

POLICY LESSONS FOR GHANA IN THE 1990S

POLICY SUMMARY OF

“STRUCTURAL ADJUSTMENT POLICIES IN GHANA IN THE 1990S – AN EMPIRICAL ANALYSIS AND POLICY RECOMMENDATIONS”

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Abstract

This paper summarizes macro and sectoral policy recommendations derived from a quantitative analysis of the Ghanaian economy during the 1990s, based on yearly data for the real side variables such as sectoral output and on monthly data for the nominal/macro variables such as the price level and the money supply.

The main driver of inflation is found to be growth in broad money. Monetary base growth targets are seen to be a much more effective tool for inflation control than interest rates, as the influence of interest rates on broad money supply is small and transient. The other two main determinants of inflation are exchange rate depreciation and wholesale food crop price inflation, making exchange rate and trade policy, together with agricultural policy, essential components of effective inflation control.

The exchange rate tends to lag behind inflation, and then correct itself in violent “freely falling” episodes. Therefore, the Bank of Ghana’s interventions to stabilize the exchange rate should consist only of depreciations aiming to prevent overvaluation, never of “defending” the exchange rate.

Because agriculture is supply-constrained and nontraded industry is demand-driven, different strategies are needed to boost their output for domestic use and to improve their contribution to the balance of payments. In the case of agriculture, broad supply-side measures such as provision of infrastructure, credit, and inputs, are necessary to improve the sector’s ability to both supply exportables and satisfy the domestic food market, thus decreasing imports.

In the case of manufacturing, the limiting problem is not productive capacity, but insufficient demand. As substantial fiscal stimulus is not a feasible option, moderate tariffs on imported manufactured final goods would be helpful to decrease import demand while boosting government revenue and demand for domestic manufactured goods, without causing inflationary pressures. These tariffs should be combined with very selective support programs for nontraditional exports.

The already large debt burden and the thin financial sector make fiscal restraint unavoidable. However, as net government demand was the main driver of the economy throughout the 1990s, fiscal restraint alone will have strong recessionary effects unless combined with policies to boost aggregate demand. These should consist of low interest rates, tariffs on imported manufactured final goods, selective support of nontraditional exports, and broad agricultural support measures.

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This paper summarizes the policy recommendations derived from a quantitative study of the Ghanaian economy in the 1990s, and is intended primarily for a non-technical audience. The data compilation and analysis, as well as the theoretical considerations, that led to these recommendations, are presented in more detail in Kraev [2004b].

The paper consists of four sections. Section 1 gives a brief introduction to recent Ghanaian history and introduces in some more detail the research questions, namely to what extent the policies pursued by Ghana during the 1990s corresponded to the standard Structural Adjustment blueprint, and whether other policies could have resulted in better economic performance. Section 2 very briefly reviews the dataset and analysis methods we use. Then, Section 3 discusses one by one the different policy components, such as fiscal, monetary, and trade policy, and Section 4 concludes.

1 Introduction

The experience of Ghana during the last decades is largely representative of Sub-Saharan Africa as a whole. Gross economic mismanagement during the 1970s led to an exchange rate that was almost 1000% overvalued and thus “not so much wrong as irrelevant to economic calculation” [Taylor 1988]. As a result, cocoa production, which was the main source of foreign exchange, had dropped drastically; domestic industries were unable to operate due to lack of parts and intermediate inputs.

After a turbulent period in 1978-1981 that saw several regimes come and go, Flt.-Lt. Jerry Rawlings came to power in a military coup on 31. December 1981. The first year of his rule consisted of “distributionist-cum-populist mobilization” [Gyimah-Boadi and Jeffries 2000]. However, after a year of such policies, which also coincided with a severe drought and a huge repatriation of Ghanaians from Nigeria in 1983, the government decided to change course and seek foreign assistance. The standard IMF-supported structural adjustment reform package (known in Ghana as the Economic Recovery Program) was proclaimed by the government, including a maxi-devaluation, fiscal austerity, tight money, and trade liberalization.

The policy reforms were accompanied by high capital receipts from abroad, mostly from multilateral and bilateral lenders [Killick and Malik 1995], that led to overall balance of payments surpluses in spite of persistent current account deficits as much-needed imports were brought into the country. A more realistic exchange rate, combined with good weather and decreases in smuggling due to better producer prices, increased cocoa export receipts; and thanks to the lifting of the foreign exchange constraint GDP grew by as much as 5% per year.

During the 1980s, these reforms were happening in the political context of a military dictatorship. While there were attempts by various groups to resist the reforms and to launch counter-coups, none of these were able to topple the regime or even present any very effective organized opposition to the reforms. Overall, Ghana in the 1980s was a relatively strong (for the region), authoritarian state.

During the late 1980s the government has embarked on a series of democratization reforms such as decentralization and the establishment of district assemblies, and the early 1990s saw a return to multi-party politics, with a national election taking place in 1992 (with the party of Jerry Rawlings, the PNDC, coming out as the winner).

Given this combination of a relatively well-functioning (if authoritarian) state, wide economic reforms, rebounding GDP and export growth, and a broad move towards decentralization and democracy, it will come as no surprise that during the late 1980s Ghana was widely touted as the “Front-runner in adjustment” [Husain and Faruquee 1994]. As a result, the behavior of the Ghanaian economy was extensively studied by both proponents and opponents of structural adjustment, resulting in substantial literature on the subject.

The democratization process continued unabated through the 1990s. The elections of 1992 were followed by the next round in 1996 (PNDC winning again), and another in 2000, when PNDC lost and peacefully transferred power to the winning party. Overall, Ghana enjoyed remarkable political stability throughout the period.

Given the positive political developments, it is all the more disappointing that they were not matched by economic success. Inflation remained persistently high; in order to boost its popularity prior to the 1992 elections, the government made excessive commitments that led to egregious budget

deficits during 1992-1994, further fueling inflation during that period. Capital formation remained depressed, with a total investment ratio estimated to be 6-12% in 1988 [Killick and Malik 1995], and even exhibited a slight downward trend in the 1990s [Kraev 2004c, Ch. 7]. The continuing capital inflows led to debt buildup and mounting interest payments. The medium-term benefits of liberalization didn't set in; growth turned from high in the late 80s to lagging in early to mid-90s and external debt has increased to an extent that Ghana qualified for the Heavily Indebted Poor Countries (HIPC) initiative.

The question of whether the stagnating state of the economy in the 1990s happened because of some components of the structural adjustment program (such as fiscal austerity or high interest rates), or because the latter was not followed consistently enough (meaning mainly excessive government spending), is far from being settled.

In this paper, we address the following questions: firstly, to what extent did the Ghanaian government actually follow the proclaimed principles of structural adjustment, namely tight monetary and austere fiscal policy, and current and capital account liberalization? Secondly, given the structure of the Ghanaian economy during the period (as derived from careful data investigation in Kraev [2004b]), would a different set of policies have resulted in better macroeconomic performance? The latter question is essentially important because the 1990s have not seen major structural change in the economy, thus the lessons we derive are likely to be relevant to the present as well.

2 Methods

The customary way of answering the kind of questions we are asking here, especially for developing countries, is by building a CGE model. It was our original intent to also do this. However, after conducting an extensive review of CGE models [Kraev 2003], we have discovered that all CGE models have a major flaw: they are not really research tools as much as storytelling tools. That is, a CGE model can contain virtually any description of how a given economy fits together, and still be calibrated to data for any given country. Because CGEs only use data from one year, there is no way to verify how well a given CGE describes a given economy. Thus a CGE model is capable of little more than playing back the assumptions that are built into it.

We address that problem by working with time series instead of a one-year slice such as a CGE would use. We compile a set of yearly Social Accounting Matrices (describing money flows in the economy) for years 1990-2001, and a set of monthly Financial Accounting matrices (describing financial stocks) for the same period, and use selected variables from that dataset to test specific hypotheses, such as whether the nontraded industry output is determined by demand or by productive capacity. The FAM methodology is described in detail in Kraev [2004a], and the actual dataset compilation in Kraev [2004c].

We then use the SAM/FAM time series to test a series of hypotheses about both real-side variables such as price elasticity of import demand, and financial variables such as inflation and money supply growth. As all financial time series are available monthly for most of the period 1990-2001, we can investigate them using ARIMA-X (AutoRegressive Integrated Moving Average with eXogenous variables) econometrics. On the other hand, real-side data is only available yearly, so we test various hypotheses about it by splitting our time period into estimation (1990-1997) and validation (1998-2001) periods, and use the estimation period data to fit a number of functional forms. The functional form that then gives the best prediction performance for the validation period is chosen as the best hypothesis. Details of the procedure and the results are documented in Kraev [2004c], and a summary of the policy conclusions follows.

3 Discussion of Individual Policies

The major indicators of Ghana's compliance with the precepts of structural adjustment are summarized in Table 1. From it we can already see that trade liberalization and capital account liberalization (the latter measured by the degree of overvaluation of the official exchange rate) were real and sus-

	1980-1984	1985-1989	1990-1994	1995-1999	2000
Primary deficit as % of GDP	4.5%	1.2%	3.6%	2.8%	0.4%
Total deficit as % of GDP	6.0%	2.7%	5.9%	8.5%	9.7%
External Debt as % of GDP	38%	58%	77%	92%	128%
Domestic Debt as % of GDP	0%	0%	8%	23%	29%
Broad money growth rate	32%	42%	33%	28%	35%
Nominal TB interest rate	13%	20%	27%	36%	35%
Real TB interest rate ¹	-40%	-6%	9%	14%	17%
Effective import tariff	25%	16%	15%	14%	13%
Effective cocoa duty	51%	35%	28%	35%	14%
Current Account as % of GDP	-3.4%	-1.9%	-5.5%	-6.6%	-7.9%
Exchange rate overvaluation	1279%	50%	4%	1%	0%

Table 1: *Indicators of Ghana's adherence to Structural Adjustment policies.*

tained. On the other hand, monetary policy was anything but tight, and fiscal policy was not really austere, especially not in the mid-1990s. Let us look at each of these in turn.

3.1 Monetary Policy and Inflation

One of the persistent problems of the Ghanaian economy has been out-of-control inflation and money supply growth, at almost triple the average value for either Sub-Saharan Africa or the low-income countries. We see from Table 1 that monetary policy since 1980 has been anything but tight. During the the 1980s, real interest rates were more often than not negative, and money supply growth rates of over 40% were quite common. In the 1990s (likely in reaction to the fiscal excesses) interest rates were raised somewhat, but due to high and volatile inflation real interest rates were still occasionally negative for extended periods, and rarely exceeded 10%; and money supply growth likewise slowed down, but not by much.

High interest rate spreads between lending and deposit rates meant that real rates on deposits were even more likely to be negative than treasury bill rates, giving no incentive to save with the banks. Instead of savings accounts, holding foreign exchange was widely used as way of storing wealth, so that from 1997 BoG included forex holdings in the definition of money [Brownbridge et al. 2000].

One of the goals of the Economic Recovery Program was stimulating credit to the private sector. However, that was hard to achieve because of extremely high government borrowing, which resulted in crowding out of the private sector from the credit market and strangulation of investment. Bank credit to the private sector averaged less than 5% of GDP, and if we adjust it for the increased cost of capital goods (mostly imported), it hardly grew at all in real terms [Brownbridge et al. 2000].

What little bank lending went to the private sector financed working capital rather than investment, especially as the need for working capital went up with constant inflation and depreciation [Aryeetey and Harrigan 2000]. Discussions with private investors and executives of the Private Enterprises Foundation suggested that high nominal interest rates made firms reluctant to use loans for investment purposes, and also increased cost of operation, thus pushing up prices [Brownbridge et al. 2000]. Even though real interest rates were not that high, even in the 1990s, high nominal interest rates combined with very volatile inflation made real rates hard to predict, making borrowing to invest too risky. However, the picture seems to be changing in the late 1990s, with inflation subsiding and real interest rates consistently remaining over the 10% mark.

The huge growth in money supply throughout the 1980s and 1990s is usually taken as the main explanation for the high inflation rates. However, there are also dissenting opinions, such Sowa et al. [Sowa

¹Real interest rates are computed by subtracting CPI inflation from nominal interest rates. CPI is chosen because it is the most readily available deflator.

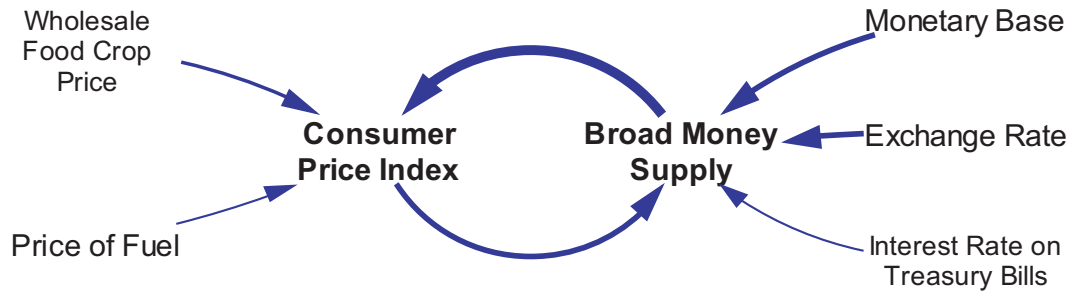


Figure 1: A Summary of the Inflation Model We Identify. Thickness of arrows indicates strength of influence.

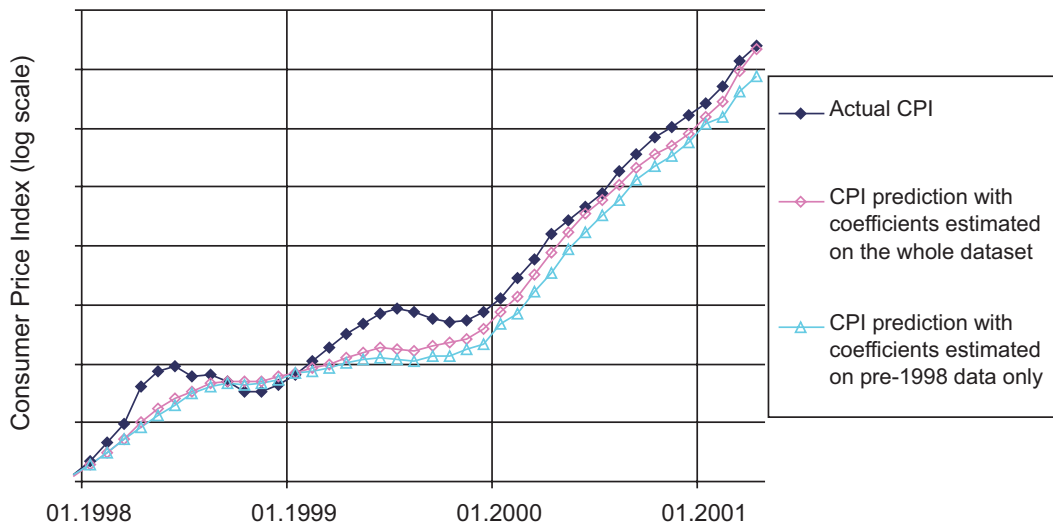


Figure 2: Actual CPI vs. predictions from ARIMA-X regressions

and Kwakye 1991, Sowa 1994, CEPA 1996], who argue that output volatility (especially in food production, which has a weight of 50% of CPI), rather than monetary factors, drives inflation.

Our regressions on monthly data from the 1990s confirm the role of broad money supply as the main driver of inflation. An increase in broad money supply translates almost one-to-one into a CPI increase (with the impact spread out over a year and a half), in agreement with the constant velocity of money hypothesis that the monetarists use.

However, cost factors, namely wholesale price of food crops and to a lesser extent price of fuel, are also important. Further, the growth in broad money supply is driven not only by growth in monetary base, but also by revaluation, that is by the increase in value of foreign-currency denominated assets (such as dollar bills, or dollar-denominated bank accounts, held by the populace) due to exchange rate depreciation. This makes balance of payments deficits directly responsible for inflation on par with central bank-financed government deficits. On the other hand, the influence of interest rates on money supply was statistically significant but too weak to make them an effective instrument for control of broad money growth. The overall model of inflation and money supply growth that we have identified is shown in Figure 1.

The equation for CPI inflation that we derive turns out to be quite robust with respect to choice of time period, and does quite well at predicting the last third of our time period when estimated using only data from the first two thirds, as shown in Figure 2.

What policy conclusions can we draw from this? First of all, control of broad money supply growth is indeed the key to inflation control in Ghana. This means control of monetary base growth and control of the rate of depreciation of the cedi. The first of these means that targeting monetary base growth is a good idea; we will return to exchange rate dynamics in Section 3.2.

On the other hand, the weak influence of interest rates on money supply growth means that the

loose monetary policy of the past two decades was actually a good idea - low interest rates stimulate investment as well as bring down the government's domestic debt service costs, with no drawbacks visible to the author. While *nominal* interest rates were quite high in the 1990s, that was mainly due to high inflation; now that inflation has started to abate in the late 1990s, the Bank of Ghana should lower the nominal rates accordingly, lest investment strangulation through inflation and exchange rate volatility be replaced by strangulation through too high real interest rates.

Finally, remember that an important determinant of inflation was the wholesale price of food crops. This is not surprising as domestic food crop production was increasingly unable to meet domestic demand in the second half of the 1990s, leading to both food price inflation and increased imports. Therefore, increasing the productive capacity of the agricultural sector would have significant payoffs through two channels. Firstly, increased supply would lower food crop prices; secondly, it would lead to lower food imports, thus to a better balance of payments and therefore to lower rates of currency depreciation, also leading to lower inflation. Thus cost-effective agricultural support policies are a vital component of inflation control.

3.2 Exchange Rate Policy and Capital Account Liberalization

Capital account liberalization is one of the more controversial components of structural adjustment, touted as the key to beneficial foreign investment by its proponents, and as a cause of financial instability by its opponents.

Unlike many countries, for example, in Latin America, Ghana does not provide much evidence of the adverse effects, nor indeed of the expected benefits. Net private transfers into Ghana are positive, owing mainly to remittances from Ghanaians working abroad. Capital flight does not appear to be a major issue, possibly because there was not much capital there to begin with; and the banking system is too thin, and the economy too little industrialized, for credit markets to develop substantial boom-bust cycles that could strongly affect the rest of the economy.

On the side of expected benefits, the only major result appears to be the large investments by foreign-owned mining companies. However, as these investments mainly go towards buying capital goods (not produced in Ghana), the constraints on profit repatriation are weak, and the linkages between the mining sector and the rest of the economy are also quite weak, the net benefit to Ghana from the foreign investment in mining appears to be limited at best.

A useful indicator of capital account liberalization is the degree of exchange rate overvaluation, as measured by the ratio of the official to the black market exchange rate. A glance at Table 1 confirms that exchange rate overvaluation went from rampant in the early 1980s to nonexistent in the 1990s, a major success for the reform program.

However, contrary to expectations of neoclassical trade theory, the floating exchange rate was *not* a successful instrument for stabilizing real exchange rates; instead, nominal exchange rate volatility was the cause of most of the volatility in the real exchange rate.

The pattern of exchange rate movements was a series of periods when depreciation rate was fairly stable and lagged behind the rate of inflation, alternating with quite violent "freely falling" strong depreciation periods that re-aligned the relative prices while causing another surge of inflation. There were two such freely falling episodes during our period. The second happened after a period of attempted exchange rate stabilization by the Bank of Ghana, and was the larger of the two.

The message that we extract from that is that the Bank of Ghana should under no circumstances attempt to prop the exchange rate up. Besides being costly to maintain and immediately increasing import demand, an overvalued exchange rate will correct itself anyway once the Bank of Ghana runs out of reserves, and the ensuing depreciation will be all the stronger for the delay.

In fact, in our view the problem of choosing the right intervention strategy in the exchange rate market might be likened to the optimal strategy of forest fire management. Just as in our case inflation gradually accumulates to make an exchange rate overvalued (even though the latter floats), the dry wood in the forest accumulates and increases the fire hazard. If one tries to suppress every fire using all the resources one has, eventually there will be enough dry wood around to make the next fire too big to quench, and that maxi-fire could well cause more damage than all of the smaller ones we had

suppressed. Instead, the correct method of fire management consists in igniting smaller, controllable fires on purpose as soon as there's a little dead wood around, and thus keeping the fires small.

Likewise, it might be worth while to consider an exchange rate policy that is based on watching some relative price indicator such as ratio of retail prices of imported vs. domestically produced manufactures, and intervenes to *depreciate* the exchange rate at first signs of overvaluation. There would be several positive consequences to such a strategy: firstly, one could hope to avoid the damaging maxi-depreciations that happen every so often in the "normal" course of affairs. Secondly, that little extra depreciation would help lower imports via relative price effects, thus reducing future depreciation pressures; thirdly, rather than losing money on propping the exchange rate up, the Bank of Ghana might actually make a bit of a profit while keeping it at a more realistic level.

The only downside would be higher import prices; however, slightly higher but more stable prices of imports might well be better for local businesses and consumers than occasionally lower but more volatile prices.

In addition to preventing overvaluation in the short term, currency stability also requires achieving a viable balance of payments position in the medium term. As long as the trade account, not even counting the debt service payments, is continuously in the red, we cannot expect any currency stability. The balance of payments is the subject of the next section.

3.3 External Trade, Balance of Payments, and Sectoral Behavior

A major goal of most structural adjustment programs is eliminating or reducing what is perceived as price distortions, in particular government subsidies to domestic producers and tariffs on international trade. That was also the case in Ghana. Table 1 shows us is that as opposed to tight money and austere fiscal policy (which did not happen), trade liberalization was quite real and sustained.

According to Aryeetey and Harrigan [2000], liberalizing the current account had the following goals: narrow the gap between official and parallel exchange rate, provide foreign exchange to ease import strangulation, achieve a viable balance of payments position, clear up arrears, and introduce current account convertibility.

With the exception of a viable balance of payments, the objectives have been largely achieved. Guaranteeing a sufficient supply of capital goods and intermediate inputs is quite essential for Ghana, whose primary and secondary sector are not self-sufficient in either of these. The jump of GDP growth rates from the first five years of the 1980s to the next five years after that was likely due primarily to capital goods and intermediate input availability, along with huge aid inflows that financed these.

Although imports and exports grew at about the same rate, the trade balance was always in deficit as the total volume of imports exceeded that of exports by a large margin. While availability of imports necessary for production was doubtless a good thing, the same cannot be said of the concurrent glut of final goods.

This section discusses the impact of these measures on domestic producers, as well as policy options for improving the balance of payments and stimulating domestic production.

The balance of payments deficit must be tackled from both sides, import demand and export supply. Reining in the share of imports in GDP is necessary; a mere expansion of exports (even if all the foreign exchange generated thereby accrued to Ghanaian firms and nationals) would lead to an increased GDP via the multiplier effects, and thus to a proportionate increase in imports, to a large extent negating the positive balance of payments effect of increased exports.

While the discussion so far dealt with the economy as a whole, at this point we have to take into account that the sectoral behavior, and therefore the impact of existing policies and the choice of policy recommendations, is very different for agriculture and industry. The agricultural sector as a whole is supply-constrained, and therefore any increase in production for export will lead to a decrease in production for domestic uses. Therefore, the main problem to tackle there is the productive capacity of the sector as a whole. On the other hand, the binding constraint for domestic manufacturing is not productive capacity, but insufficient demand. Thus the main challenge here is redirecting demand from imported to domestic manufactures. Let us consider each in turn.

3.3.1 Agriculture

The sectoral structure of the Ghanaian economy is dominated by agriculture (primarily food for domestic consumption and cocoa for export). The agricultural sector in Ghana is crucial for any poverty reduction strategy, containing as it does over half of the country's working population (Figure 3) and having by far the highest poverty incidence. Thus, impacts on the agricultural sector are an important gauge of distributional impacts of a policy.

The impacts of the ERP on the agricultural sector appear to have been mixed. On the one hand, the initial opening up to foreign trade, and the flood of foreign assistance to finance it, led to increased availability of capital goods and inputs such as fertilizer; furthermore, the cocoa producers profited from increased producer prices of cocoa and from liberalization of cocoa marketing. On the other hand, the food subsector appears to be weakened by the switch to price incentives for cash crops and by increased cost of fertilizer and labor.

According to Nyanteng and Seini [2000], the level of productivity is generally low due to poor farming practices and very low use of fertilizer, the latter additionally depressed by fertilizer subsidy cuts. Likewise, removal of subsidies on insecticides and fungicides almost tripled their real prices. As government pulled out of procurement, supply and distribution of inputs, private sector did not jump in to fill the gap, resulting in decreased availability.

A major constraint on the marketing of foodstuffs is the poor infrastructure; transportation alone is said to contribute as much as 70% to marketing costs, and storage losses are estimated at between 15% and 30%.

One of the measures to achieve a reduction of government deficit was a reduction or cancellation of government programs such as input procurement and input subsidies for agriculture. Besides the positive revenue impact, an intended consequence was to create a space for the private sector to fill that niche instead of the government, supposedly leading to greater efficiency.

It appears that that policy has achieved the reverse of its intended purpose. First of all, the private sector has not sprung up to fill the gap left by the withdrawal of government programs, as indicated by Nyanteng and Seini [2000] and by the fact that since 1995, Ghana's food crop supply was increasingly scarce (as suggested by the ratio of wholesale food crop price to CPI). This can be expected to have a row of adverse consequences. Firstly, as most of the poor in Ghana are food farmers, and most of the food farmers are poor, reduction in government support of agriculture has directly hit the poorest segment of society.

Secondly, as food production has not been able to keep up with demand, it is very likely that the shortfall was made up through imports. That, in turn, led to a worsening of the balance of payments and therefore higher depreciation rate. Our econometrics suggest that about a quarter to a third of Ghana's broad money supply is foreign currency-denominated, the increased depreciation translated into increased money supply growth and thus directly into higher inflation. Thus we come to the conclusion that curtailing government support of agriculture could well have damaged agriculture and *still* led to higher, or at least not lower, medium-term growth of money supply and inflation.

As at this point export crop and food crop production actually compete with each other for the total productive capacity, agricultural policies should aim to expand the productivity of the sector as a whole. Thus, the optimal policy interventions would be in provisions of infrastructure such as roads and storage facilities, along with credit and reinstatement of input procurement programs and input subsidies. If it is deemed essential that the latter is done by the private sector, then that should be achieved by first making sure the private sector solution works in parallel to the government-run system and only then dismantling the latter.

Our argument here worked the way it did because agriculture is experiencing an aggregate supply constraint. The story for domestic industry, which is demand-driven, is quite different, and is narrated in the next section.

3.3.2 Industry

The main components of the industrial sector are mining, manufacturing (largely for the domestic market), and utilities (largely government-owned). Mining is mostly foreign-owned and its products

are mostly exported. Investment in mining is largely foreign-financed, and thus apart from providing some employment, tax revenue, and modest intermediate input demand, the mining sector appears to be largely insulated from the rest of the economy.

Let us consider the policies of the ERP that affected the industrial sector. A major component of the program was a package of investment incentives, including unlimited repatriation of profits, a reduction in corporate tax rates, and a shift in price incentives for investment favoring export industries and disadvantageous to formerly protected manufacturing industries.

In response to these investment incentives together with generous tax concessions, the mining sector did indeed grow substantially. However, the impacts of ERP policies on domestic manufacturing appear to have been largely negative.

Real depreciation and real interest rate raises led to almost a doubling of the cost of capital goods relative to the GDP deflator from 1983 to 1991 [Brownbridge et al. 2000, Table 4.2]. That did not affect mining as it was largely indifferent to domestic price levels, but it combined with the competition from increased imports to depress manufacturing.

Our investigation of the data strongly suggests that the domestic nontraded manufacturing sector is demand-driven, and furthermore that the allocation of overall demand for industrial output between imports and domestic goods is very responsive to their relative price. Therefore the elimination or lowering of import tariffs had several adverse impacts: firstly, it negatively affected a source of government revenue; secondly, it worsened the balance of payments through increased demand for imports; and finally, it depressed domestic manufacturing, thus lowering the national income. As domestic manufacturing is *not* supply-constrained but demand-driven, depressing manufacturing of goods for domestic consumption did *not* contribute to increasing exports.

Based on that analysis, what policies can we suggest? Firstly, a moderate increase in tariffs on manufactured consumption goods would be effective in lowering import demand, increasing demand for domestic industry as well as raising extra revenue. That would appear to us an easy, low cost/high gain measure. The key to doing it right is firstly, to restrict the tariffs to final goods and the few capital goods for which domestic substitutes are readily available; secondly, to keep the increases moderate; and finally, to restrict the demand-redirecting measures to manufactured goods (as opposed to agricultural produce). While this is not by itself a sufficient measure, it would provide fast balance of payments relief while stimulating import substitutes as well as aggregate demand; whereas the equally necessary measures to expand export supply would take several years to kick in.

While the moderate tariffs on manufactured final goods imports will provide a degree of immediate balance of payments relief and stimulus for domestic manufacturing, over the medium term it is also necessary to expand the supply of exports. As industry as a whole is not supply-constrained, any program of support of export industries needs to be specifically targeted to reach these, rather than the whole of the secondary sector. As non-traditional exports are by far the fastest growing export component, the optimal approach to industrial export support is likely to consist in programs specific to each export sub-category, rather than broad macroeconomic measures of the kind that we discuss here.

Finally, we have seen in Section 3.1 that interest rates are not a very effective tool of monetary policy, while high interest rates are a serious impediment to investment. Therefore interest rates should be as low as the domestic credit market will allow. This should go a long way to stimulate investment and manufacturing for domestic consumption.

3.3.3 Labor Market and the Role of the Informal Sector

The reader will have wondered why the discussion so far has omitted the role of the informal sector in the economy. After all, the informal sector contains about a quarter of the labor force and is responsible for about a third of GDP. The reason for that omission is scarcity of data: almost the only source of data on the informal sector are the household surveys, of which there were only two in the 1990s; thus, analysis of informal sector behavior is to a large extent a matter of conjecture. It is mostly composed of small, independent producers, and anecdotal evidence suggests that one of its major roles is to absorb labor displaced from wage employment in the formal sector, be it in government or in

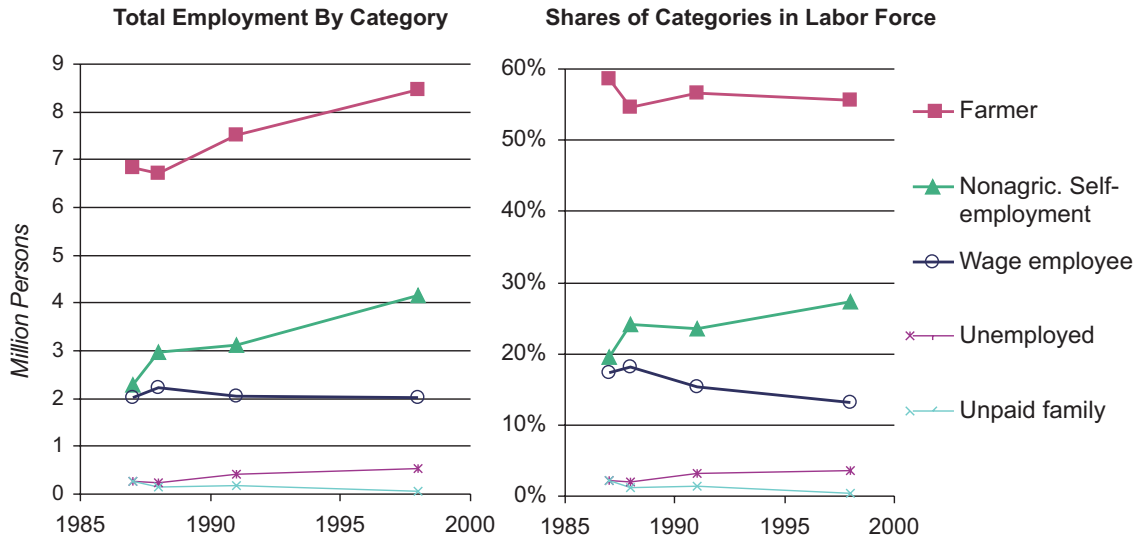


Figure 3: *Employment composition (GLSS1-4 and author's estimates)*

private firms.

Let us take that description, along with the preceding discussion of the other sectors, to get an assessment of broad distributional impacts of the macro and sectoral policies during the 1990s.

First of all, the state of the economy in the 1990s, while not stellar, was in many respects vastly superior to the state of the economy in the early 1980s, in the few years prior to the adoption of the structural adjustment program. All population groups have profited from the positive GDP growth and increased availability of imports, both production inputs and final goods. However, on top of that various sectors were affected differently. Employment in manufacturing was adversely affected by low demand, removal of protection, and high interest rates; the displaced workers ended up in the informal sector, mainly providing services. Likewise, agriculture, in particular food crop production, was adversely affected by removal of government support programs and competition from imports. Cocoa producers, while also adversely affected by removal of government support programs, fared comparatively better due to increased cocoa purchasing prices. The sector least adversely affected by liberalization was the informal sector, as it was never government-supported in the first place and produced almost exclusively nontradable goods, so faced no competition from imports.

Summing up, while positive GDP growth profited all population groups to some extent, the food farmers and formal sector employees fared worst of all, while informal sector was least adversely affected (largely by default). Thus the net incentives worked towards reallocation of the labor force into the informal sector.

Do available data on labor market trends confirm that view? Figure 3 shows the composition of the labor force in absolute and percentage terms. We see that the majority of the population are farmers, followed by non-agricultural self employment (transport, personal services, etc. - most of these activities fall into the informal sector) and wage employees. Further, we see that the share of farmers in the labor force has remained stable, while wage employment has stagnated in absolute terms and diminished as a share of the labor force. As our analysis suggested, the difference is taken up by the nonagricultural self-employment, that is largely by the informal sector.

This is a disturbing trend, as the informal sector is one of the least productive sectors of the economy, and offers few perspectives for development. To have a chance at working its way out of poverty, Ghana must find ways to stimulate its agricultural sector, which still contains the majority of the population and the vast majority of the poor, and its industrial sector, which is the most promising in terms of higher productivity, lowering of import dependence, and supply of high value added exports.

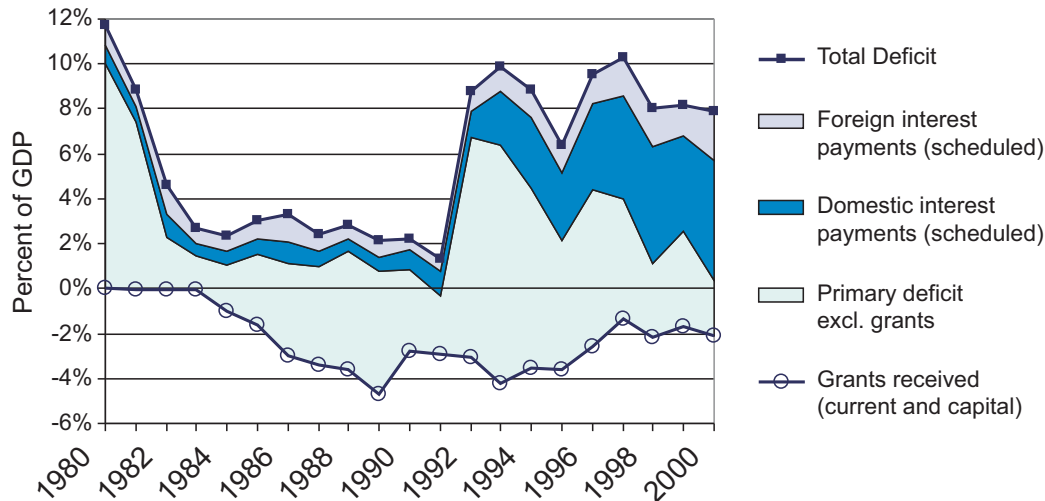


Figure 4: *Composition of the Fiscal Deficit (International Monetary Fund, author's estimates)*

3.4 Fiscal Policy

Fiscal policy is the remaining major policy component for us to discuss. The average deficit values for the last four five-year periods can be seen in Table 1; however, it might be more informative to look at a decomposition of the deficit over time in Figure 4. As the figure packs quite a bit of information, let us go quickly over its contents. All values in Figure 4 are plotted as shares of GDP. The lowermost line (empty circles) represents the total grants received. As they *reduce* the deficit, they are plotted with a minus sign. The large area on top of that represents the primary deficit (that is, without taking into account the expenditure on interest payments) excluding grants; by stacking it onto the grants graph, its upper border represents the primary deficit including grants. Stacked on top of that there are the two areas representing interest payments on domestic and foreign debt, respectively. The topmost line (filled-in squares) is merely there to emphasize that all the areas together stack up to the total deficit.

Looking at Figure 4, we see several distinct periods. First, there is the period of turmoil in 1980-1982 with large deficits and no grants; then from 1984 until 1989 we see growing pre-grant primary deficits compensated by an even larger growth in grants, with the interest payments remaining comparatively small. In 1990 and 1991, grants fell, but so did the primary deficit, actually resulting in a tiny primary surplus.

Unfortunately, this fairly hopeful picture unravels immediately after that. In 1992 (election year, bad cocoa harvest) revenues fell, expenditures rose, and foreign grants stayed low, leading to a huge primary deficit. The primary deficit remained high for the next couple of years, at the same time as grants were shrinking. While the primary deficit was brought under control from 1997 onwards, the interest payments on the debt accumulated during earlier excesses made sure the broad deficit never again fell under 6% of GDP, and generally stayed around 8%.

What recommendations can we make based on the above? First of all, there are clearly compelling arguments for fiscal restraint. The domestic debt service is already a major drain on the budget, the foreign debt service is not too far behind; further borrowing from the central bank would drive inflation, and further borrowing from the domestic banking sector would only worsen the debt service problem, along with pushing domestic interest rates up.

However, the other side of the issue is that throughout the 1990s, government demand was the main driver of the economy, and in fact the only net demand injection during most years. Major reductions in government deficits would therefore certainly have strong recessionary impacts, with domestic industry and the informal sector being hit the hardest; and as domestic industry would be hard hit by the reduction in aggregate demand, its investment demand would also fall, not improving the situation. Thus, government deficit reductions would only be sustainable if combined with aggregate

demand *increases* from some other source. As the net savings of the private sector are quite stable, the main candidate for providing that net demand is the balance of payments, through policies discussed in Section 3.3.

4 Discussion

This paper summarizes the macro and sectoral policy recommendations from a quantitative analysis of the Ghanaian economy during the 1990s, based on yearly data for the real side variables such as sectoral output and monthly data for the nominal/macro variables such as the price level and the money supply.

Looking at how far the government was following structural adjustment policies, we find that current and capital account liberalization was real and sustained, while monetary policy was not at all tight and government indulged in substantial deficits during the mid-1990s. This resulted in a large domestic debt stock, servicing which has presented a growing strain on the budget.

The main driver of inflation is found to be growth in broad money. Monetary base growth targets are seen to be a much more effective tool for inflation control than interest rates, as the influence of interest rates on either inflation or money supply is small and transient.

The other two main determinants of inflation are exchange rate depreciation and wholesale food crop price inflation, making exchange rate and trade policy, together with agricultural policy, essential components of effective inflation control.

The exchange rate tends to lag behind inflation, and then correct itself in violent “freely falling” episodes. Therefore, the Bank of Ghana’s interventions to stabilize the exchange rate should consist only of depreciations aiming to prevent overvaluation, never of “defending” the exchange rate.

Because agriculture is supply-constrained and nontraded industry is demand-driven, different strategies are needed to boost their production for domestic use and to improve their contribution to the balance of payments. In the case of agriculture, broad supply-side measures such as provision of infrastructure, credit, and inputs, are necessary to improve the sector’s ability to both supply exportables and satisfy the domestic food market, thus decreasing imports.

In the case of manufacturing, the limiting problem is not productive capacity, but insufficient demand. As substantial fiscal stimulus is not a feasible option, moderate tariffs on imported manufactured final goods would be helpful to decrease import demand while boosting government revenue and demand for domestic manufactured goods, without causing inflationary pressures. These should be combined with very selective support programs for nontraditional exports.

The already large debt burden and the thin financial sector make fiscal restraint unavoidable. However, as net government demand was the main driver of the economy throughout the 1990s, fiscal restraint alone will have strong recessionary effects unless combined with policies to boost aggregate demand. These should consist of low interest rates, tariffs on imported manufactured final goods, selective support of nontraditional exports, and broad agricultural support measures.

Are these results particular to Ghana in the 1990s, or are they more broadly applicable? First of all, the structure of the Ghanaian economy has not changed much during the 1990s, apart from some deepening of the financial sector. Thus, our policy recommendations are likely to be valid not only for the 1990s, but also for the present.

Furthermore, in Kraev [2004b] we discuss the interrelationships between all the results we present here, along with their implications for the validity in Ghana of two competing schools of economic theory, neoclassical/monetarist and structuralist. While the discussion is too technical to include here, its conclusion is that our empirical results are representative of a small, open economy with a shallow financial system, a weak industrial sector, and large agricultural and informal sectors composed of small producers. As that description would apply to many other developing economies, especially in Sub-Saharan Africa, our empirical results and policy conclusions are likely to carry over to them.

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