# 1 Introduction and overview

## 1.1 Introduction

African countries often have weak formal institutions, which affect the working of their economies. Their fiscal administration, for example, is often powerless, and this results in an excessive taxation of foreign trade, the easiest flows to exploit, creating significant distortion. The latter gives rise to some rents that can be captured by various forms of rent-seeking, with competition between the agents of the government and others from the private sector. Corruption, fraud, and smuggling, are thus part of everyday life in African, as in so many other economies (e.g. the transition economies of Central and Eastern Europe, CEE). These are not mentioned here for the sake of attracting the attention of the reader with some exotic anecdotes; they shape the functioning of these economies in ways that a serious macroeconomic analysis should take into account. Failure to do so explains, for example, why we read some papers showing how international trade is inexplicably low between African countries whereas any fieldwork, either in warehouses or near the borders, would convince the observer that a lot of trade was going on. In this field, as in many others, statistics can be extremely deceptive, when they are not put in the right perspective by direct observation. I have seen bags of subsidized Nigerian fertilizers as far west as Senegal, and any traveler in West Africa will be familiar with the seemingly ubiquitous bottles of Nigerian petrol for sale at the roadside. Informal institutions to some extent substitute for the failing formal ones, and help this "parallel economy" to function.

I have a happy memory of an afternoon spent south of N'Djamena, in Chad, with my friend "Djim" in January 2001. It was a very hot day, and he took me to a restaurant run by a friend of his, very close to the Cameroonian border at N'Guéli. While we were sipping a cold "Flag" beer, sitting in the shade not far from the roadside, he drew my attention to some strange couples, walking quite fast in the direction of the city. In each case, there was a lady walking in front, with an old blind man following her, holding her by the shoulder (there are many such victims of river blindness in Sahelian countries). These people had skinny faces, and very slim arms and legs, but the rest of their body looked obese. I then learned that they were transporting bags of sugar under their clothes, because the tax on sugar is lower in Cameroon than in Chad. Thanks to a fundamental aspect of the Sara traditional initiation rites, this trade offers a profitable occupation for old blind men in countries where most people have no social security. Among the Sara and other southern ethnic groups, one of the first things that young boys are taught at their initiation, is that they should never do any harm to handicapped people; when they grow older, some of them become customs officers, and would therefore never accost any old blind men, an immunity that extends to those helping them. By the time the "Flag" beer was finished, we had seen many such couples. Then we saw a crippled young man, sitting on a strange little car, briskly pushed by another young man. The car was made of a wooden box, painted green, fixed on four wheels, probably recycled from a baby landau, with a large handle for pushing it. Djim then told me that the local "brand C ..." beer factory benefited from a legal monopoly, while there was across the border, not far into the interior of Cameroon, another factory producing the same brand of beer in a more competitive environment. God bless the Sara initiation!

Because the opportunity cost of labor is so small for many people in Africa, some of them are prepared to spend a lot of time in arbitrage operations, to earn even a small margin. A lot of the trade that takes place between African countries is of this type, and never shows up in the official statistics. Trade statistics are also based on customs data, and are thus blighted by fraud. Because tariffs are not uniform, much activity at the customs is devoted to convincing the officer that what he sees is actually something else, with a much lower tariff rate. For a modest inducement, the trader and the officer can eventually agree to see the same thing. Even some recorded transactions are thus underestimated. One should never restrict one's attention to formal institutions, as the informal ones are every bit as important (see North, 1990).

Part I of this book seeks to shed some light on the economic consequences of this type of "hidden activity." Part II is devoted to short-run macroeconomics, focusing on foreign exchange and the constraints that stem from it, in economies that are more open than they look. Part III looks at longer-run issues, raising the issue of "pro-poor growth" when there is an informal sector, as well as that of the structural transformations that occur in the process of economic growth, when export crops are important. Lastly, it offers a general explanation for all the strange phenomena that have been met with in earlier chapters, such as corruption, smuggling, parallel markets, and other forms of unofficial transactions.

## 1.2 Overview

Chapter 2 begins by describing the "hidden trade" mentioned above, and gathers some of the observations that I have been able to put together over the years, or to pick up from others. It aims to bring out some of the stylized facts that must be taken into account when doing any open economy macroeconomics for African countries. Of course, not all the countries in Africa are exactly alike, and my experience has a definite West African bias. However, most of the stories that I have been able to collect from my fellow economists from Eastern and Southern Africa, whom I have met mainly through the AERC network, convince me that similar things are relevant for these countries, too. Think of the situation in Zimbabwe in 2005–6, where the official economy is crumbling under the rule of President Mugabe and the so-called "war veterans." There is scope for making a fast buck in parallel market activities, if you have the right connections. In many other African economies, market controls have on paper been lifted, in the wake of the liberalization movement that swept across the continent in the 1990s and early 2000s. However, as illustrated below, informal institutions such as corruption and fraud often fill the niche vacated by formal controls. Trade distortions depend as much on the behavior of customs officers as on the decisions taken by bureaucrats and politicians. Smugglers and other types of tariff evaders still have a bright future in Africa, as they do in many other parts of the world (see, e.g., Naylor, 1999).

These observations are then put into perspective using some traditional tools of trade theory to shed some light on the welfare consequences of unrecorded cross-border trade. Ironically, it turns out that borrowing the formal framework of Vinerian analysis of the customs union is particularly illuminating in this case. The analogy comes from the fact that smuggling can be analyzed as a form of partial, or preferential, trade liberalization, like the creation of a free-trade area (FTA). The welfare effect thus ends up being ambiguous, depending on the relative strength of the trade-diversion and trade-creation effects. However, the conclusion is that in general, the existence of parallel trade pushes the analysis in favor of trade liberalization and regional integration, as these policies tend to divert trade flows from the parallel to the official segment of the external market. In other words, smugglers have not yet completely performed the task of integrating regional markets.

Chapter 3 goes one step further, and embeds these "hidden activities" in a small general equilibrium model, in order to bring out some of the effects that a partial equilibrium analysis necessarily misses. There is in particular an interesting interaction between the parallel foreign exchange market and the goods market. Some background information is provided first on the parallel market for the naira, the inconvertible currency of Nigeria. Analyzing this in a general equilibrium setting shows how the convertibility of the local currency makes a significant difference for some key comparative statics effects. This sheds some light on the way in which some market institutions do significantly affect the predictable impacts of various economic policy measures, and should serve, along with other parts of the book, as a salutary warning against a "one-size-fits-all" approach to economic policy – which is, unfortunately, much too evident among some officers from donor agencies or international financial institutions (IFIs).

Part II takes the analysis further, in the direction of short-run open economy macroeconomics. It takes stock of some of the ideas developed in part I, and analyzes how these phenomena influence the conduct of monetary and exchange rate policies. Institutional differences again intervene.

Chapter 4 analyzes how the government can use the official segment of the foreign exchange market, when the currency is inconvertible, to covertly divert massive sums of money. A simple macroeconomic model is developed that sheds some light on the working of these parallel market economies. They are very different in Africa from those analyzed in Latin America by Dornbusch *et al*. (1983), where the parallel market is a "sideshow." In Africa, it is center stage, as the price level is in many cases in fact determined on this market. The parallel market premium and the rate of inflation are jointly determined, and the inflation tax is used to fund the subsidy that is implicit in the parallel market premium. The example of Nigeria is discussed at length, as this country offers a unique natural experiment based on the change in policy that occurred in 1986. This is done to test the macro economic impact of this diversion of potential tax revenues, depending on the behavior of the central bank. The latter can lead to some instability if it loses sight of the role of the official foreign exchange rate as a nominal anchor for the economy. A glance at Kenyan data suggests that, starting in the late 1970s, a similar problem existed for this country, as well. The case of Guinea is also discussed, showing that the central bank can stabilize the exchange rate and the price level if it chooses the right behavior. This is a tribute to my friend Kerfalla Yansané's skills as a central banker, although he hates my using him to epitomize the power of the "conservative central banker" in Africa *à la* Rogoff (1985), and I want to apologize for this here. I am doing it in a good cause, as I use this expression in a scientific sense.

An appendix to this chapter gives some microfoundations for the demand for money function used in chapters 4 and 6 of this book. It derives the required function from first principles, using Pontryagin's Maximum Principle in a variant of Sidrauski (1967) and Benhabib, Schmitt-Grohé, and Uribe (2002).

Chapter 5 examines the second type of constraint that emerges from the external sector, in the case where the national currency is convertible. In Africa, this is mainly the case for the CFA Zone, and its main features are described. Convertibility reduces the ability of the government to divert money through the official market channel and it opens the way for some external constraints. The particular institutions of the CFA Zone give some leverage to the former colonial power (France), for better or worse. However, the most important external constraint facing this group of countries is foreign debt. This is where the disciplinary force restraining the government comes from. This is discussed in chapters 5 using a dynamic model for structuring the narration of the events that led to the 1994 devaluation of the CFA Franc. This case shows that external pressure can lead to misguided policies – in this instance, the suspension of the external convertibility of CFA Franc bank notes. This triggered a spectacular currency crisis which made a devaluation unavoidable.

Chapter 6 considers the lessons to be learned from episodes of African currency crises. Although they rarely hit the headlines, they have a lot to teach us. These episodes can take place without involving the financial market; unfortunately, for the poorest, the food market provides the assets that can best bear the effects of a flight against the local currency. The example of Madagascar is discussed in particular, to show how rice paddy can sometimes be a very lucrative asset to hold. A short theoretical section sketches the main points of the three "generations" of currency crisis models, suggesting that the case studies approach is probably the most fruitful one to adopt for analyzing these events. The CFA Franc crisis is then discussed again, in order to illustrate the working of the African brand of the so-called "Tequila effect." This refers to the Mexican crisis of 1994, whose contagion spread to its neighbors in Latin America. There is an "effect" which provides the transmission channel whereby a shock on the CFA Franc can be passed on to the naira, in neighboring Nigeria. The Cola nut is produced in the forest zone, where it is not greatly consumed, except by migrants, and is consumed in the Sahelian zone, where it is not produced. It is thus a good symbol of the links that exist between the different economies of the region.

Part III looks at longer-run issues. Chapter 7 looks at medium-run matters, showing that, as expected, the 1994 devaluation of the CFA Franc triggered a recovery in the growth rate in the CFA Zone countries. What was not expected was that some deepening of poverty occurred, together with the recovery in growth, documented by looking at data from Côte d'Ivoire and Niger. A simple analytical model is presented to explain this somewhat counter-intuitive observation, and it rests on the stratification that is typical of African labor markets. Formal sector workers are much richer than others, and they often run additional businesses in the informal sector. An expected cut in their purchasing power – in the wake of a future devaluation, for example – leads them to cut their consumption and invest temporarily in their informal sector businesses for the sake of consumption smoothing. The resulting increase in capital intensity has a temporary positive effect on informal sector wages. When the expected cut occurs, they begin gradually to run down their assets, creating a negative effect on informal sector wages.

Chapter 8 looks at a still longer-run issue, characterizing the structural changes that occur in an economy where export crops – as they are in most African economies – are paramount in the early phase of development. At a later stage, the accumulation of human capital becomes the dominant engine of long-run growth. This is done using the "Côte d'Ivoire" model of endogenous growth; it assumes that the economy is open to the free immigration of labor and the perfect mobility of capital. The limiting factor is local human capital. This model displays an interesting transitional dynamics, where export revenues play an active role, while the asymptotic steady-state growth path depends entirely on the efficiency with which human capital is created. This model sheds some light on the type of economic convergence that should be observed in Africa. High growth rates are observed in thriving crop-exporting economies, and the challenge is to use these resources to develop the local human capital efficiently. Later, as the economy diversifies, the growth rate slows down, as the economy becomes more reliant on the accumulated human capital.

Chapter 9 provides an explanation for some of the inefficient behaviors or institutions described in earlier chapters. It traces the fundamental problem to ethnic polarization, and the resulting risk of conflict that it entails. It then shows that redistribution in favor of politically excluded groups is a fairly efficient way to prevent political violence and civil war. Redistribution can be performed using different channels, ranging from corruption and patronage to publicly provided education and health care.

## 1.3 Conclusion

Most of the chapters in the book have a focus on the observation of one particular event, such as the devaluation of the CFA Franc which took place in January 1994, the adjustment policy adopted by Nigeria during 1986, or the speculative attack against the Malagasy Franc which took place in May 1994. These major macroeconomic events are difficult to analyze by statistical methods, because they are so infrequent, and pose a significant challenge to the professional macroeconomist. The latter must therefore equip herself with simple analytical models in order to recognize such events when they occur, and to draw some useful implications from them. My experience as a consultant has taught me that decision-makers are convinced only by hearing simple stories based on relevant case studies. The type of clarity required to do this comes from the implicit use of simple models that help to structure the narration. The aim of this book is to convey this truth to the reader.

# PART I
# Unrecorded trade in goods and currencies

# 2 *The welfare implications of unrecorded cross-border trade*

## 2.1 Introduction

Most developing countries do not have the administrative capacity for raising tax revenues in an efficient way. Foreign trade turns out to be one of the easiest taxes to exploit, since traded goods have to pass through easily monitored points, such as seaports, train stations, or airports. Customs officers thus play a major role in collecting fiscal revenues for the government, and sometimes for themselves, as "informal levies." This is especially true in Africa, where taxes on foreign trade often amount to about half the total tax revenues. Table 2.1 illustrates this point by showing the ratio of trade-related taxes to total tax revenues in selected Sub-Saharan countries in the 1980s.

Many attempts have been made to change this situation, but the need to collect fiscal revenues is delaying reform. For example, between 1997 and 2000 the West African Economic and Monetary Union (WAEMU) adopted various reforms aimed at harmonizing the taxation of trade flows among its members, and at creating a common external tariff (CET), while removing tariffs on most intra-WAEMU trade. However, various escape clauses were put in place allowing countries to introduce temporary new taxes, which have in many cases become permanent.

All these levies bear generally more heavily on imports and on export crops, and create significant distortion. They provide some protection to firms that produce import substitutes and thus create, in many cases, an anti-export bias. Moreover, the figures in table 2.1 are an under-estimate for some countries. For example, oil-rich Nigeria levies more than 60% on the profits from oil exports as royalties, which appear under the heading of corporate tax, and not as a trade-related tax. A similar effect occurs, *mutatis mutandis*, in uranium-exporting

This chapter draws on Azam (1998).

*Table 2.1. The share of trade taxes in tax revenues, 1988 and selected dates, %*

| | | *1988* | *Previous dates* |
|---|---|---|---|
| Cameroon | : | 18.4 | 29.0 (1981–3) |
| Congo | : | 32.3 | 17.0 (1978–80) |
| Côte d'Ivoire | : | 42.3 | 46.3 (1980–2) |
| Gambia | : | 77.9 | 78.8 (1976–8) |
| Ghana | : | 37.9 | 37.1 (1981–3) |
| Kenya | : | 2.1 | 22.3 (1979–81) |
| Niger | : | n/a | 40.0 (1978–80) |
| Nigeria | : | 17.5 | 19.4 (1976–8) |
| Senegal | : | 37.7 | 38.5 (1980–2) |
| Uganda | : | 46.7 | 55.8 (1981–3) |
| Zaire | : | 46.9 | 35.8 (1980–2) |

**Note:** n/a = Not available.
**Sources:** 1988: Tanzi (1992); Previous dates: Tanzi (1987).

Niger. In the case of Cameroon, the royalties on oil exports have been kept out of sight for a long time, deposited in a US bank account at the discretion of the president, so that they are also not included in the figures given in table 2.1. Similarly, importers often pay bribes in order to avoid paying the full amount of the necessary customs duties (Daubrée, 1996). This is again a kind of tax on foreign trade, even if it does not show up in the government budget.

Exports are also often taxed in Africa by a marketing board or a stabilization fund. This type of levy is not included in table 2.1, although it sometimes amounts to a significant percentage of the border price. This was the case for a long time in Côte d'Ivoire, where the stabilization fund known as CAISTAB was in fact capturing a large share of the export proceeds. This lasted until the fall in international prices for coffee and cocoa in the late 1980s (Ridler, 1988; Schiller, 1989; Azam and Morrisson, 1994). Figure 2.1, from McIntire and Varangis (1999), represents the series of the producer price of cocoa in Côte d'Ivoire, as well as the free-on-board (FOB) price. The difference between the two was levied either by CAISTAB or directly by the state. It then transpired that most of the money levied on producers through CAISTAB had not been invested in liquid assets that could be easily sold in order to raise funds to compensate