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COUNTRY REPORT 3

MALI

Economic Policy and International Trade

This country report is a product of the joint UNDP/World Bank Trade Expansion Program which provides technical and policy advice to countries intending to reform their trade regimes. The views contained herein are those of the authors and do not necessarily reflect those of the United Nations Development Program or the World Bank.

MALI

ECONOMIC POLICY AND INTERNATIONAL TRADE

Country Study prepared for the
World Bank/UNDP Trade Expansion Program

by the

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PREFACE

This is a report of a study conducted under the Trade Expansion Program of the United Nations Development Program (UNDP) and the World Bank. The study team from the Center for Studies and Research on International Development (CERDI) was led by Patrick Guillaumont, Professor at the University of Clermont I and Director of CERDI. Other team members were Shantayanan Devarajan, Professor at Harvard University; Anne-Marie Geourjon, Assistant Professor at the University of Clermont I; Sylviane Guillaumont, Professor at the University of Clermont I; and Henri-François Henner, Professor at the University of Clermont I. The team also benefited from the assistance of Hans-Peter Lankes (World Bank consultant), Sylvie Millot (CERDI consultant), Pascale Phélinas (Research Officer, ORSTOM), Cheikh Sidibé (Chief, Foreign Trade Division, DNAE), and Wendy Takacs (University of Maryland), who assisted the team in the compilation of data or wrote supplementary memoranda to the report.

Although this study was a team effort, various members were responsible for specific chapters of the report. Chapters 1, 2, and 6 were written by P. Guillaumont and S. Guillaumont; Chapter 3 by S. Devarajan; Chapter 4 by A.M. Geourjon; and Chapter 5 b H.F. Henner. Annex 3 was written by Pascale Phélinas.

The team spent July 10-24, 1988, in Mali, where it benefited from the most helpful and fruitful assistance provided by Mr. Youssouf Thiam, World Bank economist in Bamako, and coordinated by the National Directorate of Economic Affairs, in particular its Director, Mr. Démé. It is not possible to list here all the Malian individuals who helped the team in its

work. We trust that each of them will accept our expression of appreciation.

GLOSSARY OF ABBREVIATIONS

BCEAO	Central Bank of West African States (Banque Centrale des Etats de l'Afrique de l'Ouest)
BDM	Development Bank of Mali (Banque de Développement du Mali)
BIC	tax on industrial and commercial profit (impôt sur les bénéfices industriels et commerciaux)
CERDI	Center for Studies and Research on International Development, Clermont University (Centre d'Etudes et de Recherches sur le Développement International)
CMDT	Textile Development Company of Mali (Compagnie Malienne pour le Développement de Textiles)
CPS	tax for import (export) services (contribution pour prestations de services rendus à l'importation [l'exportation])
DFI	import tax
IAS	tax on businesses and services (impôt sur les affaires et les services)
IRVM	tax on income on securities (impôt sur le revenue des valeurs mobilières)
ISCP	special tax on specific products (impôt spécial sur certain produits)
OSRP	Office of Price Stabilization and Control (l'Office du Stabilisation et de Régulation des Prix)
TCR	regional cooperation tax (taxe de coopération régionale)
WAEC	West African Economic Community
WAMU	West African Monetary Union

SUMMARY

To increase its rate of economic growth while preserving external equilibrium Mali needs to encourage exports and some import substitution. Economic policy can help to achieve these goals.

First, Mali must ensure the general competitiveness of the economy while preventing any increase in the real effective exchange rate (that is, the ratio of Malian prices to international prices, converted at the official exchange rate). Although the available data suggest that the real effective exchange rate has not noticeably appreciated over the past fifteen years, Mali's growth objectives, the drop in cotton prices, and the increase in the country's debt-service obligations, together with the great length and permeability of Mali's borders, make competitiveness a vital necessity.

To enable accurate tracking of the country's competitiveness, a reliable consumer price index is needed. Competitiveness also requires strict control over money creation and aggregate demand. Specifically, this will entail limiting the budget deficit, even if increased external financing is available.

In addition to these general measures regarding competitiveness, implementation of a set of specific measures concerning credit, taxation, customs duties, regulation of foreign trade, and the setting of cotton prices will help to expand international trade.

Credit policy. Although credit policy is determined within the framework of the rules of the West African Monetary Union (WAMU), national monetary authorities have some discretion in terms of the overall policy adopted and in the use of selective instruments.

For credit policy to contribute effectively to the expansion of exports and to import substitution it must ensure the competitiveness of the economy and therefore limit growth of the money supply. The steps currently being taken to restructure the Development Bank of Mali (BDM) and improve its debt collection and to settle the government's domestic arrears should serve to lessen the constraint imposed by overall monetary policy on the distribution of credit to productive activities.

The monetary authorities have available an array of selective instruments for channeling credit toward export-oriented and import-substituting activities. Efforts can be made to expand the number of activities benefiting from seasonal credit (which is unrestricted and available at low interest), but these activities must not result in an encroachment of public control over sectors that are now the preserve of private enterprise. To establish credit programs for small and medium-size productive enterprises, it would be desirable to adopt a more flexible interest rate policy (with respect to WAMU rules).

Fiscal policy. Mali can also use fiscal policy to promote foreign trade. Nominal tax rates in Mali are close to those in other African countries, but the effective tax burden in Mali is much lighter, which shows the narrowness of Mali's tax base. The proportion of indirect taxes is also higher in Mali, which indicates that the tax system is creating distortions. Since any increase in the budget deficit could cause the real exchange rate to appreciate, all recommendations are based on the assumption that the government's revenues must be protected.

The most important indirect tax, the turnover tax on business and services (IAS) introduces several biases into the tax system. The first bias is that in favor of vertically integrated (and generally large)

enterprises; this is due to the fact that deductions allowed in computing the IAS cover only some of the inputs used. The second bias works to the disadvantage of exporters in two ways: (1) since the IAS is a deduction-based value added tax (VAT) and not a true rebate system VAT, taxes already paid on inputs are not refunded, and (2) the IAS is higher on imported than on locally produced goods, thereby raising the cost of imported inputs used by exporters.

Deductions allowable against the IAS should be increased, which would eliminate, for enterprises producing for the domestic market, the bias against companies that are not vertically integrated. The bias against exporters could be corrected by replacing the IAS with a rebate system VAT and by equalizing taxation of imports and local goods.

Changes in two other taxes are recommended. Mali's export taxes, which (apart from the case of cotton) generate only 1 percent of the government's revenues, should be eliminated and the IAS rate increased to make up the lost revenue. Second, the tax on income from securities should be abolished. Direct taxes in Mali have an impact on the performance of the economy, especially on capital formation. There is a big difference between the effective tax burden on the profits of a corporation and the profits of a partnership because of the securities tax. This distortion can discourage capital formation and its cause should be eliminated.

Customs policy. The promotion of foreign trade in Mali can be facilitated by an appropriate customs policy. Improvement of the efficiency of the customs system is particularly important for facilitating a movement from quantitative restrictions to tariffs, which would then become the chief protection instrument within the framework of a rational

industrial policy. The recommendations suggested here are consistent with the continuation of the government's Economic Reform Program.

Prevention of smuggling and tariff evasion is a prerequisite for any measure designed to improve the tariff system because the greater the amount of smuggling and evasion the more inefficient will be the tariff-based protection policy and the greater the resultant distortions. Simplification of the customs system, which is currently extremely complex, would help to reduce these problems and facilitate the collection of duties and taxes. Three categories of measures are suggested for simplifying the system: elimination of official prices, reduction of exemptions from import duties and taxes, and a return to three separate systems of import taxation, that is, customs duty, import tax (DFI), and VAT.

Simplification of the customs system would also facilitate economic analysis of the tariff structure, thereby enabling a separation of protective and revenue generating functions. Sectors needing protection and the period for which protection should be provided would need to be carefully and systematically determined. The protection policy must be separated from the budgetary objectives. To this end the turnover tax (IAS or VAT) would be used solely to generate tax revenues, which would result in elimination of all discrimination between imported and local products, while the DFI would be used purely as a protection instrument. Until a systematic analysis is undertaken of the sectors warranting special protection, greater neutrality of the customs system would appear desirable in order to lessen existing distortions. To this end it would be helpful to increase the uniformity of the DFI rates applicable to products in the same category.

Finally, all customs tariffs create a handicap for the export sector that should be reduced by eliminating taxes and duties on exports (with a few exceptions) and introducing a VAT. A general exemption should be granted from taxes and duties on imported inputs used in the manufacture of exports, including the 5 percent tax for special import services (CPS).

Regulatory framework. Certain rules and regulations governing foreign trade have remained unchanged since the period of state control of the economy and are not appropriate to the government's present economic policy. These rules were established to achieve three objectives: satisfaction of the population's basic needs, collection of statistical data on trade flows for tax and customs purposes, and protection of national production.

With the liberalization of trade the first objective is now pursued through market mechanisms and not by regulation. The instruments used to achieve the remaining two objectives are import and export licenses, inventory declarations, and more recently, product-linking requirements (for sugar and tea). Analysis of the functioning of these regulatory procedures and of their economic consequences shows that they perform their function poorly and that they tend to divert trade into unrecorded flows, thereby reducing both customs revenues and protection of domestic production.

Two sets of measures are recommended to ease the constraints imposed on imports and exports and thereby to lessen the temptation to fraud and the resulting distortions. These measures include elimination of the import license system, except for certain special items, and elimination of export licenses. A second category of measures is intended to strengthen the effectiveness of administrative control to help ensure

that customs duties are actually collected and that real protection is provided where warranted. The efficiency of customs administration can be enhanced by simplifying operations, providing better training and better pay for staff (or incentives for ensuring that proper duties are actually paid), and taking more vigorous action to stamp out corruption.

As for linking imports and domestic production, which has worked well for sugar but not for tea, it seems difficult to develop this policy into a general protection system because of its inefficiency when local products and imports are not homogeneous and because of the risks of lower productivity in sectors protected in this way.

Cotton pricing policy. The policy concerning producer prices for cotton, the country's chief export product, is a key foreign trade policy instrument. Cotton pricing policy tries to reconcile four objectives: maintaining a link between the producer price and the international price trend (to ensure the efficient allocation of national resources to cotton production), stabilizing the producer price (to encourage innovation in the sector and prevent excessive fluctuations in production), ensuring a minimum level of fiscal revenue for the government, and preventing large variations in these revenues over time.

Several systems are conceivable for supporting these objectives. In the case of Mali, to ensure both that the producer price is in line with the international price trend and that it has some measure of stability, it is recommended that a guaranteed export price be set, based on the past international price trend. This export price can then be used to fix the price paid to producers while also ensuring a modest contribution to the state budget.

A stabilization fund should also be established to prevent instability in state revenues. To ensure proper use of the funds, it is recommended that the stabilization fund be autonomous and that it be required to deposit its reserves in an account with the Central Bank of West African States (BCEAO).

INTRODUCTION

Expansion of trade is a particularly important issue in Mali today. Mali is very dependent on imports to supply many of its needs while its export receipts are derived primarily from two products, cotton and cattle, so they are subject to considerable fluctuation. A policy encouraging export development and diversification is necessary, but Mali also needs an effective import-substitution policy.

Mali's trade policy has to be formulated with due regard to the specific characteristics of the Malian economy. Mali is still at a low level of economic development. The country is landlocked, which is a handicap to exports, while the immense length of its borders (7,000 kilometers) makes smuggling easier and protection of domestic production more difficult. The public sector is large but is currently being reorganized and downscaled under the liberalization policy. Mali belongs to the West African Monetary Union (WAMU), which guarantees the convertibility of its currency while prohibiting Mali from unilaterally adjusting its nominal exchange rate. Certain of its key products (livestock in particular) face difficult competition because of the protection given to producers in industrial countries. On the more positive side is the dynamism of the country's traders, which can be an asset for the promotion of national products.

A trade policy aimed at export promotion and efficient import substitution involves two main aspects. First, the general competitiveness of the economy needs to be ensured through appropriate macroeconomic policies. Second, specific incentive measures are needed in different fields: credit policy, fiscal policy, customs policy, foreign trade

policy, and agricultural export pricing policy for cotton. While economic policy measures can have an impact on foreign trade, and trade expansion policy merges to some extent with the structural adjustment policy, the following analysis concentrates on the measures most likely to directly affect foreign trade.

CHAPTER 1

THE GENERAL QUEST FOR COMPETITIVENESS: THE ROLE OF MACROECONOMIC POLICY

Expansion of trade in an economy undergoing liberalization requires a competitive price structure. The following sections examine what this competitiveness means for Mali and how it can be influenced by macroeconomic policy.

1.1 The Need to Ensure Competitiveness

In a small and largely liberalized market economy, with a fixed exchange rate, the price of exportable and importable (tradable) goods is in the long run essentially determined by the prices prevailing in other countries (corrected for the exogenous movement of the nominal effective exchange rate, that is, the mean of the relevant bilateral exchange rates). These prices constitute an absolute constraint for export activities, but they are also determining for import-substitution activities in an economy such as Mali's where such activities are rarely sheltered against competition from unofficial imports. The volume of exports and imports then depends on the level of domestic costs (cost of inputs and nontradable goods), which determines the profitability of export and import-substitution activities. These costs depend on elements as varied as wages, domestic transportation, profit margins, and taxes.

Measuring changes in competitiveness is always difficult, but is particularly so in the case of the Malian economy because of lack of reliable price statistics for the different sectors. On the basis of statistics currently available, the following observations can be made.

An initial, approximate measure of changes in competitiveness can be derived by comparing the price indexes for agricultural and industrial products with those for services, both measured using the sector deflators of the national accounts. Agricultural and industrial goods are assumed to be tradables, which means their prices depend on prices outside Mali and on trade policy, whereas services are generally considered to be nontradables with prices that reflect the cost of domestic inputs. For this rough estimate, 1970 is selected as the base year and the exchange rate is assumed to have been at an equilibrium level as a result of the 50 percent devaluation in 1967, followed by a period of restrictive monetary and budgetary policy. It appears from the national accounts data for Mali published by the World Bank (1987c)[1] that the index constituted by the ratio of the services deflator to the deflator for agricultural and industry tended to decline between 1970 and 1985, and especially from 1978 onward (column 1, Table 1-1 at the end of this chapter). This could indicate an improvement in competitiveness.

This diagnosis is confirmed by another measure of competitiveness, the real effective exchange rate (REER) index, which is the index of the ratio of prices in Mali to those of its main trading partners, corrected for the movement of the nominal effective exchange rate, that is, the index of the average exchange rate with respect to those partner countries. The REER index was calculated using the price index for the partner countries.

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1 These data, from World Tables, are based on the Malian national accounts and systematically made up of estimates of value added by sector at current and constant prices, are not very reliable, especially in regard to the movement of the prices of services.

For Mali, which does not have a consumer price index, the GDP deflator and the private consumption deflator used by the World Bank were used to calculate the REER index (columns 2 and 3 of Table 1-1). Data were weighted by the origin of imports in 1975. When the GDP deflator is used, the calculations show that the REER index had moved downward to 79 by 1987; when the private assumption deflator is used, the index had moved down to 69. These observations match those of Dittus (1987), who uses different indexes and weightings.

If, instead, retail price data are used to construct a retrospective consumer price index (see Lecaillon and Morrison 1986; Poels; and Table 1-2, column 3), the pace of inflation in Mali appears to be faster than suggested by national accounts data, which would indicate a significant appreciation (column 4 of Table 1-1) between 1978 and 1981, followed by some depreciation. However, the weighting of this index (which had to be chosen arbitrarily because of the lack of data on the structure of consumption and the sparse price data available) does not take services into account (at least not for 1968-80) and assigns preponderant significance to prices of tradable goods, especially cereals. Its swifter increase than that of the other indexes described reflects the marked rise in cereal prices rather than any unfavourable movement of relative prices as far as tradables are concerned.

These analyses have to be rounded out by a calculation that takes into account the origin not only of official trade but also of unofficial flows from neighboring countries. It proved impossible to take into account trade with Guinea and Mauritania, which is financed essentially in the parallel exchange market for which we have no data. For the other WAMU countries (Burkina Faso, Côte d'Ivoire, Niger, and Senegal), however, it

was possible to calculate an average REER, with a weighting that approximately reflects the significance of Mali's official and unofficial trade with those countries (Table 1-1, columns 7, 8, and 9). The calculations using the GDP deflator and the private consumption deflator indicate an underlying depreciation of Mali's REER since 1973 with respect to its four WAMU partners.

If there had been no improvement in competitiveness over the past ten years, it would be hard to explain how industrial production could have risen as it has since the early 1980s, even in the sectors exposed to international competition (textiles, foodstuffs). It is also revealing that both the minimum wage and the producer price for cotton, which is an indicator of labor rates in rural areas, are lower in Mali than in the other WAMU countries (Tables 1-3 and 1-4).

Nevertheless, the hypothesis is sometimes put forward that the CFA franc is overvalued in Mali. This hypothesis is apparently based on two considerations. First, if the REER is calculated using as the weight the market share of competing countries for Mali's main exports -- cotton (Dittus 1987) and possibly cattle and groundnuts (Plane 1988) -- the calculations show a marked appreciation up to 1979, followed by a pronounced depreciation to 1984-85 and then a large rise thereafter because of the U.S. share in world cotton exports (Table 1-1, columns 5 and 6). Neither the long-term trend nor the theoretical significance of this movement is clear, in that the fluctuations in the index reflect those of the dollar.

The second argument is derived from the marked trade imbalance, which has tended to increase over recent years, in part because of the

influence of the worsening terms of trade (see Tables 1-5 and 1-6). By making some assumptions about the elasticities of demand for imports and supply of exports with respect to the exchange rate, the difference can be calculated between the present REER and the rate which would permit restoration of equilibrium in the trade balance (Stryker 1987, 39-40). Great caution is required in interpreting the results because of the hypothetical nature of the elasticities used and because the very existence of a trade imbalance implies an overvaluation of the currency in this type of calculation. The fact is that it is normal for a low-income developing country to benefit from a positive net capital transfer.

The two arguments presented above do not therefore support the contention that the CFA franc is overvalued in Mali. Nevertheless, in light of the deterioration in the terms of trade, the desirable REER might be lower today than it was in 1970. Continuing deterioration in the terms of trade over a long period means that a greater volume of exports is required to maintain the trade deficit and the level of imports at a given level. This can only be achieved by means of a domestic price structure that is more favorable to exports, that is, by a depreciation of the REER or by increased productivity in the export sector. In the case of Mali, such assessments are difficult to make because of the uncertainty regarding the actual movement of the terms of trade, as shown by the discrepancy between World Bank and UNCTAD data (Table 1-6) which, moreover, relate only to official trade. In addition, data on productivity in the export sectors are very scanty, although it does seem that some significant productivity gains have been achieved in the cotton sector.

It remains true, nonetheless, that if the objective is to favor exports and import substitution, economic policy in Mali will have to prevent any appreciation of the real exchange rate. This need is intensified because the Malian economy is very open to the outside world, and its long borders make trade protection difficult.

1.2 The Impact of Macroeconomic Policy on Competitiveness

As a WAMU member, Mali cannot change the parity of its currency independently of the other members. However, the impact on the REER, other things being equal, of a devaluation of the CFA franc with respect to the French franc could be much less in Mali than in the other WAMU countries. Mali's trade, more than that of any other WAMU country (except possibly Burkina Faso), is conducted within the WAMU. If the objective is to diversify Mali's exports or to strengthen its competitiveness with respect to imported products, the measures adopted will to a large extent concern Mali's neighboring countries, four of which have the same currency.

Thus other macroeconomic instruments than exchange rate control must be used to control the REER. These instruments are monetary policy and budgetary policy. In a country such as Mali, which does not have a capital market in which the government can borrow to finance its deficit, the budget deficit and money creation are closely linked. Whether it is financed with Central Bank of West African States (BCEAO) advances or external borrowing, the budget deficit tends to increase money creation and therefore aggregate demand. Thus the financing of the deficit causes the prices of domestic goods to rise compared with those of international

goods, bringing about an appreciation of the REER, and eroding competitiveness.[2]

Control of money creation has a beneficial, twofold effect on the equilibrium of the trade balance. First, by limiting domestic spending it reduces imports and encourages exports. Second, it prevents an excessive rise in domestic costs (wages, salaries, and profit margins) and so in the prices of domestic goods relative to international prices, thereby improving competitiveness and lowering the REER. Accordingly, in its policy framework document on medium-term economic and financial policy (hereafter called the policy framework document), the Malian government refers to "maintaining the average annual rate of growth of domestic liquidity at a level below that of GDP, with a view to easing the pressures resulting from excessive demand."

A too restrictive monetary policy could have an unfavorable impact on the balance of payments, however, since it could deprive the productive sectors of the credit needed for expansion. Accordingly, the policy framework document states that "the aim of credit policy will be to channel resources to the productive sectors of the economy, especially agriculture, stockraising, and light industry." Limiting the budget deficit is an

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2 Although the need to limit the budget deficit derives primarily from the effect of the deficit on money creation and aggregate demand, Mali had previously also been constrained under an International Monetary Fund (IMF) standby agreement setting a ceiling of 20 percent of fiscal revenues for the amount of BCEAO advances to the Treasury. Because of Mali's noncompliance with its agreements with the IMF, the country has not received the second tranche of the standby credit and the Malian Treasury has been deprived of the counterpart funds. Meanwhile the BCEAO has been obliged, on behalf of the Treasury, to service the credits already received from the IMF.

essential prerequisite for reconciling strict control of money creation (estimated at 5.2 percent annually over the next five years, according to the policy framework document) with sufficient distribution of credit to the productive sectors.

1.3 Conclusion

In sum, two main recommendations can be drawn concerning competitiveness:

1. Appropriate price indexes are needed to enable accurate monitoring of competitiveness and of productivity. The efforts underway to establish a reliable consumer price index should be pursued vigorously.
2. To ensure expansion of trade, strict control of money creation and aggregate demand is necessary to prevent appreciation of the real effective exchange rate. This means that the budget deficit must be kept down, even when increased external financing is available. The microeconomic measures taken to expand foreign trade must not frustrate these efforts to reduce the deficit.

Table 1-1. Competitiveness Indicators for Mali, 1968-87

Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1968	104.5	103.9	102.1	121.0	109.6	110.0	101.3	99.5	118.0
1969	97.7	102.5	101.8	109.6	104.2	104.6	100.6	99.9	107.5
1970	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1971	99.7	100.9	102.3	110.1	102.7	101.8	105.0	106.4	114.5
1972	98.0	103.7	95.0	113.9	121.1	118.5	110.1	101.0	121.0
1973	97.2	102.2	102.4	130.2	136.0	129.3	105.7	105.9	134.8
1974	111.9	92.9	94.2	119.4	115.3	109.7	97.3	98.6	124.9
1975	87.5	100.4	98.5	117.0	140.1	135.6	101.1	99.2	117.8
1976	98.4	101.4	94.9	113.0	132.3	127.1	103.4	96.7	115.3
1977	104.0	95.2	90.2	119.5	130.0	125.1	89.8	85.1	112.7
1978	105.5	96.0	91.4	134.1	143.2	136.0	89.5	85.2	125.0
1979	94.6	96.0	91.5	122.1	161.1	149.4	87.1	83.0	110.8
1980	89.7	93.0	87.4	132.1	157.4	145.2	84.1	79.0	119.4
1981	92.2	91.5	89.6	131.4	123.9	117.0	85.2	83.4	122.3
1982	93.3	82.9	75.3	121.1	104.6	101.3	79.1	71.8	115.4
1983	92.6	80.8	72.8	115.5	94.3	92.2	79.8	71.9	114.1
1984	86.5	83.9	74.8	115.7	87.4	86.1	83.9	74.8	115.8
1985	84.8	82.4	74.3	118.7	84.8	84.8	83.2	75.0	119.7
1986	n.a.	77.3	69.2	n.a.	103.8	101.3	77.1	69.0	n.a.
1987	n.a.	79.0	68.9	n.a.	123.8	119.8	79.5	69.4	n.a.

Table 1-1 Notes

(1) Relative deflator: ratio of deflator for services and comparable categories to the deflator for agricultural and industrial sectors.

(2), (3), (4) Real effective exchange rates or geometric means of bilateral real exchange rates, calculated according to the following formula: exchange rate index multiplied by price index for Mali and divided by price index for other countries. These means are weighted by the structure of official imports in 1975:

Belgium	1.5%	Japan	1.7%
Côte d'Ivoire	21.1%	Netherlands	2.2%
France	44.9%	Senegal	11.1%
Germany	9.1%	United Kingdom	2.5%
Italy	2.2%	United States	3.7%

For partner countries: consumer price indexes.
For Mali:

- Indicator 2: GDP deflator, from World Bank (1987), adjusted for years 1982-87 by unpublished World Bank data derived from latest Malian national accounts.
- Indicator 3: private consumption deflator, same source as GDP deflator.
- Indicator 4: consumer price index (see notes to Table 1-2).

Source: 1968-80, Lecaillon and Morrison 1986, Annex 8; 1980-85, UNCTAD index.

(5), (6) Real effective exchange rates or geometric means of bilateral real exchange rates, calculated according to the same formula as above using consumer price indexes for the partner countries and the GDP deflator for Mali. These means are weighted according to the significance in world trade of Mali's competitors for cotton exports (year 1975) for indicator 5 and for cotton, groundnut, and beef exports (year 1975) for indicator 6, namely:

- Cotton 79.4%	Egypt 12.4%, Mexico 8.2%, Pakistan 8.5%, Turkey 9.5%, United States 61.4%
- Groundnuts 10.8%	Argentina 19.2%, Brazil 10.6%, Hong Kong 16.1%, Senegal 9.1%
- Beef 9.8%	Argentina 13.8%, Australia 26.1%, France 18.5%, Germany 23.3%, Netherlands 18.3%

(7), (8), (9) Real effective exchange rates (geometric mean) vis-à-vis neighbor countries belonging to the WAMU:

Weighting:	Côte d'Ivoire	60%
	Senegal	20%
	Burkina Faso	10%
	Niger	10%

For partner WAMU countries: consumer price index index.
For Mali: indicator 7, GDP deflator; indicator 8, private consumption deflator; and indicator 9, consumer price index, in accordance with indicators 2, 3, and 4.

Table 1-2. Price Indexes for Mali, 1968-87

Year	GDP deflator [a]	Private consumption deflator [a]	Consumer price indexes [b]
1968	37.2	38.9	30.5
1969	39.0	41.2	29.4
1970	41.3	43.9	29.1
1971	43.5	46.9	33.4
1972	46.6	45.5	36.1
1973	49.5	52.8	44.5
1974	52.4	56.5	47.4
1975	63.0	65.8	51.7
1976	69.9	69.6	54.9
1977	75.3	75.9	66.6
1978	82.8	83.8	81.4
1979	91.8	93.1	82.3
1980	100.0	100.0	100.0
1981	110.9	115.6	112.1
1982	113.4	109.6	116.7
1983	121.8	116.7	122.6
1984	135.9	129.0	132.1
1985	140.5	134.8	142.3
1986	135.3	128.8	n.a.
1987	141.2	131.1	n.a.

a From World Bank (1987c), adjusted for 1982-87 by unpublished World Bank data derived from Malian national accounts.

b For 1968-80, cost of living index (Lecaillon and Morrison 1986), weighted 2/3 for index of food products on free market (National Directorate of Statistics data) and 1/3 for nonfood products index constructed by authors (clothing 46%, kerosene 24%, lighting 9%, utensils 21%); for 1980-85, consumer price index (Poels; supplemented for 1980-86 by UNCTAD data), weighted 52% for food products and 47% for nonfood products (rent 4.9%, miscellaneous 5.0%, energy 6.6%, transportation 9.1%, hygiene 9.6%, clothing 13.1%, and furniture 19.6%).

Table 1-3. Minimum Wage in West African Monetary Union Countries, 1976-88
(CFA francs per hour as of January 1 each year)

Year	Côte d'Ivoire	Burkina Faso	Senegal	Niger	Mali
1976	115.00	53.00	107.05	48.00	36.361
1977	115.00	72.00	107.05	48.00	36.361
1978	143.75	72.00	107.05	75.67	37.232
1979	158.125	90.00	107.05	75.67	37.232
1980	174.00	90.00	133.81	109.2	44.150
1981	174.00	90.00	140.50	109.2	44.150
1982	191.40	114.00	152.04	109.2	49.919
1983	191.40	114.00	175.00	109.2	49.919
1984	191.40	114.00	175.00	109.2	49.919
1985	191.40	114.00	183.75	109.2	49.919
1986	191.40	114.00	183.75	109.2	67.220
1987	191.40	114.00	183.75	109.2	67.220
1988	191.40	114.00	183.75	109.2	67.220

Note: The minimum wage is the salaire minimum interprofessionnel garanti (SMIG).

Source: BCEAO, Notes d'information et statistiques, "Monetary and financial statistics," by country 1985-88.

Table 1-4. Producer Prices for Seed Cotton in West African Monetary Union Countries, 1979/80 to 1987/88 (CFA francs per kilogram)

Year	Côte d'Ivoire	Burkina Faso	Senegal	Niger	Mali
1979/80	80	55	55	62	55
1980/81	80	55	60	62	55
1981/82	80	62	68	80	65
1982/83	80	62	70	120	65
1983/84	100	70	70	120	74.65
1984/85	115	90	70	120	75
1985/86	115	100	100	130	85
1986/87	115	100	100	130	85
1987/88			100	110	85

Source: BCEAO, Notes d'information et statistiques, "Economic and monetary statistics," by country, 1985-88.

Table 1-5. Movement of Balance of Payments Positions as a Percentage of GDP in Mali, 1970-87

Year	Trade balance (goods balance)	Current balance (including transfers)
1970	-1.3	-0.5
1971	-2.5	-2.4
1972	-3.9	-2.4
1973	-8.8	-5.2
1974	-12.5	-6.9
1975	-8.8	-7.0
1976	-1.9	-4.6
1977	1.3	0.5
1978	-8.9	-8.3
1979	-8.1	-7.3
1980	-6.2	-7.8
1981	-8.2	-10.2
1982	-7.4	-8.9
1983	-7.6	-9.1
1984	-5.9	-6.2
1985	-27.7	-12.5
1986	-18.5	-11.0
1987	-11.9	-5.7

Source: For balance of payments positions, 1970-81, IMF, International Financial Statistics, various years; 1982-84, IMF (1987, Table 13); 1985-87, IMF, "Memorandum on Economic and Financial Policy for 1988-1992," Table 2. For gross domestic product, 1970-81, World Bank (1987c); 1982-87, World Bank, adjusted data based on Malian national accounts.

Table 1-6. Movement of Terms of Trade for Mali, 1966-86
(official trade only)

Year	UNCTAD	World Tables
1966		146.0
1967		157.1
1968		158.7
1969		170.7
1970	114	180.2
1971		172.2
1972		168.8
1973	119	182.2
1974	103	111.9
1975	104	100.6
1976	133	128.6
1977	127	119.6
1978	116	119.6
1979	105	105.3
1980	100	100.0
1981	108	92.8
1982	102	82.6
1983	111	92.9
1984	109	92.6
1985	112	81.6]
1986	108	73.5

Note: UNCTAD data are the result of the ratio of export to import unit values, whereas World Bank data are based on international prices for commodities and unit value indexes for manufactures. The marked divergence between the two series is discussed in the text.

Source: UNCTAD; World Bank (1987c, 286-87).

CHAPTER 2

CREDIT POLICY

A selective credit policy favoring export-oriented or import-substituting activities has to take two constraints into account, one financial, the other institutional. The financial constraint relates to the fact that credit policy has to fit into a relatively restrictive overall monetary policy framework. The second constraint derives from the fact that Mali belongs to the West African Monetary Union (WAMU), which means that monetary policy instruments, including selective instruments, are laid down for the union as a whole. Application of the selective policy is the responsibility of national monetary authorities (National Credit Councils), however, so these authorities have a certain amount of room to maneuver.

2.1 Easing of the Overall Constraint

Credit growth, which was negative in 1987, is estimated at 4.2 percent for 1988. If the inflation forecast of 4.3 percent for 1988 measured by the GDP deflator is taken into account, credit for 1988 will probably be found to have remained unchanged or even to have fallen slightly in real terms. If the economic plan for the period 1988-92 is in fact carried out, credit to the economy should grow by about 11 percent in nominal terms and 7-8 percent in real terms in the years ahead.

Given the present situation, a difficult transitional period lies ahead for the development of productive activities. To increase credit to certain activities there is currently no alternative to cutting credit to others. In this connection, two steps appear indispensable. One is

restructuring of the Development Bank of Mali (BDM) which receives 50 percent of all deposits but grants a larger proportion of credit. The other is reduction of the government's arrears.

The BDM must continue its efforts to recover arrears. Collection of arrears has three beneficial effects: (1) by improving the BDM's cash position, it gives greater liquidity to deposits, a significant proportion of which is presently frozen, and it thereby improves the general liquidity of the economy; (2) by reducing the amount of credit outstanding from the BDM, it brings the total credit to the economy below its official limit, thereby freeing an additional margin of credit that the Central Bank of West African States (BCEAO) can then make available to other local banks; and finally, (3) by reducing the BDM's liabilities, the collection of arrears also lessens the burden that the BDM's losses represent for Mali's public finances. Settlement of the BDM's situation by means of external assistance and conversion of the bank from a public to a semipublic corporation will not produce any additional credit margin for the economy, but this restructuring is nevertheless essential in the long term for the smooth functioning of the banking system.

Several public and private sector enterprises are unable to repay bank credit because the government is behind in its payments to them. As a result, a part of all banks' assets is frozen. The nonliquidity of postal checking accounts also constitutes a problem for the cash position of certain enterprises.

The government's domestic arrears of CFAF 23.7 billion in 1987 were equal to about one-quarter of the CFAF 95 billion in credit to the economy as a whole in that year. These arrears have created a real liquidity crisis. Its impact on foreign trade is similar to, although less

severe than, the effects of a lack of foreign exchange, a problem affecting many developing countries, which, unlike Mali, do not have the advantage of guaranteed convertibility. The enterprises owed money by the government are unable to pay their suppliers and consequently cannot obtain supplies or invest as they would like to. Settling the government's domestic arrears, as envisaged in the government policy framework document, is accordingly an essential prerequisite for expansion of foreign trade.

2.2 Use of Selective Policy Instruments Favoring Exports and Import Substitution

The BCEAO does not have a selective monetary policy instrument designed exclusively for export promotion, such as the granting of export credits free of restrictions or at preferential discount rates. Selective policy instruments are available, however, for priority sectors, that is, for productive agricultural or industrial activities that are generally directed either to exports or import substitution. These instruments can therefore be used to favor exports without necessarily introducing a bias against import substitution.

These instruments are consistent with the basic objective of limiting credit to commercial activities, particularly when they involve imports, in order that productive activities might benefit. A brief description of the selective monetary policy instruments as formulated for the WAMU and applied in Mali is presented in the following paragraphs before moving on to a consideration of the problems posed by more intensive utilization of these instruments.

2.2.1 Selective Credit Policy Instruments

Selective credit instruments are of two kinds: those that affect credit availability and those that affect its cost.

Selective action on the availability of credit forms a part of a mechanism for overall quantitative control of credit to the economy. The latter takes two forms, one indirect, through limitation of refinancing through the BCEAO, and the other direct, by means of "credit containment."

The total amount of BCEAO refinancing for each member country of the WAMU is set yearly by the BCEAO board, upon recommendation by the respective National Credit Council. The Credit Council has to decide on the proportions that will be allocated to the Treasury and to the banks. To be discountable, bank loans must have been granted to well-managed enterprises; the total discount facility granted to each bank may not exceed 35 percent of its lending. In Mali the only bank that benefits from BCEAO discounting (apart from discounting of seasonal credit) is the BDM, which has not in fact observed the obligation regarding the quality of the claims discounted, thus obliging the BCEAO to consolidate a part of the BDM's overdraft. The selective aspect of this refinancing policy derives from the fact that the refinancing ceiling set for seasonal credit (bank credit "granted for the marketing of local agricultural products, including credit for financing exports of these products") is only advisory whereas it is mandatory for other types of credit.

Credit containment takes the form of ceilings set for the growth of credit provided by banks. As in the case of refinancing, seasonal credit is not included in this limitation. The selective aspect of containment is also apparent in the fact that the BCEAO sets different growth ceilings for different banks. Thus the BDM is not able to increase

its lending; in fact, it has to seek to reduce it (including loans to its creditworthy borrowers), and the margins for credit growth are reserved for the other banks. In setting ceilings, the BCEAO states that it favors banks on the basis of newness in business, quality of management, ability to attract deposits, and extent of lending to the priority sectors, namely agriculture, livestock, and industry.

In addition, two specific instruments serve to further the selectiveness of credit allocation: requirement for prior authorization or approval and sector credit ratios. For all loans over CFAF 30 million banks have to request prior authorization from the BCEAO, which can give preference to local production of goods for export or import substitution. It should be noted, however, that the CFAF 30 million threshold is relatively high in relation to the private sector's credit needs and that the obligation to seek prior authorization appears to constrain the banks unequally, depending on the nature of their clientele. For nonseasonal credit the National Credit Council also sets minimum ratios for the priority sectors and a ceiling ratio for the commercial sector. The extent to which these requirements for prior authorization and sector credit ratios are observed depends on how strictly the relevant penalities (noninterest-bearing reserves with the BCEAO) are applied. The penalities have in fact been imposed with increasing strictness in recent months.

Loans granted against signature or securities alone are not covered by the overall quantitative restrictions on credit or prior authorization requirements, but they can be kept within bounds by means of a provision requirement. In 1986 there was a considerable increase in signature loans because of tighter quantitative restrictions. As a result of numerous defaults, these securities were converted into ordinary loans

and became a major factor in overrunning the growth limits set for such credit. Accordingly, the National Credit Council imposed a 75 percent provision requirement in 1987 for all bank lending against securities.

This requirement has elicited considerable criticism. The measure appears, however, to be a needed and unavoidable response to some obvious abuses, particularly at the level of the BDM, which were beginning to spread to other banks. The measure is favorable to balance of payments equilibrium since it affects primarily import transactions, which commonly involve purchase on credit. Most of the difficulties with the measure are the result of applying it too strictly across the board. The National Credit Council has therefore decided to introduce some flexibility into the rule by allowing the provision to be reduced to 50 percent if the loan applicant is a national production enterprise. Ultimately, once the signature loan situation has been cleared up, it would be logical for the provision to be modulated in accordance with the borrowers' presumed creditworthiness, in the context of a procedure similar to that used for prior authorization.

Finally, it is also possible to obtain medium-term credit from the BCEAO. The conditions for such credit are particularly favorable for small and medium-size enterprises. This credit currently represents only about 14 percent of all credit to the economy, however.

Selectivity in regard to amount of credit is accompanied by selectivity in terms of interest rates. The BCEAO currently applies two discount rates, a preferential or reduced rate of 6 percent and a normal rate of 8.5 percent. Lending rates, which are identical throughout the WAMU, are set at a certain range above the BCEAO's discount rate: 1 to 2 or 1 to 3 points above the discount rate for preferred borrowers and 0 to 5

points for ordinary loans. Preferred credit is seasonal credit (loans for marketing local agricultural products, discounting bills relating to exports or such products, and financing their storage) and loans to small and medium-size enterprises (with outstanding credit of under CFAF 30 million). Given their preferred status, interest rates for seasonal loans, which affect the balance of payments, and loans to small and medium-size enterprises are lower than rates for ordinary loans: 8 percent and 9 percent (maximum), respectively, versus 13.5 percent for ordinary loans.

Loans for small and medium-size enterprises are not limited to those engaged in exporting or import substitution, but it should be noted that the majority of private Malian export-oriented enterprises fall into the small and medium-size category. Cattle and gold exports are increasingly benefiting from this type of credit. The interest rate is positive in real terms but relatively modest (about 4.5 percent with inflation at 3.5 percent).

To sum up, Malian monetary authorities have various means available to them for influencing the distribution of credit in favor of productive activities at the expense of commercial activities: prior authorizations, sector credit ratios, and regulation of lending on signature. The procedure used for seasonal credit (which does not come under the quantitative restrictions and benefits from a preferential rate) makes it possible to favor the marketing of certain national agricultural products. Finally, small and medium-size enterprises are able to obtain credit at considerably lower interest rates than the rest of the economy. The issue to be determined is whether the use of these selective instruments can be strengthened.

2.2.2 The Conditions for More Intensive Use of Selective Credit Instruments

The system of prior approvals and sector credit ratios that makes the channeling of credit to particular sectors possible is limited by the structure of credit demand. Demand is much greater in the commercial sector than in agriculture or industry. Thus the effectiveness of the selective credit policy depends on the other aspects of economic policy, particularly tax and customs policy, which are capable of creating incentives for productive activities (see Chapters 3 and 4).

Two selective credit policy instruments, those involving seasonal credit and preferential treatment of small and medium-size enterprises, warrant special examination.

Currently, the products benefiting from seasonal credit in Mali are cotton (through exports of the Textile Development Company of Mali and the Haute Valée Operation), mangoes (through Fruitema), and rice (through the financial restructuring of the Office du Niger). The BCEAO National Director can also make seasonal credit available to other activities,[3] but eligibility is limited to local products that can be marketed within one year (so that the financing transaction can also be completed within one

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3 "For application of this scale, seasonal credit shall be understood to be bank financing provided exclusively and specifically for the marketing of local agricultural products, including loans for financing the exportation of these products:

-- when this marketing is effected through or under the supervision of agencies directly or indirectly under government control,

-- and when these financing transactions are normally completed within 12 months of the start of the season." (BCEAO, "Taux des opérations de la Banque Centrale des Etats de l'Afrique de l'ouest." Note d'Information No. 354, November 1986).

year). Private traders wishing to obtain such financing must belong to an organization, must accept a certain degree of state control, and must be covered by a guarantee fund that protects the banking system against any risk.

Seasonal credit seems to be an effective instrument for promoting agricultural activities. One example is Sicamali's experiment with exporting shea butter: exports rose from next to nothing to CFAF 2 billion after the introduction of seasonal credit in 1982-83. Currently, exports seem to be limited not because of a lack of credit but because Sicamali, which in principle holds the monopoly for purchasing shea nuts, offers such a low price that shea nut gathering is discouraged and clandestine exports are encouraged.

The liberalization of cereal marketing (millet, sorghum, and maize) has raised the problem of how to provide seasonal credit for cereals, which had been available during the time of the OPAM monopoly. The Cereal Market Restructuring Program has established various lines of credit which enable banks to finance the purchase and storage of cereals; thus farmer's associations can receive ordinary loans from the National Bank for Agricultural Development and other banks as well. The recovery rate for these loans is relatively high. Some experiments are also underway to enable private traders to benefit from seasonal credit or bank guarantees through guarantee funds made available by the Cereal Market Restructuring Program or through mutual economic interest groups ("groupements d'interêt économique"). If guaranteed by a state agency (OPAM for example) these loans to the private sector could acquire the status of seasonal credit. Making cereal marketing and storage credit available for farmers associations and private traders is particularly

desirable from a trade balance perspective, since favoring the sale of local cereals helps reduce demand for imports. (Merchants are sometimes tempted to buy outside Mali when their suppliers will give them credit.) This development could also favor exports or cereals should surpluses arise.

It has been suggested that seasonal credit should be made more widely available, for the marketing of vegetables, for example, or hides and skins. The difficulty in these cases is that a large number of scattered and very small-scale producers are involved. In general, the issue to be considered is whether expansion of the seasonal credit system is desirable since it would extend government supervision over potential beneficiary activities at a time when liberalization of the economy and promotion of the private sector are the desired objectives. Two factors make expansion of seasonal credit less important than it might otherwise be. The fact that seasonal credit is not subject to the same quantitative restrictions as regular credit will no longer be a consideration if, as envisaged in the medium-term program, regular credit reattains a growth rate of 7-9 percent in real terms. As to the advantage represented by a reduced interest rate, reduced rates could be allowed for most of the activities referred to through the preferential credit program for small and medium-size enterprises.

However, even the application of preferential interest rates is not without certain problems. The margin of 1 to 2 points over the discount rate for seasonal credit seems reasonable for operations that do not (under present circumstances) entail risks for the banks and that involve only low management costs. However, when the banks do not benefit from BCEAO discounting but lend their surplus funds in the money market

(which is generally the case with Malian banks other than the BDM), the money market rate needs to remain lower than the rate charged to preferred borrowers, which is not always the case.

The regulation of lending rates for small and medium-size enterprises is more questionable. Banks indebted to BCEAO see their margin reduced from 5 percentage points for ordinary loans to 3 percentage points, while banks without access to refinancing facilities are obliged to limit the rates they charge to small and medium-size enterprises to 9 percent compared with 13.5 percent on ordinary loans. Requiring lower interest rates can be counterproductive if it discourages banks from granting such loans, which are often more costly (in terms of management) and more risky than ordinary loans. It is true that the general credit conditions are fixed administratively and uniformly for the entire WAMU, but the introduction of some flexibility into the conditions applicable to small and medium-size enterprises would nevertheless be desirable.

2.2.3 Conclusion

The main recommendations presented in this chapter can be summarized as follows.

For the credit policy to contribute effectively to expansion of exports and effective import substitution, it must ensure the competitiveness of the economy. The use of selective credit instruments is therefore constrained by the overall limit on the increase of credit. Efforts currently underway to restructure the BDM and clear the government's domestic arrears, which will help ease this overall constraint, thus assume considerable importance.

The monetary authorities have an adequate array of selective instruments available to them. Efforts can be made to expand the number of activities benefiting from seasonal credit (unrestricted and low interest), but the risk is that this expansion may be achieved by increasing government control over sectors that are currently the preserve of private enterprise.

Finally, with a view to increasing credit for national productive small and medium-size enterprises it would probably be desirable to adopt a more flexible policy (as regards WAMU rules) on the interest rates applicable to them.

CHAPTER 3

FISCAL POLICY

The following facts suggest the significance of the budgetary implications of a trade expansion program in Mali:

1. Official development assistance to Mali accounted for 35 percent of GNP in 1985, which was the highest percentage for any country in the world. While this figure fell to 23 percent in 1986, Mali still ranked fourth highest among all countries receiving assistance (World Bank 1987b).
2. Budget deficits in Mali regularly exceed 10 percent of GDP. They represented 15.2 percent of GDP in 1985 and 12.2 percent in 1986 (World Bank 1988a).
3. The tax-GDP ratio of about 12 percent is lower than the average for Sub-Saharan Africa (World Bank 1988b).
4. Not only is the tax-GPD ratio low, but it is also based primarily on indirect rather than direct taxes. In 1985 the proportion of indirect taxes in total taxation was 72 percent. The average for Sub-Saharan Africa was 62 percent.
5. More than 40 percent of the proceeds from indirect taxes come from taxes on foreign trade (customs duties on imports and taxes on exports).

Several aspects stand out in this picture. Mali is a resource-poor economy with a demand for resources that still exceeds national income. Resource transfers between the public and private sectors are

costly. The nominal tax rate is high, but the tax yield is actually low. The proportion of indirect taxes is high, clearly because they are the easiest to collect. And taxation of foreign trade, which impedes its expansion, represents a significant proportion of the public revenue base.

This chapter examines the fiscal aspects of programs designed to expand foreign trade in Mali. Section 3.1 analyzes the country's fiscal performance from a comparative standpoint, relating Mali's instruments and results to those of the other Sub-Saharan countries. It also examines how the country's chronic budget deficits can affect incentives intended to promote foreign trade. Section 3.2 describes Mali's various fiscal instruments, showing how these instruments create distortions in market signals, and presents recommendations for improving the system without losing fiscal revenue.

3.1 Comparison of Mali's Tax System with Other Systems in Sub-Saharan Africa

Tax-GDP ratios in Mali have regularly been lower by a standard deviation than the average for Sub-Saharan Africa (see Table 3-1). In a study covering the 15-year period 1966-81, Shalizi and Squire (1986) calculated a tax-GDP ratio for Mali of about 11 percent compared with an average of 15 percent for Africa as a whole.[4]

Two factors could explain these low figures: a low tax rate or a narrow tax base. Statutory tax rates are not particularly low in Mali; in

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4 The 11 percent figure does not include Special Facility funds for the supplementary budget. If they are included, Mali's tax-GDP ratio is about 14 percent, which is still lower than the average for Sub-Saharan Africa.

fact, the rates could be categorized as rather high. (Although it is not easy to collect data on average nominal tax rates in the countries considered, Table 3-2 provides an indication of the rates in Mali and in a sample of African countries.)[5] Since the cause of the problem is not low tax rates, the low tax-GDP ratio probably results from the narrow tax base. This, in turn, results from the large number of exemptions granted to taxpayers and the weakness of tax administration. These two aspects of the Malian system will be examined later, after the use made of various fiscal instruments is examined for Mali and neighboring countries.

An important distinction is that between direct and indirect taxes. As a general rule, indirect taxes are easier to collect but they create more distortions in production and consumption decision-making and therefore entail efficiency losses, which are detrimental to the economy. Although countries with relatively undeveloped administrative structures tend to depend more on indirect than direct taxes, the ratio of indirect to direct taxes is particularly high in Mali, even by African standards. This has not always been the case, however (see Table 3-3). The proportion of indirect taxes has grown over the years in Mali while remaining more or less stable in Africa as a whole. There are also indications that internal taxes make up a higher proportion of indirect taxes in Mali than in neighboring countries, suggesting the difficulties in trying to tax international trade, given Mali's 7,000 kilometer border.

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5 The countries included have a system of indirect taxes similar to that of Mali. Their fiscal systems do not include a value added tax (VAT) or turnover tax, but they have a VAT-type system of indirect taxation, which is applied to both imports and locally produced goods.

On the basis of this comparative analysis, what conclusions can be drawn concerning the fiscal policy to be adopted in the context of an international trade expansion program? First, the low tax-GDP ratio compared with the average for African countries shows that there is scope for mobilizing more domestic resources to lessen the budget deficit. This issue ties in with foreign trade because a budget deficit is generally financed either by expanding domestic credit or by borrowing from abroad. The outcome in both cases is a rise in domestic prices relative to the prices of foreign products. The additional drain on national revenue and a possible increase in the domestic money supply would bring about an increase in the general price level: the prices of goods that are not tradable internationally will rise in relation to tradable goods. Regardless of the solution selected, the budget deficit results in an appreciation in the real exchange rate because the nominal exchange rate in Mali is fixed in relation to the French franc. Thus appreciation in the real exchange rate affects the production of tradable goods (import substitutes and exports). It is therefore clear that if the budget deficit can be reduced by increasing the tax-GDP ratio this will have the effect of lowering the real exchange rate and thus of stimulating foreign trade.

It is well known, however, that tax increases can have a detrimental impact on the economy by causing distortions in the signals given to producers and consumers and reducing the efficiency of resource allocation. Specifically, taxes could erode the competitiveness of Malian exports. Thus care must be taken that the instruments selected to increase the tax-GDP ratio do not result in the loss of the benefits the country would stand to gain from reduction of its budget deficit.

As has been noted, indirect taxes generally bring about more distortions in production than do direct taxes because indirect taxes affect production as well as consumption, while direct taxes affect only consumption (and savings). Thus since the proportion of indirect taxes to total tax revenue is much higher in Mali than the average for African countries (72 percent compared to 63 percent) and seems to be rising, one objective of any tax system reform designed to promote foreign trade should be to correct this trend. A move to a rebate-based value added tax (VAT) would help to accomplish this goal. Although a VAT is an indirect tax, its impact is closer to that of a direct tax because it is a tax on final consumption. Section 3.2 examines several measures that would make it possible to modify the structure of direct and indirect taxation in Mali.

Among indirect taxes, customs duties on imports and taxes on exports hamper international trade more than internal taxes because they affect trade directly. Thus it could be considered fortunate that taxes on foreign trade constitute a smaller proportion of overall tax revenue in Mali than in any other African country, although this is a result more of collection problems than of a liberal trade regime. Mali's internal taxes, however, have a direct impact on international trade, particularly on exports.

3.2 Tax Reforms and Promotion of Foreign Trade

This section takes a closer look at the tax instruments used in Mali and recommends certain changes that will help maintain government revenue while minimizing any detrimental effects on trade.

3.2.1 Indirect taxes

The chief indirect tax in Mali is the tax on businesses and services (IAS), a turnover tax, which in 1987 accounted for about 34 percent of government revenue. The IAS could be described as a pseudo value-added tax. Like a VAT, it is levied on both imports and domestic transactions. Agriculture and the commercial sector, however, are exempt from this tax. The industrial and service sectors (excluding trade) and imported consumer goods thus constitute the base of the IAS.

While the IAS aims in certain respects to tax the value added by allowing enterprises to deduct the cost of certain inputs, the deduction is not systematic. The IAS does not completely avoid the problem of being a multistage tax on turnover. Enterprises calculate the IAS as follows. Firms authorized to pay on a flat-rate basis add a government-established profit rate to their labor and input costs, which determines their turnover. Before calculating the IAS due, they deduct from their turnover the cost of inputs subject to IAS at an earlier stage in the production process. It should be noted that no deduction is allowed for services included in the production process (although their cost incorporates the IAS paid on the direct and indirect inputs needed for the production of these services and they are subject to an IAS tax at special rates).[6] Thus besides being computed on a deduction-based rather than a rebate-based system, the IAS does not have a comprehensive deduction system (see Annex 1 for a simplified presentation of the differential impacts of turnover taxes in Mali).

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6 The only exception is for electric power service, which is deductible. But water, for example, is not.

Use of the deduction-based IAS rather than the rebate-based VAT method results in the loss of two advantages of a VAT-type tax. First, with a rebate-system VAT exporters can get back all taxes paid on inputs. Not only are they not required to pay any taxes on their production, but they can also deduct the VAT paid on their domestic sales and receive reimbursement for all taxes paid on inputs. With the deduction-based method these rebates and deductions are not possible because it is not a tax rebate mechanism but a mechanism for reducing the tax base. Nor do tax authorities take into account customs duties paid on inputs, making matters even worse for exporters.[7] As a result, taxes are added to Malian exporters' production cost, which is generally not the case for their competitors.

Second, the rebate-based VAT method does not encourage enterprises to pad their cost figures, because they are not required to pay again the taxes already paid at an earlier stage in the production process. If they overstate their costs, this can be proved from the tax receipts of the firm that sold them the inputs. With the deduction-based method, this is not possible because calculation of the tax payable is based on the enterprise's own returns.

The incompleteness of the deductions permitted under the IAS creates a bias against small enterprises, which obtain needed production services from other enterprises and therefore pay more tax than enterprises with better vertical integration (see Annex 1). Expanding the scope of deductions from the tax base would remove this bias for enterprises selling

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7 The exceptions are enterprises covered by the investment code, which are exempt for five years.

on the domestic market but not for exporters. The relative advantage of small export enterprises over small enterprises selling on the domestic market would also be reduced with this reform. Introduction of a VAT would eliminate the remaining bias.

One final problem with the IAS derives from the fact that imports are treated differently from products manufactured in Mali. Although since 1986 the tax rates have been identical, the IAS on imports is calculated on a base that includes the IAS. For example, if an item costs CFAF 100 at the Malian border, the 20 percent rate is applied to CFAF 120 (i.e., CFAF 100 times 20 percent), making the actual rate 24 percent. This additional tax on imports has the same effect as a customs duty, offering national producers modest protection. But as with other customs duties, this system has the same effect as an export duty, again penalizing Malian products on the international market.

The foregoing analysis clearly shows the need for reform of the IAS. Malian authorities have started a program aimed at introducing a true VAT before 1990, a decision that is bound to benefit the economy. Nonetheless, instituting a real VAT is not without problems. If the VAT is introduced too quickly, the political support essential for the success of a reform of this kind might be lacking. The risk of price hikes is always a concern, as is the possibility of a loss of revenue to the state. Accordingly, a transitional phase would be desirable. The question then becomes what measures would be compatible with reaching the long-term goal of instituting a VAT while in the short run reducing the inefficiencies of the IAS and its adverse effects on exports? Several recommendations are suggested.

1. For computing the IAS, allow deductions of all inputs to the production process including services (particularly financial services). Before taking this step, the private sector should be consulted (through the chamber of commerce) and the potential losses of fiscal revenue should be calculated. If fiscal losses will be significant, they could be partly offset by a modest increase (say, 1 percent) in the IAS rate. This reform would make the tax fairer regardless of the structure of enterprises selling on the domestic market, but it would not do anything to change the indirect tax burden on exports. Its primary purpose would be to pave the way for the subsequent introduction of a VAT.

2. Equalize the effective IAS rates on both imports and products produced in Mali so that exports are not penalized. This change might also result in a drop in revenue and therefore might require a modest increase in the IAS.

3. Broaden the base of the IAS to include, in particular, the large commercial sector, but first undertake a meticulous examination of the enterprises that would be subject to the tax.[8] Many small retailers will first require training in the

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8 This change could create a distortion between the modern and the informal sectors, driving some firms into the informal sector. Establishment of a flat-rate system for small traders might lessen this effect. Moreover, as the change is made to the rebate-based VAT method, incentives to move to the informal sector will be reduced.

accounting procedures for transactions involving the tax. This recommendation should be implemented once traders have been adequately informed about this new form of taxation. The revenue raised through this measure may offset the losses caused by the first two recommendations, making it unnecessary to raise the IAS to any appreciable extent.

4. Finally, the VAT can be introduced. Switching from the deduction-based IAS to the rebate-based VAT will entail some major changes in the way taxes are administered, at both the government and the individual enterprise levels. Consequently, the VAT must not be implemented until the administrative apparatus needed to handle the heavy increase in paperwork has been set in place. It will also be necessary to consult the enterprises and give them the opportunity to familiarize themselves with the changes they will need to make in their accounting procedures. It will be advisable to draw on the experience of other countries, such as Niger, for example, to determine how to manage this phase.

5. Once the VAT has been introduced, it should become the government's chief source of indirect tax revenue. Customs duties and import taxes will no longer be necessary as revenue sources. Because the base for the VAT is broader than that of import duties and taxes, a small increase in the VAT rate can bring in as much revenue as a large increase in the customs duty rate. Export taxes will no longer be needed

to boost government revenue. It will also be advisable to make the VAT identical on imports and on domestic production. Otherwise, even though exporters are reimbursed for the VAT on imports, the slight protection afforded to domestic production by a higher rate on imports would handicap exports by raising the cost of inputs, particularly labor.

Of the other indirect taxes in Mali, customs duties on imports and taxes on exports are the most important. Customs duties and taxes on imports account for about 17 percent of government revenue, according to 1987 budget figures. Overall the structure of customs duties in Mali is consistent with economic efficiency criteria: rates are generally higher on consumer goods than on producer goods. But, as shown in Chapter 4, which examines import duties in detail, there are significant deviations in each category for which there is no apparent reason. Customs duties are also higher on imports that compete with domestic production, which means that customs duties are used as a protection instrument.

In addition to the tax on exports implicit in the structure of import duties, Mali has two categories of explicit export taxes: the tax for import services (CPS) and taxes applicable to specific products. According to 1987 budget data, proceeds from export taxes amounted to CFAF 1.2 billion, or a little more than 1 percent of total revenue. (The total is CFAF 2.2 billion if the CMDT is included.) The proceeds from export taxes in Mali are thus equivalent to a 0.5 percent increase in the IAS rate.[9]

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9 In 1987 the IAS, at an average rate of 10 percent, brought in about CFAF 20 billion. Raising the rate to 10.5 percent would generate an additional CFAF 1 billion.

Given that exports already bear additional taxation because of the imperfections of the IAS deductions mechanism and the absence of any system for refunding import duties. The government should eliminate all explicit export taxes. This move would show exporters that the government is committed to promoting trade, and it would free up administrative resources that could be employed on improving the collection of other taxes.

3.2.2 Direct taxes

Direct taxes affect trade since they affect the overall efficiency of the economy. If these taxes cause distortions in production decision-making, they will have the effect of lowering the efficiency of Malian industry and hence the competitiveness of Malian products on the world market.

The direct tax system in Mali tends to create certain distortions. One major distortion is that created by the multistage structure of taxes on the profits of corporations. Dividends distributed by corporations are, in turn, subject to the tax on income from securities (IRVM) and the tax on industrial and commercial profits (BIC), which cannot be deducted from taxable income for IRVM purposes (see Annex 2). In some instances the incremental rate of the tax on profits is close to 70 percent for corporations, compared with approximately 60 percent for other companies.[10] This bias against corporations could discourage capital formation. Since corporations have more opportunities to establish themselves on the export market, this bias might affect the performance of Malian exports. Such

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10 BIC rates are different for the two types of companies: 45 percent for limited liability companies and 25 percent for the others. See Annex 2 for an explanation of how these tax rates are calculated.

high incremental tax rates also discourage the establishment of new enterprises. This is an important consideration if the expansion of Malian exports is to be based on nontraditional manufactured products because new enterprises will need to be set up to produce them. To eliminate this bias and lessen the tax burden, it would be advisable to eliminate the IRVM, particularly since its yield is negligible (less than CFAF 300 million). Its elimination will also demonstrate the government's support for the creation of a dynamic private sector, which is clearly a vital component of an international trade expansion program.

3.2.3 Conclusion

This chapter examined the fiscal aspects of an expansion of Malian foreign trade. Given that the national economy has relatively limited resources and that the government lacks the capacity to mobilize domestic resources, trade policy reform will have significant consequences for the government budget. Furthermore, as is the case in other developing countries, Mali derives the bulk of its revenue from indirect taxes, which are detrimental to foreign trade.

The changes in the tax system proposed here are guided by two concerns: leaving the government's revenue base intact and improving the efficiency of the economy (or, at least, reducing discrimination against exportable goods). These concerns have guided Mali's economic policy over the last two years and continue to guide reforms planned for the years to come. It is with these considerations in mind that we make the following recommendations:

1. Gradually convert the IAS to a VAT by authorizing deduction of all inputs including services, applying the same IAS rates to imports and to domestically produced goods, broadening the IAS base to include the commercial sector, and switching from the deduction-based method to the rebate-based method.

2. Maintain higher customs duties on consumer goods than on producer goods but try to standardize the rates in each category (or at least reduce the degree of variation).

3. Once the VAT has been introduced, make it the main source of government revenue from indirect taxes, and use customs duties only as a protection instrument.

4. Eliminate export taxes and offset any resultant loss in revenue by a slight increase in the IAS rate.

5. Eliminate the IRVM so that corporations are not subject to double taxation, and if necessary, offset the loss in revenue by a slight increase in the IAS rate.

Adoption of these recommendations will help to encourage the development of Malian foreign trade while ensuring due consideration for Mali's precarious budgetary situation. These recommendations are particularly important as a complement to recommendations made elsewhere in this report. If fiscal issues are neglected, this could seriously compromise the trade expansion program in Mali. Moreover, the trade

expansion program provides an opportunity to rationalize Mali's tax system. The benefits of this reform of the fiscal system are therefore not limited to the international trade sector but extend to the entire economy.

Table 3-1. Comparison of Tax/GDP Ratios in Mali and Sub-Saharan Africa as a Whole, 1975-85

Year	Mali	Sub-Saharan Africa	
		Average	Standard Deviation
1975	9.7	16.2	5.7
1976	10.4	14.9	4.1
1977	11.4	15.9	5.7
1978	1.6	16.6	5.7
1979	9.7	16.0	6.6
1980	9.3	16.6	6.9
1981	10.6	16.0	6.6
1982	11.9	16.7	7.0
1983	12.0	17.3	7.2
1984	11.6	17.6	7.1
1985	11.9	17.2	6.4

Source: World Bank (1988b).

Table 3-2. Statutory Tax Rates in Twelve Sub-Saharan African Countries

Country	Indirect tax rate on domestic production	Indirect tax rate on imports	Income tax rate for individuals (maximum incremental rate)	Corporate business tax
Benin	18-21		60	42
Burkina Faso	18			40
Ethiopia	5-7	18	82	50
Lesotho	6		50	37.5
Malawi	0-30	120	50	50
Mali	10-40	10-40	50	50
Mauritania	4-16	15-25	40	40
Niger	13-30	13-30	60	50
Seychelles	5-10	5-10	50	35
Swaziland	5	5	50	37.5
Togo	2-14	18	55	40
Zaire	18-30	9	60	

Source: Majd (1987).

Table 3-3. A Comparison of Indirect Taxes as Proportion of Total Revenue in Mali and Sub-Saharan Africa as a Whole, 1975-85 (percentages)

Year	Mali	Average for Sub-Saharan Africa
1975	58.3	
1976	55.4	
1977	57.0	62.8
1978	55.4	63.5
1979	56.3	65.2
1980	62.7	64.1
1981	65.7	63.2
1982	61.7	63.5
1983	60.9	63.1
1984	65.0	62.3
1985	71.6	62.8

Source: World Bank (1988b).

CHAPTER 4

CUSTOMS POLICY

Customs tariffs have a direct impact on a country's foreign trade. But before suggesting any changes that might foster the development of foreign trade, it is important to define the objectives of tariff protection and to describe the characteristics of the Malian system. Some reforms are already underway as part of the government's Economic Reform Program.

4.1 Goals of the Tariff Policy

Traditionally, one of the primary goals of customs tariff policy in developing countries is to generate revenue. Foreign trade is regarded as a sector that is easy to tax, even though collection of these taxes is not so easy in a landlocked country such as Mali. In 1987 indirect taxes on international trade, including the IAS on imports, accounted for about 43 percent of government revenue (World Bank 1987a, 50).

Another primary goal of tariff policy is to protect domestic production. Establishment of a customs duty introduces a bias in favor of domestic production. Although protection of domestic production may be justified in a developing country such as Mali, it can create internal distortions that are prejudicial to the economy in that they generate costs for consumers and exporters and lead to inefficient domestic resource allocation.

4.1.1 Features of a "good" customs policy

Three features seem to be essential to a good customs policy: separation of the protection and revenue-generation objectives, neutrality, and simplicity.

The goals of protecting domestic production and generating budget revenue must be separated in order to control the motivational effects of customs tariffs. If import tariffs are raised for budgetary reasons there is a risk of simultaneously increasing the protection of the economy, which may not be desirable. Tariffs should therefore be used primarily as an instrument of protection policy rather than to achieve budgetary goals. It is easier to generate revenue by means of a tax on the consumption of products (both domestic and imported). Because the base for a consumption tax is much broader than that of import tariffs, a lower rate can achieve an equivalent amount of revenue (see Chapter 3) while presenting less of an incentive to evade payment.

Application of a customs tariff entails discrimination between domestic and foreign products and also among various sectors of the domestic economy as certain sectors receive relatively more protection and are therefore more privileged than others. A nonuniform tariff creates disparities among products (favoring those for which the tariff rate, and therefore nominal protection,[11] is higher) and among sectors. Domestic producers are affected by the tariff rate both on imports of competing goods and on inputs they need for their production. Tariffs on competing goods favor domestic producers of those goods while tariffs on inputs penalize the producers that use them. Thus the effects of differential

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11 Nominal protection measures the effect of protection instruments on the prices of products.

customs tariffs vary depending on the production activities concerned; the effective rates of protection for these activities can also be very different.[12]

Customs tariffs are by their nature biased in favor of import substitution activities and against export activities. The levying of taxes on imported products benefits import substitution sectors to the disadvantage of others, particularly export industries. The taxing of imports penalizes exports by raising the cost of imported intermediate products, which in developing countries often constitute a large part of export production. Tariffs also cause increases in domestic consumer prices, which can in turn lead to an increase in the cost of domestic labor, a development that is also unfavorable for export promotion.

The lower the average customs tariff level the less adverse the impact on the export sector. To neutralize the bias against exports, tariff protection needs to be accompanied by special measures to promote exports. In a country such as Mali that has budgetary difficulties, it is easier to lower protection against imports than to promote exports directly by means of a subsidy system, as is done in Senegal and Côte d'Ivoire, for example. Thus the average level of protective tariffs on imports must be low enough to eliminate the handicap imposed on the export sector.

To enhance the neutrality of the incentive system, the average spread of tariffs should also be small. The more homogenous the tariff

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12 The effective rate of protection is equal to the percentage increase in the value added of a production activity attributable to all protection measures in effect.

structure, the easier it is to apply and the fewer the distortions it will cause among different sectors. Tariff neutrality can of course be deliberately abandoned in order to foster expansion of priority sectors, but such differentiation would conflict with the goal of simplification. Protection will be easier to manage if the customs tariff structure is simple and if customs duty and import tax exemptions are limited.

Neutrality and simplicity of the customs tariff should also help to limit fraud, which distorts the results of customs policy.

4.1.2 The problem of fraud[13]

Fraud in the foreign trade sector is very widespread in Mali. The massive extent of the problem creates a major handicap for the economy, with particularly harmful consequences for the production sector, which is put at a great disadvantage relative to the commercial sector, and for government revenue, which is lost as a result of the fraud.

There are two types of fraud: (1) clearing goods through customs on the basis of false declarations of quality, quantity, or origin and (2) smuggling.

Smuggling is encouraged both by internal factors, such as an inadequate fiscal system, insufficient resources for control and prevention, and tolerance on the part of government officials, and by external factors, such as the parallel market between Guinean/Mauritanian francs and the CFA franc and reexportation from Guinea. Also, smuggling

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13 See C.O. Sidibé: Le phénomène de la fraude au Mali: origines et conséquences, a report prepared for this study, for a more extensive examination of the issue of fraud in the foreign trade sector.

is increasingly being done by individuals who carry only small quantities at a time, which makes control and prevention even harder.

On the export side, livestock, hides and skins, and gold are most frequently the target of smugglers, but misrepresentation and outright contrabanding are far more common with imports.[14]

Items smuggled into Mali fall primarily into two categories. The first group is staples and consumer goods for which the state has a monopoly on trade. This category formerly included certain products marketed by SOMIEX (milk, sugar, tea) and still includes cigarettes and pharmaceutical products. It also includes common consumer goods produced outside Mali that compete with domestic production and that enjoy nontariff protection (such as tissue paper, flour, and plastic items). This group of products accounted for more than 90 percent of the value of goods seized; of these, 70 percent involved products normally marketed by a state monopoly. The second category includes products subject to heavy import duties (60 percent or higher). These goods are primarily luxury consumer items such as alcohol, certain textiles not produced locally (cotton damask), and perfumes.

Smuggling represents a considerable loss of revenue for the Treasury, of course, but it also creates internal distortions that can frustrate or even counteract the protection policy. The more extensive smuggling is, the less effective the protection system will be. Smuggled products that compete with products of protected industries reach the

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14 See "Mali: la fraude contre le développement," Africa International no. 207 (July 1988).

domestic market without any limit on quantities or payment of internal taxes or customs duties, which amounts to negative protection for the domestic industry in question.

Control and prevention of smuggling are therefore a prerequisite for implementation of an efficient export promotion system. Several customs policy measures designed to lessen smuggling are presented in Section 4.3 of this chapter. As a general rule the protection system should try to limit the incentives for smuggling by avoiding quantitative restrictions and unduly high tariffs.

4.2 Mali's Tariff Protection System

This section examines the impact of Mali's customs tariffs by describing the various duties and taxes levied on foreign trade and by comparing the real tax burden on imports and exports. The changes made in official prices and import taxes (DFI) since 1986 as part of the Economic Reform Program are also discussed.

4.2.1 Taxation of foreign trade

Duties and taxes on imports. The system of customs duties and taxes payable on imports is more cumbersome and complex than the system for exports. In 1968 imports were taxed according to a three-column system: customs duty, revenue duty, and a turnover tax (the tax on businesses and services, IAS) levied on both imports and domestically produced products. Since then various taxes have been added, making the present system considerably more complicated.

All products, except fuel and fuel products, for which the taxation system is even more complex,[15] are subject to six categories of external and internal duties and taxes. There are three categories of external taxes. The customs duty is applied at a uniform rate of 5 percent, calculated on the basis of the c.i.f. value of the product or its posted (official) value. The DFI varies from 0 to 100 percent depending on the product and is also calculated on the c.i.f. value or the posted value. The DFI is the only external tax that varies by product. The Office of Price Stabilization and Control tax (OSRP) is a special uniform tax of CFAF 5 per net kilogram.

There are also three categories of internal taxes. The IAS is now calculated at the same rates for imported and domestically produced goods: a reduced rate of 10 percent, a normal rate of 20 percent, and a surcharge rate of 40 percent. The tax base is different, however, which serves to maintain a difference between the two categories. For domestic production the base is tax free while for imports it is tax inclusive (the c.i.f. or posted price plus customs duty, DFI, and IAS). When applied in this manner, the IAS is not a neutral tax but provides additional protection for domestic production against competing imports. The deduction-based rather than rebate-based format of the IAS also creates a handicap for Malian exports. Exporters are exempt from payment of the IAS at the production

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15 In addition to the other taxes, fuel and fuel products are subject to a specific internal tax on fuels, the Mining Fund special tax, the tax on petroleum stocks, and the difference in price structure tax (DSP) levied by the Office of Price Stabilization and Control. The latter tax is a mechanism for adjustment between the consumer price and the c.i.f. value plus taxes and marketing costs.

stage but they must pay this tax on their direct and indirect inputs, which reduces the competitiveness of their products (see Chapter 3 on fiscal policy).

A second internal tax, the tax for special import services (CPS) is paid to the Public Debt Amortization Fund to service the national debt rather than to the Treasury. There are no exemptions to this tax, which is 5 percent on all products except petroleum products, for which the rate is 3 percent. It is calculated on the c.i.f. value of products, not their posted value.

The third internal tax, the special tax on certain products (ISCP), also known as the "local tax," is a variable-rate tax payable on seven products: salt, sugar, tea, milk, tobacco, cartridges, and alcohol.

Products originating from third countries, that is, countries outside the West African Economic Community (WAEC), are subject to all the duties and taxes on imports listed above, while products from WAEC countries are less heavily taxed. WAEC products are covered by a preferential system for external duties and taxes; no distinction applies for internal taxes, however. Unprocessed products from WAEC countries are exempt from customs duties, DFI, and the OSRP tax. Some manufactured products qualify for the regional cooperation tax (TCR). For these products, which are covered by a five-year authorization from WAEC authorities, the TCR replaces customs duties, DFI, and the OSRP tax with a single tax at a rate that is lower than that of the other three combined. Manufactured products that are not approved for the TCR are exempt only from customs duties.

Duties and taxes on exports. Three categories of taxes are levied on exports. (A fourth tax, the OSRP tax, is now levied only on groundnut oil.) The export tax, which was originally introduced to ensure adequate supplies for the domestic market, is a variable-rate (from 5 to 10 percent) special or ad valorem tax based on the border or posted value of the product.[16] The CPS is levied on all exports at a uniform rate of 3 percent. The anticyclical tax is levied on export profits when world prices are high. It is levied on the export value added of certain products (groundnuts, groundnut oil, groundnut cakes, cottonseed, cottonseed oil, leather, skins, and gum arabic) and is not applied when prices are low.

4.2.2 The tax burden on imports and exports

It was impossible to study the system of incentives resulting from tariff protection because of the complexity of the tariff and tax structures. The customs tariff comprises more than 4,200 headings, with rates that vary according to product origin. There are also nineteen different taxes levied on imports at the border. The tariff system is further complicated by numerous exemptions and the use of posted values which, by modifying the taxable base of products, make it possible to increase or reduce the protection provided. Thus, although tariff analysis is essential for the formulation of a rational customs policy, the complexity of the Malian system makes this approach impractical. For the

16 The official or posted export values are lower than the real value of the products. They are intended to ease the export taxation of certain products.

same reason, Stryker's study (1987) on protection in Mali in 1986 could not be updated following implementation of the Economic Reform Program.

Given this constraint, the ratio of total taxes levied at customs to the value of products was calculated for 1987 as a simple method for broadly comparing the tariff protection enjoyed by various categories of products. Although simple and convenient, this method has significant deficiencies in that it does not distinguish imports by origin and it takes into account all taxes levied at customs, even the IAS and ISCP, which are also levied on domestically produced goods. It is impossible to eliminate the impact of these taxes, however, because there are three different rates of IAS and the rate of the ISCP varies by product. The outcomes presented here, therefore, are approximates rather than precise assessments of the level of tariff protection for various products.

These ratios were calculated (Table 4-1) for the main products grouped in five categories: primary consumer goods, noncompeting consumer goods, competing consumer goods, noncompeting inputs, and competing inputs. A comparison of the average tariff protection for each category shows that the overall structure of the tariff system is satisfactory: consumer products are more heavily taxed than intermediate goods. Mali's comparative advantage does not lie in the production of intermediate goods. As most of Mali's industries produce consumer goods, the difference in taxation between consumer goods and inputs probably allows domestic activities to benefit from an effective protection level that is higher than the nominal protection of their finished products. Customs tariffs also do a good job of protecting domestic activities. Imported products that compete with domestic products are taxed more heavily than

noncompeting imports in both the consumer product and intermediate goods categories (Table 4-1).

A more detailed look at the findings, however, shows some sizable discrepancies in the taxation levels of various products within each category. From this it can be assumed that certain production activities are penalized to the extent that some of their inputs--most likely those that compete with domestic production--are subject to a greater tax burden than that applied to their final product. The calculations are for 1987, however, and do not take full account of the effects of the May 1987 changes in the DFI rates aimed at correcting such situations (see Section 4.2.3). A decree of May 1988 extended this reform, so these anomalies probably no longer exist.

There is often no economic justification for the marked differences in taxation of the products in the five categories. While in some cases these differences may be legitimate (a higher rate may be used to combat dumping or to provide special protection for a specified period), in most cases they are hard to explain. For example, articles of clothing that compete with domestic production are subject to very different tax burdens, such as 24.7 percent for clothing of textile fabric, 42 percent for knitted goods, and 68.9 percent for footwear. Such differences increase internal distortions, complicate customs collection, and encourage smuggling. The extent of the internal distortions caused by the tariff structure was demonstrated for 1986 by Striker (1987). His study provides an evaluation of nominal and effective protection in Mali for a sample of products and industries and shows the range of the differences that exists between various goods and the different production activities.

The tax burden on exports was evaluated in the same way as that for imports (Table 4-2). The ratio of the total amount of taxes on exports to the value of transactions is equal to 2.9 percent on average, but certain products are highly taxed (at rates of more than 5 percent). Export taxes, which account for only a very small part of government revenue, further penalize export activities, which are already relatively disadvantaged by the tariff system compared with production for the domestic market.

4.2.3 Customs policy reforms undertaken as part of the Economic Reform Program

The Economic Reform Program, which the Malian government has been implementing since 1986 in an effort to reduce the role of the public sector and to increase that of the private sector, has also encompassed reform of the tariff policy. The goals of tariff reform are gradual elimination of the system of posted values and adjustment of the structure of the DFI.

Official or posted values form the basis of import taxes for certain products. This system enables the authorities to vary taxes on the products concerned by modifying the base rather than changing the rate. This is a more flexible means of intervention requiring only an order (arrêté), whereas a change in rates has to be made by decree (décret). This system also has the advantage of simplifying the assessment of the customs value of goods. In addition, it has been used to discourage the consumption of luxury products, to protect national industrial units, and to favor the consumption of certain staples.

The problem with the use of posted prices rather than real values is that this conceals the effects created by customs tariffs and thereby considerably complicates their rational use as a tool of economic policy. For this reason posted values are gradually being eliminated. Order No. 6981/MFC-CAB of August 1, 1986, established four categories of products for which posted values would apply: staples (milk, sugar, tomato concentrate, coffee extract), strategic products (cement, fuel, and fuel products), products vulnerable to smuggling (textiles, knitted goods), and products intended for specific industrial enterprises (manufacturers of sheet metal and of spare parts for bicycles). The posted values for almost all these products were set lower than their real value, with the exception of sugar, home heating oil, certain special fabrics, and cotton bedspreads. Order No. 3155/MFC-CAB of July 16, 1988, again set the posted values for most of the products, although with the exception of milk, sugar, cement, fuel, and fuel products, the new values are fairly close to the real values.

Adjustment of the DFI rate was the second goal of tariff reform under the Economic Reform Program. This reform was intended to eliminate certain anomalies in the tariff structure that resulted in lower tariff rates for several finished products than the rates on inputs used in their production. It became increasingly urgent to lower the rates on inputs as the enterprises involved reached the end of the period for which they qualified for exemptions under the investment code. At the same time, an increase in the DFI was planned for certain finished products.

The changes in the DFI rates were made gradually through the law of March 21, 1986, a decree dated May 12, 1987, and Decrees No. 137 and No. 138 of May 20, 1988. However, the purpose of Decree 138 was not to reshape the structure of the DFI but to compensate, in the case of products subject

to posted values, for the loss of earnings resulting from the reduction of the difference between their posted and their real values.

4.3 Recommendations for Further Customs Policy Reform

The gradual movement of the posted values of products in line with their real values and adjustments of DFI rates have improved the transparency of the customs system and eliminated some major internal distortions. The question now is how to take this policy further to promote foreign trade, that is, to stimulate exports and to ensure the development of profitable import substitution activities.

Section 4.1 showed that a customs system could be improved by separating the protection policy from revenue generation and by simplifying the tariff system and increasing its neutrality. The following proposals are keyed to these three points; certain measures could be implemented quickly while others will require prior studies.

4.3.1 Separation of protection and budgetary goals

Even before a VAT system can be fully implemented steps should be taken to adjust the IAS tax so that it does not affect protection levels, that is, by applying the same rates to imports and local products. Once a VAT has been introduced, it should be regarded as the primary source of revenue, and tariffs must then be used as a protection instrument rather than a means of enhancing revenue. It is also preferable to discourage consumption of luxury goods through an appropriate VAT rate rather than through very high tariffs that simply encourage smuggling. The higher the tariff on a product, the more smugglers stand to gain in relation to the risks they take.

As has already begun under the Economic Recovery Program, the DFI rate must become the only instrument to use for tariff protection.

4.3.2 Simplification of the tariff system

Simplification of the tariff system will make it easier to use and will facilitate the type of economic analysis needed to mold tariff policy into an efficient economic tool. In addition, simplification, by facilitating computerization of customs service, can cut administrative costs and might even lessen evasion and smuggling. The complexity of the existing system greatly complicates collection efforts and encourages the practice of false declarations.

Dropping posted values completely would make the system more transparent, but there are some arguments in favor of retaining them in specific cases. The use of posted values provides a flexible and swift means of intervention, which has advantages when applied to strategic products and staples. The system offers a means of containing the consumer prices for these products, which might justify retention of the system on a temporary basis in a very low-income country.

Although elimination of posted values is not advisable in the near term for milk, sugar, cement, and fuel products,[17] it should be possible in

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17 The posted values for these products are quite different from their real values. They are lower in the case of milk, cement, and fuel products and higher in the case of sugar. Their elimination would bring about immediate price increases for milk and cement and a drop in protection for sugar. In the case of fuel and fuel products, which are sold under an administered price system, an increase in posted values would change the distribution of customs and OSRP revenue.

the medium term for milk and sugar; the case of the two strategic products will be more difficult, however. It should also be possible in the near term to begin to tax the other products on the list on the basis of their real value.

The large number of exemptions allowed complicates the system and accounts for a major loss in revenue. In 1987 exemptions were equivalent to 65 percent of the total amount of duties and taxes actually collected at customs (Table 4-3). It would be advisable to review the numerous pieces of legislation, including the investment code, that grant exemptions, with a view toward rationalizing and upgrading them. The review should also encompass exemptions that are granted on an exceptional basis without being specifically provided for in legislation, which account for 3.5 percent of all exemptions. A reduction in the number of exemptions is desirable if the aim is to simplify the tariff system so that it can be used more effectively.

The large number of duties and taxes on imports also complicates the tariff system. It would therefore be desirable to return to a three-column system of taxation by consolidating the various taxes. Three taxes would be kept: customs duty, the import tax (DFI), and a value added tax (VAT). This system would be consistent with the aim of equalizing taxes on imports within the framework of the WAEC. Elimination of the OSRP tax on imported fuel products and the DSP tax on imported cement and fuel products, which are both payable to the Office of Price Stabilization and Control, and the CPS, which goes to the Public Debt Amortization Fund, will, of course, result in a loss in revenue for the affected agencies. Elimination of the OSRP taxes should be easier to carry out given government commitment to price liberalization as part of the Economic

Reform Program. With elimination of the CPS, the debt will have to be regarded as a budgetary problem instead of as a problem to be resolved through tariffs.

4.3.3 Increased neutrality of the tariff system

The study of the tax burden on imports has highlighted the considerable differences in the tax levels for various products within a single category (competing and noncompeting consumer goods, competing and noncompeting intermediate goods, primary consumer goods and staples).

Reducing the differences in DFI rates for products within a single category would reduce distortions. It would be advisable, however, to retain a difference in DFI rates between consumer goods and intermediate products, with intermediate products being less highly taxed in order to favor export industries that do not quality for exemptions. The tax on consumer goods could be around 35 percent or 40 percent while that on inputs and staples could be 15 percent or 20 percent, levels that are slightly lower than the current average for each category. Taxes on noncompeting inputs for domestic production could even be targeted for eventual elimination, which would give domestic industries a competitive edge.

The cost of this reform could be offset by very slight increases in the IAS (or VAT) rates, which have a broader base than tariffs, and by reducing smuggling. The harmonization of rates will probably make a positive contribution toward curbing evasion and smuggling, particularly for products such as tea which are too heavily taxed.

The main distortion engendered by a customs tariff is a bias against exports. Measures must therefore be devised to offset, or at least

minimize, this handicap. The slight lowering of the overall tariff level that is proposed would relieve the tax burden on imports that currently affects the export sector. Provided the IAS is changed from a deduction-based system to a rebate-based system (see Chapter 3), exporters will be able to increase their competitiveness.

The taxes that are now levied on exports accentuate the bias against exports. In some cases, these taxes are relatively high. In view of their negative effect and their negligible contribution to government revenue, it would be better to eliminate all duties and taxes on exports. As an exception, export taxes could be retained for agricultural products, such as cotton, for example, because farm income is not subject to direct taxation. In the future, if the gold mining sector expands, imposition of an export tax on gold might be justified as a promising source of revenue for the government. However, at present, the mining sector is not sufficiently developed and the risk of smuggling is too great for a special export tax to be considered.

Another means of reducing the bias against exports would be to expand the duty and tax exemption system for imported inputs used in the manufacture of exports. While an overall reduction in the number of tax exemptions is desirable, the exemptions offered to exporting industries should be granted to all such industries. This could be done by trying to solve the technical difficulties that limit development of the system of industrial warehouses ("entrepôts industriels") which was instituted in 1977 and implemented in 1986. Only two enterprises are currently benefiting from this system. While a free zone is virtually ruled out because of the high cost it would involve, the possibility could be

investigated of offering tax credits to exporters equivalent to the amount of duties and taxes paid on imported inputs; these credits could be deducted from their domestic taxes. The reform of the investment code might also provide an opportunity for offering special benefits to firms that export.

Finally, steps should be taken to see that export enterprises that benefit from exemptions also qualify for exemption from the 5 percent CPS that is levied on their imported inputs, which is not the case at present.

While implementation of these suggestions would reduce the antiexport bias resulting from the tariff system, it is impossible to tell whether these measures would be sufficient to offset all the negative effects of the tariff system.

The foregoing proposals are intended to improve the efficiency of the customs system. This reform is all the more important given the recent tendency to eliminate quantitative restrictions, which makes the protective role of tariffs more significant. Customs tariffs can be used as an instrument for temporarily protecting certain carefully selected activities. (Stryker (1987), for example, found that Mali had a comparative advantage in the production of agricultural equipment, plastic bags, and cottonseed oil). Proper identification of the sectors to promote is a delicate matter, however, and be done only within the framework of a meticulously formulated industrial policy.

Table 4-1. Duties Collected on Imports in Mali in 1987, by Product Category

Product	Number	c.i.f. value of imports	Duties and taxes on imports	Value of imports as % of total	Duties collected as % of total	Average tax rate (duties collected as % of c.i.f. value)
Primary consumer products/staples						
Salt	25	5466	2440	4.883	8.085	44.6
Sugar	17	4120	1076	3.680	3.584	26.1
Pharmaceutical products	30	3212	333	2.869	1.102	10.4
Milk	4	2742	204	2.450	0.675	7.4
Cereals	10	2418	302	2.160	0.999	12.5
Flour, malt	11	1051	6	0.939	0.019	0.5
Books	49	716	38	0.639	0.125	5.3
Tea	9-A	322	227	0.288	0.752	70.4
Total		20,048	4624	17.908	15.321	23.1
Energy						
Fuel and fuel products	27	16627	7808	14.852	25.870	47.0
Competing consumer goods						
Cotton	55	4146	1064	3.703	3.525	25.7
Tobacco	24	3493	2463	3.120	8.160	70.5
Fruit	8	1872	647	1.672	2.145	34.6
Other fabrics	62	972	244	0.868	0.810	25.2
Processed fruits/vegetables	20	765	640	0.684	2.120	83.6
Soap, wax	34	613	365	0.548	1.210	59.6
Furniture	94	600	106	0.536	0.351	17.1
Footwear	64	544	375	0.486	1.243	68.9
Ceramic products	69	387	17	0.301	0.387	34.7
Fish	3	332	93	0.296	0.307	28.0
Bakery products	19	325	148	0.291	0.491	45.5
Discontinuous synthetic textiles	56	309	129	0.276	0.428	41.7
Beer	22-B	196	245	0.175	0.813	125.3
Vegetables	7	168	44	0.150	0.146	26.2
Jewelry	71	142	3	0.127	0.009	1.8
Carpets, embroidery	58	121	88	0.108	0.293	73.3
Knitted goods	60	116	49	0.104	0.161	42.0
Nonalcoholic beverages	22-A	111	66	0.099	0.218	59.3
Clothing, fabric	61	111	27	0.099	0.091	24.7
Leather articles	42	43	28	0.039	0.094	65.4
Meat	2	30	28	0.027	0.092	91.2
Headgear	65	28	11	0.025	0.038	41.0
Other vegetable textiles	57	19	1	0.017	0.003	4.9
Food industry waste	23	17	8	0.015	0.027	47.6
Continuous synthetic textiles	51	17	4	0.015	0.015	26.1
Feathers, down	67	14	14	0.012	0.046	99.9
Wool	53	11	11	0.009	0.038	107.6
Silk	50	2	1	0.001	0.004	79.2
Vinegar	22-D	0	0	0.000	0.001	78.8
Flax	54	0	0	0.000	0.000	0.0
Total		15,454	7021	13.805	23.263	45.4

Table 4-1. Duties Collected on Imports in Mali in 1987, by Product Category (continued)

Product	Number	c.i.f. value of imports	Duties and taxes on imports	Value of imports as % of total	Duties collected as % of total	Average tax rate (duties collected as % of c.i.f. value)
Noncompeting consumer goods						
Passenger motor vehicles	87-B	3422	1203	3.257	3.986	35.2
Instant coffee, soup	21	2558	681	2.285	2.258	26.6
Processed meat	16	1503	117	1.343	0.387	7.8
Glass	70	505	151	0.461	0.500	29.9
Perfumery, toilet preparation	33	225	103	0.201	0.341	45.7
Miscellaneous	98	212	57	0.190	0.190	27.0
Alcoholic beverages	22-C	121	167	0.108	0.552	137.2
Coffee	9-B	78	18	0.068	0.059	23.4
Photographic goods	37	73	30	0.065	0.098	40.4
Games, sports equipment	97	67	30	0.060	0.099	44.3
Musical instruments	92	55	5	0.049	0.015	8.3
Cocoa	18	44	30	0.039	0.098	67.0
Spices	9-C	12	10	0.011	0.033	82.9
Arms, ammunition	93	8	7	0.007	0.024	88.5
Clocks and watches	91	6	0	0.006	0.001	6.0
Umbrellas	66	2	1	0.002	0.002	31.5
Total		8890	2508	7.941	8.640	219.3
Competing intermediate products						
Colors, paints	32	657	176	0.587	0.583	26.8
Old clothing	53	442	242	0.395	0.803	54.8
Oil seeds	12	28	9	0.025	0.029	31.4
Livestock	1	17	2	0.015	0.006	10.5
Brushes	96	10	2	0.009	0.006	19.3
Rawhides, skins and leather	41	3	0	0.003	0.001	8.0
Plants	6	0	0	0.000	0.001	68.1
Total		1157	431	1.034	1.429	37.3
Noncompeting intermediate products						
Mechanical appliances	84	8797	1086	7.858	3.599	12.3
Iron & steel	73	6543	1202	5.845	3.981	18.4
Fertilizers	31	5845	144	5.042	0.477	2.5
Commercial vehicles	87-A	5069	1294	4.528	4.286	25.5
Electrical appliances	85	5036	625	4.498	2.070	12.4
Misc. chemical products	38	2334	248	2.085	0.823	10.6
Rubber	40	2260	1000	2.018	3.315	44.3
Synthetic materials	39	2250	263	2.010	0.871	11.7
Paper, paperboard	48	1307	329	1.168	1.089	25.1
Fats, oils	15	1237	196	1.105	0.646	15.8
Railway equipment	86	1227	6	1.096	0.019	0.5
Inorganic chemicals	28	1203	148	1.074	0.491	12.3
Vehicles spare parts	87-C	1187	186	1.060	0.617	15.7
Photographic, medical instruments	90	1127	151	1.007	0.501	13.4
Zinc	79	1019	51	0.910	0.169	5.0
Organic chemicals	29	820	111	0.732	0.369	13.6
Wood, charcoal	44	738	145	0.659	0.479	19.6

Table 4-1. Duties Collected on Imports in Mali in 1987, by Product Category (continued)

Product	Number	c.i.f. value of imports	Duties and taxes on imports	Value of imports as % of total	Duties collected as % of total	Average tax rate (dutes collected as % of c.i.f. value)
Nickel	78	415	64	0.371	0.211	15.4
Tools	82	387	74	0.345	0.247	19.3
Miscellaneous metal products	83	386	175	0.345	0.581	45.4
Wadding, industrial textiles	59	369	119	0.330	0.394	32.2
Articles of stone, cement	68	117	19	0.105	0.061	15.8
Glues	35	69	29	0.062	0.097	42.4
Pyrotechnic products	36	64	1	0.057	0.005	2.3
Carving materials	95	60	1	0.053	0.002	0.9
Aircraft and parts	88	41	0	0.037	0.000	0.0
Copper	74	26	6	0.023	0.019	22.1
Resins	13	23	11	0.021	0.036	46.4
Straw and esparto products	46	9	4	0.008	0.014	47.7
Other vegetable products	14	5	1	0.004	0.003	20.6
Magnesium	77	2	1	0.002	0.002	34.5
Lead	78	1	0	0.001	0.001	29.0
Cork	45	0	0	0.000	0.001	80.5
Ships, boats	89	0	0	0.000	0.000	0.0
Tin	80	0	0	0.000	0.000	67.6
Total		49,772	7689	44.460	25.478	15.4
Grand Total		111,949	30,181	100	100	27.0

Source: prepared by Hans Peter Lankes on the basis of SYDONIA customs statistics.

Table 4-2. Duties Collected on Exports in Mali in 1987, by Product Category

Product	Number	Customs value	Taxes on exports	Value of exports as % of total	Tax collected as % of total	Average tax rate (taxes collected as % of export value)
Livestock	1	3747	274	9.387	23.405	7.3
Meat	2	2	0	0.004	0.007	5.0
Fish	3	77	16	0.192	1.358	20.8
Milk	4	2	0	0.005	0.012	8.0
Other animal products	5	0	0	0.001	0.003	8.0
Vegetables	7	68	5	0.170	0.408	7.0
Fruit	8	131	4	0.328	0.326	2.9
Coffee, tea	9	3	0	0.008	0.008	3.2
Cereals	10	143	9	0.358	0.808	6.6
Flour, malt	11	10	0	0.025	0.028	3.3
Oil, seeds	12	382	22	0.958	1.853	5.7
Vegetable extracts	13	285	13	0.713	1.073	4.4
Other vegetable products	14	753	0	1.886	0.038	0.1
Fats and oils	15	10	0	0.026	0.027	3.1
Edible preparations	21	3	0	0.007	0.007	3.0
Alcoholic beverages, vinegar	22	65	2	0.163	0.167	3.0
Food industry waste	23	48	1	0.120	0.122	3.0
Salt, sulphur, cement	25	22	1	0.054	0.055	3.0
Inorganic chemicals	28	2	0	0.006	0.006	3.0
Photographic goods	37	1	0	0.003	0.000	0.0
Miscellaneous chemical products	38	13	0	0.033	0.033	3.0
Resins and plastic materials	39	3	0	0.007	0.004	1.6
Rubber	40	8	1	0.019	0.052	8.0
Rawhides, skins and leathers	41	311	15	0.778	1.268	4.8
Wood, charcoal	44	3	0	0.007	0.009	3.9
Straw and esparto products	46	8	0	0.020	0.020	3.0
Cotton	55	30955	719	77.551	61.305	2.3
Other vegetable textiles	57	17	1	0.043	0.044	3.0
Clothing, fabric	61	0	0	0.001	0.000	0.0
Old clothing	63	3	0	0.006	0.000	0.0
Footwear	64	4	0	0.010	0.010	3.0
Umbrellas, etc.	66	0	0	0.000	0.000	0.0
Feathers, human hair	67	1	0	0.003	0.003	3.0
Precious metals, jewelry	71	2638	84	6.608	7.161	3.2
Iron, steel	73	41	1	0.102	0.104	3.0
Lead	78	0	0	0.000	0.000	0.0
Zinc	79	20	1	0.050	0.052	3.0
Tools	82	2	0	0.004	0.005	3.0
Miscellaneous metal articles	83	5	0	0.012	0.012	3.0
Mechanical appliances	84	84	2	0.211	0.210	2.9
Electrical appliances	85	17	0	0.042	0.001	0.1
Vehicles	87	3	0	0.008	0.005	1.9
Optical and precision instruments	90	19	0	0.048	0.000	0.0
Arms, ammunition	93	1	0	0.001	0.001	3.0
Furniture	94	0	0	0.000	0.000	0.0
Total		39,916	1172	100	100	2.9

Table 4-3. Comparison of Exemptions by Budget Type

Title	1985				
	Highway Fund	Treasury	Debt Amortization Fund	Mining Fund	Petroleum Stocks
Notice No. 8 a/	25,388,789	54,151,437	8,152,032	1,742,584	867,157
State enterprise	103,351,146	3,507,919,039	307,022,221	4,040,135	14,800,240
Authorized enterprise	2,613,898	1,844,673,278	24,611,633	674,004	17,189,551
Project agreements	185,505,114	5,091,484,681	793,048,526	13,540,940	12,239
Diplomatic exemptions	40,276,202	708,388,098	68,602,941	1,290,582	
Order 709 b/		4,199,542,688	401,313,798		
Order 564 c/	3,008,228	177,903,486	9,699,277	385,416	76,037
Others d/	131,640,022	189,566,295	48,860,199	8,009,294	1,523,235
Total	491,783,395	15,773,627,002	1,661,310,927	29,672,965	34,468,459
Duties paid (collected)	2,842,305,711	25,555,725,255	5,888,576,218	122,247,134	112,853,896
		61%			

Notes: a Notice No. 8: legislation governing losses attributable to transport of petroleum products.
b Order No. 709: exemptions granted for items for the Head of State, the army, gifts, assistance for return of coopérants and certain pharmaceutical products.
c Order No. 564: exemption for fuel for Malian aircraft (Air Mali).
d Other: temporary or permanent exemptions in special cases not provided for in legislation but necessary.

Source: Republic of Mali; Ministry of Finance and Commerce, National Directorate of Customs, Statistics and Economic Studies Division.

Table 4-3. Comparison of Exemptions by Budget Type (continued)

Title	1986				
	Highway Fund	Treasury	Debt Amortization Fund	Mining Fund	PTK
Notice No. 8 a/	58,780,909	60,518,370	8,652,321	1,388,916	1,204,231
State enterprise	215,365,041	3,065,776,755	544,201,114	5,236,314	12,974,915
Authorized enterprise	2,955,067	2,816,652,220	28,587,789	489,304	12,358,493
Project agreements	647,507,774	4,849,192,600	738,998,407	16,437,998	11,087,191
Diplomatic exemptions	52,166,746	879,461,572	126,231,280	1,223,007	--
Order 709 b/		3,998,746,380	841,460,817	--	--
Order 584 c/	585,879	142,739,818	6,994,089	--	--
Others d/	352,878,840	238,117,072	48,492,081	8,282,115	577,333
Total	1,328,240,256	16,034,204,787	2,343,617,698	33,603,654	38,202,163
Duties paid (collected)	5,301,146,646	28,454,496,487	6,077,906,659	113,995,950	124,206,511
		61%		56%	65%

Notes: a Notice No. 8: legislation governing losses attributable to transport of petroleum products.
b Order No. 709: exemptions granted for items for the Head of State, the army, gifts, assistance for return of coopérants and certain pharmaceutical products.
c Order No. 584: exemption for fuel for Malian aircraft (Air Mali).
d Other: temporary or permanent exemptions in special cases not provided for in legislation but necessary.

Source: Republic of Mali; Ministry of Finance and Commerce, National Directorate of Customs, Statistics and Economic Studies Division.

Table 4-3. Comparison of Exemptions by Budget Type (continued)

Title	1987				
	Highway Fund	Treasury	Debt Amortization Fund	Mining Fund	PTK
Notice No. 8 a/	55,573,876	50,503,398	6,043,242	1,147,687	1,198,531
State enterprise	104,416,842	519,980,240	114,019,119	4,358,629	8,105,081
Authorized enterprise	129,293,534	4,240,520,479	159,323,341	3,307,998	15,273,813
Project agreements	599,704,549	8,058,424,403	1,052,945,669	14,978,519	22,886
Diplomatic exemptions	58,185,160	726,545,247	74,600,055	1,221,661	--
Order 709 b/	--	4,205,387,296	404,931,869	--	--
Order 564 c/	--	--	--	--	--
Others d/	342,837,806	357,173,813	46,275,373	7,882,584	4,010,055
Total	1,288,011,767	18,158,534,876	1,858,138,668	32,895,078	23,610,366
Duties paid (collected)	5,554,051,844	28,105,464,586	4,445,803,605	114,687,635	148,980,360
		61%		56%	65%

Notes: a Notice No. 8: legislation governing losses attributable to transport of petroleum products.
b Order No. 709: exemptions granted for items for the Head of State, the army, gifts, assistance for return of coopérants and certain pharmaceutical products.
c Order No. 564: exemption for fuel for Malian aircraft (Air Mali).
d Other: temporary or permanent exemptions in special cases not provided for in legislation but necessary.

Source: Republic of Mali; Ministry of Finance and Commerce, National Directorate of Customs, Statistics and Economic Studies Division.

CHAPTER 5

REGULATIONS AND PROCEDURES GOVERNING INTERNATIONAL TRADE

Many of the regulations governing Mali's international trade originated in an earlier period when the government assumed numerous economic functions mainly to compensate for capacity that was lacking in the private sector. The situation has changed over time, and simplified procedures have been introduced in recent years (1968-88).

5.1 Objectives of Trade Regulations

Tracking product volumes. The concern with tracking product volumes is to ensure that the essential needs of the Malian population can be met, especially demand for basic products such as tea, sugar, flour, and milk. A parallel goal is to improve the balance of import and export flows in order to reduce balance of payments problems and borrowing from the operations account. Planners are often more inclined to reduce imports by limiting the size of import flows than by imposing customs duties, believing that this allows tighter control of the volume of goods entering the country.

Generating statistics/projections. In a managed economy, accurate data are needed on trade flows in and out of the country and within its borders, if only to allow customs and revenue to be determined. Such projections in Mali are the responsibility of the External and Internal Trade Departments of the National Directorate of Customs, which try to ascertain what stocks of key products are available in each region. Besides providing a window on potential demand or surplus figures, this exercise gives an initial idea of the customs revenue that can be expected

from the anticipated trade flows. In addition to the implicit fiscal objective here, a general objective is to gain a more accurate picture of the flows of goods entering and leaving the country.

Encouraging or protecting domestic production. Regulations in this area attempt to create circumstances favoring domestic products over competing imports, even though domestic production is generally at a disadvantage in terms of price or quality. Protection policies are designed to offset the handicaps of the Malian economy in order to expand the share of the market commanded by local enterprises. Two primary protection procedures have been employed: (1) temporary suspension of import licenses and (2) product-linking requirements which are intended to reinforce tariff barriers that did not have the desired effect.

The question that needs to be answered is whether or to what extent these objectives are still consistent with the needs of the Malian economy as defined by agreements the government has entered into with international agencies. These three goals were far more consonant with an economy managed and regulated by the government than with the present move toward deregulation, which gives more play to price mechanisms. Because the transition from a managed to a market economy is being effected gradually, however, these familiar procedures have not yet been phased out. The fundamental problem is still how to achieve these objectives without allowing newly adopted procedures to create still greater distortions in the rest of the economy.

The concern with tracking product volumes is no longer valid since the price mechanism ensures that the market as a whole is supplied as needed. The concern with statistics and projections, which is mainly a response to the need for information as a basis for introducing and setting

rates for taxes and customs charges, should cease to be important if the tariff system advocated in the preceding chapter proves effective in reducing fraud. Accordingly, the concern with protection of domestic production is the only goal which remains pertinent.

5.2 Procedures

To accomplish the three objectives detailed above, three regulatory instruments are used: import and export licenses, inventory declarations, and product linking.

5.2.1 Import and export licenses

Imports. All importers are required to hold import licenses registered with the National Directorate of Customs. Import licenses are valid for six months, but can be extended for an additional three months. Although license applications can be obtained at minimal cost through the Chamber of Commerce, they require very detailed information and must be countersigned by various public or private agencies (13 copies). Many private sector importers believe that the administration delays processing and checking the forms as an indirect means of curbing or preventing trade. Consequently, they apply for licenses for products they are not currently interested in importing or for import volumes well in excess of what they will actually import. In fact, private sector importers treat licenses like financial assets: they consider it sound policy to hold a portfolio of them at all times, since this enables them to switch operations whenever imports of particular classes of goods are prohibited.

For essential products like sugar, a license can be obtained only after a "Prior Approval to Import" document has also been obtained through

the Customs Directorate. More restrictive than the license itself, this document requires the applicant to submit an invoice from his foreign supplier -- in other words, the applicant must already have almost completed the usual steps required to import a product (selecting and setting up the method of payment, taking out insurance, arranging transportation, and so on). The authorities justify this cumbersome procedure by claiming that it trains private operators in the skills required in a difficult international market. The upshot is that a number of potential imports are discouraged by the time it takes to obtain an import license and so are effectively prevented from operating through the official channels.

According to the External Trade Department, import licenses are granted routinely, except when imports have been suspended, which officials say is becoming increasingly rare. In any case, import volumes as reflected in license applications exceed recorded and estimated imports volumes by a very wide margin. This finding appears to corroborate the hypothesis that private operators manage their import licenses like a portfolio of assets.

The obvious conclusion, then, is that import licenses no longer reflect the real needs of the Malian population or the imports that actually enter the country. The import licensing procedure no longer provides a means of estimating import volumes, and there is no justification for a licensing system in an economy that is relying increasingly on market regulatory mechanisms rather than governmental controls. Any protective effect of licensing on Malian industries appears to be illusory, since licenses are not granted within a quota system and importers would quickly switch to nonrecorded imports if quantity

restrictions were introduced. Nor does licensing help in the collection of statistics and the projection of trade flows. Studies by the Customs Directorate itself show no evidence of any connection between the volume of authorized imports (total licenses granted) and the volume recorded by the Customs Administration or estimated by the Central Bank of West African States (BCEAO) -- or even, at times, the stocks existing on the Malian market.

The disadvantages of the system are mainly the delays imposed on importers and the considerable effort they must make whenever they attempt to speed up their license application. At the same time, opportunities for profit (economic rent) are created for importers that are able to obtain licenses more easily than others. In addition, if licenses are used as a means of restricting imports, importers will almost automatically move away from official import operations to nonrecorded ones, with an accompanying loss of customs revenue.

Other import-related procedures have been introduced which appear to be of no advantage to the authorities. The requirement that importers use the services of an authorized customs broker or forwarding agent is unnecessary since clearance procedures take place at the final destination/point of sale and not at the border crossing points. The use of authorized forwarding agents is supposed to guarantee that the government actually receives the duties and other charges payable on imported goods. Unfortunately, however, the use of such agents has simply created an additional cost for private sector importers, who are forced to use the services of a group which takes advantage of its monopoly position. In the end, it is consumers or the government that bear the burden--the former have to pay a surcharge on the imported product (when the customs

clearance procedures are carried out correctly) and the latter runs the risk of revenue loss through fraud.

Imports are usually cleared through customs close to the final place of sale. In practice, this usually means in Bamako. This concentration of imports in Bamako creates additional handling costs for importers because of the resulting congestion at the Bamako Customs Clearance Center, with waiting times that may exceed two weeks. Further costs are associated with the formalities required in the course of transporting goods from the border to one of the other clearance points, not the least of which is the disappearance of goods between the border and the clearance points (which are far from the border). These inefficiencies entail costs to the nation as a whole and losses to the government that could easily be avoided if clearance procedures were simplified and if five or six customs centers were strategically located on major access roads.

Exports. Exporters have to go through procedures similar to those required of importers. One of Mali's problems is how to foster the production and sale of exportable goods (and import substitutes) despite cost and haulage problems. Any obstacle to export activity (or domestic output of consumer or production goods) should be eliminated as far as possible. This applies to export licenses, a legacy of the period of state control of the economy when producers had to be restrained from supplying the more remunerative foreign market to the detriment of Malian consumers.

Export licenses are granted for only three months. Applicants have to give specific information (such as countries of destination, prices, quantities) at a stage when they have not yet signed their contracts and so can give only projected figures. If their projections prove wrong (for example, quantities of goods are greater than announced),

exporters are fined. Export licensing procedures are directed mainly toward Mali's few organized producers, particularly exporters of processed agricultural products. But a large part of the country's agricultural exports (livestock) passes through parallel channels, so the flows are extremely difficult to monitor. Export licensing has not had the intended result, which was to ensure that domestic demand received priority. Nor has export licensing meant that exporters transferred their foreign exchange earnings to their bank accounts in Mali immediately. Nor has payment of the standard export tax (the CPS) helped in monitoring the flow of goods leaving Mali.

5.2.2 Inventory declarations

The Internal Trade Department tries to monitor the supply situation in Mali by obtaining declarations regarding the stocks of the major food products held by manufacturers and wholesalers. These declarations are sent monthly to the National Directorate of Customs (Bamako headquarters and the regional offices) and provide the basis for a very approximate estimate of supply status region by region and product by product. These data are used to forecast possible interruptions in the flow of supplies, particularly of basic consumer products. The same procedure makes it possible to anticipate a surplus, and therefore to suspend imports of certain products temporarily so as to give market priority to Mali's domestic output.

Although this procedure may have helped the authorities to spot developing supply crises, remedial decisions have not been taken quickly enough. For instance, that not all regions have had adequate supplies of

food grains is not a failure for which the forecasting and projection mechanisms can be blamed entirely.

5.2.3 Product linking

In February 1988 the Customs Directorate began to experiment with a less conventional linking procedure for two essential products, sugar and tea. Each prospective importer of sugar (tea) is required to obtain a "Prior Authorization to Import" and submit proof of purchase of a quantity of locally produced sugar (tea) in order to obtain an import license. The linking ratios of domestic production to imports are 1:1 for granulated sugar, 1.3:1 for lump sugar, and 0.2:1 for tea.

The goal here is to move locally produced sugar (tea), for which production costs in Mali are higher than world prices even after allowing for freight and customs charges on imports. Importers therefore have to strike a balance between the higher price they pay for the domestic product and their full cost on the imported product and then sell at an average price that covers their total cost. Contrary to experience in neighboring countries that have also introduced linking requirements, the experiment in Mali seems to have met the authorities' expectations in the case of sugar. In the case of tea, however, importers were not persuaded to buy the local product, mainly because the quality difference between the local and imported products meant they were not true substitutes, while the large number of importers helped to guarantee their anonymity in nonrecorded import traffic. In 1987 for an estimated consumption of 1,300 tons of tea (essentially imported), the Customs Directorate issued import licenses for 125 tons, while the Customs Administration recorded entry of 199 tons and BCEAO estimated imports at a total 1,380 tons.

What initial conclusions can be drawn regarding the economic effects of product linking and the conditions needed to ensure that it will be effective?

Product linking can be effective in ensuring that domestic output is sold first, provided that the transactions involved are fairly tightly controlled and that the domestic and imported products are equivalents, so that local importers' calculations about what offsetting measures they need to take remain relatively simple. Only if these conditions apply (as they do in the case of sugar) can importers calculate their return accurately, allowing for losses on the resale of the domestic product and profits on the sale of the imported product (elasticity of demand remaining the same, by definition, regardless of product origin). If the products concerned are not equivalents (meaning that the price elasticities of demand are different), then it becomes much more difficult for importers to calculate their return.

Linking is a single-operation measure that replaces the usual pair consisting of a customs duty plus subsidization of domestic output. It has the further advantage of avoiding the need for cumbersome bureaucratic procedures or the actual disbursement of subsidies. As has been demonstrated elsewhere (Takacs 1988), linking can be an acceptable (second-best) protection measure when its aim is to move domestic output and stabilize prices and when financial constraints rule out the payment of subsidies to local producers.

Linking is further justified in the case of sugar on the grounds that the international market prices are surplus prices. In some ways, linking can be regarded as an indirect means of recreating acceptable conditions of competitiveness for domestic producers. Linking is a more

effective means of doing so in the Malian economic context than would be customs duties, which would be circumvented through smuggling. Nevertheless, it is clear that private sector importers accept linking requirements only if they are less costly overall than a switch to the contraband economy. This switching point consequently determines the limit beyond which this system will not work.

Like all protection measures, however, linking involves additional cost for the consumer when the benchmark price used is the international market price. Moreover, linking leads to market concentration, since only businesses that cover the entire national territory are in a position to sustain the cost of a national supply operation--something not true of the small traders in Kayes, for instance.

It would be extremely risky to try to apply this system to other products, especially if the criterion of product equivalency cannot be met. The kind of failure experienced with tea would be inevitable. Similarly, this is not the time to tighten the linking requirements on sugar (as a result of setting up a new sugar mill in Mali), since increased losses on local sugar could prompt importers to move out of the official market.

5.3 Recommendations

The various ministries concerned have undertaken numerous research projects to improve their knowledge of market questions and trade flows and to promote domestic production. These studies have led to the introduction of some of the procedures outlined above. Although they appear to have met some of the expectations held for them, they have caused new economic distortions which should be eliminated. This is the focus of the recommendations set out here.

5.3.1 Procedural requirements for imports

From the standpoint of the government's initial objective, the import licensing system has shown itself to be ineffective, particularly since the authorities began to rely more on market mechanisms to ensure that Mali's consumers and producers are adequately supplied. Licenses should be granted automatically for most products, or better still, eliminated.

If the authorities wish to keep track of importers' intentions, importers can be required to declare their plans to the National Customs Directorate, but without having to fill out lengthy forms and receive multiple signatures from the various government departments concerned with external transactions. Importers could fill out declarations of their import intentions in the same way that wholesalers today submit declarations of inventory to the Internal Trade Department. These data could then be centralized and processed by the Customs Directorate. The Directorate could use this information, together with information on consumption patterns and warehousing practices, to draw up market supply projections which could then be broken down by region with assistance from the agency's branch offices. This is not to say that the best indicator of the state of the market is not still price (if freely determined by the forces of supply and demand) rather than the volume of the product held in stock. And it is also true that the effect of freedom to trade will be to encourage importers and exporters to know their market and its real needs better, so that they no longer need to be told what products are in demand and where that demand exists. However, such a policy entails abandonment of the long-standing principle that Malian consumers should be able to obtain a given product at the same price in any part of the country.

Effective protection for domestic industry has not been obtained through the import licensing system because the licenses do not really limit import traffic. The country's borders and customs network are too easily breached for official restrictions on import volumes to have much impact. Protection can be assured only if customs duties are actually enforceable and enforced and are set at rates that do not spur importers to leave the official market and operate through nonrecorded trade channels.

5.3.2 Procedural requirements for exports

It is hard to see any justification today for Mali's cumbersome export procedures. All evidence points to the fact that the more complex they become the less they are observed. A simple declaration (a single form, in one copy only) submitted periodically to the National Customs Directorate and indicating the approximate quantity or value of goods exported should provide sufficient data for economic statistical purposes. As it is only on signature of an actual export contract that accurate details become available (destination, quantity, quality, price), the value of export traffic can only be ascertained on an ex post basis. This is done through BCEAO assessments and, more often than not, indirectly through road checks (which should be reduced).

Here, once again, experience shows that multiplying the number of procedures--and there is a temptation to do so in the interests of improving the monitoring of economic flows--almost always diverts movements of goods away from official channels. Simplification, on the other hand, particularly of procedures whose primary purpose is statistical, will reduce the cost of official requirements and thereby lessen the incentives for fraud or the use of parallel export channels. In that regard,

elimination of export licenses would appear to be the right course. The repatriation of exchange earned abroad will then depend less on public sector regulatory requirements and more on the qualities of the banking system and the monetary policy followed by the BCAEO.

5.3.3 Procedures for payment of import/export charges

Customs duties, other entry charges, and export taxes should be collectible directly on entry or outshipment, without any need for additional controls between border and point of destination or sale. Concentrating available manpower resources at six entry points (Bamako airport, Bamako rail terminus, Gao, Kayes, Motpi, and Sikasso), and reinforcing them with mobile control units, would ease congestion and expedite procedures while widening the field for their application. These changes, when combined with a reduction in the level of charges in the interests of reducing incentives to fraud, could result in a substantial increase in government revenue. Such reforms should be introduced gradually in consultation with importers and exporters, so that creation of new distortions can be avoided. In particular, actual monitoring/control procedures should be kept to a minimum and should not create transportation bottlenecks, as would, for instance, the requirement that goods be unloaded for inspection.

A private corporation has recommended a system of "reinforced control" to achieve higher revenues from customs. Knowledgeable and honest customs officers would verify that quality, quantity, and price of imports matched those on the invoice presented to the Customs Administration or

those on the import license. While the proposal would lead to increased revenue, it might also lead to a significant rise in consumer prices unless it were accompanied by a reduction in tariff rates. Instituting a system of reinforced control will be impractical, however, unless it is done progressively and accompanied by a downward adjustment in the level of customs duties.

This proposal would deal only with the problems created by underinvoicing or by misstatement of quantities/volumes, however, which are simply one part of the problem of nonrecording (and therefore nontaxation) of trade flows. In a more general sense, successful collection of customs revenue depends on upgrading the efficiency of the Customs Administration as a whole.

Nothing can be achieved unless the Customs Administration is both competent and scrupulously honest. What is needed to improve motivation and surveillance skills is better staff training in accurate identification of categories of imported goods, simplification of the tariff structure to facilitate the job of verification, and possibly some form of customs staff sharing in the total revenue collected.[18] The outcome should be improved recording of import operations as a result of reduced fraud, more effective protection for domestic industry, and an increase in government budgetary

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18 A provision for sharing in revenue collected would give customs officials greater incentive to guard against fraud (underinvoicing, underestimation of quantities and qualities, false declarations, and contraband). It might also make the Customs Administration reluctant to accept subsequent tariff reductions, however, and give rise to claims for similar participation arrangements from other sectors of the civil service (the Tax Administration, in particular).

revenue as a result of proper application of the tariff and more realistic valuation of goods.

The mission therefore makes the following recommendations to the Malian authorities:

-- elimination of import licenses
-- elimination of export licenses
-- decentralization by conducting customs clearance operations at the six main entry points
-- reinforcement of the effectiveness of the Customs Administration through simplification of operating procedures, better training and better remuneration for customs staff, and greater emphasis on the prevention of corruption.

CHAPTER 6

PRICE POLICY FOR AGRICULTURAL EXPORTS: COTTON

This chapter examines the government's price policy for cotton, which is the sole agricultural product subject to price control as well as Mali's major foreign exchange earner. Between 1982 and 1986, cotton accounted for 39 percent of export receipts, making it the leading export (followed by cattle at 33 percent).

The future of the cotton subsector in Mali was recently studied in considerable depth. A major seminar was held on the subject in May 1988 in Sélingué, chaired by the Minister of Agriculture and attended by representatives of the leading foreign donors active in the subsector. Various recommendations were made on its structure, the role of the Textile Development Company of Mali (CMDT), and the producer price policy. (The producer price policy was discussed only in terms of the principles involved and needs to be studied in detail.) In view of the focus of the seminar, and without anticipating the study's findings, this chapter examines the issue of the price of cotton in the general context of foreign trade policy. The price of cotton is a key element in the incentive system that will shape the expansion of trade.

6.1 Objectives of the Cotton Price Policy

For cotton in Mali, as for any major export crop, a producer price policy has four main objectives, which must be prioritized because they cannot be achieved simultaneously (for more detail, see P. Guillaumont and S. Guillaumont 1988).

One objective is that the producer prices be linked with the international price over the long run. The trend in the producer price, which influences production over the long run, cannot deviate for any length of time from the international price trend. If the producer price tends to fall below the international price, the country runs the risk of discouraging higher production. If the price tends to rise above the international price, the crop may tie up too many production factors. That is, it may grow disproportionately in relation to other crops. Moreover, such growth can generate a loss over the long run, and the crop may ultimately have to be subsidized by the rest of the economy. In both cases, the greater the elasticity of supply in relation to price, the greater the risk. In the case of cotton, for which international prices fell sharply in 1985-86, followed by a partial recovery, all observers believe that the second risk prompted the Sélingué seminar to affirm the need to maintain a linkage with the international price while also offering an attractive price to the grower. Should there be a lasting reversal in the trend on the international market, the price may not be attractive enough to foreign buyers.

A second objective is revenue generation for the government. Cotton, as the main export, should help finance the government budget, although care should be taken that the tax is not excessive.

A third objective, also recognized by the Sélingué seminar, is stabilization of producer prices. In general, because of the risk it poses, price instability is considered to lower average production. Even if this were not so, volatile producer prices would have an adverse impact on the cotton subsector. First, the instability of producer prices causes

instability of production (because of the sensitivity of supply to price). In an agroindustrial subsector such as cotton that involves fixed plant, this instability is a factor in the cyclical underutilization of plant and equipment and hence in higher average costs. Next, if all "peaks" in the world market price are passed on to the grower, this would lead to a rapid expansion in areas planted to cotton. Such a large expansion can involve thorny ecological risks, including degradation of the soil, as less land is left fallow and the use of crop rotation decreases. Finally, when changes in the international price for cotton are passed on to producers, the exact price change cannot be known before planting, so price changes can influence production only in the following year, when the international economic outlook for cotton may be entirely different. This can be a factor in wide swings in export receipts.

The producer price that is to be stabilized is defined as the price to which supply is most sensitive. This can be the real price (the nominal price deflated by a price index for the goods purchased by the grower) or the ratio of cotton prices to the prices of competing crops, essentially cereals. Viewed from this angle, the problem of stabilizing cotton prices has become much more delicate since the cereals market has been deregulated. Nevertheless, the instability of cereal prices is considered normal by farmers, whose choices are influenced more by the trend in relative cotton/cereal prices than by fluctuations in cereal prices. Since the consumer price index now includes a significant cereal component, the price to be stabilized is the real price.

A fourth objective, which is often overlooked, is to ensure that the price policy does not lead to highly unstable tax (or parafiscal)

receipts. In stabilizing producer prices, the state compensates for the instability of international prices. If taxes on an export product like cotton account for a substantial portion of the budget, public receipts become very unstable. This instability, as the experience of many countries shows, is associated with poor public management. The risk is not only that an entire category of receipts will dry up, which happened when cotton prices collapsed, but that sudden surpluses, which are tricky to manage, will have to be dealt with. Public sector decisions made during boom periods (increases in operating expenditures, in particular increased hiring in the civil service, poorly prepared investments, and so on) were often at the root of the difficulties that led to the need for the current adjustment policies.

Mali has not been immune to this type of reaction, as shown by the steep climb in public spending in 1972-73 and 1975-77 after cotton prices rose, although the problem seems to have been less marked than in other countries. In any event, it would seem prudent to reduce this risk to a minimum in the future. Efforts should therefore be made to find a mechanism for stabilizing producer prices that does not transfer the burden of unstable international prices to the national budget. This would suggest that stabilization management should be handled by an agency not funded by the state.

6.2 Assessment of the Current Cotton Pricing System

6.2.1 Brief description of the cotton pricing system

The cotton subsector is under tight government control through CMDT, a mixed public-private corporation that oversees all matters related to production and provides related services. CMDT collects, transports,

processes, and markets cotton, in addition to providing inputs and extension services and conducting research. It also works closely with village associations in their activities related to cotton growing and outreach. CMDT sets an official producer price for cotton each crop year, along with CMDT's budget, which covers all its costs and earnings.

Taxation of the cotton subsector, which includes direct and indirect taxes, is complex. For many years tax revenues from this subsector have financed a large share of the national budget. For example, in 1983-84 cotton provided CFAF 9.1 billion (Hartmann 1988) or 14 percent of total government revenue of CFAF 61.9 billion in 1984 (IMF 1987, 20). Following the fall in cotton prices, however, receipts dwindled to almost zero, because of shrinkage of the tax base and government exemptions granted to lessen the subsector's deficit.

In addition, there is a producer price stabilization system, which has gone through two phases. Prior to 1983, the system was under the umbrella of the Price Stabilization and Regularization Office (OSRP), which handled various agricultural products (food and export crops). OSRP taxed the cotton subsector but never helped finance it. Under the Mali Sud II Adjustment Program a cotton Guarantee Fund was established and managed by OSRP, specifically to guarantee equilibrium in the subsector, but its financing was limited and funds soon ran out during the 1985-86 price collapse.

6.2.2 Consequences of the system

Before the consequences of the system on prices and public revenues can be examined, the problem of expressing changes in producer prices in real terms has to be dealt with. Since there is no satisfactory

price index that can be used for deflating nominal prices, the long-term trend in real producer prices is uncertain. The trend identified depends largely on the starting point of the price index used for converting nominal prices to real prices. Nominal prices remained constant from 1961-62 to 1969-70, but because of inflation, which was inaccurately measured but nevertheless a fact in Mali during the period, the real price fell sharply. The trend is therefore very different depending on whether it is measured from the early 1960s or the early 1970s. However, the early 1960s are not a valid reference point for judging the degree to which price changes served as incentives since yields were low. Only after 1967-68, once agricultural extension operations had triggered a marked increase in yields, can prices received by farmers be used as reference.

Another problem is the choice of index. When 1967-68 is taken as the point of departure and the GDP deflator is used, the linear trend of the real price seems to slope slightly upward (see Table 6-1, column 2). When the cost-of-living index is used (combined Lecaillon-Morrison and Poels index, see Section 1.1 in Chapter 1), it curves somewhat downward (column 3).

Even in the case of the stable or rising real price trend as calculated using the GDP deflator, three elements must also be taken into account in assessing the relative incentive represented by producer prices over the long run:

1. Nominal cotton prices in Mali are lower than in all other countries in the franc zone.
2. The ratio of cotton prices to cereal prices plunged during the 1960s, generally stabilized during the 1970s, and

declined again in the early 1980s. Its recovery is too recent to imply a reversal of the trend.

3. Subsidies for inputs have been cut in recent years, which has lessened the incentives associated with cotton prices.

Overall, then, the evidence suggests that the real producer price for cotton is relatively low. As such, any downward trend in the future may depress production, as happened after the short-term fall in price in 1982-83.

To compare the trend in producer prices in Mali with that in international cotton prices, the relationship between the producer price and unit export value expressed in CFA francs was calculated (Table 6-1, column 9). That ratio, unstable over the short-run, does not show a trend significantly different from zero, which should rule out the hypothesis that there is no connection between the trends in producer and international prices.

A more in-depth analysis (see annex 3) makes it possible to link the real producer price and international terms of trade for cotton (or the real international price).[19] The real international price tended to rise between 1968 and 1977, after which there was a downward trend -- interrupted by a steep climb in 1984 -- which intensified in 1985 and 1986. For the period as a whole, the trend was downward, unlike that for real producer prices. The effect of this downward trend on real producer prices

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19 This price is expressed in a mix of currencies (the currencies of Mali's main trading partners) and deflated by the average consumer price index for those countries.

seems to have been reinforced until 1984 by heavier taxes on the unit export value. The upward trend in the real producer price is therefore due to the depreciation of the real exchange rate for Mali's currency from 1976 onward (Mali franc, then CFA franc) and since 1985 to a decrease in taxes and lower processing and marketing costs.

Changes in the real price should also be examined in relation to the objective of stabilization. In the case of cotton in Mali, as in most countries with a similar system, the use of a tier system for nominal prices went hand in hand with instability of real prices, which although less volatile than in the case of international prices, was not negligible. Thus if the GDP price index is used as a deflator, the absolute mean deviation from the 1968-87 linear trend is 5.6 percent for the real producer price and 14 percent for the real unit export value (see last line of Table 6-1). Stabilization was therefore real, but only partial, with irregular and sometimes inopportune adjustments in relation to changes in the international price; for instance, the highest real price in the entire period measured with the GDP deflator was attained in 1985-86.

The system has several implications for public finance. Inasmuch as processing and marketing costs changed proportionally, the lack of any clear-cut trend in the relationship between producer and export prices suggests long-term stability in the taxation of the cotton subsector. The average tax rate seems to have been relatively high, as shown by various studies on the nominal protection of cotton in Mali (Lecaillon and Morrison 1986, 66-67; Hartman 1988, 19-21; Phélinas, Annex 3 of this report). Was it in fact excessive? In all likelihood, production would have increased more rapidly had taxes been lower and prices higher. However, heavy taxes did not depress production or cause it to stagnate. In any event,

calculation of the optimal average taxation of cotton would require both microeconomic and macroeconomic analysis, which is beyond the scope of this study.

A clear drawback of the system as it has operated in the past is that it has resulted in pronounced variability in tax receipts. This happened because there was never a true stabilization fund for cotton that had sufficient resources and was independently managed. Thus the system could not efficiently stabilize producer prices and public revenue simultaneously.

6.3 Desirable Emphases for Reform

Given the objectives of cotton pricing policy and the lessons drawn from experience, several principles for reforming cotton pricing can be identified. These principles are consistent with the general focus of the Sélingué seminar, although they may lead to approaches that differ somewhat from those originally envisaged.

To meet the objectives of a price policy as detailed in section 6.1, a policy should be established for setting a producer price that reflects changes in the international price but does not fluctuate too widely. Stabilization would be provided by an agency that is not dependent on the national budget, in order to ensure that its activities are not affected by instability of public revenue and that guarantee funds are available.

Under a system consistent with these principles, a guaranteed export price would be determined each year on the basis of the trend in the international price for cotton during the previous years. For example, the average international price expressed in constant values for the previous

six or seven years could be used.[20] The stabilization fund, which should have a certain amount of capital at the outset, would receive the difference between the guaranteed or trend price and the actual export price; when that difference is negative, it would subsidize the subsector even more.

The proposed system is different from a system that guarantees the producer only a floor price. In a floor-price system fluctuations in the international price above that level are passed on to the producer. The floor-price approach is not a true stabilization system as the actual price can fluctuate widely. The system may also lose all practical value if the floor price is not indexed to consumer prices or to the trend in the nominal international price.

In the system proposed here the real price is truly stabilized, as it is linked to the trend in international prices. This system avoids the impact of abrupt changes either up or down in producer prices and can therefore help to regulate production. In particular, it makes it possible to set and announce the definitive producer price prior to the planting season. This avoids reactions in supply that run counter to changes in international prices, which in a floor-price system are caused by the time lag between announcement of the price that will actually be paid and the production it influences.

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20 In other words, the unit export value of cotton expressed in CFA francs is deflated by a consumer price index using the end year as the base, which requires that a satisfactory consumer price index be available. If not, the trend in the nominal international price can be calculated by adjusting the figures for previous years to take account of world inflation.

The system proposed here moreover has the advantage of reducing fluctuations in tax receipts as well as in CMDT's profit. As envisaged by the resolutions of the Sélingué seminar, CMDT should function as an industrial and commercial company, so that it is motivated to control its costs. The performance contract linking it to the government for several years should clearly distinguish the activities related to cotton production, marketing, and processing (which are to be financed from cotton receipts) from its public service activities (which would be financed by state subsidies, possibly from a direct allocation of tax receipts from the cotton subsector). The performance contract should also specify the formula for calculating producer prices (for seed cotton) on the basis of the guaranteed price (for cotton fiber). The formula should reflect a technical equivalence coefficient between cotton fiber and seed cotton, CMDT's normal remuneration for activities associated with cotton, and the desirable level of taxation of the subsector.

The present tax system should be simplified. Two systems are suggested which can ensure relatively stable receipts for the public coffers.

In the first system, the government would assess a proportional tax based on the value of cotton fiber production measured at the guaranteed price. Because the guaranteed price is stabilized, the revenue generated by the tax would be relatively stable. The government would also collect a tax on CMDT's profits and its share of dividends on its equity. This source of budget receipts would of course be less stable because it would depend on CMDT's profits and not its turnover, which determines the proportional tax. CMDT's profits would in all likelihood be less stable than the value of production.

In the second system, there would be no proportional tax on the value of production; rather, CMDT's profits and its share of dividends would be taxed. This approach would be more disadvantageous for CMDT and less so for the government than the first system because tax receipts would probably be more variable. The second system has the advantage of avoiding taxes on the value of exports, which is consistent with the logic of other proposals presented in this report. Nevertheless, such a tax can be justified as a substitute for direct taxation of the income of cotton growers.

Smooth running of the cotton pricing system requires that the government allow the cotton stabilization fund to operate autonomously. It should be able to keep its funds independent from the public Treasury, ideally in an account with the BCEAO. Such a solution is also justified from a macroeconomic standpoint because it facilitates monetary regulation. Some of the money created as a result of export receipts would be stabilized during periods of rising prices, while additional money would be created as a result of drawings from the account when prices fell.

6.4 Conclusion

To recapitulate, the recommendations for the cotton price policy are as follows.

To ensure that producer prices reflect the international prices and that they are stable over the short run, it is recommended that a guaranteed export price be set. The past trend for the international price can be used to set this price, which would include the producer price and a reasonable contribution by the subsector to the national budget. To avoid instability in the level of public receipts and prevent the use of

stabilization funds for other purposes, an autonomous stabilization fund should be established and its reserves should be deposited in a BCEAO account.

Table 6-1. Price Indicators for Cotton 1966/67 - 1987/88

Year	(1) Official price/kg of seed cotton in CFAF	(2) Real price in 1980 CFAF (GDP deflator)[a]	(3) Real price in 1980 CFAF[b]	(4) Net income/ha in current CFAF[c]	(5) Net income/ha in 1980 CFAF[d]	(6) Relative cotton/millet producer price[e]	(7) Unit export value/kg of cotton fiber in CFAF	(8) Unit export value/kg of cotton fiber in 1980 CFAF[f]	(9) Producer price/unit export value (%)
1966-67	17.0	55.3	57.9	--	--	2.3	--	--	--
1967-68	17.0	45.7	55.7	--	--	2.1	120.0	324.6	14.1
1968-69	17.0	43.6	57.9	--	--	2.1	133.4	342.0	12.7
1969-70	17.0	41.1	58.5	--	--	1.9	152.0	368.3	11.2
1970-71	22.5	51.7	67.3	--	--	2.5	161.3	370.5	13.9
1971-72	22.5	48.3	62.4	--	--	2.5	159.5	342.3	14.1
1972-73	25.0	50.5	56.2	--	--	2.5	230.2	464.6	10.9
1973-74	25.0	47.7	52.8	--	--	1.6	274.1	523.3	9.1
1974-75	37.5	59.5	72.5	--	--	2.3	250.1	365.0	16.3
1975-76	37.5	53.6	68.3	--	--	2.3	230.7	329.8	16.3
1976-77	37.5	49.8	56.3	--	--	2.3	382.1	507.6	9.8
1977-78	45.0	54.4	55.3	34.5	41.7	2.5	342.7	414.1	13.1
1978-79	45.0	49.0	54.7	34.9	38.0	2.4	335.2	365.0	13.4
1979-80	55.0	55.0	55.0	51.8	51.8	2.2	371.9	371.9	14.8
1980-81	55.0	49.6	49.9	36.4	32.8	1.6	461.3	416.0	11.9
1981-82	65.0	57.3	55.7	45.3	39.9	1.5	465.1	410.2	14.0
1982-83	65.0	53.4	53.0	54.2	44.5	1.5	548.4	450.4	11.9
1983-84	75.0	55.2	56.8	66.8	49.1	1.4	742.4	546.1	10.1
1984-85	75.0	53.4	52.7	61.9	44.1	1.4	671.0	477.7	11.2
1985-86	85.0	62.8	n.a.	73.3	54.2	-1.5	385.3	284.9	22.1
1986-87	85.0	60.2	n.a.	65.3	46.2	-1.5	436.8	309.4	19.5
1987-88							450.9		
Slope of linear trend 1967/68 to 1986/87		+0.7*		na		-0.05*		+2.0	+0.17
1967/68 to 1984/85		+0.6*	-0.5*			-0.05*		+6.9*	-0.07
Instability factor (%)		5.6		na		14.4		14.4	18.4

[a] Ex post real price in 1980 CFA francs: official price divided by the GDP deflator for the year during which the crop year ends (see deflator in Table 1-2).

[b] Ex post real price in 1980 CFA: official price divided by the Lecaillon-Morrison consumer price index supplemented by Poels (see notes to Table 1-2).

[c] Gross income per hectare (yield times official price) minus cost of inputs.

[d] Same as column 4 but expressed in 1980 CFA francs using the GDP deflator (1980 = 100).

[e] Based on official prices. For millet, the market price may have differed appreciably from the official price, in particular after 1984-85.

[f] Expressed in 1980 CFA francs using the GDP deflator (1980 = 100) for the year during which the crop year ends (see deflator in Table 1-2). The instability coefficient is measured by the absolute mean deviation from the 1968-87 linear trend.

* Significant at 5% or greater.

Sources: (1) (2) Lecaillon and Morrison 1986 and BCEAO; (3) Lecaillon and Morrison 1986 and Poels; (4) (5) (6) CMDT, as presented in Hartmann 1988, 16 and Annex IV; (7) (8) CMDT.

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ANNEXES

ANNEX 1

SIMPLIFIED SIMULATION OF THE DIFFERENT TYPES OF TURNOVER TAX IN MALI

This annex examines the fiscal bias introduced by the tax on businesses and services (IAS). Two types of bias are examined: that which results from the degree of the company's vertical integration and that which results from the breakdown of sales between the domestic market and exports. The analysis shows that reform of the IAS can eliminate the bias due to the degree of integration for companies selling on the domestic market, but only a value added tax will solve the problem for exporters.

Current Situation Assuming a Uniform IAS of 20 percent

Companies selling on the domestic market

Case 1: Company purchasing its physical inputs and using outside services:

Intermediate consumption, before taxes	CFAF 100
Outside services (excluding transportation) before taxes	50
Value added	80
Total turnover, before taxes	CFAF 230

IAS paid by the company: (230-100) x 0.2 = CFAF 26
IAS borne by the product: 26 + (150 x 0.2) = 26 + 30 = CFAF 56

Case 2: Company with greater vertical integration, producing its own services

Intermediate consumption, before taxes	CFAF 100
Value added	130
Total turnover, before taxes	CFAF 230

IAS paid by the company: (230 - 100) x 0.2 = CFAF 26
IAS borne by the product: 26 + (100 x 0.2) = CFAF 46

Conclusion: Because of less than full deductibility for taxes already paid, the product manufactured by company 2 pays less tax than that manufactured by company 1.

Case 3: Fully integrated company, producing its own physical inputs and services

IAS paid by the company and borne by the product: 230 x 0.2 = CFAF 46

Conclusion: The product manufactured by company 3 pays the same taxes as that manufactured by company 2 (because intermediate consumption in case 2 is tax deductible).

Exporting Companies

Case 1: The company is exempted from the taxes it would have to pay if it sold the product on the domestic market (i.e., CFAF 26).

IAS paid by the company:	CFAF 0
IAS borne by the product:	CFAF 30

Case 2: The company is exempted from the taxes under the same conditions as company 1 (i.e., CFAF 26).

IAS paid by the company:	CFAF 0
IAS borne by the product:	CFAF 20

Case 3: The company is exempted from its entire tax liability (i.e., CFAF 46).

IAS paid by the company:	CFAF 0
IAS borne by the product:	CFAF 0

Conclusion: The greater the vertical integration of exporting companies, the lighter their tax burden. In other words, even if intermediate consumption is tax deductible for exporting companies, there is still a bias in favor of the most integrated firms.

Situation Assuming Outside Services Can Be Deducted, IAS Remaining at 20 Percent

Companies selling on the domestic market

Case 1:	IAS paid:	(230 - 150) x 0.2 = CFAF 16
	IAS borne by the product:	CFA 16 + 30 = CFAF 46
Case 2:	IAS paid	(230 - 100) x 0.2 = 26
	IAS borne by the product:	26 + 20 = CFAF 46
Case 3:	IAS paid and borne by product:	230 x 0.2 = CFAF 46

Conclusion: The products bear the same tax burden in each company because the IAS is no longer a cascade tax, with an inherent bias against small companies.

Exporting companies

Case 1: The company is exempted from the taxes that it would have to pay if it sold its product on the domestic market (i.e., CFAF 16).

IAS paid by the company:	CFAF 0
IAS borne by the product:	CFAF 30

Case 2: The company is exempted from the taxes it would have to pay if it sold its product on the domestic market (i.e., CFAF 26).

IAS paid by the company:	CFAF 0
IAS borne by the product:	20

Case 3: The company is exempted from all taxes borne by the product (i.e., CFAF 46).

IAS paid by the company:	CFAF 0
IAS borne by the product:	CFAF 0

Conclusion: For exporting companies, broadening the range of tax deductions does not change the magnitude of the tax burden and still provides an advantage for the most vertically integrated companies.

Assuming a VAT of 20 Percent is Substituted for the IAS

Companies selling on the domestic market

Case 1:	Tax borne by the product:	230 x 0.2 = CFAF 46
	Tax paid (reflecting deduction for taxes previously paid):	CFAF 46 - 30 = CFAF 16
Case 2:	Tax borne by the product:	230 x 0.2 = CFAF 46
	Tax paid:	46 - 30 = CFAF 16
Case 3:	Tax borne and paid:	230 x 0.2 = CFAF 46

Conclusion: The product gives rise to the same tax burden for all companies.

Exporting companies: The three types of companies now enjoy a tax exemption of CFAF 46. The tax burden is therefore zero. The companies can either deduct any tax paid on domestic sales or seek a CFAF 30 refund in the first case or CFAF 20 in the second. No taxes are paid in the third case.

Conclusion: The tax burden borne by the product is identical (zero) regardless of the company's degree of vertical integration. The benefit for exporters in comparison to companies selling domestically is the same (CFAF 46) regardless of the size of the company.

Summary of the Results of the Simulation: Tax Burden for a Product by Destination, Type of Taxation, and Degree of Subsector Integration

(in CFAF)

	Sales on the domestic market			Exports		
	Current IAS	IAS with broader deductions	VAT	Current IAS	IAS with broader deductions	VAT
Companies with little integration	56	46	46	30	30	0
Companies with average integration	46	46	46	20	20	0
Totally integrated companies	46	46	46	0	0	0

ANNEX 2

SIMULATION OF EFFECTIVE DIRECT INCOME TAXES FOR DIFFERENT TYPES OF COMPANIES

Corporation

Income	CFAF 100
Tax on industrial and commercial profits (BIC) 45%	-45
	55
Tax on securities (IRVM) 18%	-9.9
	45.1
General income tax (IGR) 50% (max. rate)*	-22.6
Net income	CFAF 22.5

Overall tax rate: (100 - 22.6)/100 = 77.5%

* With the average IGR rate of 15 percent, the IGR paid is CFAF 6.8 and net income is CFAF 38.3, making the overall tax rate: (100 - 38.3)/100 = 61.7%

Partnership

Income	CFAF 100
Tax on industrial and commercial profits (BIC) 25%	-25
	75
General income tax (IGR) 50% (max. rate)*	-37.5
Net income	CFAF 37.5

Overall tax rate: (100 - 37.5)/100 = 62.5%

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* With the average IGR rate of 15%, the IGR paid is 11.3 and net income is CFAF 63.7, making the overall tax rate: (100 - 63.7)/100 = 36.3%.

ANNEX 3

DETERMINANTS OF THE REAL PRODUCER PRICE FOR COTTON IN MALI

by

Pascale Phélinas

September 1988

Table of Contents

Introduction

Cotton is important to Mali's economy, accounting for 16 percent of agricultural production and 40 percent of the country's receipts in foreign exchange. Mali has a comparative advantage in cotton growing; its production costs are far below those in most other African producer countries (Hartmann 1988; Government of Mali 1987).

Until the cotton crisis in 1985/86 and 1986/87 when world prices plunged, Mali's competitiveness in cotton was indisputable. When the crisis seriously undercut the profitability of that activity, the government responded by adopting a number of adjustment measures to reduce costs across the board in its subsector.

Because cotton is vital to the country's economy, Mali has always sought to stimulate cotton growing, and the producer price policy has played no small role in this respect. A number of studies have shown that production decisions by cotton growers are based primarily on the price announced before the planting season (see Levine 1983; Lecaillon and Morrison 1986).

The real price ultimately received by producers depends on a set of factors affecting both nominal prices and those of the goods purchased by the producer--exchange rate, marketing and processing costs, taxation, domestic inflation, and international prices. Moreover, the government's room for maneuvering in the setting of producer prices is constrained by world prices. Because Mali accounts for a relatively small share of the world market, the price at which the fiber is sold is a totally exogenous variable.

This study seeks to show the respective influence of exogenous factors and economic policy factors on real producer prices. The first section describes the cotton subsector in Mali and changes in the real and relative prices for cotton over the last 20 years. The analysis of the macroeconomic determinants of the real price is developed in the second section.

1. Background of the Cotton Subsector and Producer Prices

Efforts to develop cotton growing began before independence on Office du Niger land and in the Mali Sud region under the aegis of the French Textile Development Company (CFDT). Since that time, the cotton subsector has undergone a number of reforms.

1.1 Structure of the Cotton Subsector

Initially, cotton activities were primarily the responsibility of CFDT; cotton production on Office du Niger land was very marginal and ceased in 1971. The Haute Vallée Operation was launched in the early 1970s to develop crops in its project area, including cotton. Cotton production never accounted for more than 5 percent of total production. During the 1970s the authorities' efforts to develop cotton took new directions. Farmer infrastructure was stressed, activities involving cereals were begun, and the first village associations were established. In 1975 the

Malian Textile Development Company (CMDT) succeeded CFDT. Its objective is to "promote cotton production and in general agricultural development and a higher standard of living for farmers in cotton-growing areas" (Ministry of Production, Republic of Mali/CMDT Agreement, June 1985).

Since 1980 CMDT has directly supplied growers with inputs (fertilizer, insecticides, farm equipment). It also provides technical assistance, acts as an exclusive purchasing agent for the seed cotton sold by village associations, and handles the processing of cotton into fiber.

Most fiber is exported. The remainder is sold to local spinning mills, the Malian Textile Company (COMATEX), and the Textile Industry of Mali (ITEMA). On-site processing of seed cotton is handled by two refineries, Vegetable Oil Products Company of Mali (SEPOM) and Cotton Oil Refinery of Mali (HUICOMA).

Until November 1986 the Malian Export-Import Company (SOMIEX), a state-owned company, had a monopoly on cotton exports. Since then, CMDT has been authorized to export cotton directly and SOMIEX has played only a minor role. SOMIEX had oversight solely for cotton exports under international trade agreements and was totally eliminated from the subsector in July 1988.

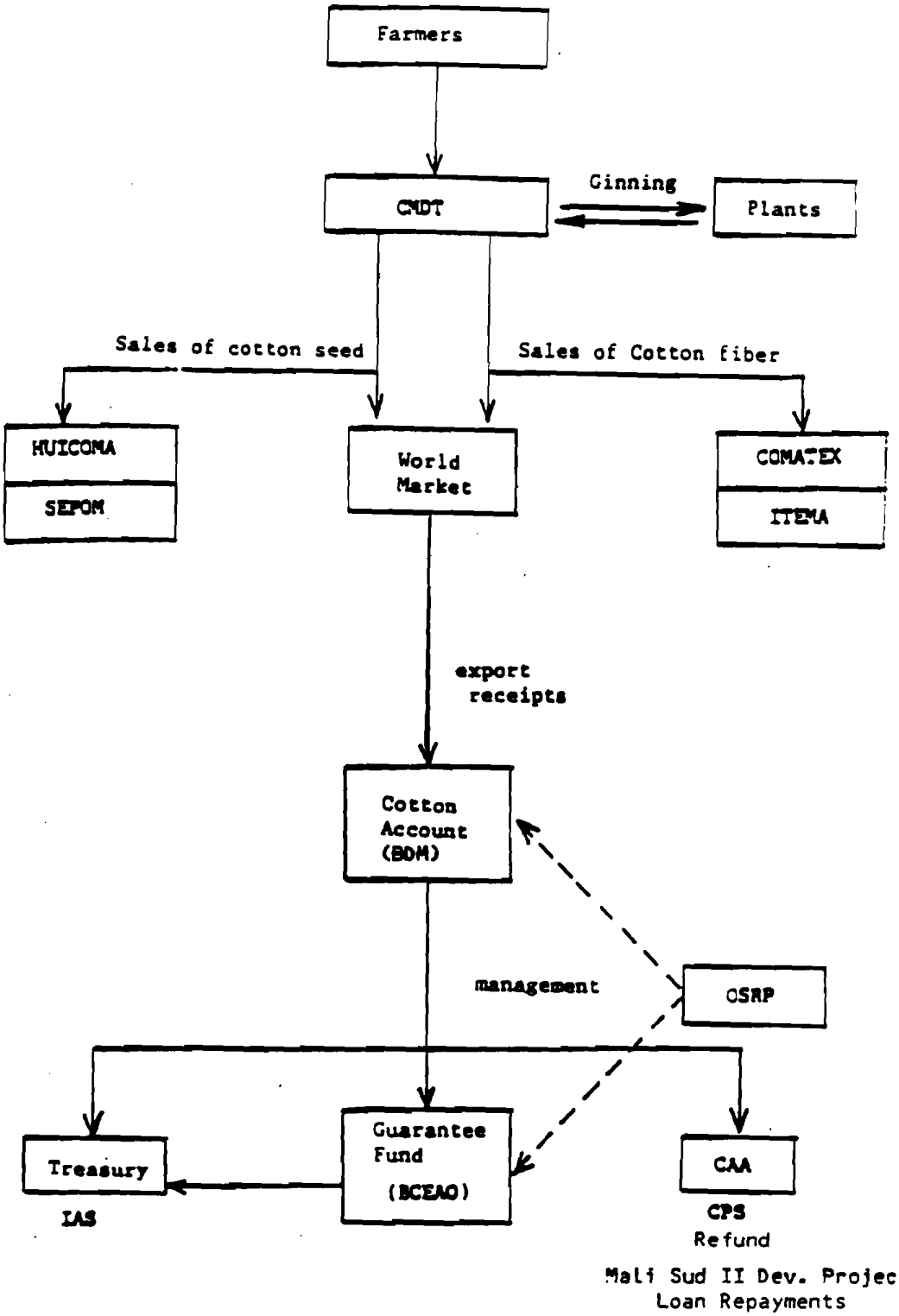
Before 1983 SOMIEX owned the cotton delivered by CMDT and received all export receipts. Earnings were split evenly between the Treasury and SOMIEX and used to finance subsidies for staple products. Since the start of the second Mali Sud rural development project in 1983-84, all financial flows in the cotton subsector have been controlled by the Office of Price Stabilization and Control (OSRP), which manages the Cotton Account at the Development Bank of Mali (BDM) and the Cotton Guarantee Fund. All receipts from cotton exports are paid into the Cotton Account. The account is used to finance all costs borne by CMDT in marketing the fiber and to replenish the Guarantee Fund. The account also pays for a number of taxes (IAS, CPS) and funds the repayment of loans made under the Mali Sud development project. (See Figure A-1 for a simplified flowchart of the cotton subsector).

The Guarantee Fund, held by the Central Bank of West African States (BCEAO) is actually a stabilization fund. Its resources come from the balance in the Cotton Account and STABEX payments in the event of losses on cotton exports.

1.2 Producer Prices

Until 1986 Mali followed a policy of administered prices. Since then, the system has been partially dismantled. Most prices are now based on market forces (margins are nevertheless controlled), with the exception of prices for products such as cotton that are considered strategic by the government.

Figure A-1. Simplified Flowchart for the Cotton Subsector



1.2.1 Nominal price

Producer prices for cotton are set by decree and published at the start of the crop year. All parties involved in the cotton subsector participate in the determination of this price through the Technical Committee of the National Price and Income Commission. The committee proposes producer prices, in principle on the basis of technical studies of production costs and the international price. Its findings are submitted to the Council of Ministers, which makes the final decision.

Price changes can be split into two major periods:

-- Until 1974 producer prices were very stable. The average annual increase was 3.6 percent.

-- In 1974 the international commodities markets were hard hit by the petroleum crisis. Prices tumbled and the countries producing those commodities increased their producer prices substantially. In Mali the price of cotton soared by 50 percent. Subsequent increases were less spectacular: 20 percent in 1977 and 18 percent in 1982. In 1984 new tensions arose on the international cotton market, spurring a steep climb in prices. The producer price in Mali rose by 31 percent between the 1983-84 and 1985-86 crop years.

At the beginning of the 1985-86 crop year the producer price was set at CFAF 85 per kilogram. Because of the sharp drop in international prices in 1985 and 1986, there has been no increase since that time and none is envisaged for the 1988-89 crop year. However, the price has been maintained. The average annual growth rate between 1974 and 1988 was 6.7 percent.

Cotton growers in Mali are paid less than other African producers (Government of Mali 1987,80), as is shown by the following comparison (in CFA francs per kilogram):

Cameroon	155
Niger	130
Côte d'Ivoire	115
Benin	110
Togo	105
Burkina Faso	100
Central African Republic	100
Chad	100
Senegal	100
Mali	85

1.2.2 Real and relative prices

Mali has no data that satisfactorily track changes in consumer prices. The official index, prepared by the statistical offices, reflects only the prices of foodstuffs. As there was no better alternative, the

deflator used here is the implicit GDP deflator index (see Chapter 1 of main report). Even if that index poorly reflected the cost of living in rural areas, it can be reasonably assumed that its trend is significant.

Figure A-2 shows three subperiods in the real producer price for cotton:

-- From 1967 to 1974 increases in the nominal price were small and largely offset by inflation.

-- In 1975 and 1977 the real price index returned to its 1970 level. However, from 1978 onward the increase in the general price level weakened the purchasing power of cotton growers and real prices tended to fall until 1981.

-- From 1982 onward, the curve again began to swing upward and the trend from 1981 to 1987 shows an upturn.

For the period from 1967 to 1987 as a whole, the real price for cotton does not show any clear trend (average increase of 0.3 percent a year).

For relative prices it can be seen from Figure A-2 that changes in the relationship of cotton prices to those for other crops did not favor cotton.

With respect to groundnuts, cotton rapidly lost its relative appeal at the end of the 1960s, but recovered somewhat during the 1970s. The end of the period was marked by a further deterioration in the relative cotton/groundnut price.

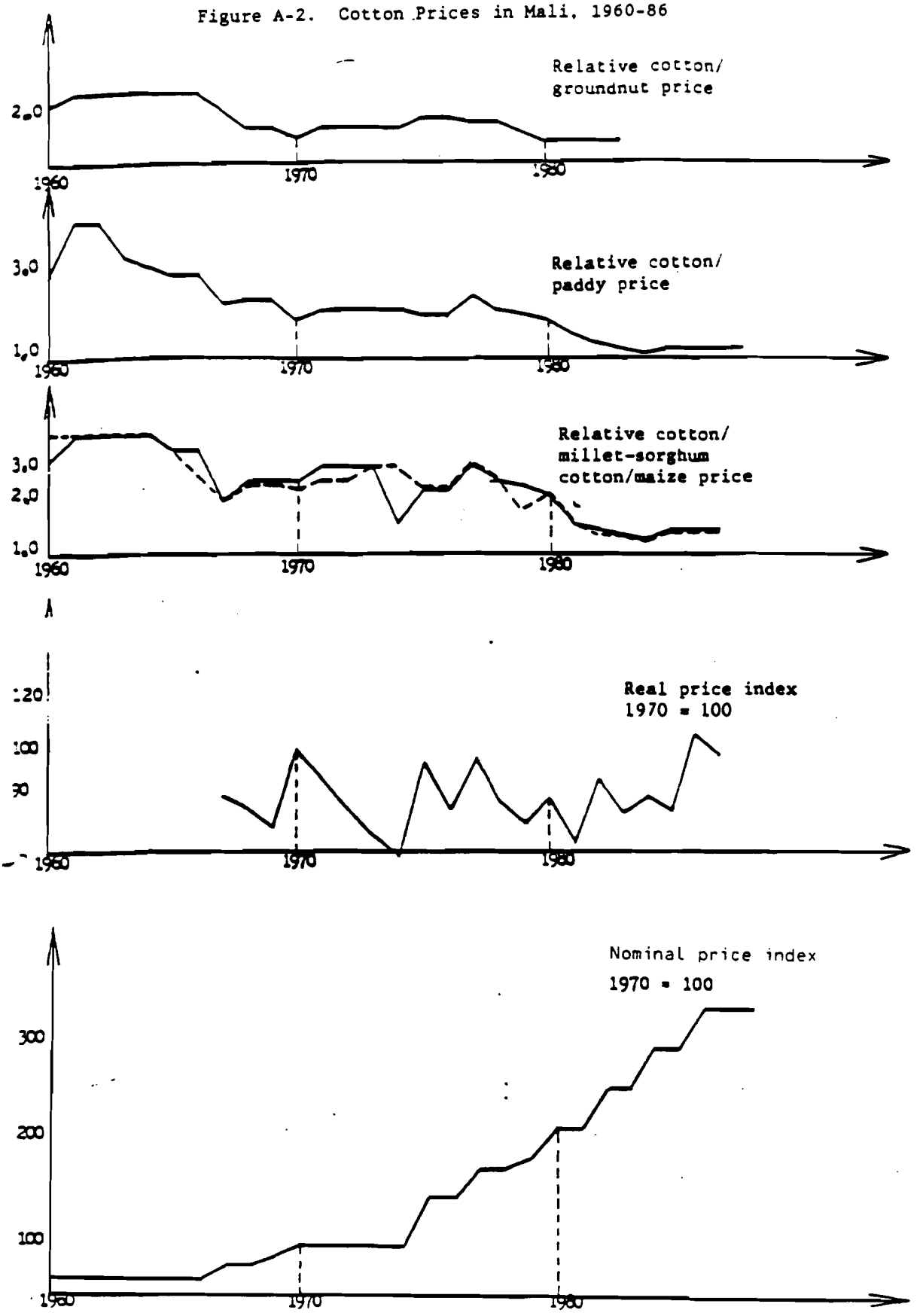
The comparison of cotton and cereal prices is more complex. Official producer prices for millet, sorghum, and maize are an unreliable indicator of prices actually received by farmers. The private market for cereals has always been active in Mali and handles most transactions. However, to the extent that CMDT handled cereals transactions in its area of jurisdiction, it can be assumed that the official price was effectively guaranteed to producers.

As regards paddy, the Office du Niger has always marketed most of the production from its areas at the official price.

The early 1980s were marked by deregulation of the cereals market. Millet and sorghum were deregulated in the 1981/82 crop year but paddy only in 1986/87. Deregulation has apparently sparked an increase in producer prices.

The trends that can be seen from Figure A-2 show a very clear deterioration in the price of cotton relative to cereals for the period as a whole. The decline was greater in the 1960s. Between 1970 and 1980, relative prices remained fairly stable. Beginning in 1980, cereal prices increased more steadily than did cotton prices, especially if the market price for cereals is taken into account.

Figure A-2. Cotton Prices in Mali, 1960-86



2. Determinants of the Real Producer Price for Cotton

The real price received by cotton growers for their product depends on both external and domestic factors. While it can be assumed that the international price plays a preeminent role, a number of economic policy measures, particularly those involving trade, foreign exchange, and taxation policies, can have a significant impact on the real producer price.

A simple model can be used to link the real purchase price to those external and domestic factors and to measure the impact of each on producer purchasing power.[1] The real producer price can be expressed as follows:

$$Pp/Pc \cdot 100 = (z \cdot \theta \cdot tw)/re^* \cdot 100,$$

where

Pp	=	nominal producer price index
z	=	index of the coefficient of equivalence between the farm-gate price and the international price
θ	=	nominal protection coefficient index
tw	=	index of international terms of trade for cotton
re*	=	real effective exchange rate index
Pc	=	implicit GDP deflator index.

The equation yields the relationship between the real price index, external factors (tw), technical factors (z), and economic policy factors (θ and re*).

2.1 External Factors: International Terms of Trade

The international terms of trade for a product can be defined as its international value expressed in a basket of currencies in relation to a world inflation indicator. The international terms of trade for cotton can thus be broken down into three elements: the border price in dollars, the value of the dollar in relation to the basket of currencies of the major trading partner countries, and inflation in those partner countries. Changes in these three factors are briefly discussed below.

2.1.1 Unit export value of cotton

International trade in cotton accounts for some 30 percent of world production. The United States dominates the market with 30 percent of world exports. The USSR is the second largest exporter, with about a 15 percent share. In recent years the People's Republic of China has become

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1 The methodology (which is detailed in an attachment at the end of this annex) was developed at the Center for Studies and Research on International Development by P. Guillaumont, C. Bonjean, and R. Marodon. (See in particular, Marodon 1988 and Bonjean 1988).

a player, with about 6 percent of world exports. Mali accounts for a very small share of the market (Government of Mali 1987, 70-71).

After a long period of stability, world cotton prices began a relatively steep climb in 1973 (see Figure A-3). In just one year the international price jumped 64 percent. The market leveled off between 1974 and 1976, with the border price stabilizing at about US$1,000/ton. In 1977, there was another steep rise in the f.o.b. price (37 percent). Cotton prices remained very favorable until 1984, when the trend reversed. In 1985 and 1986 prices collapsed, primarily because of an enormous increase in world production and cotton exports from China. In 1987, cotton prices recovered markedly, although they are still below the average for the 1977-84 period.

2.1.2 Value of the dollar in relation to the currencies of partner countries

To the extent that the international price for cotton is denominated in dollars, the price of cotton expressed in the basket of currencies of Mali's partners depends on the values of the U.S. currency on foreign exchange markets. The dollar tended to weaken in the 1970s, although there were several brief upswings, particularly in 1974 and then in 1976 and 1977. At the start of the 1980s the value of the dollar began an astronomical rise and peaked at a record level in 1985. It plunged in 1986 and 1987, marking a "return to normalcy" on the exchange markets.

2.1.3 Inflation in trading partner countries

Inflation in Mali's ten main partner countries (from which it imports) was calculated by the geometric mean of the consumer price indices in those countries. The resulting index is an indicator of world inflation perceived by Mali.

The average annual growth in consumer prices in Mali's trading partners was 9.1 percent between 1967 and 1987. There was a considerable increase in 1974 (18.3 percent following the first oil shock. The impact of the second oil shock was more moderate (12.3 percent increase in 1980). The end of the period was marked by a clear slowdown in world inflation (see Figure A-3).

2.1.4 International terms of trade for cotton

Measured over the period under consideration (1968-87), the trend in international terms of trade is downward. This trend became more acute in 1978, with a brief interruption in 1984 and especially after 1985. For about the last ten years Mali has thus had to face relatively disadvantageous price conditions on the international markets.

Table A-1 shows that changes in the export price expressed in dollars largely explain the movements in the real international price or international terms of trade for cotton. However, until 1980 world inflation and the relative weakening of the dollar had an adverse effect on the terms of trade. These two factors simultaneously held back increases in cotton prices and intensified declines.

Figure A-3. Changes in the Determinants of the Real International Price for Cotton

(base year = 1970)

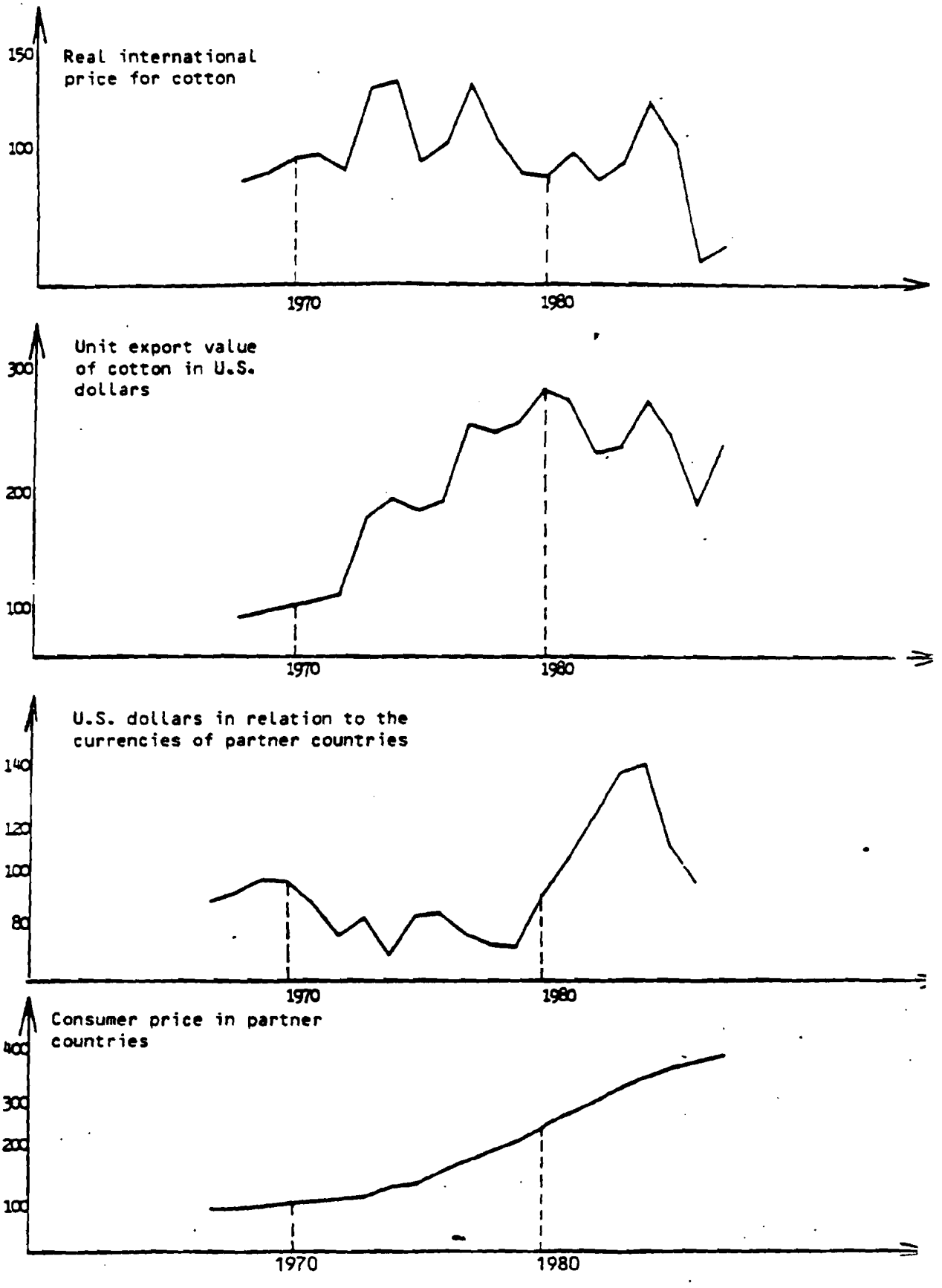

Table A-1. Determinants of the Real International Price for Cotton, 1969-87
(in chain indices)

Year	Pw	Pwc	re/r	tw
1969	104.2	105.2	104.0	103.1
1970	106.6	106.5	104.9	105.0
1971	106.2	103.8	99.2	101.5
1972	108.6	104.7	91.4	94.8
1973	163.7	104.9	85.9	134.0
1974	110.2	118.3	109.8	102.2
1975	94.2	103.3	82.8	75.5
1976	105.5	119.7	121.5	107.2
1977	137.3	112.8	101.0	122.9
1978	97.6	108.4	91.5	82.4
1979	103.8	111.1	94.3	88.1
1980	111.7	112.3	99.1	98.6
1981	96.5	110.5	126.0	109.9
1982	83.3	108.0	115.9	89.4
1983	101.9	110.0	115.9	107.2
1984	117.9	106.5	113.5	125.8
1985	87.8	105.2	102.8	85.8
1986	74.6	103.3	77.6	56.1
1987	130.6	102.5	87.0	110.9

Notes: Pw: Export price of cotton in dollars.
Pwc: Inflation in partner countries.
re/r: Change in the currency basket in relation to the dollar.
tw: Real international price for cotton.

Source: Tables A-9 and A-10.

From 1981 to 1985 the slowing of world inflation and a sharp rise in the value of the dollar were responsible for a pronounced recovery in the real international price for cotton. Beginning in 1985, however, a fall in the value of the dollar intensified the decline in prices.

2.2 Domestic Factors

The level at which the producer price for cotton is set depends in part on the price at which the fiber can be traded on the international market. The exchange rate, marketing and processing costs, and the tax burden borne by the cotton subsector also help determine the producer price. These factors are examined in the following sections.

2.2.1 Marketing of cotton

Prior to November 1986 the marketing of cotton was overseen by CMDT and SOMIEX. The primary collection and processing of cotton are still handled by CMDT. SOMIEX was responsible for export operations, but that function is now the responsibility of CMDT.

Until 1983-84 CMDT and SOMIEX based price schedules on an estimated operating account. The price schedules had to cover all factors in the cost. The procedure for their approval was the same as that for producer prices, and the final decision was taken by the Council of Ministers. This system was changed in 1983-84, and the various costs of market intervention activities are established in the budget estimates approved by OSRP.

Several comments need to be made about the changes in the line items of the schedules and budgets (Tables A-6 and A-7 at the end of this annex).

There was a sharp increase in CMDT's selling price in 1983-84 and 1984-85 (55 percent in two years). This surge in the factory-gate price was due primarily to higher ginning costs resulting from allocations to provisions for the construction of a new plant.[2] As a result, the f.o.b. cost increased 50 percent in the same period.

From 1984-85 to 1987-88 the cost of fiber f.o.b. port of shipment went down from CFAF 642/kilogram to CFAF 440/kilogram. As of the 1985/86 crop year, the government adopted a number of measures to bring the before-tax cost of local cotton down to a level compatible with the world price.

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2 As CMDT is a public enterprise, all fixed assets are owned by the state. CMDT's accounting system therefore has no line items for depreciation. Allocations to provisions are used to replace equipment.

As part of those measures, CMDT was to substantially reduce its collection and ginning costs along with those for f.o.b. preparation. With the exception of ginning costs, the budget estimates (Tables A-6 and A-7) do not show a significant decrease for those line items between 1984-85 and 1987-88 and 1984-85 (see Table A-2) is excluded from total ginning costs, ginning costs per se actually increased between 1984-85 and 1987-88 in nominal and real values.

Table A-2. Cotton Ginning Costs in CFAF Francs per Ton in Mali, 1983/84 to 1987/88

Category	1983/84	1984/85	1985/86	1986/87	1987/88
Allocation to provisions	61,503	73,864			
Ginning costs	49,617	47,730	51,757	44,140	71,117
Total ginning costs	111,120	121,594	51,757	44,140	71,117

Source: Table A-7.

The other measures to reduce the before-tax price involved a reduction of input subsidies, elimination of CMDT's remuneration, and postponement of repayments under the Mali Sud II project.

Moreover, the difficulties of measuring taxes caused a bias in the calculation of actual processing and marketing costs. For some line items it was not always possible to isolate the amount of taxes paid. It can be reasonably assumed that until 1985-86 the bias was fairly constant and the before-tax price variation significant. However, after 1985-86, the fall in processing and marketing costs is overestimated to the extent that it reflects some of the tax exemptions granted to the cotton subsector.

As a whole for the period from 1972 to 1988, marketing and processing costs represented a relatively large share of the f.o.b. price (between 30 and 40 percent until 1983).

Real marketing and processing costs rose an average 3.5 percent per year between 1972 and 1987 (see below). The market intervention costs of CMDT and SOMIEX increased in real terms up to 1985 and then began to decline in 1986 and 1987.[3]

1972	1973	1974	1975	1976	1977	1978	1979
57	58	74	61	71	60	84	71

1980	1981	1982	1983	1984	1985	1986	1987
66	71	79	91	128	144	83	67

2.2.2 Fiscal and parafiscal policy

The taxation of the cotton subsector is rather complex. For the sake of simplicity, domestic taxes will be distinguished from those on exports.

Domestic taxes. The cotton subsector pays a large number of domestic taxes, including the following:

-- Tax on businesses and services (IAS). Under the accounting system used by CMDT and SOMIEX, the IAS is not posted separately for each line item (transportation, ginning, financial costs, earnings, etc.) in the price schedules and budgets. They therefore include the IAS.

-- Municipal and crop protection taxes, respectively CFAF 100 and CFAF 1,000 per ton of seed cotton. The figures are given in fiber equivalent.

-- Business permit (patente) and land taxes. These two taxes do not appear directly on the price schedules and therefore could not be isolated. The same is true for the contribution to the National Housing Fund, the contribution for research, and the interstate road transportation tax.

-- Tax on industrial and commercial profits (BIC), applicable to CMDT's activities as a whole. As such, it was not possible to identify the amounts for cotton operations.

The tax benefits granted to the cotton subsector since 1985-86 affected all of these taxes, with the exception of the IAS. However, the IAS on earnings was included in the exemptions.

As the tax component could not be properly isolated from processing and marketing costs, the impact of the exemptions in terms of lower taxes could not be wholly reflected in the books; taxes were therefore overestimated beginning with 1985-86. Before that, they were

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3 Data are from Tables A-3 and A-8.

systematically underestimated. However, to the extent that the tax system was not changed substantially, the trend is still significant.

Direct and indirect export taxes. Cotton exports are subject to three main taxes:

-- Tax for export services (CPS), which is 3 percent of the export value. This tax was established in 1974 to finance the debt service. Payments are made to the Debt Amortization Fund.

-- The export tax, which was gradually reduced and then eliminated in 1981-82.

-- The Office of Price Stabilization and Control (OSRP) tax, which was introduced in 1972 on two products, cotton and fuels, and abolished in 1981/82.

Indirect export taxes represent the difference between the cost f.o.b. port of shipment, including export taxes, and the f.o.b. price actually received. Before the Mali Sud II project, export earnings were subject to a special tax (tax conjoncturelle) that was paid to the Treasury. The portion kept by SOMIEX was used to subsidize consumer staples. Since 1983-84 payments have been made directly to the Cotton Account.

Protection and taxation. Changes in the nominal protection coefficient (shown in Figure A-4) indicate that cotton production was very heavily taxed (from 40 percent to more than 60 percent) between 1972 and 1984. During the years in which the world price for cotton was particularly high, taxes were relatively heavier than during periods when export prices were low. Thus, in 1973, 1974, and 1977, through taxes and parafiscal charges, the public coffers received about 45 percent of the actual f.o.b. price; producer prices accounted for only 28 percent on average (see Table A-3). In 1983 and 1984 producers received about the same share of the international price (on average 29 percent), whereas taxes were relatively lower than in 1973 and 1974 (abut 25 percent of the f.o.b. price) owing to a surge in marketing and processing costs, which accounted for 43 percent o the export price in 1983 and 50 percent in 1984.

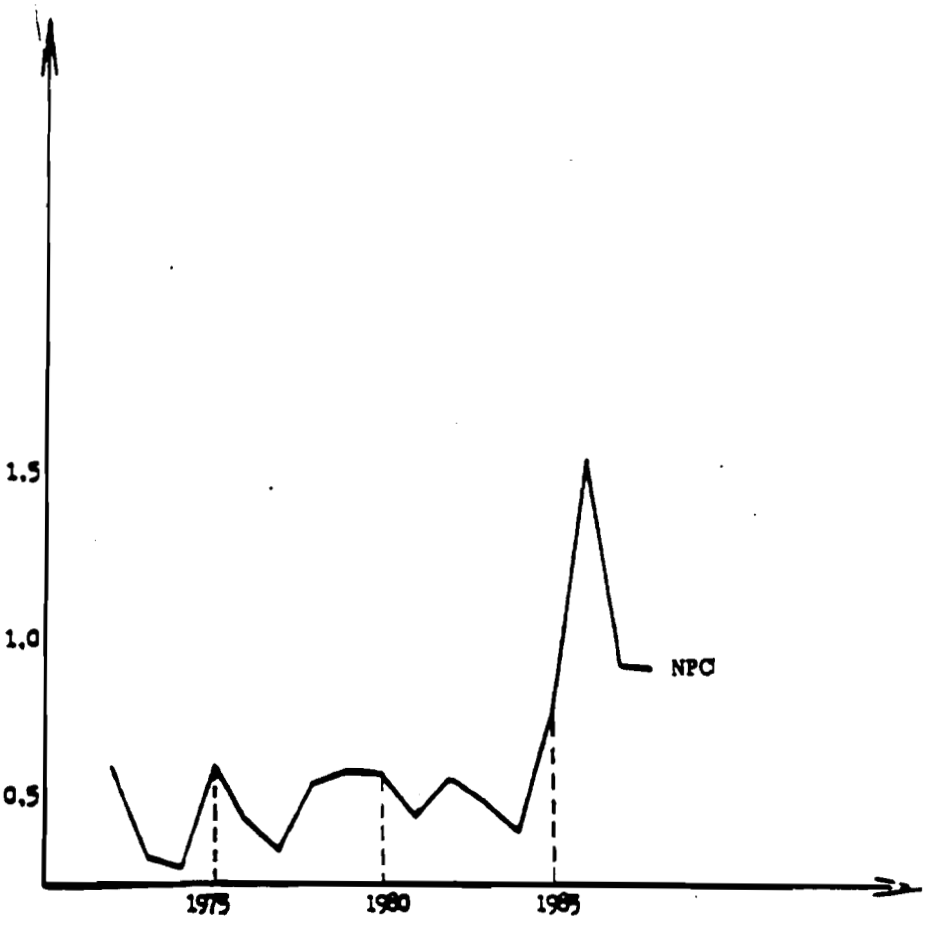
Conversely, in years when the world prices fell, as in 1972, 1975, and then from 1978 to 1980, producers received as much as 40 percent of the border price (38 percent on average) thanks to lower parafiscal charges, which accounts for some 20 percent of the f.o.b. price. Since 1985, the protection coefficient has been nearing 1, reaching a record level of 1.57 in 1986. The cotton crisis forced the government to grant sizable tax exemptions to the cotton subsector so that it could maintain its competitiveness, enabling producers to keep more than half the export price.

Table A-3. Relationship of the International Price Expressed in CFA to the Current Exchange Rate and the Nominal Producer Price (in CFA francs per kilogram and percentages)

Category	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1. Average export price	160	230	274	230	271	382	343	335	372	461	465	549	743	671	385	437	451
As % of export price	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2. Taxes	32	32	44	20	22	34	38	35	26	28	20	15	16	11	--	--	--
As % of export price	20	14	16	9	8	9	11	10	7	6	4	3	2	2	--	--	--
3. Tax payments to Cotton Account	5	70	81	30	45	133	37	36	59	118	83	125	157	29	-81	10	11
As % of export price	3	30	30	13	17	35	11	11	16	26	18	23	21	4	-21	2	2
4. Marketing and processing costs	57	62	88	83	107	97	150	140	142	170	191	238	373	434	242	203	216
As % of export price	36	27	30	36	39	25	44	42	38	37	41	43	50	65	63	46	48
5. Producer price	66	66	66	97	97	118	118	124	145	145	171	171	197	197	224	224	224
As % of export price	41	29	24	42	36	31	34	37	39	31	37	31	27	29	58	51	50
6. Farm-gate equivalent of export price (1 minus 4)	103	168	191	147	164	285	193	195	230	291	274	311	370	237	143	234	235
7. Nominal protection coefficient (5/6)	0.64	0.39	0.35	0.66	0.59	0.41	0.61	0.64	0.63	0.50	0.62	0.55	0.53	0.83	1.57	0.96	0.95
8. Coefficient of equivalence between farm-gate and border prices (6/1)	0.64	0.73	0.70	0.64	0.61	0.75	0.56	0.58	0.62	0.63	0.59	0.57	0.50	0.35	0.37	0.54	0.52

Source: Calculations based on data in Tables A-5, A-6, and A-7.

Figure A-4. Changes in the Nominal Protection Coefficients for Cotton in Mali, 1972-88



2.2.3 Exchange policy

The real effective exchange rate for the CFA franc in Mali was calculated from the bilateral exchange rates and the cumulative inflation differential between Mali and its main trading partners:

Belgium	Côte d'Ivoire	France	Italy	Japan
1.5%	21.1%	44.9%	2.2%	1.7%

Netherlands	Fed. Rep. of Germany	United Kingdom	Senegal	United States
2.2%	9.1%	2.5%	11.1%	3.7%

The weighting was based on the share of each country in Mali's official imports in 1975. From Figure A-5 it can be seen that there were two different periods in the level of the real effective exchange rate:

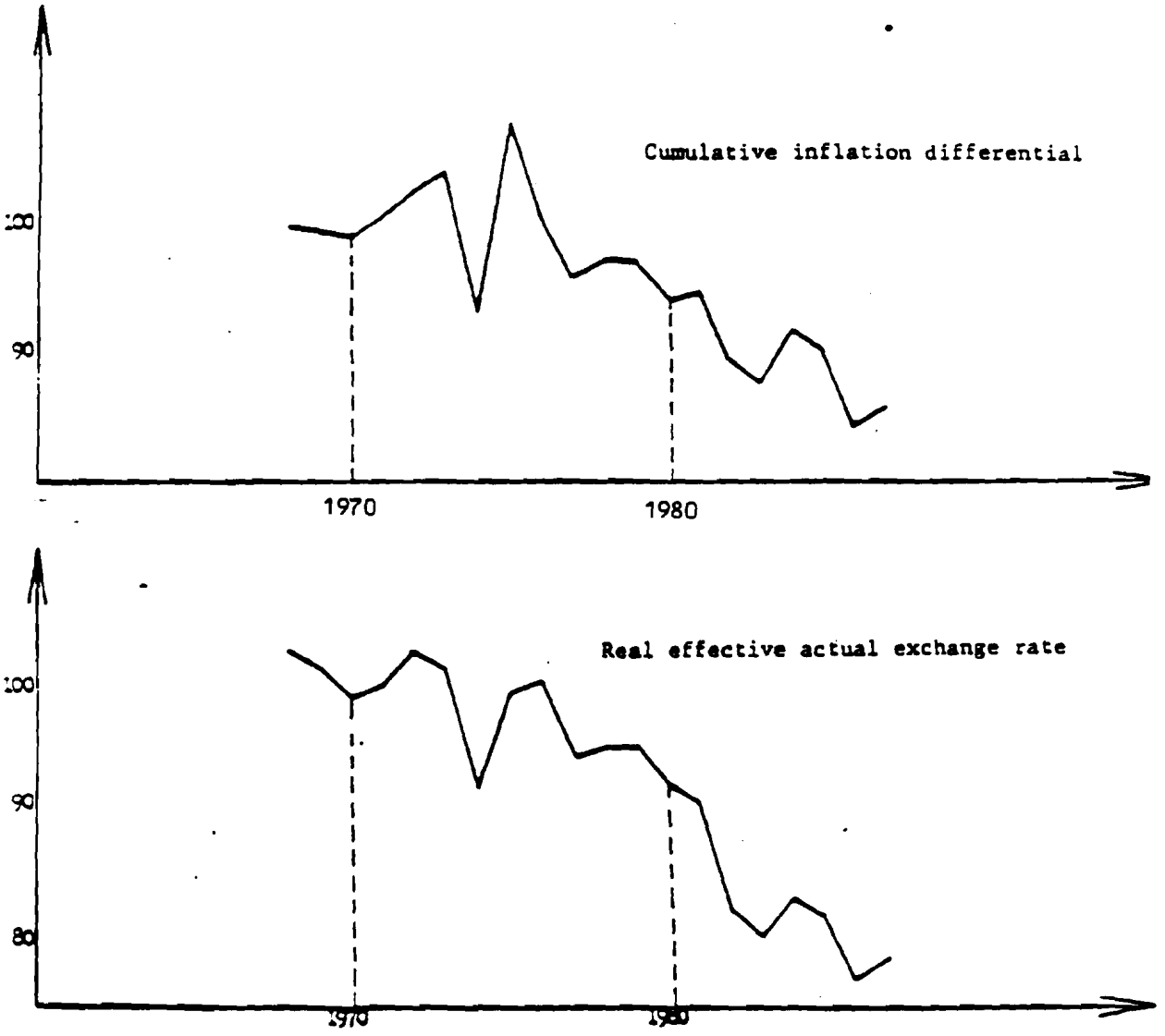
-- Until 1976 the real effective exchange rate hovered near its equilibrium level. There was a slight tendency for it to rise, especially in 1968 and 1969 and again in 1972 and 1973.

-- Beginning in 1977 the CFA franc in Mali began to weaken; the index of the real effective exchange rate lost 10 percentage points between 1977 and 1981. The currency began a sharper decline in 1982, which continued until 1987.

The cumulative inflation differential is largely behind the changes in the real effective exchange rate. Whereas until 1975 prices increased much faster in Mali than in its trading partners, since 1976 there has been a distinct easing of inflation in Mali in relation to its trading partners.

Ultimately, unlike the experience in other countries, a fixed parity helped maintain the value in local currency of each kilogram of cotton exported. If the equilibrium level of the exchange rate it is assumed to be the 1970 figure, the spread between the f.o.b. price expressed in CFA francs at the official exchange rate and the f.o.b. price converted into CFA francs at the real exchange rate can be considered an implicit production subsidy. The protection coefficient must then be adjusted to reflect the decline in the real exchange rate, in order to provide a better indication of real taxation/subsidization. The calculation and interpretation of the protection coefficient adjusted for the overevaluation or underevaluation of a given currency give rise to particularly delicate problems in the case of an agroindustrial crop with high processing costs. We preferred to avoid giving results here that are difficult to interpret.

Figure A-5. Real Effective Exchange Rate for the CFA Franc in Mali and Cumulative Inflation Differential Between Mali and the Main Trading Partners, 1969-87



It is nevertheless clear that from 1976 to 1984 taxation of the cotton subsector as measured by the unadjusted nominal coefficient, is overestimated. From 1985 onward the positive effects of tax exemtpions for the producer substantially strengthened the effect of the "depreciated" CFA franc in Mali.

2.3 Summary

The major trends for the factors affecting the real producer price of cotton have just been analyzed. The method given in Attachment 1 to this annex can be used to assess the relative impact of each of these factors on the real price.

That impact is measured by using chain indices calculated from simple indices for each factor. For a given year, the chain index is equal to the simple index for that year as compared to the simple index for the preceding year. Thus, the effect of each factor on the real price as well as any offsetting effect between them can be analyzed for each year.

The following comments relate to the chain indices shown in Table A-4.

1. The impact of the international terms of trade for cotton on the real product price was considerably softened by the taxation policy for the cotton subsector. In point of fact, positive changes in the real price often corresponded to a worsening of the international terms of trade owing to compensatory movements in the protection coefficient.

The tax and parafiscal policy thus played a key role in determining real producer prices. The measures taken generally made it possible to maintain producer prices when international prices fell off substantially; in this respect 1975, 1978, 1979, and especially 1985 and 1986 are particularly significant. Conversely, the sudden jump in the terms of trade for cotton in 1973-74, 1976-77, and 1983-84 was largely offset by an increase in indirect taxes.

For the period 1972-87 as a whole, the changes in the real international price for cotton were not favorable to producer prices; the trend in the international terms of trade was in fact negative for the period (see Figure A-6). However, the unfavorable changes in the international terms of trade were partially offset by a steady lessening of the tax burden of the cotton subsector.

2. Analysis of the impact of the domestic marketing policy on the real producer price is a more delicate matter. Because changes in the z coefficient are linked to movements in the international price, they do not measure increases or decreases in marketing and processing costs.

Thus in 1973-74 and 1977 the increase in z reflects that of the border price; it does not reflect lower marketing costs. However, from 1982 to 1985 the steep increase in marketing costs was primarily

Table A-4. Determinants of Real Producer Prices for Cotton in Mali, 1972-87

(in chain indices)

Year	P_p	z	θ	t_w	re*
1972	n.a.	n.a.	n.a.	n.a.	n.a.
1973	94.4	114.1	60.9	134.0	98.6
1974	96.9	95.9	89.8	102.2	90.9
1975	120.4	91.4	188.5	75.5	108.0
1976	90.4	95.3	89.4	107.2	101.0
1977	111.9	123.0	69.5	122.9	93.9
1978	90.8	74.7	148.7	82.5	100.9
1979	95.7	103.5	104.9	88.1	100.0
1980	107.1	107.0	98.4	98.6	96.9
1981	90.1	101.5	79.4	109.9	98.3
1982	114.7	93.7	124.1	89.4	90.6
1983	94.0	96.5	88.6	107.2	97.5
1984	102.5	87.8	96.4	125.8	103.9
1985	95.7	70.0	156.6	85.8	98.3
1986	119.8	105.7	189.1	56.2	93.7
1987	96.6	146.0	61.1	110.8	102.3

Notes: P_p : Real producer price for cotton.
z : Coefficient of equivalence between farm-gate price and border price.
θ : Nominal protection coefficient.
tw : Real international price for cotton.
re* : Real effective exchange rate.

Source: Table A-11.

responsible for the drop in z. In 1986 and 1987, when world prices plummeted, the before-tax cost price fell. However, we know that the increase in z is overestimated for those two years (see above) and its positive impact on the real price was less in actuality than is shown in Table A-4.

In sum, marketing and processing costs between 1972 and 1980 had a negative effect on real producer prices.

3. The fact that the real effective exchange rate changed very little suggests a priori that the exchange policy had a marginal impact on the domestic terms of trade for the producer. However, over the long run, despite the deterioration in the international terms of trade and the penalizing impact of trade policy and taxation of the sector, the real price for cotton was maintained (or even slightly increased) between 1972 and 1987. Producer purchasing power increased, primarily because of a weakening of the currency in real terms.

2.4 Conclusion

The economic policy followed by most African countries has often been blamed for the continent's poor agricultural performance. This study sought to illustrate the impact of certain economic policy measures on the real prices for cotton in Mali, along with the role played by exogenous factors.

The main findings clearly show that trade, tax, and exhange policies are powerful instruments that can cancel out or strengthen the impact that changes in the international terms of trade for cotton have on producer purchasing power.

Throughout the period under consideration, the deterioration in the international terms of trade blocked increases in producer prices. Pressure from this factor was particularly marked during the cotton crisis in 1985-86.

Trade policy largely curbed increases in the real prices for cotton. Reacting to the 1985-86 plunge in world prices, the government formulated a Crisis Resolution Plan (Plan de Sortie de la Crise) to reduce costs in the sector. It nevertheless appears that CMDT did not generate substantial savings on the costs of its market intervention activities, meaning that there is still considerable scope for improving competitiveness in the sector.

Taxes and parafiscal charges, used to stabilize producer prices, substantially held down producer purchasing power until 1984. After that point, depressed prices on the international markets led the Malian authorities to considerably limit all taxation of the cotton subsector. The measures they took were an important factor in maintaining the real price of cotton.

Finally, the exchange policy was an important economic policy variable over the long run. Given the rather penalizing impact of the other factors on the real price of cotton, only depreciation of the real effective exchange rate made it possible for that price to be maintained.

Figure A-6. Determinants of the Real Producer Price for Cotton in Mali, 1972-87

(base year = 1972)

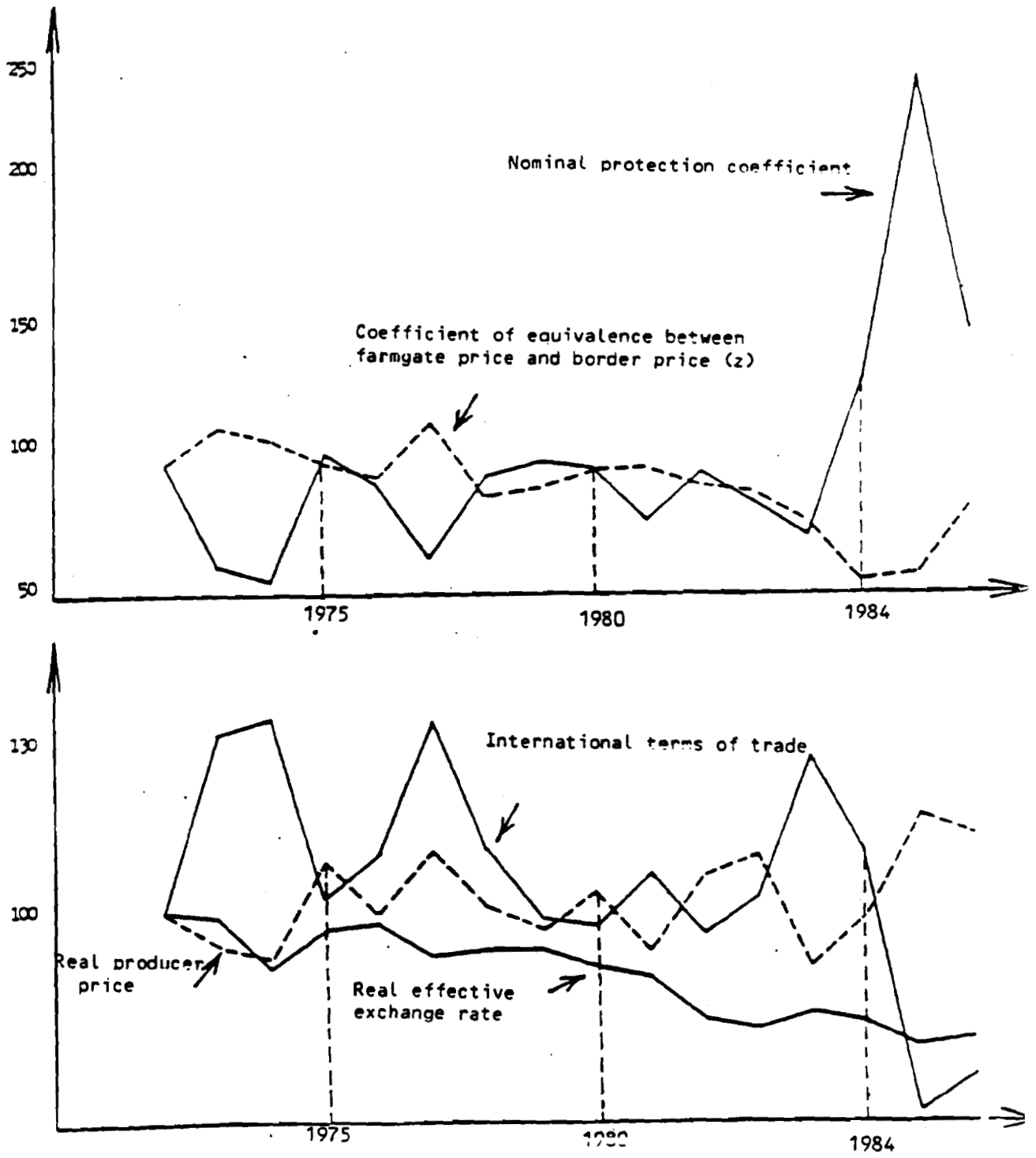


Table A-5. Producer Prices for Main Crops in Mali, 1960-89
(in CFA francs per kilogram)

Year	Paddy	Millet/Sorghum[a]	Maize	Cotton[b]	Groundnuts[c]
1960	6	5.8	5	17	7.8
1961	4.5	5	5	17	7
1962	4.5	5	5	17	7
1963	5.5	5	5	17	7
1964	5.8	5	5	17	7
1965	6.3	5.5	5.5	17	7
1966	6.3	5.5	6.5	17	7
1967	8	8	8	17	8
1968	9	8	8.5	20	12
1969	9	8	8.5	20	12
1970	12.5	9	10	22.5	15
1971	12.5	9	10	25	15
1972	12.5	9	10	25	15
1973	12.5	10	10	25	15
1974	12.5	16	10	25	15
1975	20	16	16	37.5	20
1976	20	16	16	37.5	20
1977	20	16	16	45	25
1978	22.5	18	18	45	25
1979	25	20	25	47.5	30
1980	31.2	25	25	55	40
1981	37.5	35	35	55	40
1982	50	42.5	45	65	45
1983	55	45	47.5	65	45
1984	60	50	50	75	
1985	65	50	50	75	
1986	70	55	55	85	
1987	70	55	55	85	
1988	70			85	
1989	70			85	

Note: Crop year n-n+1 is considered to be calendar year n+1 (e.g., crop year 1967-68 is noted as 1968). The producer price has been deregulated since 1983-84.

a Before 1967 the figures are for prices from regions with surpluses. After 1967 prices are standard throughout the territory.

b First quality.

c Unshelled groundnuts.

Source: OSCE, from DNAE.

Table A-6. Price Schedules -- Budgets for Export Cotton Fiber, SOMIEX and CMDT, 1971/72 to 1987/88
(in thousands of CFA francs)

Category	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81
CMDT factory-gate cost price	111,403	115,880	152,519	164,469	189,560	197,862	249,449	236,383	251,459	280,614
Transportation, handling, storage costs	9,765	9,633	10,410	10,833	11,472	16,928	17,695	18,297	18,491	20,489
Financial costs	--	--	--	--	--	--	--	7,771	8,268	10,511
Transit costs	3,649	4,023	--	3,972	4,655	5,787	8,909	9,354	9,352	9,455
Insurance	--	--	--	462	2,279	2,015	2,396	2,404	2,404	3,125
Overhead	3,100	3,100	3,100	--	--	--	--	--	--	--
CPS	--	--	--	--	--	6,076	7,630	7,482	7,950	8,225
Export taxes	27,000	27,000	27,000	20,000	16,500	20,000	20,000	17,500	15,000	10,000
Cost price f.o.b. port of shipment	154,917	159,636	193,029	199,736	225,506	248,668	306,079	299,191	312,924	342,713

Category	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88
CMDT factory-gate cost price	324,209	374,793	498,348	580,708	407,010	369,744	389,615
Transportation, handling, storage costs	24,154	24,770	22,259	29,888	28,335	31.200	28,160
Financial costs	11,780	1,207	2,770	-	925	1,320	1,348
Transit costs	8,374	8,374	15,201	19,073	19,484	18,640	16,165
Insurance	3,160	3,611	5,799	4,028	2,840	2,270	713
Overhead	--	--	2,344	--	4,857	570	--
CPS	9,915	11,429	12,848	8,174	Exempt	Exempt	Exempt
Export taxes	--	--	--	--	--	--	
Cost price f.o.b. port of shipment	381,592	424,184	559,569	641,821	465,911	426,564	439,684

Source: Office of Price Stabilization and Control.

Table A-7. Price Schedules -- Budgets for Export Cotton Fiber, CMDT, 1971/72 to 1987/87
(in CFA francs per ton)

Category	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81
Purchase price	24,250	24,475	24,363	36,875	37,000	37,000	43,000	45,000	55,000	55,000
Market costs	850	866	1,263	1,000	1,573	1,861	1,723	1,319	1,443	2,352
Collection cost	2,400	2,400	2,515	2,500	3,382	3,780	4,930	4,336	4,944	6,271
Road maintenance	--	--	--	--	--	--	326	431	181	155
Input subsidies	2,000	2,000	5,667	5,750	5,367	6,500	8,988	9,000	5,000	6,250
Extension	3,000	3,162	5,066	5,067	5,946	5,078	5,078	4,455	4,071	7,316
CFDT technical support	--	--	--	1,250	1,250	1,250	1,250	1,250	1,250	1,250
Mali Sud I project repayment	--	--	--	--	--	--	2,605	2,768	500	500
Recurrent charges under Mali Sud I project	--	--	--	--	--	--	--	--	--	--
Seed cotton factory-gate cost price (in fiber equivalent)	85,526	88,330	104,360	138,005	144,989	147,524	179,630	182,338	194,076	210,036
Ginning	15,704	15,827	20,820	15,000	20,023	22,726	27,346	22,308	24,468	35,306
Insurance	1,655	1,340	2,157	1,201	1,207	1,399	1,982	1,259	1,883	2,035
Bank interest	3,255	5,115	7,414	5,000	9,285	9,611	19,013	9,653	8,966	9,981
CMDT remuneration	--	--	--	5,000	8,790	8,836	11,068	10,899	11,617	12,506
Municipal tax	263	268	268	263	266	266	265	266	268	266
Crop protection tax	--	--	--	--	--	--	2,645	2,660	2,681	2,660
OSRP tax	5,000	5,000	17,500	--	5,000	7,500	7,500	7,500	7,500	7,500
Fiber factory-gate cost price	111,403	115,880	152,519	164,469	189,560	197,862	249,449	236,383	251,459	280,614

Table A-7. Price Schedules -- Budgets for Export Cotton Fiber, CMDT, 1971/72 to 1987/87 (continued)
(in CFA francs per ton)

Category	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88
Purchase price	65,000	65,000	74,700	75,000	84,318	84,753	84,779
Market costs	2,352	2,873	3,187	3,960	2,858	3,144	4,808
Collection cost	8,272	9,434	11,972	12,930	11,968	13,270	11,838
Road maintenance	156	157	263	272	205	41	556
Input subsidies	12,084	12,083	14,911	21,575	8,068	2,492	--
Extension	7,315	11,512	15,940	11,876	12,601	9,874	9,869
CFDT technical support	1,250	1,250	1,250	1,250	1,250	1,250	1,250
Mali Sud I project repayment	500	5,000	8,717	11,314	Exempt	Exempt	Exempt
Recurrent charges under Mali Sud I project	--	--	--	12,389	11,299	3,059	1,955
Seed cotton factory-gate cost price (in fiber equivalent)	249,157	276,570	335,052	400,202	340,550	307,789	302,776
Ginning	31,115	50,000	111,120	121,594	51,757	44,140	71,117
Insurance	3,023	828	1,820	2,164	1,726	2,466	943
Bank interest	11,446	16,544	19,812	22,247	12,977	15,349	14,779
CMDT remuneration	15,081	27,371	27,730	31,575	--	--	--
Municipal tax	262	258	256	266	Exempt	Exempt	Exempt
Crop protection tax	2,625	3,222	2,558	2,660	Exempt	Exempt	Exempt
OSRP tax	7,500	--	--	--	--	--	--
Fiber factory-gate cost price	324,209	374,739	498,348	580,708	407,010	369,744	389,615

Source: Office of Price Stabilization and Control.

Table A-8. Cotton Fiber Exports, 1968-88

Year	Quantity in tons	Value in millions of CFAF	Unit Value in CFAF/ton	Unit Value in US$/ton
1968	12,246	1,500	120,715	493
1969	16,492	2,200	133,398	514
1970	17,100	2,600	152,047	548
1971	19,840	3,200	161,290	582
1972	22,880	3,650	159,528	632
1973	20,847	4,800	230,249	1,033
1974	15,505	4,250	274,105	1,140
1975	18,906	4,350	230,086	1,074
1976	42,295	11,450	270,718	1,033
1977	36,968	14,127	382,141	1,556
1978	39,212	13,437	342,676	1,519
1979	42,620	14,285	335,172	1,576
1980	57,647	21,440	371,937	1,760
1981	40,129	18,512	461,313	1,698
1982	30,456	14,167	465,147	1,415
1983	43,674	23,974	548,931	1,441
1984	52,095	38,700	742,874	1,700
1985	52,740	35,386	670,952	1,493
1986	64,350	24,792	385,272	1,113
1987	68,298	29,836	436,847	1,454
1988	67,344	30,362	450,854	

Source: Central Bank of West African States and Office of Price Stabilization and Control.

Table A-9. Price Indexes for Cotton in Mali, 1967-87
(base year = 1970)

Date	Pc	re*	re	r	Pp
1967	74.5				91.3
1968	90.1	103.9	103.0	112.5	88.8
1969	94.5	102.5	101.9	106.9	84.7
1970	100.0	100.0	100.0	100.0	100.0
1971	105.5	101.0	99.4	100.2	94.8
1972	112.9	103.7	99.8	110.0	88.6
1973	120.1	102.2	97.0	124.6	83.3
1974	126.9	92.9	98.7	115.4	78.8
1975	152.7	100.4	91.7	129.6	98.2
1976	169.5	101.4	100.0	116.2	88.5
1977	182.4	95.2	98.2	113.0	98.7
1978	200.5	96.0	97.8	123.1	89.8
1979	222.5	96.0	97.9	130.6	85.4
1980	242.3	93.0	97.7	131.4	90.8
1981	268.7	91.5	95.7	102.2	81.9
1982	274.7	82.9	91.7	84.5	94.6
1983	295.1	80.8	91.6	72.9	88.1
1984	329.4	83.9	90.7	63.6	91.1
1985	340.4	82.4	90.7	61.8	88.1
1986	327.7	77.3	91.3	80.2	103.8
1987	342.0	79.0	91.6	92.4	99.4

Notes: Pc: Implicit GDP index.
re*: Real effective exchange rate index.
re: Effective exchange rate index.
r: Index of the nominal exchange rate relative to the dollar.
Pp: Index of the real producer price for cotton.

For the method of calculating re and re* see Table 1-1 of the main report.

Source: CERDI data bank, based on World Bank (1987c) and IMF, International Financial Statistics.

Table A-10. Determinants of the International Terms of Trade for Cotton, 1967-87 (base year = 1970)

Year	Pw	Pwc	re/r	tw
1967		86.3		
1968	90	89.3	91.6	92.3
1969	93.8	93.9	95.3	95.2
1970	100.0	100.0	100.0	100.0
1971	106.2	103.8	99.2	101.5
1972	115.3	108.7	90.7	96.2
1973	188.7	114.0	77.9	128.9
1974	208.0	134.9	85.5	131.8
1975	196.0	139.4	70.8	99.5
1976	206.8	166.9	86.0	106.6
1977	283.9	188.3	86.9	131.0
1978	277.2	204.1	79.5	108.0
1979	287.6	226.7	75.0	95.1
1980	321.2	254.5	74.3	93.8
1981	309.8	281.2	93.6	103.1
1982	258.2	303.8	108.5	92.2
1983	263.0	334.6	125.7	98.8
1984	310.2	356.2	142.7	124.3
1985	272.4	374.8	146.7	106.6
1986	203.1	387.0	113.9	59.8
1987	265.3	396.7	99.1	66.3

Notes: Pw: FOB price index for cotton expressed in dollars.
Pwc: Average consumer price index for main trading partners.
re: Effective exchange rate index.
r: Index of the nominal exchange rate relative to the dollar.
tw: Index of the international terms of trade for cotton.

Source: Based on data in Tables A-8 and A-9.

Table A-11. Determinants of Real Producer Prices, 1972-87
(base year = 1972)

Date	Pp	z	θ	tw	re*
1972	100.0	100.0	100.0	100.0	100.0
1973	94.4	114.1	60.9	134.0	98.6
1974	91.5	109.4	54.7	137.0	89.6
1975	110.1	100.0	103.1	103.4	96.8
1976	99.5	95.3	92.2	110.8	97.8
1977	111.5	117.2	64.1	136.2	91.8
1978	101.1	87.5	95.3	112.3	92.6
1979	96.8	90.6	100.0	98.9	92.6
1980	103.6	96.9	98.4	97.5	89.7
1981	93.4	98.4	78.1	107.2	88.2
1982	107.1	92.2	96.9	95.8	79.9
1983	100.8	89.0	85.9	102.7	77.9
1984	103.3	78.1	82.8	129.2	80.9
1985	98.9	54.7	129.7	110.8	79.5
1986	118.4	57.8	245.3	62.2	74.5
1987	114.2	84.4	149.6	68.9	76.2
1988		81.3	148.4		

Notes: Pp: Real producer price for cotton.
z: Coefficient of equivalence between the farm-gate price and the border price.
θ: Nominal protection coefficient.
tw: Real international price for cotton.
re*: Real effective change rate.

Source: Based on data from preceding tables.

ATTACHMENT 1

METHOD FOR ANALYZING THE IMPACT OF THE DETERMINANTS OF REAL PRODUCER PRICES[4]

Construction of the model

The real price of the product in question should be broken down into the factors directly representative of the country's economic policy (called domestic factors) and exogenous factors contingent upon the international environment (external factors).

Let

Pp = nominal producer price
P'w = international price for the product in dollars
Pw = international price for the product expressed in the local currency (Pw = P'w/r)
r = nominal exchange rate in relation to the dollar (absolute).

The product must be "tradable", so that for each year its international price can be broken down. An analysis of the production and marketing process makes it possible to distinguish

Pp = the share corresponding to the producer price
C = the share corresponding to marketing, transportation, and processing costs for the product
T = the share corresponding to taxes and subsidies under the tax and parafiscal policy affecting the sector.

These components have to be consistent with the following identity:

$$Pw = Pp + T + C. \quad (1)$$

Pw*, the farm-gate equivalent of the international price in local currency, is therefore determined by

$$Pw^* = Pw - C = Pp + T \quad (2)$$

Two economic policy indicators can then be shown:

$$z = Pw^*/Pw \text{ and } \theta = Pp/Pw^* \quad (3)$$

where z represents the coefficient equivalence between the producer price and the border price, taking into account the marketing, transportation, and processing costs of the product, and θ is the nominal protection coefficient.

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4 Method devised by P. Guillaumont 1986; Bonjean 1988a; and Morodon 1988.

The following relationship is then established between the producer and international prices:

$$Pp/Pw = z \cdot \theta \quad \text{and} \quad Pp/P'w = (z \cdot \theta) \; / \; r \; . \tag{4}$$

The identity is verified if the parameters are expressed in an index in relation to a base year (indices are noted by ^):

$$\hat{Pp}/\hat{P'w} = (\hat{z} \cdot \hat{\theta}) \; / \; \hat{r} \cdot 100 \; . \tag{5}$$

The real producer price can then be expressed as follows:

$$\hat{Pp}/\hat{Pc} \cdot 100 = [(\hat{z} \cdot \hat{\theta}) \; / \; \hat{r}] \cdot (\hat{P'w} \; / \hat{Pc}) \; , \tag{6}$$

where $\hat{Pc}$ is the consumer price index (it is assumed that it is a satisfactory indicator of rural consumer prices or at least that changes in the rural index do not differ markedly from the index for the entire country).

The expression P'w/r•Pc can be considered to be the quotient of two elements, tw/re*:

$$\hat{tw} = (\hat{P'w}/\hat{r}) \cdot 100 = (\hat{Pwc}/\hat{re}) \text{ and } \hat{re^*} = \hat{re} \cdot (\hat{Pc}/\hat{Pwc}), \tag{7}$$

where $\hat{tw}$ is the real international price index for the product or its "international terms of trade," expressed in the local currency (a concept very similar to the common concept of net border terms of trade), Pwc is the average consumer price index in trading partner countries (averaged using a structure identical to that used to calculate the effective exchange rate), and re* is the real effective exchange rate index, calculated from the nominal effective exchange rate (re) and the ratio between the consumer price indices in the country in question and its trading partners.

The index $\hat{tw}$ can be written as follows:

$$\hat{tw} = (\hat{P'w}/\hat{Pwc}) \cdot (\hat{re}/\hat{r}) \; . \tag{8}$$

The international terms of trade for the product thus depend on the export price in dollars, consumer prices in trading partner countries, and a monetary index, all three of which are clearly external variables.

All the above indicators taken together yield the following equation:

$$\hat{Pp}/\hat{Pc} \cdot 100 = (\hat{z} \cdot \hat{\theta} \cdot \hat{tw}) \; / \; \hat{re^*} \cdot 100 \; . \tag{9}$$

Impact of the factors on real prices

The impact of the factors on real prices cannot be measured directly using the arithmetic equation given above.

That equation expressed in logarithms is as follows:

$$\text{Log } \hat{Pp}/\hat{Pc} = \text{Log } \hat{z} + \text{Log } \hat{\theta} + \text{Log } \hat{tw} - \text{Log } \hat{re}^* - 2\text{Log } 100 \qquad (10)$$

and hence,

$$d \text{ Log } \hat{Pp}/\hat{Pc} = d \text{ Log } \hat{z} + d \text{ Log } \hat{\theta} + d \text{ Log } \hat{tw} - d \text{ Log } \hat{re}^* \ . \qquad (11)$$

The elasticities just shown above are hence all equal to 1 or -1, reflecting the fact that an increase or decrease of x% in one of the variables results in a proportional change in the real price index.

An annual analysis must be made of price fluctuations. For each year, the impact of a given factor must be examined as well as any offsetting effect among variables.

That impact can be quantified by calculating chain indexes based on simple indexes prepared during the identification of the real price determinants. The chain index for each year is derived by comparing the gross index for that year to the index of the preceding year. The magnitude of the increase or decrease in relation to the preceding year is then apparent for each variable being studied. Thus a chain index equal to 110 for year n means that the variable in question increased 10% between n-1 and n.

The advantages of impact analysis in this form are twofold:

-- The identity of the relationship between the real price and technical, international, and macroeconomic factors is maintained. For each year, if ($\hat{\ }$) is noted on the chain index for the variables involved, we still have:

$$\hat{\hat{Pp}}/\hat{\hat{Pc}} \cdot 100 = (\hat{\hat{z}} \cdot \hat{\hat{\theta}} \cdot \hat{\hat{tw}}) \ / \ \hat{\hat{re}}^*) \cdot 1/100 \qquad (12)$$

-- As a breakdown shows the annual impact of the variables, possible subperiods can be identified or at least groups of years for which one of the factors had an overriding impact on the others and must clearly be isolated as the key determinant in the decline or recovery of the real price.