbersome exporting procedures	= 2. Uncompetitiveness: Difficulty in meeting international standards, and packaging, high cost of production
5. Stealing at the ports	5. Inadequate technology
=6. Unstable world market prices	6. High cost of inputs
=6. Frequency of ships to W. Africa	7. Inadequate supply of inputs
8. High cost of fuel	8. Customs procedures
9. Cost of inputs	

suggests that access to export finance was important in improving the responsiveness of exporters (Rhee, 1985). The emphasis here was on the provision of pre–shipment working capital loans. Export credit insurance schemes were also important since they helped exporters gain confidence in tapping new markets.

In the case of non–exporters wishing to export, the need is for long–term investment finance in order to develop their export capabilities. This need relates to a second constraint in terms of technology and the competitiveness of their products.

While macroeconomic policies may create the relevant incentives, a deficient infrastructure can frustrate and hinder the response of entrepreneurs. Infrastructural inadequacies were cited by a large number of the firms interviewed as a source of difficulty in exporting. Table 4.8 shows infrastructural difficulties as ranking second only to finance as a problem. For horticultural exporters, lack of cold storage facilities at airports can result in considerable losses due to deterioration in the quality of the product before export. Similar difficulties arise for other exporters in terms of the availability of secure, reasonably priced storage and warehousing facilities at the ports. These facilities, according to exporters, are either inadequate or very expensive. This need is particularly important if one takes into consideration the infrequency of the shipping service to Ghana and the cost of such services.

Exporting involves entry into new markets. For most companies that are not part of an international chain of companies this can be difficult and expensive. For most respondents, both exporters and non–exporters, our field experience shows that markets and marketing pose considerable actual or perceived difficulties. Frequently cited by exporting firms are lack of foreign markets, lack of agents abroad and the high costs of operating in foreign markets. This difficulty is acknowledged in the literature dealing with the experience of other countries (Helleiner, 1988). Ignorance about conditions in external markets was the most frequently cited reason why firms producing solely for the domestic market were not exporting. A booming or protected domestic market may be more attractive than exporting; quite a number of firms were not interested in exporting because they could not satisfy even the domestic market. This factor ranked second with finance in non–exporters' reasons why they were not exporting.

A number of non–exporters, mostly in manufacturing, clearly indicated that they were unable to export because their products were uncompetitive in both quality and price. This reason was ranked second, together with finance and the unsatisfied domestic market, among reasons for not exporting. In some cases it was simply the packaging of

the product that was regarded as not up to international standards. Most of these firms were established during the import–substitution industrialisation phase. One, for instance, indicated that it was using the same machinery and technology as when it was established in 1959. For most of such enterprises exporting would require changes in their technologies involving huge capital outlays. In view of the fact that most of these enterprises are emerging from very low levels of operation during the period of the controlled regime, they have neither the accumulated reserves to finance such investments nor the performance record to justify large bank loans.

As discussed earlier, exporting involves filling in various forms and interacting with different agencies and establishments to obtain licences and permits. These operations can be time–consuming and cumbersome—a difficulty frequently cited by exporters. Even though the forms to be completed have now been reduced to one, the administrative processes involved are still burdensome. Respondents asked for decentralisation of the processing of the A2 forms, which is centralised in the Bank of Ghana in Accra. They also asked for the A2 forms to be made more readily available. Most exporters would prefer a one–stop export centre where all the relevant documents could be processed. For the non–exporters, the cumbersome exporting procedure was similarly perceived to be a deterrent.

Firms were asked to identify measures which could be adopted to improve the incentive structure. Their answers are listed below in order of importance:

(i) financial assistance;
(ii) assistance of the GEPC to find markets for their products;
(iii) reduction of transport charges;
(iv) simplifying export processing procedure.

Other measures identified by individual respondents were an increase in the foreign exchange retention scheme to 45 per cent. This issue had been raised by some exporters in previous export fora organised under the auspices of the GEPC. With the liberalisation of the payments system, firms should perhaps be allowed to determine freely the proportion of export earnings they wish to keep abroad. This would amount to a 100 per cent retention.[9] A salt exporter complained about the high Civil

9. Since this report was concluded government has initiated policies to increase the export earnings retention to 100 per cent.

Defence Organisation tolls imposed on it. There was also a request for the provision of advanced reliable information on shipping and container space. One respondent asked for further fiscal incentives, e.g. a reduction in the sales tax. It is interesting to note that the most frequently requested measure, namely financial assistance, is the one incentive which has been missing from the export promotion package until quite recently. An export guarantee scheme administered by the Bank of Ghana has been in existence, but it has not been well publicised and has not met the needs of exporters. Most exporters wanted credit at subsidised costs. One exporter in particular mentioned that subsidised credit was required because of the need to hold a higher level of stocks than was needed by competitors in the developed economies, because of the unreliability of suppliers of imported inputs.

Conclusion

There has been a positive supply response to the policy measures instituted under the ERP. Exchange rate policy has played a very important part in generating this response. This experience is similar to that of other developing countries, for example Mauritius (McQueen, 1991) and Kenya (Stevens, 1991b), where the depreciation of the real exchange rate was an important explanation of the expansion of NTEs.

The results of the field survey also show that non–price variables (for example, information on available markets, the state of the infrastructure and exporting procedures) are also important as constraints limiting the extent and speed with which firms can respond to the price incentives. This is also similar to the experience of other countries. In Jamaica, for example, it was found that the quality of labour was a constraint on the expansion of clothing exports (Stevens, 1991a).

An important issue that emerges from the field survey concerns the sustainability of firms' exporting activities. Only a minority can be described as being predominantly exporters. This suggests that if the enabling environment were not maintained there would be a shift away from exporting to producing for the domestic market. Recent calls for protection for certain import–substituting industries have to be viewed with caution because protection can penalise exports through shifts in relative prices.

5
Conclusions and Recommendations

In this study we have examined the response of non–traditional exports to the policies undertaken during the ERP/SAP period. It has been seen that, measured from a number of points of view, these policies created a conducive incentive system for non–traditional export expansion as compared with the earlier situation. In terms of relative prices, ERP/SAP policies, especially the exchange rate depreciations, improved export prices relative to those of domestic goods. The improved operating environment has increased the efficiency and competitiveness of firms as compared with the situation in the early 1980s.

Both exporters and non–exporters are aware of certain components of the incentive system and perceive them as creating an atmosphere conducive to exporting. This is despite remaining weaknesses, for example the bureaucratic processes which exporters have to undergo before final shipments can be made.

NTEs have responded well to the improved incentives. Some diversification has been achieved. There has been an increase in the share of processed and semi–processed goods in total NTEs. By 1990 this share had reached 53.1 per cent.

Short–run elasticities are low, even though they are higher for NTEs than for all exports. A number of constraints hindering the responsiveness of exporters have been identified. It would seem from the literature, however, that these are problems common to the early phase of diversification.

As a general strategy of diversification, the easier phase is diversification into other primary products. Our own analysis shows the negative relationship between the level of primary and agricultural exports and earnings stability. It is essential therefore to take measures to encourage diversification into manufactured exports. Although the ERP/SAP has improved capacity utilisation in industry, the level remains very low at 38 per cent for 1989 and 37 per cent for 1990 (World Bank, 1991). Diversification into exporting may provide a way of improving the level of capacity utilisation.

In terms of recommendations, the survey reveals conclusively that the exchange rate is the single most important variable. The maintenance of

appropriate macroeconomic, trade and exchange rate policies is imperative for the sustained development of NTEs. It is necessary in order to build up the confidence of actual and potential exporters regarding the permanence of these policies. There is evidence that some anti–export bias still persists in the trade regime and this needs to be removed. The large size of the incidence parameter, 'w' (see Chapter 3), suggests that indiscriminate protection of the import–substituting sector adversely affects the export sector. Any policies which may be implemented to encourage production for the domestic market will need to be accompanied by measures to maintain the incentive to export.

The wide range of values of the estimated effective protection rates suggests the need to rationalise tariff structures further. The present tariff structure is an escalating one, with the average tax rate on consumer goods twice that on raw materials. It may be necessary to narrow these differentials.

The question of finance must be addressed in order to ensure the continuing viability of NTEs. Most producers surveyed regarded the credit squeeze as a major constraint. From the point of view of most firms, it was also the most important issue needing to be addressed. It must be conceded, however, that some exporters, even though they may have had plans for exporting on the drawing board, may have lacked the necessary collateral to secure bank credit facilities. It is possible that, even though the firms perceive availability of credit to be their most pressing constraint, it is not in fact so critical. A study of small–scale enterprises in a medium–sized town in Ghana found that most entrepreneurs could not indicate what they would do with the credit if it was immediately made available to them (Aryeetey, 1991). Perhaps the establishment of the Export Finance Company is a move in the right direction.

However, in terms of longer–term finance for the development of NTEs, particularly manufactured exports, long–term rehabilitation finance will be desirable. This could be similar to the rehabilitation finance arranged through the International Development Association for traditional exports, such as timber and mining. The establishment of a special fund to finance the development of NTEs is essential. This should include provision for financial assistance to non–exporters who, but for the financial outlay, would have embarked on exporting. The scheme being advocated here could be a Special Non–Traditional Exports Fund.

Closely connected with the issue of finance is the need for technical assistance to a number of the long–established manufacturing enterprises. Such enterprises, as indicated earlier, produce poor–quality, high–cost products basically for the domestic market. Exporting may require new

technologies in order to enable them to produce products meeting international standards at competitive prices.

For many firms paucity of information on external markets and foreign outlets for their products constitutes a major constraint. At present government trade (commercial) attachés operate in Europe and North America. A more radical approach would be the establishment of specific trade boards or agencies in the two regions instead of a docile embassy–type trade representation. The boards or agencies could conduct market surveys in large and growing markets abroad. They could set up a registry of existing domestic producing firms and their products. They could then identify the demand for goods produced in Ghana and try to match the foreign demand with a local producer. They could also provide information on potential export products. Information provided by this service could include prices, quality standards and packaging. Government could also enter into bilateral export agreements to enhance the volume of NTEs.

In order for this service to be successful, it would, however, be necessary to remove the hurdles created by inadequate infrastructure and burdensome exporting procedures. Some exporters have suggested an Exports Processing Centre. Our survey revealed that exporters of perishable goods were particularly indignant about delays. The provision of adequate storage facilities at the ports to prevent damage to products and losses is also very important. This need not be provided by government. Premises located either at, or close to, the points of entry could be leased to individuals who could then provide this service.

In general, dissemination of information has been a major problem in policy implementation. Except for the foreign exchange retention scheme, most exporters in our survey were unaware of the existence of the components of the incentive package. For the export promotion package to be effective it will be necessary to improve publicity so that all entrepreneurs become aware of the various incentives.

It is obvious from this study that there is need for further micro–level research into the manufacturing sector, to examine in greater detail the nature of the constraints on production, in particular finance, and to identify those factors which will encourage firms to export. The experience of other countries, and the manner in which they have addressed the problem of markets, would be particularly relevant. Moreover, this study has concentrated on merchandise exports and has excluded the services sector. There is, therefore, a need for further research to include invisible exports.

Appendix Table
Economic indicators for Ghana, 1970-90

Year	*1970*	*1975*	*1980*	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*	*1990*
Population (million)	8.6	9.9	10.7	11.1	11.5	11.9	12.4	12.7	13.1	13.4	13.7	14.1	14.5
GDP per capita (cedis) in 1975 prices	–	493	466	438	394	366	394	397	407	412	446	446	464
GDP per capita Index (1975=100)	-	100	105	101	94	89	98	103	108	112	119	126	-
Real GDP growth	–	–	0.5	-3.5	-6.9	-4.6	8.6	5.1	5.2	4.8	5.6	5.1	3.1
Inflation rate (%)	9	30	50	117	22	122.9	39.7	10.4	24.6	39.8	31.4	25.0	37.2
Official exchange rate (cedis/US dollar)	1.02	1.15	2.75	2.75	2.75	3.45	36	54	106	162	202	270	330
Real effective exchange rate (1980=100)	28.1	30.8	100.0	220.5	276.8	242.0	72.2	52.2	30.6	25.2	22.2	19.9	17.2
Sectoral rates of growth:													
- agriculture	-	-	2.2	-2.6	-5.5	-2.4	9.7	0.7	3.3	0.0	3.6	4.2	-2.4
- industry	-	-	0.3	-16.0	-17.0	-12.0	-9.1	17.6	7.6	11.3	7.4	4.2	403
- services	-	-	-2.3	3.3	-3.6	2.3	6.6	7.5	6.5	9.4	7.8	5.8	886

continued...

Appendix Table continued...

Year	*1970*	*1975*	*1980*	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*	*1990*
Balance of payments: Current account ($ million)	-67.7	-17.6	-29.2	-420.8	-108.6	-174.1	-38.8	-134.2	-43.0	-96.9	-65.8	-97.5	–
Export (fob) merchandise	427.0	801.0	1103.6	710.7	607.0	439.1	565.9	632.4	773.4	826.8	881.0	807.2	–
Imports (fob) merchandise	-375.1	-650.5	-908.3	-954.3	-588.7	-499.7	-533.0	-668.7	-712.5	-951.5	-993.4	-999.0	–
Trade balance	51.9	150.4	195.3	-243.6	18.3	-60.6	32.9	-36.3	60.9	-124.7	-112.4	-191.8	–
Overall balance	2.5	106.3	-30.1	-288.7	-9.6	-172.9	35.6	14.1	-60.8	140.2	181.1	-155.6	–
Producer price of cocoa (cedis/m/tonne)	293	597	3,603	3,644	10,628	12,000	20,000	30,000	56,000	85,000	140,000	165,000	174,400
Cocoa output ('000 m/tonne)	413	396	295	258	225	178	158	175	219	228	188	300	295
Cocoa duties (in billion cedis)	–	–	0.8	0.1	0	1.3	5.6	8.1	11.9	30.9	19.9	19.9	31.0
Log exports ('000 m^3)	601.1	–	120	50	50	60	74	143	221	320	330	200.7	–
Sawn timber exports ('000 m^3)	240.8	–	70	50	40	50	57	89	107	170	170	154	–
Minimum wage (cedis per day)	0.8	2	5.3	12	25	35	70	90	146.3	146.3	146.25	170	218

Sources: Ghana Statistical Service *Quarterly Digest of Statistics*, various issues, Accra; IMF, *International Financial Statistics Yearbook*, 1990, Washington, DC; World Bank (1989); World Bank (1991); Ghana Cocoa Board.

References

Abbey, J.L.S. and Clark, C. Scott (1974) 'A Macroeconometric Model of the Ghanaian Economy 1956–69', *The Economic Bulletin of Ghana*, Vol. 4, No. 1, pp. 3–32.

Aghevli, Bijan B. and Marquez-Ruarte, Jorge (1985) 'A Case of Successful Adjustment: Korea's Experience during 1980-84', *IMF Occasional Paper* No. 39. Washington, DC.

Aizeman, Joshua (1985) 'Tariff Liberalization Policy and Financial Restrictions', *Journal of International Economics*, 19: 241–55.

Aryeetey, E. (1991) *The Relationship between Formal and Informal Financial Sectors*. African Economic Research Consortium, Research Paper, Nairobi.

Athukoralo, P. and Huynh, F.C.H. (1987) *Export Instability and Growth: Problems and Prospects for the Developing Economies*. Beckenham: Croom Helm.

Bateman, M.J. (1965) 'Aggregate and Regional Supply Functions for Ghanaian Cocoa 1946–62', *Journal of Farm Economics*, Vol. 47, pp. 384–400.

Bhagwati, J.D. (1988) 'Export Promoting Trade Strategies: Issues and Evidence', *World Bank Research Observer* 3(1): 27–57

Bond, Marion E. (1985) 'Export Demand and Supply for Groups of Non-Oil Developing Countries', *IMF Staff Working Paper* Vol. 32, No. 1. Washington, DC.

Bond, M. and Milne, E. (1987) 'Export Diversification in Developing Countries. Recent Trends and Impact', in *IMF Staff Studies for World Economic Outlook*, (August). Washington, DC: International Monetary Fund.

Clements, E. and Sjaastad, L. (1984) *How Protection Taxes Exports*. London: Trade Policy Centre.

Colombatto, E. (1988) 'New Evidence on Exports and Growth in LDCs', Ld'A–QEH *Development Studies Working Papers* No. 5, (September).

Corden, W.M. (1971) *The Theory of Protection*. London: Oxford University Press.

Franco, G.R. (1981) 'The Optimal Producer Price of Cocoa in Ghana', *Journal of Development Economics*, Vol 8, pp 77–92.

Ffrench–Davis, R. and Pinera, J. (1979) 'Export Promotion Policies in Developing Countries', in de Vries, B.A., *Export Promotion Policies*, World Bank Staff Working Paper No. 313. Washington, DC.

Garcia, J.G. (1981) *The Effects of Exchange Rates and Commercial Policy on Agricultural Incentives in Colombia, 1965-1978.* Washington, DC: International Trade Policy Research Institute.

Ghartey, E.E. (1987) 'Devaluation as a balance of payments corrective measure in developing countries: A study relating to Ghana', *Applied Economics*, Vol. 19, pp. 937–47.

Gyimah–Brempong, K. (1991) 'Export Instability and Economic Growth in Sub–Saharan Africa', *Economic Development and Cultural Change*, Vol. 39, No. 4, pp. 815–28, (July).

Helleiner, G.K. (1988) *Trade Strategies in Medium–Term Adjustment*, paper prepared for the UNU/WIDER project on medium–term strategies for adjustment.

Islam, R. and Wetzel, D.L. (1991) *The Macroeconomics of Public Sector Deficits: A Case Study of Ghana.* World Bank Research Project 675–31. Washington, DC.

Jebuni, C., Asuming–Brempong, S. and Fosu, K.Y. (1990) *The Impact of the Economic Recovery Programme on Agriculture in Ghana*, report submitted to the United States Agency for International Development, Accra.

Jebuni, C.D., Oduro, A., and Tutu, K.A. (1991) 'Trade and Payments Liberalisation and Economic Performance in Ghana'. Paper presented at the African Economic Research Consortium Workshop, Nairobi.

Jebuni, C.D., Sowa, N.K., and Tutu, K.A. (1991) *Exchange Rate Policy and Macroeconomic Performance in Ghana.* AERC Research Paper, Nairobi.

Khan, Mohsin S. and Knight, Malcolm D. (1988) 'Import Compression and Export Performance in Developing Countries', *The Review of Economics and Statistics*, Vol. LXX., No. 2, (May).

Killick, T. (1978) *Development Economics in Action: A Study of Economic Policies in Ghana.* London: Heinemann.

Krueger, Anne O., Schiff, Maurice, and Valdes, Alberto (1988) 'Agricultural Incentives in Developing Countries: Measuring the Effects of Sectoral and Economywide Policies'. *World Bank Economic Review*, Vol. 2, No. 3, pp. 255–72.

Leith, J.C. (1971) 'Export Concentration and Stability: The case of Ghana', *The Economic Bulletin of Ghana* 1: 45–55.

Leith, J.C. (1974) *Foreign Trade Regimes and Economic Development.* New York: National Bureau of Economic Research.

Lim, D. (1976) 'Export Instability and Economic Growth—Return to Fundamentals', *Oxford Bulletin of Economics and Statistics* 38: 311–322.

Loxley, John (1988) 'Ghana, Economic Crisis and the Long Road to Recovery'. The North-South Institute, Ottawa, Canada.

Lyakurwa, W.M. (1991) *Trade Policy and Promotion in Sub–Saharan Africa.* African Economic Research Consortium, Special Paper No. 12, Nairobi.

Massell, B.F. (1970) 'Export Instability and Economic Structure', *American Economic Review,* Vol. 60, 617–31.

May, E. (1985) *Exchange Controls and Parallel Markets in Sub–Saharan Africa: Focus on Ghana.* World Bank Staff Working Paper No. 711. Washington, DC.

McQueen, M. (1991) 'Mauritius: Successful Export Diversification Under Adverse Conditions'. *The Courier,* No. 127, pp. 74–7, (May–June).

Milanovic, B. (1986) *Export Incentive and Turkish Manufactured Exports, 1980–1984.* World Bank Staff Working Paper No. 768, Washington, DC.

Moran (1989) 'Imports Under a Foreign Exchange Constraint', *The World Bank Economic Review* 3(2): 279–295.

Newman, J.L., Lavy, V. and de Vreyer, P. (1990) *The Response of Firms to Relative Price Changes in Côte d'Ivoire. The Implications for Export Subsidies and Devaluations,* paper presented at the African Economic Issues Conference, Nairobi.

Nyanteng, V.K. (1980) *The Declining Cocoa Industry: An Analysis of Some Fundamental Problems.* Technical Publication series, No. 40. Legon: Institute of Statistical, Social and Economic Research.

Oyejide, A.T. (1986) *The Effects of Trade and Exchange Rate Policies on Agriculture in Nigeria,* Research Report No. 55. Washington, DC: IFPRI.

Oyejide, Ademola T. (1990) 'Supply Response in the Context of Structural Adjustment in sub-Saharan Africa', *Special Paper* No. 1, African Research Consortium, Nairobi, Kenya, (February).

Pinto, B. (1985) *Fiscal Deficits, Inflationary Expectations and Parallel Exchange Markets in Ghana: Monetarism in the Tropics?* CPD Discussion Papers, No. 1985–56. Washington, DC: World Bank.

Pinto, B. (1988) *Black Markets for Foreign Exchange, Real Exchange Rates and Inflation.* Policy, Planning and Research Working Paper No. 84. Washington, DC: World Bank.

Pinto, B. (1989) 'Black Market Premia, Exchange Rate Unification, and Inflation in Sub–Saharan Africa', *The World Bank Economic Review* 3(3): 321–338.

Republic of Ghana (1983) *Statement of the Economic Recovery Programme.* Accra.

Republic of Ghana (1987a) *A Programme of Structural Adjustment*. Report prepared by the Government of Ghana for the fourth meeting of the Consultative Group for Ghana.

Republic of Ghana (1987b) *National Programme for Economic Development (Revised)*, (July). Accra.

Republic of Ghana (1988) *Public Investment Programme 1988-90*, Vol. I (Main Report), Accra.

Rhee, Y.W. (1985) *Instruments for Export Policy and Administration: Lessons from the East Asian Experience*. World Bank Staff Working Paper No. 725. Washington, DC.

Riddell, R. (1991) 'Zimbabwe: The Expansion of Non–Traditional Exports: General Explanation', *The Courier*, No. 127, pp. 78–80, (May–June).

Rittenberg, L. (1986) 'Export Growth Performance of Less–Developed Countries', *Journal of Development Economics*, 24, 167–77.

Rothchild, D. and Gyimah–Boadi, E. (1986) 'Ghana's Economic Decline and Development Strategies' in J. Ravenhill (ed.) *Africa in Economic Crisis*. London: Macmillan.

Rourke, B.E. (1974) 'Profitability of cocoa and alternative crops in the Eastern Region, Ghana', in R.A. Kotey, C. Okali and B.E. Rourke (eds.), *Economics of Cocoa Production and Marketing, Proceedings of Cocoa Economics Research Conference*. Legon: Institute of Statistical, Social and Economic Research.

Sjaasted, L. (1980) 'Commercial Policy, "True" Tariffs and Relative Prices', in J. Black and B. Hindley (eds.), *Current Issues in Commercial Policy*. London: MacMillan for the Trade Policy Research Centre.

Statistical Services, *Quarterly Digest of Statistics*, various issues, Accra.

Stevens, C. (1991a) 'Jamaica Manufacturing: Almost Exclusively for Export', *The Courier*, No. 127, pp. 87–90, (May–June).

Stevens, C. (1991b) 'Kenya: Broadening the Range of Agricultural Exports', *The Courier*, No. 127, pp. 70–73, (May–June).

Teal, F. (1985) 'The Foreign Exchange Regime and Growth: A Comparison of Ghana and Ivory Coast', *African Affairs*, Vol. 85(339): 283–295, 267–82.

Tshibaka, T.B. (1986) *The Effects of Trade and Exchange Rate Policies on Agriculture in Zaire*. IFPRI Research Report No. 56. Washington, DC.

UNCTAD (1989) *Handbook of International Trade and Development Statistics*. Geneva.

World Bank (1984) *Toward Sustained Development in Africa*. Washington, DC.

World Bank (1989) *Ghana: Policies and Issues of Structural Adjustment.* Washington, DC.
World Bank (1991) *Ghana Progress on Adjustment.* Washington, DC.

ODI Research Reports

The economy of Ghana suffered a protracted decline during much of the three decades following independence, particularly in the 1970s and early 1980s. With a fast-growing population, Ghana regressed from classification as a medium-income country in the 1960s to a low-income country by the end of the 1970s. Since 1983 the PNDC government has pursued an Economic Recovery Programme (ERP) and substantial growth of output has been achieved. After years of decline, export volumes have also been expanding.

How much of this expansion can be attributed to the ERP is disputed, however, and this is one of a pair of reports, funded by the Overseas Development Administration and co-ordinated by ODI, examining the effects of the ERP on important segments of the Ghanaian economy. *Diversifying Exports*, by a team from the Economics Department of the University of Ghana, studies the important question of the extent to which non-traditional exports have responded to the policies of the ERP.

After reviewing overall export performance and policies towards non-traditional exports, the report draws upon the results of a special survey to examine the incentive structure facing the sector and how its output has responded to this. The nature of remaining constraints on exporters is examined and the report concludes with policy recommendations.

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