OECD DEVELOPMENT CENTRE

Working Paper No. 138
(Formerly Technical Paper No. 138)

DETERMINANTS OF CUSTOMS FRAUD AND CORRUPTION: EVIDENCE FROM TWO AFRICAN COUNTRIES

by

David Stasavage and Cécile Daubrée

Research programme on:
Political Economy and Development in Africa

OECD OCDE

August 1998
CD/DOC(98)8

TABLE OF CONTENTS

ACKNOWLEDGEMENTS

An earlier version of this paper was prepared for the UNDP/OECD Development Centre Conference on Corruption and Integrity Improvement Initiatives in the Context of Developing Countries, 24th and 25th October 1997. The authors thank Irène Hors and Jean-Claude Berthélemy for their comments. The generous financial assistance of the Governments of the Netherlands and of Switzerland is gratefully acknowledged.

RÉSUMÉ

La corruption de l'administration des douanes est un problème majeur dans de nombreux pays africains. Plusieurs hypothèses concernant les déterminants de la fraude aux douanes au Sénégal et au Mali sont examinées dans ce document à partir de données portant sur la période 1990-96. Des tests statistiques effectués sur des données par produits confirment l'opinion largement répandue selon laquelle des niveaux élevés de taxation encouragent la fraude. Les résultats montrent également que le recours à une société privée de contrôle des marchandises avant embarquement peut être un moyen efficace de lutter contre la corruption, à la condition toutefois d'être complété par des réformes internes telle que l'informatisation des formalités douanières. Enfin, l'évolution des déterminants de la corruption — comme les niveaux de taxation — dépend elle-même de changements politiques plus généraux dans les deux pays étudiés.

SUMMARY

Corruption in customs administrations is a major problem in many African countries. Data from the period 1990-96 are used to examine several hypotheses concerning the determinants of customs fraud in Senegal and Mali. Statistical tests using product-by-product data support the widely held view that high levels of taxation lead to fraud. The findings also show that hiring a pre-shipment inspection company can be an effective tool in fighting corruption, but only if it is accompanied by internal reforms like computerisation of customs procedures. Finally, changes in determinants of corruption, such as levels of taxation, have themselves depended upon broader political changes in each of the two countries.

PREFACE

The negative effects of fraud and corruption on economic growth and development are now widely recognised: market allocation mechanisms are distorted; human and capital resources are diverted from productive activities; and the state and its institutions are undermined. Consequently, political stability and independent economic policy are endangered. Many countries have initiated anti-corruption programmes. However, in order to formulate efficient corruption control policies, a sound analysis of the determinants of corruption is necessary.

Focusing on the customs administrations of Senegal and Mali, the authors use econometric tests to show which institutional conditions produce a reduction in the level of fraud. Well-documented descriptions of the national context provide valuable insights into the political economy dimension of corruption. The relationship between the state and private enterprise is found to have a direct impact on the customs environment, and, therefore, on incentives to engage in fraud and corruption. The authors conclude with practical policy recommendations which make an important contribution to the search for effective institutional and economic measures to control fraud and fight corruption.

This study was carried out within the framework of the Development Centre's research activity on good governance and corruption. This research activity has two objectives: to provide policy recommendations to developing-country governments and aid agencies in their fight against corruption; and to provide OECD Member countries with a clearer understanding of the causes and consequences of corruption in developing countries.

Jean Bonvin
President
OECD Development Centre
August 1998

I. INTRODUCTION

Senegal and Mali, along with many other African countries, have suffered from a serious problem of customs fraud in recent years. This has included substantial smuggling activities where importers avoid taxes by completely bypassing customs procedures, and cases where importers engage in fraud with the co-operation of corrupt customs officials. We focus on the latter type of fraud in this paper, both because it is more susceptible to being measured, and because it can shed light on the more general issue of the determinants of corruption in the public sectors of African economies; a subject which has received considerable attention of late but which often resists careful empirical analysis. Following standard principal-agent models of corruption, we consider three potential determinants of fraud within the Senegalese and Malian customs administrations. First, the higher the rate of import taxation on a product, the greater the incentive to engage in fraud. Second, do procedures within the customs administration offer substantial opportunities for customs officials to make arbitrary changes to the amount of tax due on an import without risking subsequent detection? Third, are customs officials offered wages sufficient to provide an incentive for not engaging in corruption[1]?

In addition to presenting detailed qualitative information on the determinants of fraud within the customs administration in each country, we have collected data to conduct an econometric test of some of these determinants. Following the method developed by Daubrée (1996), we use product-by-product data on imports and import taxes to construct an indicator that measures one type of customs fraud, that which involves importers correctly declaring the value of their goods but then avoiding payment of all or a portion of taxes due. For both Senegal and Mali, using data from a sample of products judged susceptible to fraud, we regress the gap between official rates of taxation and actual rates of assessment, for each product for each year, on a number of potential determinants.

Our qualitative analysis also extends beyond the determinants of corruption *within* customs administrations to show how broader political factors in each country have intervened to influence the development of trade policy and the enforcement of customs procedures. For example, relations between governments and businesses can lead to protectionist trade policies for which the by-product is fraud. There may also be individuals or groups which are locked out of such preferential arrangements and which exert political pressure for lax enforcement of customs regulations. Finally, one needs to ask whether there are actors like an independent judiciary or a free press capable of monitoring customs agents and sanctioning them in the case of fraud.

II. CUSTOMS FRAUD IN SENEGAL

The Evolution of Customs Fraud

Before presenting information on the different forms of fraud, it is important to have a basic understanding of standard procedures for taxation of imports in a country like Senegal. Those who import goods must make a declaration of the value and description of their goods and, based on this declaration, a customs official verifies the tariff classification of the imported goods and calculates the tax that is owed. This calculation is based on the tariff classification of the product and on any exemptions which may be accorded, such as those on goods destined for foreign embassies. This stage of the process, where import taxes are assessed, is known in Senegal as *assessment* (*liquidation* in French). Once the tax is calculated, the importer is required to pay the tax owed, but it is an agent of the Treasury that is responsible for final payment, known as *recouvrement* in French. Once the importer pays the Treasury, he or she shows proof of payment to the customs administration in order to be able to reclaim his or her goods. In many African countries, in recent years, an additional step has been added to the above process whereby a private "pre-shipment inspection" company inspects a shipment in its country of origin in order to recommend a value and tariff classification. The pre-shipment inspection company may then also be mandated to conduct a follow-up check to see if its recommendations have been followed.

There are numerous opportunities to engage in fraud during this process including *i)* under-declaration of the true value of goods; *ii)* misclassification of tariff category; *iii)* correct declaration of value and tariff classification but underpayment of import taxes based on a false assessment of tax liability; *iv)* tax evasion where taxes are correctly assessed but never paid (no *recouvrement*) and the good is released anyway; and *v)* smuggling where goods are imported without the knowledge of customs officials. Our indicator captures the third of these five types of fraud. Interviewees in Senegal suggested that methods *i)*, *ii)* and *iv)* for not paying taxes have continued to be a problem but that they have become increasingly difficult in recent years. As a result, our indicator may capture a larger proportion of total fraud at the end of our period of observation. To the extent that we can show in our regressions that there has been a decline in measured fraud over time, even with this measurement bias, and that this decline in fraud is significantly correlated with policy and institutional changes that should logically have led to a reduction in fraud, then we can still draw basic conclusions about policy measures to reduce customs fraud.

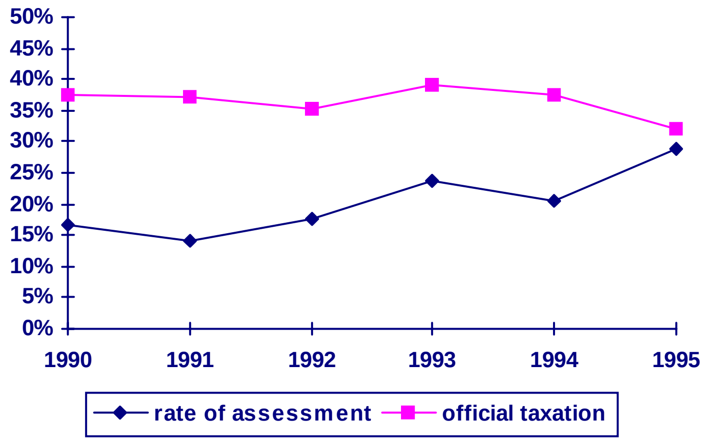
The overall statistics on imports in Table 1 show that the rate of assessment, which is simply the total value of import tax assessments divided by the total declared value of imports, has been in a sharp decline since 1993. This could be the result of trade liberalisation or of an increase in fraud. We will suggest that there is in fact a *decrease* in fraud, but that the effects of fraud on the global rate of assessment have been more than offset by the effects of trade liberalisation. Hence the observed decline of the global rate of assessment. For that, we will look at statistics on individual products and, in particular, for those products which our interviewees suggested frequently entered Senegal fraudulently. Figure 1 shows the evolution of official rates of taxation and of actual rates of assessment, based on a weighted average of 60 products commonly judged susceptible to fraud. The weighting is based upon the value of imports for the product in question as a share of total imports. These 60 products together represent 19 per cent of the total value of imports, on average, for the period. The products include consumer goods, such as milk products, rice, tomato concentrate and matches[2]. Rates of assessment on these 60 "sensitive" products have, on average, increased in recent years at the same time that official rates of taxation have been reduced. Based on this data, our indicator for fraud, which is simply the gap between the official rate of taxation and actual rate of assessment, has dropped from 21 per cent in 1990 to 3.2 per cent in 1995, with a particularly dramatic drop in 1995. This is an indication that fraud on these products has been reduced in Senegal and, since these are the products commonly thought to be the most susceptible to fraud, it seems likely that overall fraud has diminished as well.

Table 1. **Overall Import Statistics for Senegal**

	1991	1992	1993	1994	1995
Imports CIF (bn CFA)	309.4	333.1	281.9	390.7	691.1
Import tax assessments (bn CFA)	112.8	172.2	103.0	126.8	163.4
Rate of assessment	33%	35%	37%	32%	24%

Note: Fiscal 1991 here is calendar 1990/91. Fiscal 1992 is calendar 1991/92.
Sources: IMF, Direction des Douanes du Sénégal, World Bank, Dakar.

Figure 1. **Official Taxation and Rates of Assessment on Products Susceptible to Fraud**



Source: Direction Générale des Douanes**.**

As a further step, using the product by product data we ran a regression of the rate of assessment, *RA,* on the official rate of taxation *OT*. As one would expect, there is a positive correlation between the two that is highly significant[3]. The results of a Wald test suggest that there is a strong influence of factors other than the official rate of taxation in determining the actual rate of assessment, a potential indicator of fraud.

$$\underset{}{RA} = \underset{(6.11)}{0.62}\, OT + \underset{(1.35)}{0.11}$$

N = 350; *p(Hausman)* = 0.84; *W-stat* (b=1) = -3.75 > t(5 per cent); R^2 = 0,19; t-statistics in parentheses.

Determinants of Fraud Within the Senegalese Customs Administration

There are a number of potential determinants of fraud within a customs administration. A look at their evolution over time can provide an explanation for the apparent decline in fraud in recent years.

Trade Policy

At the beginning of its initial attempts at trade liberalisation in 1986, Senegal had an average rate of nominal tariff protection that was high, even by African standards (98 per cent on average vs. 41 per cent for other African countries) (Berthélemy *et al*., 1996). The Senegalese government also resorted to a formidable array of non-tariff barriers. Reference prices *(valeurs mercuriales)* were used on a number of products as a means of increasing *de facto* levels of protection in certain products without increasing published tariff rates. Imports of many products were subject to quantitative restrictions. These included partial monopolies, which gave a local producer a fixed percentage of market share, and import licenses *(autorisations préalables)* for other products. The number of individuals that could legally import goods was also restricted through the requirement of having an import-export card. Quantitative restrictions were often agreed to as part of special agreements *(conventions spéciales)* established with individual industrial firms established in Senegal.

Between 1986 and 1988, the Senegalese government made an initial attempt at trade liberalisation. Average rates on the two basic tariffs were lowered and the gap between different rates was also reduced. Reference prices for imports were eliminated, and *autorisations préalables* were scaled back. If it had been sustained, this liberalisation effort would have significantly reduced incentives for engaging in fraud but, as early as 1989, the government began to reverse many of the reform measures under pressure from import-competing firms suffering from an appreciating real exchange rate.

The January 1994 devaluation of the CFA franc facilitated a renewed effort to liberalise trade. In early 1994, tariffs were lowered. Between October 1994 and February 1995, the Senegalese government also took dramatic action to remove almost all remaining non-tariff barriers to imports and virtually all remaining import licensing requirements were repealed. *Conventions spéciales* were revised or annulled, and reference prices on all imports were abolished as of 1st January 1995. These developments correspond quite closely with the reduction in fraud observable in our data. The caveat to this portrait of dramatic progress on liberalisation is that, at the end of 1995, Senegal still had the highest maximum tariff rate among the seven UEMOA states (45 per cent), and the highest average rate of effective protection, at 50 per cent (Herrou-Aragon, 1996).

Procedures for Clearing Goods

Progress in improving customs procedures has been more continuous than progress with trade liberalisation, but it, too, has accelerated since 1994. Before 1990, all customs bureaux in Senegal relied on a non-computerised system of declaration and inspection of goods that provided many opportunities for fraud. In 1990, the Senegalese government introduced the first major innovation to the functioning of the customs administration that had a real chance to reduce opportunities for fraud, the GAINDE computer system. When one enters a specific quantity, value and tariff classification for an item, the GAINDE system automatically computes all taxes to be paid. The GAINDE system facilitates detection of cases where customs officials have modified the level of taxation for arbitrary reasons.

The second major innovation to the functioning of the Senegalese customs has been the contracting of a pre-shipment inspection company, the *Société Générale de Surveillance* (SGS), which has been operational in Senegal since mid-1992. SGS has a contract to inspect the value, quantity and tariff classification of goods and to seal them before shipment to Senegal. Following the passage of goods through the Senegalese customs, SGS has a mandate to conduct an ex-post reconciliation which verifies whether customs has followed SGS recommendations. This ex-post reconciliation is facilitated by the fact that the GAINDE system is programmed to refuse the declaration of any shipment of greater than 3 million CFA francs in declared value which is not accompanied by an SGS pre-inspection certificate automatically.

As with any system, there are weaknesses with pre-shipment inspection. The Senegalese government is obliged to pay SGS a minimum fee for each inspection and, as a result, SGS has been contracted to inspect only shipments of greater than 3 million CFA francs in declared value. This is apparently judged to be the break-even point, below which the expense of paying SGS to inspect small shipments will outweigh the benefits gained from recovered revenues, but it has led to an increasing tendency for importers to divide their shipments so as to avoid pre-shipment inspection. It should also be noted that while SGS can, in theory, provide quite an effective check on a customs administration, hiring SGS is costly, as the Senegalese government's yearly payments to SGS are of the same order of magnitude as the entire budget for the customs administration.

Computerisation of declarations and pre-shipment inspection have been accompanied by internal reforms of the customs administration. Donors have pressed for these reforms, but the role played by the Director of Customs in place since February 1994 has been at least as important. In February 1995, the customs was reorganised to separate activities of planning, collection of duties and surveillance more clearly. The creation of seven regional offices within the customs administration has helped to improve accountability by clarifying assignment of tasks and by improving the rapidity with which the Director General of Customs can obtain information. The customs administration has also created a special bureau to verify, *ex post,* that exemptions are legitimate.

While internal reforms have proceeded, their effectiveness has probably been weakened by a constant lack of sufficient funds for non-wage recurrent expenditures in the customs budget. Non-wage recurrent expenditures stood at a very low level of 6.4 per cent of the total customs budget in 1994 and actually fell to 4.5 per cent of the total in 1995. This has led to situations where customs inspectors lack gasoline to power their cars.

Material Benefits for Senegalese Customs Officials

While confidentiality in this area prevented us from collecting direct evidence on levels of pay for Senegalese customs officials, we can draw inferences about this determinant of corruption based on more general data on the evolution of real wages in the public sector in Senegal and on cross-country comparisons in public sector wage levels. It would seem difficult to argue that either the level of public sector wages in Senegal or their evolution in real terms has been a major source of corruption. As the table below indicates, average real wages in the public sector for lower level officials in Senegal remained stable until the devaluation of 1994 and, even afterwards, the drop in real wages for civil servants was mitigated by compensating nominal wage hikes and by lower than expected inflation. In terms of their level, ideally we would present data comparing wage levels for similar tasks in the public and private sector within Senegal, but we may be able to draw inferences from the fact that the mean civil servant's salary in Senegal is 11.8 times per capita GDP while, in a sample of 22 Sub-Saharan African countries, the mean wage is only 5.8 times per capita GDP[4]. In addition to this general civil service wage data, there is some information about the performance-related benefits which customs officials receive. These include a 20 per cent reward of the value of seized merchandise. The problem has been that there are pressures for sharing the 20 per cent reward with other members of one's section or office. As a result, the reward system probably does not have the intended incentive effect for fighting fraud.

Table 2. **Evolution of Real Wages for Civil Servants: Maximum and Minimum Salaries (Including Fringe Benefits)**
January 1985 = 100

	Jan. 1985	July 1989	Sep. 1993	Jan. 1994	April 1994	Sep. 1994
Minimum salary	100	103	89	96	108	98
Maximum salary	100	95	82	88	82	74

Source: IMF (1995*a*).

Econometric Test of the Determinants of Fraud in Senegal

Our econometric test of the determinants of fraud in Senegal follows the method outlined in the introduction. We regress the gap between official rates of assessment and actual rates of assessment, by product and by year, on a number of potential determinants. A first group of variables (*Legal*) is designed to control for explanations for this gap that involve perfectly legal activity. The second group of variables (*Illegal*) concerns determinants that are likely to be associated with customs fraud.

(1) $\quad GAP = f(\ Legal\ ,\ Illegal\ )$

In the category of legal determinants (summarised in equation 2), we include a variable *E* for exemptions, which, for each product for each year, is the ratio between the value of imported goods granted some form of exemption and the value of imported goods which did not receive an exemption. Because many exemptions are partial, that is they result in a reduction but not complete elimination of taxes, we also include a variable *RRA* which for each product is the ratio between the rate of assessment for shipments of that product which received some form of exemption and the rate of assessment for shipments that did not receive an exemption. Finally, the use of hidden forms of taxation like reference prices *RP* has an effect of reducing the gap, because it raises assessment rates without altering the official rate of taxation.

(2) $\quad Legal = L(\ E\ ,\ RRA,\ RP\ )$

(3) $\quad Illegal = I(\ OT\ ,\ SGS\ ,\ DEVA,\ E\ ,\ RRA,\ RP,\ )$

Determinants of the gap between official taxation and actual rates of assessment due to illegal activities are summarised in equation 3, above. There is reason to believe that high rates of official taxation *OT* will provide an incentive to engage in fraud. A variable *SGS* is used to indicate the presence of a pre-shipment inspection company. Unfortunately, we were not able to obtain data in Senegal on SGS inspections by product and so this is simply a dummy variable which takes the value of 1 for years in which *SGS* was present. We also include a dummy for the January 1994 devaluation of the CFA franc *DEVA,* which increased the price of imported products and, thus, may have provided an additional incentive for importers to attempt to evade payment of import taxes. While the variables *E, RRA,* and *RP* are each likely to be correlated with legal activities that lead to a gap between official taxation and rates of assessment, they are also likely to be correlated with illegal activities which have the same effect. This raises difficulties for the interpretation of their coefficients, as discussed below.

(4) $$GAP = f'(\ \underset{(+)}{OT}\ ,\ \underset{(-)}{SGS}\ ,\ \underset{(+)}{DEVA},\ \underset{(+)}{E}\ ,\ \underset{(?)}{RRA},\ \underset{(?)}{RP},\ )$$

Equation (4) combines equations (2) and (3) to list all the variables that may influence *GAP*, together with the predicted signs for their coefficients. Predictions for the first three variables are straightforward. We expect the coefficient on *OT* to be positive, that on *SGS* to be negative, and that on *DEVA* to be positive. Establishing firm predictions for the signs of the coefficients for the last three variables in equation 4 is complicated by the fact that each of these variables is likely to have offsetting effects. As noted above, high levels of exemptions (*E*) should be associated with an increase in *GAP* for perfectly legal reasons. High levels of exemptions may also be positively correlated with *GAP* for illegal reasons, to the extent that they are associated with a lax monitoring environment. However, a high level of exemptions may also mean that it is easier for those seeking to avoid import taxes to obtain an exemption rather than engaging fraud and, thus, it may be negatively associated with *GAP*. We do not expect this latter effect to dominate the other two, so *E* should have a positive coefficient. The case of the variable *RRA* is less clear. To the extent that it captures legal determinants of *GAP*, the variable *RRA* should have a negative coefficient, because the greater (smaller) the ratio, the less (more) it is to obtain an exemption. However, when it is less profitable to obtain an exemption, importers seeking to avoid paying taxes may have a greater tendency to engage in fraud. As a consequence, we cannot establish a predicted sign for *RRA.* Hidden forms of taxation such as reference prices *RP* have an effect of raising assessment rates without being reflected in official rates of taxation and thus should be negatively correlated with *GAP.* As an additional measure of taxation, though, reference prices may also provide an incentive to engage in fraud. This means that we cannot establish a prediction for this variable's sign.

In our regressions, a model with individual effects was tested on the basis of the results of an F-test. A random effects model was preferred over fixed effects based on the results of a Hausman test. The results (table 3) show that each of the coefficients for which we were able to make a firm prediction is of the expected sign. The fact that the coefficient for *OT* is positive and highly significant supports the widely accepted proposition that, all other things being equal, higher import taxes will lead to increased fraud. Although the coefficient for *SGS* is only significant at the 10 per cent level, this provides some evidence that pre-shipment inspection in Senegal has been effective in reducing fraud. However, this is not necessarily an indication that hiring *SGS* has been cost-effective. Answering this question would require first considering the difficult counterfactual question of what would have transpired if the funds to hire *SGS* had instead been used to equip the Senegalese customs administration with greater material resources for fighting fraud. Finally, the devaluation of the CFA franc appears to have been associated with an increase in fraud in Senegal. Two additional variables *GSUP* (for gaps of more than 100 per cent) and *GNEG* (for gaps that were negative) were added to the regression to minimise the effect of outliers. This concerned only seven products.

Table 3. **Regression of GAP on Determinants of Fraud**

Independent variable	Coefficient	T-statistic
E	0.419	(5.32)***
RRA	0.028	(1.82)*
RP	-0.062	(-1.34)
OT	0.193	(2.82)***
SGS	-0.043	(-1.69)*
DEVA	0.065	(1.73)*
GSUP	1.130	(7.06)***
GNEG	-0.462	(-12.53)***
CONST	0.096	(1.63)*

Notes: N=345. The r-squared for the regression is 0.99.*, **, and *** indicate significance at the 10 per cent, 5 per cent, and 1 per cent levels respectively.

National Level Determinants of Fraud in Senegal

If trade liberalisation appears to have been associated with a reduction in fraud in Senegal, it seems worth considering what political obstacles at the national level delayed liberalisation for so long. Given space constraints, we focus on the most prominent determinant of fraud at the national level which has involved relations between government and business.

Historically, the principal point of contention in business-government affairs in Senegal has been the attempt by a group of import-substituting industrial firms, present since the colonial period, to preserve administratively generated rents they have long enjoyed; while businesses that do not benefit from administratively generated rents have made demands for equal treatment. In response to the increasingly uncompetitive position of a number of its industrial firms, in the 1960s and 1970s the Senegalese government developed an extensive set of protectionist tools. Commerce was also heavily regulated as part of a strategy that allowed the Senegalese government to choose which individuals would be able to control the import and distribution of particular products on a case-by-case basis. The fact that the government dealt with firms individually, rather than with the industrial sector as a whole, had important implications for policy, because individual firms had an incentive to lobby for protectionist measures from which they would benefit individually, while the loss from such measures would be borne by the economy as a whole.

The favouritism practised by the government in its relations with business led to the emergence in the 1970s of an organised group of Senegalese “outsider” businesses, the *Groupement Économique du Senegal,* that sought increased opportunities for participation in commerce. However, rather than respond to demands from this group for increased Senegalese participation in commerce by liberalising and scaling back the system of import controls, the government chose to co-opt the business movement by increasing allotments of import-export cards and of *autorisations préalables* to a few prominent members of the GES[5]. This had the effect of solving the political problem of the GES in the short-run, but with negative implications for the Senegalese economy. In addition to their other negative economic effects, continuing provision of administratively generated rents, such as import licenses, had two major negative externalities in terms of customs fraud. It opened up the process of distributing rental positions in exchange for bribes. It also gave those “outsiders” who did not benefit from rents an incentive to engage in customs fraud.

Business-government relations in Senegal have since changed significantly, and it seems likely that this change is one of the factors behind the success of the liberalisation drive engaged since February 1994. Admittedly, pressure from the Bretton Woods institutions and the strengthened competitive position of firms following the 1994 devaluation also played a role. Even so, one cannot ignore the importance of the dramatic shift in business-government relations that involved a change in the balance of forces favouring and opposing trade liberalisation. In recent years, several new business groups have emerged to make demands similar to those expressed in the early 1970s. Like the organisations that preceded them, the CNESS and UNACOIS have both called for abolition of import monopolies and the system of *autorisations préalables.* The CNESS is an organisation dominated by younger, Senegalese firms that generally have not benefited from administratively generated rents. UNACOIS is an organisation of informal sector traders.

Unlike their predecessors in the GES, the leaders of the new business organisations have not been tempted to opt for particularistic benefits, rather than liberalisation. It is unclear exactly why. One reason might be that the internal structure of the CNESS and UNACOIS is very different from that of their predecessors like the UNIGES and, as a result, it is more difficult for leaders to ignore the interests of their members. A second potential reason involves a new institution for business-government dialogue that was created in 1994, the *comité tripartite de gestion de la dévaluation.* This committee meets regularly and publicly with all major business leaders present and may serve as a device for business leaders to make a credible commitment, both to other business leaders and to the members of their organisation, that they will refrain from seeking particularistic benefits. The committee might be seen as the beginning of something resembling the deliberation councils which have been associated with policy and institutional reform in East Asian countries[6].

Along with the possibility that businesses might lobby governments to change levels of import taxation, the possibility that importers might pressure government for weaker enforcement of existing customs regulations must also be considered. To the extent that this takes place, the effectiveness of reforms of customs procedures will be reduced. Senegal has the particularity of having several Islamic brotherhoods whose leaders play a critical role both in the Senegalese economy and in Senegalese politics. The source of the brotherhoods' power has been that they are able to profit economically from the labour of their followers whilst, at the same time, delivering the votes of their followers to political candidates. The brotherhoods have had a close relationship with Senegal's current ruling party since Léopold Senghor first used their electoral support to outmanoeuvre the exclusively urban-based coalition of his rival, Lamine Gueye, during the 1950s. Before the advent of contested elections in Senegal, the Islamic brotherhoods maintained a close relationship with the French colonial authorities, who relied on the leaders of the brotherhoods to establish a groundnut export sector in Senegal.

Throughout the late 1960s, the economic activities of the brotherhoods remained based almost exclusively in groundnut production. With the stagnation of the groundnut economy, they have diversified into import-export activities (Ebin, 1992). Since this development, the Senegalese government has had to satisfy two political clienteles with conflicting interests: import-competing industrialists in favour of heavy protection and traders in favour of facilitating cheap imports, *de jure* or *de facto*. Members of the Islamic brotherhoods are not more predisposed to engage in fraud than any other group but, given that Senegalese government policies have created numerous incentives for individuals to engage in fraud, the political power of the brotherhoods has allowed many of their members to engage in fraud with impunity. The best evidence of the Senegalese government's tacit acceptance of the illegal import trade is that customs officials *de facto* are not allowed to enter Touba, the holy city of the Mourides, even though it serves as a major *entrepôt* for trade in contraband and fraudulent goods. A frequent saying, quoted by Diop and Diouf (1991) and heard again in our interviews is that "any merchant pursued by the police is saved as soon as he enters the city of Touba". Fassin (1986) notes that Touba has become the centre for the illegal trade in medicine. In many cases, merchants, who are not themselves Mourides, associate themselves with the Mourides in order to benefit from this sort of protection. The Senegalese government's own *Rapport sur la Fraude* (1996) highlights the importance of Touba as the primary storage point for contraband and fraudulent goods destined for Dakar. In the end, the best way for the Senegalese government to reduce the incentive for the Islamic brotherhoods to engage in fraud would be to continue to lower taxes on imports.

III. CUSTOMS FRAUD IN MALI

The Evolution of Customs Fraud

The basic procedures for clearing customs goods in Mali resemble those in Senegal, with one major difference. Normally, when imports arrive at the Malian frontier, an estimated declaration is made at the border and then a full declaration and payment is made at the point of destination for the product (most frequently Bamako). Customs fraud in Mali includes each of the five standard possibilities outlined above. According to almost all of our interviewees customs, fraud has declined dramatically in Mali, particularly since 1994.

We only have product-by-product statistics on the evolution of the gap between the official level of taxation and the actual level of tax assessments for the years 1995 and 1996, because of a long delay in computerising the procedure for recording customs declarations and receipts in Mali. Nevertheless, aggregate statistics provide several indications to support the evidence from interviews that fraud declined during the 1990s. The overall rate of assessment varied over the period, but climbed during the period 1994-96, despite the fact that the Malian government had not broken with its programme of trade liberalisation. Table 5 shows that, while, overall, the number of exemptions granted increased, when one excludes those exemptions granted to foreign mining companies making initial imports of equipment to Mali, the number of exemptions has remained quite stable. Moreover, several categories of exemptions, notorious as sources of fraud, have been restricted severely. This is the case with exemptions granted to public enterprises, to certain NGOs and for the national investment code.

Table 4. **Overall Import Statistics for Mali**

	1990	1991	1992	1993	1994	1995	1996
Imports (bn CFA)	164.0	130.0	160.8	179.4	324.7	344.4	418.2
Import tax assessments (bnCFA)	40.2	45.7	47.1	48.4	54.4	74.8	96.5
Rate of assessment	25%	35%	29%	27%	17%	22%	23%

Sources: IMF, World Bank, Malian authorities.

Table 5. **Number of Exemptions Granted by Category**

	1990	1991	1992	1993	1994	1995	1996
Total	15 368.2	15 764.6	17 290.8	10 922.8	16 631.3	20 629.2	27 807.7
of which:							
Public enterprises	1 654	224.1	0	0	0	0	0
NGOs	0	480.3	806.1	542.8	166.2	177.5	289.5
Investment code	0	1 791	2 852	349.7	1 677	1 617.6	539.3
Army	355.7	389.9	1 014	49.3	5.2	0.8	0
Mining code	0	0	0	658.6	1 982	3 487.2	12 221

Source: Malian authorities.

Our product-by-product data covers 86 products for the years 1995 and 1996. As with our approach for Senegal, the products were chosen because interviewees and government documents suggested that they were frequently imported fraudulently. They include consumer products such as milk, cola nuts, tea, rice, flour, oil, sugar, tomato concentrate, etc[7]. The value of recorded imports for all the products in the sample amounts to 15-16 per cent of total imports. The average level of official taxation on these products is quite high, but there was a reduction in taxation for many products in 1996. It would be misleading to draw conclusions for the evolution of fraud over time based on a two-year period, but this data does allow for comparing levels of fraud across different products.

Table 6. **Import Statistics for 86 Products (Weighted Means)**

	1995	1996
Official taxation	62.4%	47.1%
Rate of assessment	49.0%	31.6%
Gap	13.3%	15.5%

Source: Malian authorities.

A regression of the rate of assessment *RA* on the official rate of taxation, *OT,* identical to that performed for the Senegalese data shows that the two are positively correlated and that the coefficient for *OT* is highly significant[8]. As was the case for Senegal, the results of a Wald test point to the existence of determinants of the rate of assessment other than the official level of taxation.

$$RA = 0{,}87\,OT - 0{,}071$$
$$(11{,}99) \qquad (-1{,}71)$$

$N = 162$; *p(Hausman)* = 0.49; *W-stat* (b=1) = -1.70 > t(10 per cent); $R^2 = 0.51$

Determinants of Fraud Within the Malian Customs Administration

The potential determinants of fraud within the Malian customs administration are similar to those in Senegal. They involve trade policy, customs procedures, and the material benefits provided to customs officials.

Trade Policy

While Mali, during the 1980s, had a system of heavy trade protection similar to that in Senegal, trade liberalisation was undertaken much earlier and in a more dramatic fashion than in Senegal. In 1988, prior to the beginning of the government's trade liberalisation campaign, heavy tariff protection created an incentive for fraud. A Malian government report estimated that the average level of import taxation on products for which there was a local producer was approximately 100 per cent (Ministère des Finances, 1988). Consumer products for which there was no local producer were generally not heavily taxed, but they were subject to numerous non-tariff barriers. As a legacy of the Socialist economic policies of the 1960s, Mali into the late 1980s retained a heavily protectionist system of import controls that was intended to manage flows of imports product by product, so as to reduce imports of non-essential goods to a bare minimum. This included both goods for which local production was being encouraged and goods for which there was no local producer.

From the second half of the 1980s, it seems clear that key decision makers within the Traoré government understood the need to undertake both an internal and external liberalisation of the Malian economy. They also understood that the numerous restrictions on imports had little effect in deterring fraud, and that they instead constituted one of the major incentives for importers to engage in fraud. A number of liberalising measures were taken previous to the 1991 transition, including the abolition of import monopolies other than those for tobacco and pharmaceutical products in 1988, elimination of remaining quantitative restrictions in April 1990, and implementation of tariff reform in February 1991 to simplify the tariff structure while maintaining the same level of average nominal protection. The transition government, which came to power in the Spring of 1991, accelerated tariff reform by passing measures to continue to simplify the tariff structure, to reduce the disparity in rates, and to lower the average level of nominal protection. In addition, virtually all remaining non-tariff barriers were eliminated in the early 1990s. Since the 1991 transition, the government has also made steady progress in streamlining procedures for import licensing.

Procedures for Clearing Goods

In contrast to its dramatic efforts with trade reform, the Malian government has been slow to improve its customs procedures. There have been continuing major opportunities to engage both in false declaration of goods and in fraud through non-payment or partial payment of taxes. During 1995 and 1996, this situation began to change as the government undertook a number of significant reforms.

Customs administration in Mali at the beginning of the 1990s was even weaker than that in Senegal, allowing substantial opportunities both to engage in false declarations and to fraud by declaring correctly but then failing to pay taxes. There had been sporadic attempts to computerise procedures using the SYDONIA programme but, by 1990, such computerisation as did exist had little, if any, deterrent effect on fraud. Computers were in place in only a few offices, and there was no network for transmitting information rapidly. Information from each declaration was entered into the computer only after the declaration had already been processed on paper (Geourjon and Steendlandt, 1991). In practice, storage of information was infrequent, making it difficult to conduct *ex post* checks to detect cases of fraud. As in Senegal, the highly discretionary nature of procedures governing the granting of exemptions in Mali at the beginning of the 1990s also provided numerous possibilities for engaging in customs fraud. The weakness of Malian customs procedures in 1990 was further accentuated by the possibility of legally bypassing standard procedure in certain cases. The Malian system of a pre-declaration of goods at the frontier followed by a detailed declaration at the point of destination represents something of a burden for individuals importing small quantities of goods for non-commercial purposes. To address this issue, in 1975 the government created a procedure called *perception directe* which allows individuals importing small quantities of goods for non-commercial purposes to make a full declaration and to pay their tax to an individual customs agent at the border.

While the Malian government contracted the services of SGS as early as 1989, the effectiveness of pre-shipment inspection has been greatly reduced by the failure to undertake complementary reforms necessary for SGS to be effective. SGS, in theory, has a programme in Mali similar to that which it has in Senegal. The company inspects import shipments of over 3 million CFA francs in value, issues a certificate recommending a value and tariff classification for each shipment and, after the declaration process is complete, it performs an *ex post* reconciliation to verify, shipment by shipment, whether SGS recommendations on value and tariff classification were respected by customs officials. Unfortunately, without a computer system in place that refuses to process a declaration unless one enters a correct number from an SGS certificate, there is little to ensure that customs officials will not simply ignore the SGS recommendation. This could involve both cases where importers never bothered to conduct an SGS inspection and cases where an inspection was conducted but the recommendation was not followed.

A second major problem with SGS operations in Mali is that while plans have existed since 1991 to conduct ex-post reconciliation operations regularly, problems with computerisation and failure by the customs service to transmit paper documents in a timely manner made it impossible for SGS to conduct reconciliations effectively[9]. However, while SGS has not released statistics on the percentage of declarations that are reconcilable, it has claimed that transmission of data and documents by the customs has become much more regular, and that this should permit a fairly complete reconciliation for 1996 onwards[10].

Apart from gradual improvements in computerisation, the main reason that the customs service is now transferring more documents to SGS may involve the internal reorganisation of customs undertaken in 1995. This involved the strengthening of eight regional directorates and the creation of two central services, the *Bureau de Controle Interne* and the *Centre Informatique et Statistique* (IMF, 1996*b*). Internal reorganisation of the customs has been complemented by efforts to limit exemptions.

Finally, while internal reforms are important, their effectiveness is reduced, as in Senegal, by the fact that the Malian customs service is hampered by a low level of non-wage recurrent expenditures. These make up less than 10 per cent of the customs budget. The low level of capital expenditures also seems to be a problem. As at the beginning of 1997, the entire customs service had only 50 automobiles and 25 motorcycles and mopeds to cover a vast amount of territory.

Material Benefits for Malian Customs Officials

It is a commonly heard assertion that it is not surprising if fraud exists in Mali, because "Malian civil servants have for years been among the most poorly paid in the Francophone countries of West Africa" (Kanté *et al.*, 1994). Viewed in absolute terms, Malian civil service salaries do indeed seem low, but, to establish that low salaries present more of an incentive problem than in other African countries, a more systematic comparison is necessary. In 1993, the average Malian civil servant earned 14 times per capita GDP (Goreux, 1995). This figure is substantially higher than the averages for other African countries, or for other Franc Zone states, cited above. Real wages actually increased in the early 1990s before being reduced by the CFA franc devaluation. The eventual reduction following the devaluation was significant, but not drastic[11].

Table 7. **Evolution of Real Wages for Civil Servants: Mean Wages**

	1990	1991	1992	1993	1994	1995
mean real wage (1990 = 100)	100	113	125	126	110	105

Source: Ministère des Finances, IMF (1996*a*).

Econometric Test of the Determinants of Fraud in Mali

The basic regression performed for Mali follows that used for the Senegalese data, as the gap between official levels of taxation and actual rates of assessment *(GAP)* is regressed upon a number of determinants. Several modifications were made, however, due to availability of data and the different time period covered. The variable for the devaluation of the CFA franc was eliminated since the Malian data cover only 1995 and 1996. Likewise, all reference prices in Mali had been abolished by this point except for petrol imports. For petrol imports, a new level of official taxation was calculated incorporating the reference price. We were able to collect data by product on SGS inspections which could provide evidence on the effectiveness of pre-shipment inspection. The variable *SGS1* is a dummy variable which takes the value of 1 if at least one SGS inspection took place for the product in question. A second variable *SGS2* for each product represents the percentage of the total declared value of imports for the product in question which were subject to SGS inspection. Both of these variables should have negative coefficients. Finally, a variable *CONT* is included as a proxy for the degree to which customs officials monitored imports of a product particularly closely. It represents the number of contested cases for each product in a given year. We expect *CONT* to have a negative coefficient.

$$(5) \qquad GAP = f'(\underset{(+)}{OT}, \underset{(-)}{SGS1}, \underset{(-)}{SGS2}, \underset{(-)}{CONT}, \underset{(+)}{E}, \underset{(?)}{RRA})$$

As for Senegal, individual effects were introduced into the model, based on the results of an F-test, and a random effects model was chosen based on the results of a Hausman test. The results with regard to trade policy reinforce those from Senegal as the level of taxation *OT* is positively correlated with the gap, and the coefficient is highly significant (table 8, below). The coefficient for the variable *CONT* is significant at the 10 per cent level and of the expected sign. Interestingly, the coefficients for the two variables designed to capture the effect of SGS inspections are of the expected sign but not significant. This provides support for the argument presented above; that the effectiveness of SGS in Mali has been weakened by delays in computerisation of the customs administration, in particular[12]. As one would expect, the rate of exemptions is positively correlated with the gap between official taxation and the rate of assessment. The large value for the coefficient here is no doubt due to the fact that the average rate of exemptions for our individual product sample for Mali was much higher than that for our Senegalese sample. The variable *RRA* was not significant in any of the regressions performed and was eliminated from the final regression.

Table 8. **Regression of GAP on Determinants of Fraud**

	coefficient	t-statistic
E (rate of exemptions)	0.436	(20.16)***
OT (official taxation)	0.157	(4.07)***
Cont (contested cases)	-0.002	(-1.84)*
SGS1	-0.020	(-1.10)
*SGS*2	-0.96E-4	(-1.00)
CONST	-0.018	(-0.68)

Notes: Indicates significance at the 10 per cent level. *, **, and *** indicate significance at the 10 per cent, 5 per cent, and 1 per cent levels respectively.

National Level Determinants of Fraud in Mali

If the main development at the national level in Senegal that brought about a reduction in fraud was changing relations between government and business, the principal development in Mali was the regime transition of 1991. The regime of Moussa Traoré, who came to power through a *coup d'état* in 1968, was, in its later years, particularly noted for the proliferation of corruption at the highest levels of government. While it was long suspected, the true extent of this corruption has only been revealed since the 1991 transition as a result of investigations into the activities of former members of the regime[13]. The protests that led to the downfall of the Traoré regime during the Spring of 1991 were inspired to a significant extent by popular disgust at pervasive corruption. Since the 1991 transition, there has been less reference to major corruption scandals.

The 1991 regime change resulted in an altered relationship between government and business that helped facilitate liberalisation, although the evolution has been different to that in Senegal. Import-substituting industrial firms enjoyed much less influence with the ruling party in Mali than they did in Senegal. While Dakar had been the headquarters for a number of firms producing for Franc Zone markets during the colonial period, Mali had fewer industrial firms and those firms which did exist did not have an effective lobbying organisation. Over time, the Traoré regime strengthened its political base by providing heavy import protection to certain industrial firms, but it was much more closely tied to merchants who profited from administratively generated rents (Courcelle and de Lattre, 1989). This presented a formidable barrier to liberalisation of import licenses and of quotas on products where merchants close to the regime had a vested interest.

The transition of 1991 provided the opportunity to accelerate trade liberalisation, thanks to the fact that many of liberalisation's biggest opponents were allies of the ousted government. Unlike in Senegal, since the 1991 transition no well-organised lobby with an interest in preserving trade liberalisation has developed. As in Senegal, one might expect such support to come from new "outsider" industrial firms not benefiting from administratively generated rents. The major business organisation in Mali today remains the *Chambre de Commerce et de l'Industrie,* a quasi-governmental body that serves as an umbrella organisation for different groups that often have very divergent interests[14]. As far as independent business organisations are concerned, the *Fédération Nationale des Employeurs du Mali* (FNEM) includes a number of different import-substituting and export-oriented industries, but several interviewees remarked that it lacks real credibility. Informal sector traders have been sufficiently organised to riot whenever there is an attempted government crackdown on the sale of fraudulent goods at Bamako's market but, unlike in Senegal, Malian informal sector traders have not yet become organised enough to launch strikes or a sustained lobbying effort for the liberalising measures.

A second change ushered in by the 1991 transition involves the extent to which elements in civil society have been increasingly ready and able to hold the Malian government accountable for cases of corruption. Mali's privately-owned press has gained a reputation for its willingness to make criticisms of certain government actions. In addition to the written press, which includes several newspapers specialising in economic issues, Mali may be unique among West African states in having numerous independent radio stations. These include stations based outside the capital[15]. While it is difficult to trace specific changes in government behaviour to freedom of the press, several government officials indicated that fear of having corrupt affairs revealed in the press has become a real deterrent to engaging in fraud.

IV. CONCLUSIONS AND IMPLICATIONS FOR POLICY

While the evolution of customs fraud in Senegal and Mali during the 1990s has differed, customs fraud in both countries appears to have been significantly reduced. The reasons for this improvement have varied. In Senegal, certain classic determinants of fraud have been addressed through trade liberalisation and improvements in customs procedures. In Mali, there was swift and early trade liberalisation, but progress on customs procedures has been much slower than in Senegal, although there are strong signs of improvement of late. In both countries, national political considerations have also been important. In Senegal, these have included the development of a pro-liberalisation business lobby on one hand, while, on the other, there remain certain groups which are able to use their political influence to avoid full payment of import taxes. In Mali, the biggest changes have involved the regime transition of 1991, which ushered in a new government that has been fully committed to reform (while being less hindered by past political alliances), and the extent to which elements of civil society have increasingly held government officials accountable for their actions.

An initial policy implication one can derive from this study is straightforward. Our regressions results and other evidence show that protectionist trade policies promote customs fraud by increasing the incentive for private citizens to engage in illegal behaviour and for government officials to abuse their office for personal, pecuniary gain. This conclusion is neither new nor surprising, but it is worth repeating.

A second implication is that to help reduce fraud, donors need to support institutional reforms which reduce discretion and which improve possibilities for monitoring the actions of individual officials. Evidence from Senegal and Mali suggests that hiring a pre-shipment inspection company can be a useful tool for reducing fraud but, in order to be effective, pre-shipment inspection needs to be accompanied by reforms within the customs which ensure that the pre-shipment inspection company has access to the information it needs to carry out its duties. The key institutional reform here in both Senegal and Mali has been to computerise the customs service, a reform whose importance has not been fully emphasised in previous studies.

A third policy implication concerns the financial resources devoted by a government to fighting fraud. In many African countries, civil service wages have been eroded by inflation to the point where it seems plausible to suggest that their low level is a major cause of fraud. While we were unable to make a full comparison between public and private sector wage levels, this picture seems less characteristic of Mali and Senegal. Instead, the more pressing financial problem may be that levels of non-wage current expenditures in the customs administration are so low that customs officers lack the basic necessities for doing their job, such as cars with fuel. One has to imagine that, in both Senegal and Mali, there would be very high returns in terms of revenues generated if budgetary allocations were made for increased operating expenditures for customs.

A fourth and final implication is that donors need to realise that customs fraud is a product not only of problems specific to the customs administration but also of political and institutional failures at the national level. Strategies to reduce corruption in individual agencies are likely to prove difficult unless they are supported by broader political change.

NOTES

1. This, of course, is predicated on the assumption that there is some structure for monitoring customs officials so that the probability of punishment in the case of fraud is greater than 0. Besley and Mclaren (1993) suggest that, in the absence of proper structures for monitoring civil servants, it may be more cost effective for a country to pay its civil servants a "capitulation wage" where pay is extremely low, but it is tacitly acknowledged that corruption will go unpunished.
2. A complete list of products is available from the authors upon request.
3. A random effects model was chosen, resulting in an r-squared of 0.19. This choice was based on a Hausman test (test for orthogonality of the random effects and regressors in a regression model, in order to determine whether a random effects or fixed effects model should be used).
4. This is based on an unweighted mean using data in Schiavo-Campo, de Tommaso, and Mukherjee (1997). Data on Malian civil servant wages, which was not included in their sample, was used from Goreux (1995).
5. This discussion of business groups in the 1970s relies heavily on Boone (1992). The *Union des Groupements Économiques Sénégalais* (UNIGES) was actually the first group of "outsider" firms to make overt demands for increased participation in commerce.
6. Campos and Root (1996) suggest that the formation of coherent business organisations and regularised consultation with government was critical to the success of Thailand's liberalisation during the early 1980s. Firstly, it offers an environment of repeated interaction which can help promote trust both between different businesses and between business and government. Secondly, to the extent that the government will feel it necessary to present any trade policy change to the *comité* first, the *comité* as a whole may be able to veto proposals that would benefit certain individual firms but leave the private sector as a whole worse off.
7. A complete list is available from the authors.
8. After performing a Hausman test a random effects model was chosen which results in an r-squared of 0.51.
9. In 1993, SGS received the full information necessary to conduct a reconciliation in only 27 per cent of the cases of imports which should have been subject to inspection. In the first half of 1994, this figure stood at only 38 per cent.
10. There is another weakness in the SGS inspection process in Mali today. As in Senegal, the fact that there is a minimum price for each SGS inspection makes it impractical to inspect imports of low value.
11. Apart from the level of salaries for customs agents, one also needs to consider whether salaries are paid regularly. While the Traoré government during the years preceding its fall often had great difficulty making regular salary payments, since the 1991 transition, the government has refrained from running arrears in this manner.
12. A regression conducted with a third SGS variable designed to measure the number of inspections per product per year showed similar results. Regressions where only one SGS variable was included at a time did not fundamentally alter the results either.

13. Amselle, 1992; *L'Indépendant,* 22 January 1997; 5 December 1996.

14. The main dispute within the *Chambre* has been between industrialists seeking higher tariff barriers as well as an increased government mobilisation against customs fraud (two objectives that are difficult to reconcile), and merchants who have sought special commercial advantages from the government, and implicitly, less vigilance against fraud. According to several different outside observers, the *Chambre de Commerce* has been controlled by the merchant interests. This is perhaps not surprising considering that 61 per cent of all formal sector firms in Mali are in commerce, of which more than half are in the import-export business. Ten large firms control over 80 per cent of the registered import trade (World Bank, 1994*b*).

15. Josserand and Bingen (1995) note that "independent radio stations have been at least as active as the written press in their coverage of economic issues and, unconstrained by literacy and language requirements, have reached larger and more diverse audiences".

BIBLIOGRAPHY

AMSELLE, J-L. (1992), « Fonctionnaires et hommes d'affaires au Mali », *Politique Africaine,* No. 47.

BERTHÉLEMY, J.-C., A. SECK and A. VOURC'H (1996), *La Croissance au Sénégal : un pari perdu* ? OECD Development Centre, Paris.

BESLEY, T. and J. MCLAREN (1993), "Taxes and Bribery: the Role of Wage Incentives", *The Economic Journal*, Vol. 103.

BOONE, C. (1992), *Merchant Capital and the Roots of State Power in Senegal: 1930-85,* Cambridge University Press, Cambridge.

CAMPOS, J.-E. and H. ROOT (1995), *Behind the Asian Miracle: Making the Promise of Shared Growth Credible,* Brookings Institution, Washington, D.C.

COURCELLE, M. and A. DE LATTRE (1989), « Le Secteur privé au Mali », Club du Sahel, Paris.

DAUBRÉE, C. (1996), « Fraude documentaire, corruption et contrebande : modèle théorique et test économétrique sur le cas du Sénégal », unpublished, CERDI Clermont-Ferrand.

DAUBRÉE, C. (1991), « La Fraude au Sénégal : identification et évaluation », Université d'Auvergne, CERDI, *Études et Documents*, 91.02.

DIOP. M. C. and M. DIOUF (1991), « Notes sur la reconversion des marabouts dans l'économie urbaine », presented at the conference on « État et société au Sénégal: crises et dynamiques sociales », CEAN, Bordeaux.

EBIN, V. (1992), « À la Recherche de nouveaux 'poissons' : stratégies commerciales mourides par temps de crise », *Politique Africaine,* No. 45.

FASSIN, D. (1986), « La Vente illicite des médicaments au Sénégal », *Politique Africaine,* No. 23.

GEOURJON, A.-M. and M. STEENLANDT (1991), « Évaluation du programme de vérification des importations (PVI) par la Société Générale de Surveillance (SGS) au Mali », CERDI, Clermont-Ferrand.

GOREUX, L. (1995), « La Dévaluation du franc CFA : un premier bilan en décembre 1995 », unpublished, World Bank, Washington, D.C.

GOUDIE, A. and D. STASAVAGE (1996), "A Framework for the Analysis of Corruption", *Technical Paper,* No. 122, OECD Development Centre, Paris.

GOVERNMENT OF SENEGAL (1996), « Rapport sur la fraude », unpublished.

HERROU-ARAGON, A. (1996), "Current Trade Policies in UEMOA Countries", unpublished, World Bank, Washington, D.C.

INSPECTION GÉNÉRALE DES FINANCES (France) (1990), « Rapport de la mission fiscalité et ajustement structurel au Sénégal », unpublished, Paris.

INTERNATIONAL MONETARY FUND (1996*a*), "Mali: Selected Issues and Statistical Annex", Washington, D.C.

INTERNATIONAL MONETARY FUND (1996*b*), « Mali : réformes fiscales et renforcement des administrations fiscale et douanière », Washington, D.C.

INTERNATIONAL MONETARY FUND, (1995*a*), "Senegal: Background Papers and Statistical Appendix", Washington, D.C.

INTERNATIONAL MONETARY FUND, (1995*b*), "CFA Franc Countries — Recent Adjustment Experience and Policy Issues", Washington, D.C.

JOSSERAND, H. and R.-J. BINGEN (1995), "Economic Management in the Sahel: a Study of Policy Advocacy in Mali", unpublished, USAID, February.

KANTÉ, M., H. HOBGOOD, B. LEWIS and C. COULIBALY (1994), "Governance in Democratic Mali: an Assessment of Transition and Consolidation and Guidelines for Near-Term Action", unpublished, USAID.

MINISTÈRE DES FINANCES ET DU COMMERCE (Mali) (1988), « Étude analytique du phénomène de la fraude en République du Mali », Bamako.

PRADHAN, S. (1996), "Evaluating Public Spending: a Framework for Public Expenditure Reviews", *World Bank Discussion Paper,* No. 323.

SCHIAVO-CAMPO, S., G. DE TOMMASO and A. MUKHERJEE (1997), "An International Statistical Survey of Government Employment and Wages", *World Bank Policy Research Working Paper,* No. 1806, Washington, D.C.

WORLD BANK (1994*a*), "Senegal: Private Sector Assessment", gray cover report No. 11317-SE.

WORLD BANK (1994*b*), "Mali: Private Sector Assessment", gray cover report No. 13559, December.