



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search  
<http://ageconsearch.umn.edu>  
[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

## EXCHANGE RATE POLICY IN ETHIOPIA: AN AGENDA FOR ACTION

**Gashaw Dagne**

Ministry of Planning and Economic Development

**ABSTRACT:** *The balance of payments of the country has been characterized by a widening current account deficit and a depletion of reserves. This is mainly due to the fact that exports have declined in recent years both in volume and value terms. One of the main factors which contributed to the decline in exports is the lack of incentives to produce. The major disincentive to produce exportables is the unattractive producer price. It is, therefore, important "to get the prices right". In this paper attempts are made to establish the overvaluation of the Birr using some quantitative and qualitative indicators. The expected effects of devaluation are also briefly discussed. Since the economy is operating below capacity and to mitigate the social cost of adjustment substantial results could be achieved by exchange rate adjustment coupled with an increased inflow of external assistance to finance the import of inputs such as raw materials, fertilizers and spare parts. In order for devaluation to be effective it must take place in tandem with economic reforms aimed at eliminating distortions that reduce economic efficiency. In addition to mitigating the negative impact of devaluation in different ways and means, it is also important to educate the public on the need for it, because it might cause political instability.*

### 1. INTRODUCTION

The most complicated of all prices is perhaps the price of foreign exchange. Its adjustment has far reaching repercussions. The main reason why it is worthwhile giving special consideration to exchange rate policy is because it is directly related to the balance of payments problem of the country and contains both demand and supply management issues. For example devaluation makes imports expensive and restrains demand for imports on the one hand and, on the other, it stimulates the production of exports through increased prices measured in domestic currency.

It is often argued in the literature that in developing countries, since most imports are vital, it is difficult to restrain demand for imports, and because of the structural

rigidities and market imperfections, supply could not respond to prices. Hence, the intended objective of devaluation could not be achieved.

The author has no intention of denying the structural problems of the country and overemphasize the role of exchange rate policy in bringing domestic and external financial stability, but attempts to indicate the opportunities that lie under exchange rate adjustment in improving the country's balance of payments position when accompanied by appropriate supportive measures.

In the short-run total expenditure on imports may rise by almost the full extent of devaluation while customers search for cheaper domestic substitutes. But, it is difficult to see what else can be done than to try to generate more foreign exchange which could finance the rising import bill if a longer-term positive impact is envisaged.

Although a thorough empirical research is necessary to show the full impact of devaluation on the economy, the author has only tried to use secondary and tertiary information for the purpose of the analysis.

The paper is organized in the following way. Section two briefly explains the balance of payments situation of the country. Section three addresses the exchange rate developments of the Birr and some indications of its overvaluation. In section four the need for devaluation and its impact on the cost of living; the government budget and production response are discussed. Section five briefly deals with the determination of the "right" exchange rate and considers the possibility of shifting to another exchange rate regime. Section six presents the concluding remarks.

## **2. BALANCE OF PAYMENTS SITUATION: AN OVERVIEW**

The country's balance of payments has seldom been favourable in the last decade (Annex 1). It has generally been characterized by a widening current account deficit and a depletion of reserves. Although there have been occasional increases, exports have declined over the decade. The value of exports which has been Birr 950 million in 1979/80 has gone down to Birr 570 million in 1990/91.

The decline in exports is mainly due to recurrent drought and continuous civil strife in the country that seriously affected agricultural production and export supply negatively. In addition, unfavourable terms of trade; due to falling world prices mainly of coffee, increase in domestic consumption as a result of rapid population growth, inadequate domestic price incentives, transportation problems and inadequate investments in the export sector have contributed to the decline in export performance. The priority given to military expenditures in the allocation of foreign exchange, had negative impact on the operations of productive enterprises in the agricultural and industrial sector; which heavily depend on imported inputs.

Imports, on the other hand, have shown a marked increase from Birr 1,384 million in 1980/81 to Birr 2,130 million in 1990/91. The increase in import demand has been on account of import-intensive development expenditures, which heavily depend on external loans and assistance.

The net earnings on services could not offset the trade deficits, thus leaving the current account deficit unimproved. The deficit in the current account was financed by external loans, official grants and reserve draw downs. Official development assistance has been very low because of the growing disenchantment of donors with the previous government's policies. The per capita ODA to Ethiopia was US\$ 14.2 in 1989, which is below the Sub-Sahara African average of US\$ 27.7.

External financing of the current account deficit grew in early and mid 1980s mainly to support investment projects increasing the external debt and debt service payments. Debt service payments as a percentage of export of goods and non-factor services increased from 6.2% in 1980/81 to about 40% in 1988/89 and 77% in 1990/91.

### **3. EXCHANGE RATE DEVELOPMENTS**

The Ethiopian Birr has been pegged to the US dollar since the 1940s. Under the Bretton Woods exchange rate system exchange rates were essentially fixed to gold parities and fluctuation was allowed only within narrow limits. After the breakdown of

this system in 1971 the industrial world converted to a flexible exchange rate system. Since then the country has been pursuing a passive exchange rate policy leaving the Birr to depreciate and appreciate with the dollar. Only on two occasions has it appreciated the Birr against the dollar. In 1971 the exchange rate was fixed at Birr 2.30 = US\$ 1. Since February 1973 the exchange rate was set at Birr 2.07 = US\$ 1. But there are some indications which point to the overvaluation of the Birr.

### 3.1 Indicators of overevaluation

Although the official exchange rate of the Birr remains the same for a long time, the real effective exchange rate (REER), i.e. the trade weighted exchange rate adjusted for the differences in inflation between Ethiopia and its trading partners has been rising (Annex 2). It rose to a peak in 1985 and has subsequently declined from 168.6 to 116 in 1988, but remained nearly 50 percent above the level of the mid-1970s.

In parallel with the official exchange arrangements there is also an illicit market for foreign exchange. In the black market, a US dollar exchanges for anything between Birr 7 and 8 currently. But this does not reflect the true price of the dollar, because the illegal market usually includes a considerable amount of risk-premium. In addition to the strict exchange control, the franco valuta import arrangements could also have pushed its illegal market price upwards. Therefore, proper caution should be exercised in using the black market rate as an indication of the exchange rate adjustment that is necessary to attain balance of payments equilibrium (Mansur 1983).

Although it might reflect, to some extent, the inefficiencies of parastatals, the domestic resource cost (DRC) of many exportables, which is calculated by dividing the f.o.b. value at domestic prices in local currency by the f.o.b. value at world prices in foreign currency (US dollar), is found to be very high. The average DRC (the domestic cost of earning a dollar) of some important tradables calculated for the period 1984/85-1988/89 is Birr 4.00.

**Table 1: The Domestic Resource Cost of Some Important Tradables  
(1984/85 - 1988/89 average)**

	commodity	DRC Birr per US dollar
1	Leather Articles	3.19
2	Textiles	3.32
3	Bevarages	3.39
4	Sugar (refined)	2.81
5	Sheep and Goats	4.53
6	Meat	4.93
7	Fruits & Vegetables	5.92
Unweighted Average DRC		4.01
Official Exchange Rate		2.07

SOURCE: ONCCP, Trade and Tourism Department

The aforementioned facts clearly depict that the Birr is an overvalued currency vis-a-vis the US dollar, thus dampening the profitability of exportable commodities and consequently worsening the trade deficit in terms of Birr.

A variety of exogenous or endogenous factors can lead to balance of payments deterioration. Among the external factors, the most important one is the worsening terms of trade which was caused by successive oil shocks and the fall in the price of coffee. Nevertheless, a rigid trade and exchange regime had also contributed to a loss of competitiveness and consequent balance of payments difficulties.

### **3.2 Consequences of the Exchange Rate Misalignment**

In the preceding section an attempt has been made to show the overvaluation of the Birr vis-a-vis the US dollar. This section will survey the consequences of the overvaluation of the Birr.

### 3.2.1 Reduced Profitability and Competitiveness of Exportables

Due to supply shortage domestic consumers and industries are competing for exportables by paying more attractive prices. Fruits, vegetables, oilseeds, some pulses are fetching at least 50 percent higher prices than f.o.b. export prices. Coffee and sugar fetch even higher prices.

The government's response to this was to restrict the domestic trade of many exportables mainly coffee. The procurement and exportation of a large percentage share of exportables was held by state trading enterprises. The share of the state in coffee export which was about 29 percent in 1978/79 rose to 87 percent in 1989/90 (Annex 3). In the export of pulses and oilseeds its share has reached 80 percent.

In recognition of the fact that the overvaluation of the Birr has become a disincentive to exporting, the authorities have resorted to subsidizing the loss of state enterprises which they incur in exporting. The financing was made possible by imposing a 5% import levy on certain imports. Export of livestock, oilseeds and pulses, leather, fruits and vegetables, textiles and clothing have all received export subsidies, which in the years 1982/83 to 1989/90 has reached Birr 71 million out of which Birr 34 million is paid to subsidizing coffee farmers (Annex 4).

Reduced profitability of legal exports has also contributed to the expansion of illegal exporting. The illegal export trade involves coffee, gold, live cattle, sheep, goats, camels, fruits, vegetables and Chat. It is estimated that about 225,000 head of cattle, 750,000 head of goats and sheep and 100,000 camels are illegally exported annually by traders and pastoralists to Djibouti, Somalia, Kenya and Sudan. About 8,000 kg. of Chat per day is exported illegally to Djibouti and Somalia (World Bank 1987).

Although there are no reliable estimates of smuggled exports, some sources believe that coffee and livestock alone amount to Birr 258 million (US\$ 125 million) per annum (World Bank 1989). This is about 45 percent of official exports in 1990/91.

In addition to encouraging illegal trade, reduced profitability of coffee and the shortage of food, has led to the cutting of coffee trees and replacing them with food

grains and Chat. According to a study presented in "World Coffee Survey" in 1968, in the then Hararghe province about 56,700 hectares of land was covered with coffee trees. A survey made 17 years later in 1985 by the Ministry of Coffee and Tea Development covering 32 major coffee growing weredas shows that only 21,790 hectares of land is covered with coffee. This indicates a decrease of about 53 percent (ONCCP 1989). Although the extent differs from region to region similar trends are expected in other coffee growing areas.

### **3.2.3 Stricter Foreign Exchange Rationing**

Foreign exchange rationing has become the order of the day since the supply of foreign exchange falls short of demand at the current official exchange rate. Even holders of valid import licenses have to queue up for foreign exchange. The foreign exchange allocation is discriminatory, especially, against the private sector. In addition, there is uncertainty and delay of allocation because it is hard to predict the availability of foreign exchange. The government has relied heavily on import restrictions and exchange control rather than devaluation to conserve foreign exchange. This has led the private sector to manipulate the system by over-invoicing imports and under-invoicing exports and by resorting to illegal imports and most recently to franco valuta imports. This means a heavy cost in terms of distortions in resource allocation.

### **3.2.3 Use of Capital-Intensive Production Techniques**

An overvalued exchange rate could also encourage the use of capital-intensive production techniques instead of labour-intensive, imported intermediate goods instead of local materials and imported consumer goods instead of indigenous substitutes because imports are cheap at the existing official exchange rate. Although it has other reasons too, the heavy dependence of the manufacturing sector on imported inputs could be a good example to illustrate this fact.

Illicit (but remunerative) transactions in inward remittances are also the negative consequences of the overvalued exchange rate.



#### 4. EXCHANGE RATE ADJUSTMENT

Different studies conducted on Ethiopia's export sector indicated that, overvalued exchange rate, low level of investment in the export sector, unfavourable terms of trade and high domestic consumption have contributed to the poor performance of the sector. But it has been emphasized that overvalued exchange rate has played a significant role. This makes exchange rate adjustment an agenda for action. In light of the issues raised it has become apparent that the exchange rate of the Birr has to be adjusted. The price of postponed adjustment will be higher. The question has to be the timing and the extent of devaluation and the accompanying measures which could ease the possible negative impact of devaluation.

##### 4.1 The Need for Devaluation

Since 1982/83 the Government has been trying to promote exports by paying subsidies to exporters - both traders and producers. But claims of subsidy by government enterprises are made ex-post and the claims are not guaranteed automatically. Fiscal pressures sometimes limit the size of the subsidy. Thus, subsidies have failed to be proper incentives for export promotion. Subsidies have also aggravated the inefficiency of public export enterprises, since the government's effort concentrated only on exporting more commodities at any cost. Another weakness of the compensation system has been its failure to incorporate the private sector as a result of which private entrepreneurs withdrew from export trade or decrease the extent of their involvement and engage themselves in other more lucrative domestic trade activities.

Balassa (1981) suggests that if the right combination of import tariffs and export subsidy are applied, they could have the same impact on productive activities as devaluation. However, these could trigger retaliatory measures by other countries. While exchange rate actions can be taken at any country's own discretion, import protection is the concern of other countries too. Deliberate and unwarranted devaluation could also provoke retaliatory action from trading partners. That is why a

devaluing country usually engages in a round of secret negotiations with other countries and international financial institutions such as the World Bank and the IMF. The Ethiopian experience has shown that export subsidies have not yielded the intended results of encouraging exports - if they have to some extent, it is obtained solely at the expense of efficiency.

Devaluation encourages exports by increasing the local currency (Birr) payment of any given dollar amount of exports, hence increasing revenues to domestic exporters, but also discourages imports by keeping the Birr payments higher. Invisible transactions such as tourism are also expected to respond to exchange rate action. Through devaluation it is intended to increase emigrant remittances, and reduce or curb the capital flight which has been carried out by over-invoicing and under-invoicing foreign trade transactions.

In addition, devaluation is necessary also to lure back illegal trade to official channels and to encourage labour - intensive production methods.

However, it is very difficult to determine *a priori* the net outcome of devaluation. It has a number of partly offsetting repercussions and the net results will depend on the country's specific situation and the type and extent of supportive measures accompanying it.

## **4.2 Impact of Devaluation**

While exerting a positive impact on the balance of payments by stimulating exports and restraining imports, devaluation also has an influence on the cost of living, on the government budget and on production.

Although a thorough analysis of the impact of devaluation requires substantial amount of information and detailed empirical work, it is here attempted to assess the repercussions by using secondary data and qualitative explanations.

### **4.2.1 Devaluation and the Cost of Living**

The effect of devaluation on the cost of living could be felt directly or indirectly. An increase in the Birr price of imported consumer items has a direct bearing on the

cost of living. The increase in the price of raw and intermediate materials could also push the cost of production of domestically produced consumer goods upwards. Devaluation could also induce the price rise of import competing home goods. The price of exportable goods which are consumed at home will also rise, because of an increase in their f.o.b. price and the competition of local traders. In addition to the above direct and indirect effects, devaluation could also trigger off a wage-price spiral.

The majority of the urban population is very poor and is ill-equipped to cope with economic policy changes which sharply increase the cost of living. The groups which are the most susceptible to falling living standards, as devaluation becomes effective, will be the low income urban population. In order to ease the impact of devaluation on the cost of living the government could apply targeted food subsidy schemes and/or make wage increment which doesn't fuel inflation and dampen the positive impact of devaluation.

Producers in the agricultural sector which constitute about 89 percent of the population and producers in industry would be better off by getting better prices through the devaluation effect.

#### **4.2.2 Devaluation and the Government Budget**

Devaluation can have a direct negative impact on the government budget deficit through an increase in the Birr value of the foreign exchange component of current and capital expenditures such as direct import of consumables, debt service on foreign borrowing and the import component of capital outlays. Devaluation can also increase government expenditure indirectly through the increase in domestic cost of production of goods and services which use imported inputs. The problem could be exacerbated if the government decides to index wages due to the price effect of devaluation. Although there is no accurate information, 25 percent of the current budget and 60 percent of the capital budget is expected to be affected by devaluation (World Bank 1987).

While devaluation can be expected to raise government expenditure through imported capital outlays and other expenditure items, it is also expected to improve the profitability of public enterprises which produce for export and thereby decreasing or removing the subsidy paid to them.

The positive and immediate impact of devaluation on the government budget is to expand the Birr value of import and export taxes which constituted 19.6% of total government revenue in 1989 (see Table 2).

However, one can argue that, since devaluation discourages import demand it might lead to a decrease in the revenue derived from import taxes. But by providing incentives to export producers, devaluation is also expected to lead to increased import demand as the capacity to import increases. By diverting the illegal export-import activities into the legal channel through price and other incentives, devaluation could also expand the base of foreign trade taxes.

Table 2: Central Government Current Revenue  
(percentage of total current revenue)

Ser. No.	Revenue Sources	1972	1989
1	Taxes on income, profit and capital gain	23.0	26.6
2	Social security contribution	n.a	n.a
3	Domestic taxes on goods and services	29.8	21.0
4	Taxes on international trade	30.4	19.6
5	Other taxes	5.6	2.2
6	Current non-tax revenue	11.1	30.7
7	Total current rev. as percent of GNP	10.5	25.2

SOURCE: World Bank, *World Development Report*, 1991.

The positive impact of devaluation could not be fully realized if there are tax exemptions and specific taxes (certain excise taxes on domestic sales). Therefore, specific taxes have to be changed into ad valorem. In principle it is not desirable to put a surcharge on coffee because it substantially decreases the producer price and becomes a disincentive to produce. However, it is the major source of government revenue (Annex 6). If it is decided to continue levying surtax on coffee, the base has to be changed from the US dollar ICO indicator price to Ethiopian Birr, otherwise tax revenue would not rise with the increase in domestic currency export prices.

Although it is not directly related to the impact of devaluation, there is a need to consider the possible positive influence of external grant to development activities, whose release by the donor community has been contingent upon the conditionality that the country make macro economic adjustments in which exchange rate adjustment is a part. An increase in external grants and the easing of debt service burden, mainly through debt cancellation and debt rescheduling, could greatly help in mitigating the negative impact of devaluation on the government budget deficit.

#### 4.2.3 Devaluation and Production Response

Since agriculture accounts for a large share of GDP and exports, two strategic pricing policies namely; exchange rate and agricultural prices, are critical. The main justification for devaluation in Ethiopia is to raise the relative prices of export commodities thereby making them more profitable and stimulate production ultimately leading to higher exports.

It is often argued that supply response to higher prices in Africa might not yield as high results as can be expected in developed economies, where there is more room for flexibility and adaptability. However, recent studies (World Bank, 1987) indicate that the short-run and long-run price elasticities for Ethiopia's total agriculture are 0.24 and 0.56 respectively. These results are higher than the short- and long-run elasticities calculated for nine Sub-Saharan African Countries which were 0.18 and 0.21 respectively (Bond, 1983).

Because of the vulnerability of agricultural exports to world market price changes it is essential to diversify into manufactured products. But this calls for new investments and might be viewed as a long-term objective. In the short-run the objective should be to reverse the previous decline in traditional exports. The share of export of goods and non-factor services from GDP has declined from 23 percent (1965) to 12 percent (1989). Since the productive sectors are operating well below capacity, there exists a room for export expansion. Most of the industries are operating at about 50 percent of their capacity. There is a very big potential for expansion in the coffee sub-sector, which is a major source of export earning. Since the gestation period for coffee is about 5 to 7

years, an increase in production in the short-run could only be achieved by improved capacity utilization. UNDP/EEC financed studies made by Food Studies Group show that through improved cultural practices the current 140,000 to 160,000 tons of annual coffee production could be raised to 260,000 tons. If the estimated domestic consumption of about 120,000 tons is deducted about 140,000 tons could be left for export, which nearly doubles the current average annual export.

In order to achieve these results, incentives for farmers have to be improved mainly through the increase in the share of producers from international prices. The producer share of the f.o.b. prices of exports remains relatively low. For coffee, the share of the producer price is only about 40 percent. Average share of producer price from f.o.b. price of coffee for 20 major coffee producing countries between 1976 and 1985 was 66.5 percent. Coffee farmers in Nicaragua and Kenya were exceptions, receiving 121.86 percent and 102.57 percent respectively. By contrast the producer share for coffee in Uganda during the same period was 38.57 percent.

Table 3: The Share of Taxes, Marketing Margin and Producer Price  
(average percent share of f.o.b. coffee price)

Particulars	1961/62 - 1974/75	1976/77* - 1986/87
F.O.B. Price	100.00	100.00
Taxes	20.40	41.60
Marketing Margin	17.90	18.00
Producer Price	61.70	40.30

\*Surtax was introduced in 1976/77

SOURCE: ONCCP (Price Studies and Policy Department), *Coffee Producer Price Study*, 1989. (in Amharic)

As shown in table 3 the share of producer price could only be improved at the expense of taxes and marketing margin. Although a decrease in coffee taxes might lower government revenue, the negative impact of tax reduction could be offset by the increase in the export quantity which ultimately widens the tax base.

The major constraint for capacity utilization could be the lack of foreign exchange to import raw materials and production inputs. Hence, an exchange rate adjustment coupled with an increased inflow of external aid to finance imported inputs, raw and intermediate materials and spare parts could generate substantial result in the short-run. Very good examples to be followed by the donor community in this regard are the EEC financed Sector Import Programmes and the Peasant Coffee Improvement Project.

Similar possibilities of capacity utilization also exist in other traditional agricultural and agro-based manufactured exports. The wealth and income distribution effects of devaluation could stimulate savings and investment. If they are accompanied by appropriate fiscal incentives they may produce a long-run gain of increased capacity.

#### **4.2.4 Devaluation and the Balance of Payments**

Export volumes may show little change immediately after devaluation, although their export value in terms of domestic currency increases. The increment in local currency import expenditures is also obvious, because customers will need time to shift to cheaper domestic substitutes. Therefore, the deficit in the trade account is likely to worsen during the months following devaluation. But after a while production is expected to respond to favourable export prices and producers will have time to find domestic substitutes for imported raw and intermediate materials. It is also expected that devaluation will lure back contraband trade to official channels which also improves the performance of the trade account. This phenomenon is known as the J-Curve effect. The J-Shaped adjustment path implies an initial drain on foreign exchange reserves. This is the time when external aid is needed to carry the country over the adjustment period (Morely, 1988). Since there will be a shortage of inputs to support export production, additional foreign assistance needs to be mobilized for importing inputs for crop, livestock and industrial production.

1988

## 5. DETERMINING THE RIGHT EXCHANGE RATE AND PEG

### 5.1 The "Right" Exchange Rate

Although it is beyond the scope of this paper to discuss in detail the mechanisms by which the price of foreign exchange is determined, it is deemed essential to briefly touch upon some aspects of exchange rate determination.

In Section 3 attempts have been made to establish the overvaluation of the Birr using different indicators such as real effective exchange rate indices (REER), the domestic resource cost (DRC), the parallel market price and other qualitative explanations. But it is difficult to determine the "right" exchange rate because of the weaknesses these indicators have.

1. The REER index is a fixed weight index based on the market share or the trade partners' share in the country's trade for a given year. It fails to indicate the dynamism that occurs during the shifting of partners and commodities. Since it overvalues the price effect (Laspyers Index) it also tends to over estimate the real exchange rate appreciation.
2. Although the very existence of the parallel market is *prima facie* evidence on the need for devaluation it does not provide accurate information because the parallel market rates usually contain a significant amount of risk-premium.
3. The domestic resource cost (DRC) also tends to over estimate the price of foreign exchange because the domestic costs of exports, to a certain extent, reflect the inefficiencies of export marketing enterprises.

A simple solution in determining the "right" exchange rate would be to let the currency float freely. But this doesn't seem feasible because of the market imperfections, lack of capital markets and structural rigidities that exist in the country. If a single currency peg is decided to be maintained, the optimum level of exchange rate could be found in between the rate calculated on the basis of REER and the parallel market rate.

Getting only the price of foreign exchange right is not a panacea for improving the performance of the economy; however, getting it wrong has proved to be detrimental. For devaluation to be more effective it has to be part and parcel of a comprehensive



economic reform which aims at promoting efficiency. Such a reform includes the creation of an attractive climate for local and foreign investors, trade liberalization, tax reform, strict monetary discipline, fiscal deficit reduction, privatization, creation of financial markets, etc.

## **5.2 Choosing an Exchange Rate Regime**

The choice of an appropriate exchange rate system is a complex decision that has to take a variety of factors, such as a country's size; its openness; the degree of international financial interaction; inflation and the foreign trade pattern, into account. There are two extreme systems - the fixed exchange rate (pegged exchange rate) system on one end and, fully flexible (freely floating) exchange rate system on the other. In between the two there are a variety of systems which could lie closer to one of the two extremes or could be a hybrid of the two.

In most developing countries a fixed exchange rate regime is favoured because in a floating system exchange rate fluctuations could be exacerbated due to the thinness of the market for their currencies. In a fixed exchange rate regime the effects of transitory supply shocks, such as crop failure, oil price rises, etc., could be cushioned by the use of reserves because the monetary authorities commit themselves to maintaining a substantial amount of foreign exchange reserves, usually equivalent to the value of six or more months worth of imports for intervention purposes. As to the choice of an appropriate peg, the trade shares are very important.

While pegging to a single currency may stimulate trade, investment and capital flows with countries of the same currency area, pegging to a single currency in an environment of generalized floating among major currencies could increase the volatility of the pegged currency in question. An alternative form of pegging to an external standard is pegging to a composite or "basket" so as to minimize the impact of external shocks on domestic income and prices.

Although a single currency peg continues to be the most common exchange rate system among developing countries, the number of currencies that are "pegged to a single currency" decreased from 69 to 53 between 1977 and 1985. The number of currencies

that are classified by the International Monetary Fund (IMF) as "pegged to a basket" increased from 30 at the end of 1977 to 43 at the end of 1985 (Takagi, 1988).

When choosing a "basket peg" exchange rate system the following important points have to be borne in mind.

1. The initial level of the exchange rate has to be established, as with a single currency peg.
2. The composition of the basket has to be determined.
3. The method of valuing (averaging) has to be chosen.
4. The operation of the basket peg needs to be flexible.
5. The authorities have to decide whether to disclose the basket to the public or not.

The determination of the adjusted initial level is already discussed in the preceding sub-section. As to the choice of the composition of the basket the major currencies as well as trade shares play very important role.

The presence of a number of currencies in the basket necessitates the choice of averaging methods depending on the policy the authorities want to pursue. This is due to the fact that the same set of currency weights yield different average values. If the authorities want an in-built depreciation bias they can use arithmetic average. If they choose to maintain the predetermined currency weights indefinitely they prefer the geometric average method. Should they desire to have a built-in appreciation (anti-inflation) bias, they can use the harmonic mean. The arithmetic average and the harmonic average share the property of variable currency shares, but the effect of depreciating currencies dominates in the former case, where as the effect could be minimized in the latter.

There is also the so called "standard basket" method which is almost identical to harmonic average. But standard basket method allows the exclusion of some minor currencies that are not traded in the forward market from the basket. SDR is one such proxy basket.

made ex-post and are not automatically guaranteed. In addition the scheme doesn't include the private sector.

Despite considerable risk-premium incorporated in the parallel exchange rate, its existence *prima facie* calls for exchange rate adjustment. Furthermore, the tapping of a substantial unrecorded import-export activity demonstrated a strong case for exchange rate action, which could have an immediate positive effect on the improvement of recorded balance of payments and the widening of the tax base.

Exchange rate action could also have an impact on the cost of living, government budget deficit and production. The increase in the cost of living due to devaluation could be mitigated through food subsidies or wage-indexation which doesn't fuel inflation. The negative impact on the government budget is expected to be offset by the increase in tax revenue generated due to devaluation effect. In the case of an increase in the government's foreign exchange denominated expenditures on capital outlays and debt-service on foreign borrowing, an increase in external grants and debt-relief arrangements could greatly help in easing the negative impact of devaluation on the budget. Now, that the war is over, the defense budget which accounted for about 54 percent of the government recurrent expenditure in 1989/90 is estimated to have dropped substantially. This could be an opportune moment to make an exchange rate adjustment without widening the budget deficit.

Despite arguments in the literature that supply response to higher prices might not yield the expected results, the Ethiopian agricultural sector has shown higher short- and long-run elasticities than the Sub-Saharan average. New investments might take time to mature. An increase in production and consequently in export volume could be achieved through capacity utilization since the productive sectors are operating well below capacity. If foreign exchange shortage, which will be a major constraint for capacity utilization, could be mitigated through an increased external aid, substantial results could be achieved in the short-run. However, for devaluation to be meaningful it has to be part and parcel of a wider economic reform programme.

Although they have some weaknesses, the indicators of exchange rate overvaluation; such as REER index; DRC and the illicit market rate used in this paper, could be the basis for the determination of the right exchange rate.

While devaluation makes good sense in terms of the economic interests of the country, it might not make sense to that section of the society whose standard of living will seriously be affected. Hence, it might cause political instability. In addition to mitigating the negative impact of devaluation through different measures, it is also very important to educate the public on the need for exchange rate adjustment.

It might also be wise to consider pegging the Ethiopian Birr to a "basket", because, pegging to a single currency in an environment where major currencies are floating, might expose to external shocks. But care should be taken not to lose the public confidence on the government's reliable and stable monetary policy when shifting to another peg.

Annex 1. Balance of Payments on Cash Basis (in Millions of Birr)

Fiscal Year	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91
Trade balance	-517.6	-532.7	-863.5	-943.4	-1137.4	-1026.8	-1277.4	-1426.9	-1486.5	-1192.2	-1067.3	-1558.3
Exports	950.6	851.5	778.1	809.6	929.6	743.6	923.8	809.8	788.1	918.2	756.9	572.1
Coffee	631.8	524.3	480.3	495.9	590.4	466.3	664.8	524.3	439.2	626.4	405.4	268.5
Others	318.8	327.2	297.8	313.7	339.2	277.3	259.0	285.5	348.9	291.8	351.5	303.6
Imports	1468.2	1384.2	1641.6	1753.0	2067.0	1770.4	2201.2	2236.7	2274.6	2110.4	1824.2	2130.4
Services (net)	28.1	70.3	60.2	85.9	112.0	103.1	107.8	99.8	78.2	96.6	143.3	64.7
Travel	7.7	9.8	13.3	9.0	6.3	8.0	5.0	0.4	5.9	-4.2	-7.4	-10.1
Other transportation	22.5	44.1	50.9	72.4	77.8	72.5	111.4	110.3	127.4	176.2	186.9	153.1
Investment income	-13.5	-14.6	-18.2	-28.0	-39.7	-68.4	-82.8	-98.1	-133.7	-166.2	-102.1	-97.3
Government n.i.e.	6.7	5.3	16.5	25.3	58.2	64.0	53.7	51.8	61.0	69.1	58.0	68.8
Other services	4.7	25.7	-2.3	7.2	9.4	27.0	20.5	35.4	17.6	21.7	7.9	-49.8
Private transfers (net)	41.3	51.2	93.6	175.8	220.0	403.7	353.8	306.4	245.3	389.1	354.6	413.9

Gashaw D.: Exchange Rate Policy in Ethiopia

Fiscal Year	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91
Current account balance	-448.2	-441.2	-709.7	-681.7	-803.4	-520.0	-815.8	-1020.7	-1163.0	-706.5	-569.4	-1079.7
Trade balancePublic transfers (net)	124.0	123.9	139.8	191.4	335.2	617.6	607.1	438.6	388.7	433.0	345.5	604.3
Capital account	169.5	322.0	679.4	401.7	395.8	423.7	547.5	407.1	570.1	452.1	575.1	698.4
Errors and ommissions (net)	71.1	-158.3	15.8	-59.4	-15.2	-425.5	11.5	131.4	-179.1	-131.3	-504.3	18.8
Overall balance	-83.6	-123.6	125.3	-148.0	-87.6	95.8	350.3	-43.6	-383.3	47.3	-153.1	241.8
Monetary movement (net)	83.6	123.6	-125.3	148.0	87.6	-95.8	-350.3	43.6	383.3	-47.3	153.1	-241.8
Financing gap											390.8	456.1
Net Foreign assets (inc. Djibouti CBE branch)	367.0	243.4	368.7	220.7	133.1	228.9	579.2	535.6	152.3	199.6	46.5	288.3

Source: National Bank of Ethiopia

Annex 2

Real Effective Exchange Rate Indices

(1980 = 100)

Year	REER
1965	109.6
1966	106.9
1967	107.8
1968	108.3
1969	106.5
1970	110.7
1971	104.6
1972	96.9
1973	95.0
1974	81.9
1975	80.7
1976	102.6
1977	109.4
1978	109.0
1979	110.2
1980	100.0
1981	110.3
1982	119.8
1983	125.8
1984	140.9
1985	168.6
1986	129.1
1987	113.6
1988	116.0

Source: The World Bank, *Ethiopia: Policy Agenda for Economic Revival*, 1989

Annex 3  
Annual Coffee Export (1978/79-1989/90)

No.	Fiscal Year	Total Export		Government Export			Private Export		
		Total Quantity (in tons)	Total Value (in million Birr)	Quantity (in tons)	Value (in million Birr)	Birr per ton	Quantity (in tons)	Value (in million Birr)	Birr per ton
1	1978/79	83,133	519.5	24,339	149.4	6,138.30	58,794	370.1	6,294.86
2	1979/80	84,975	671.4	53,932	430.1	7,974.86	31,043	241.3	7,773.09
3	1980/81	85,499	493.0	60,435	339.2	5,612.64	25,064	153.8	6,136.29
4	1981/82	83,229	497.1	59,384	352.9	5,942.68	23,845	144.2	6,047.39
5	1982/83	90,391	513.6	61,551	342.3	5,561.24	28,840	171.3	5,939.67
6	1983/84	94,017	576.9	71,018	436.8	6,150.55	22,990	140.1	6,091.57
7	1984/85	75,641	445.6	64,437	372.4	5,779.29	11,204	73.2	6,533.38
8	1985/86	74,972	669.6	59,283	602.1	8,817.71	6,689	67.5	10,091.19
9	1986/87	72,876	439.7	66,529	390.2	5,865.11	6,347	49.5	7,798.96
10	1987/88	72,262	458.1	65,039	408.2	6,276.33	7,224	49.9	6,907.53
11	1988/89	83,000	482.9	78,000	455.5	5,839.74	5,000	27.4	5,480.00
12	1989/90	83,251	360.5	72,483	304.2	4,196.85	10,768	56.3	5,228.45

Source: Ministry of Coffee and Tea Development, Coffee and Tea Development and Trade Report (1978/79-1989/90)



Annex 4: Export Subsidy (1982/83 - 1989/90)

		1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90
1	Sheep and Goats	1,177	1,582	14,978	19,356	12,245	21,336	21,990	11,032
2	Meat	5,256	5,205	8,545	9,433	7,255	5,726	3,856	1,602
3	Bovine cattle	-	-	-	-	-	-	-	1,863
4	Leather & leather products	5,547	3,223	6,861	6,259	2,231	1,502	1,622	832
5	Textiles & clothing	133	81	249	900	1,526	4,445	5,925	7,025
6	Pulses & oilseeds	1,408	9,327	3,472	280	-	-	-	1,191
7	Spices	372	369	2,416	4,035	-	-	-	1,078
8	Oilseed cakes	1,500	-	-	-	416	-	-	-
9	Sugar	2,255	7,783	7,199	3,633	5,335	2,397	795	6,605
10	Salt	541	337	1,163	1,406	445	-	-	-
11	Fruits & vegetables	332	582	3,870	2,771	3,766	6,180	6,942	5,539
12	Beverages	-	-	202	20	137	215	129	346
13	Raw hides and skins	458	775	687	353	-	-	-	-
14	Cotton seed	-	1,570	-	-	-	-	-	-
15	Coffee	-	-	-	-	-	-	-	34,000
	Total	18,979	30,834	49,642	48,455	33,356	41,801	41,259	71,113

Source: ONCCP, Trade &amp; Tourism Department

Annex 5: Summary of Government Finance 1984/85 - 1990/91  
(in millions of Birr)

Fiscal Year Ending July 7	1984/85	1985/86	1986/87	1987/88	1988/89*	1989/90*	1990/91*
Total Revenue & Grants	2954.6	3249.2	3247.9	4103.0	4077.8	3358.5	2990.0
Revenue	2323.3	2806.1	2925.9	3467.1	3732.6	3097.8	2647.1
of which Montax	(645.8)	(930.0)	(833.7)	(1139.0)	(1363.5)	(935.5)	(581.4)
External Grants	631.3	443.1	322.0	635.9	345.2	260.7	342.9
Expenditure	3823.4	4062.3	4002.9	4881.6	5206.1	5130.6	4759.9
Current Expenditure 1/	2636.4	2590.5	2619.8	3422.4	3406.4	3735.7	3419.2
Capital Expenditure	1187.0	1471.8	1383.1	1459.2	1799.7	1394.9	1340.7
Overall Deficit (-)							
Including Grants	-868.8	-813.1	-755.0	-778.6	-1128.3	-1772.1	-1769.9
Excluding Grants	-1500.1	-1256.2	-1077.0	-1414.5	-1473.5	-2032.8	-2112.8
Financing	868.8	813.1	755.0	778.6	1128.3	1772.1	1769.9
External (Net)	335.7	478.3	392.7	402.0	615.4	397.9	346.6
Gross Borrowing	376.9	544.7	493.7	539.2	759.1	461.0	400.6
Amortization	(41.2)	(66.4)	(101.0)	(137.2)	(143.7)	(63.1)	(54.0)
Domestic (Net)	533.1	334.8	362.3	376.6	512.9	1374.2	1423.3
Bank	474.9	359.0	423.4	365.0	451.0	1295.5	1230.5
Non-Bank	27.0	15.0	25.0	35.0	25.0	-	-
Others 2/	-	-	-	-	-	-	43.5
Residual	91.2	-36.7	-53.0	15.9	76.1	111.3	162.2
Amortization	(60.0)	(2.5)	(33.1)	(39.3)	(39.2)	(32.6)	(12.9)
Memorandum Items:							
Total Revenue & Grants	29.8	29.8	28.5	34.6	32.8	26.7	23.4
Total Revenue	23.4	25.7	25.7	29.3	30.1	24.6	20.7
of which Montax	(6.5)	(8.5)	(7.3)	(9.6)	(11.0)	(7.4)	(4.6)
External Grants	6.4	4.1	2.8	5.4	2.8	2.1	2.7
Expenditure	38.5	37.2	35.1	41.2	41.9	40.8	37.3
Current Expenditure	26.6	23.8	23.0	28.9	27.4	29.7	26.8
Capital Expenditure	12.0	13.5	12.1	12.3	14.5	11.1	10.5
Overall Deficit (-)							
Including Grants	-8.8	-7.5	-6.6	-6.6	-9.1	-14.1	-13.9
Excluding Grants	-15.1	-11.5	-9.4	-11.9	-11.9	-16.2	-16.5
Financing							
External (Net)	3.4	4.4	3.4	3.4	5.0	3.2	2.7
Domestic (Net)	5.4	3.1	3.2	3.2	4.1	10.9	11.1
Bank	4.8	3.3	3.7	3.1	3.6	10.3	9.6

Source: Ministry of Finance;

\* Preliminary actual;

1/ Excludes external &amp; internal debt amortization;

2/ Settlement of debt to Customs from the Treasury on behalf of government agencies.

Annex 6. Foreign Trade Taxes (1977/78 - 1989/90)

No.	Year	Total Import Tax Revenue	Total Export Tax Revenue	Foreign Trade Tax Revenue	Customs duty	Sur Tax	Cess Tax	Transaction Tax	Total Export Tax on Coffee	The share of Coffee Taxes from Total Export Tax
1	1978/79	333.7	229.1	562.8	12.2	203.4	-	7.0	222.6	97.2%
2	1979/80	247.1	297.3	544.4	13.7	264.7	3.6	9.8	291.8	98.2%
3	1980/81	296.7	188.3	485.0	13.3	154.7	5.1	9.5	182.6	97.0%
4	1981/82	284.7	190.4	475.1	12.4	158.7	4.2	9.4	184.7	97.0%
5	1982/83	306.8	203.8	510.6	14.0	174.0	4.6	8.3	200.9	98.6%
6	1983/84	321.3	257.9	579.2	14.3	225.6	4.4	9.4	253.7	98.4%
7	1984/85	289.6	172.8	462.4	10.1	146.7	3.9	7.0	169.7	98.2%
8	1985/86	291.3	262.9	554.2	9.1	236.7	3.1	9.4	258.3	98.3%
9	1886/87	408.4	153.7	562.1	12.2	125.3	3.1	10.4	151.0	98.2%
10	1987/88	437.8	147.1	584.9	10.6	119.4	4.2	10.0	144.2	98.0%
11	1988/89	356.0	163.2	528.2	11.1	134.8	3.9	9.8	159.6	97.8%
12	1989/90	430.6	49.8	480.4	12.9	19.5	5.0	9.7	47.1	94.7%

Source: ONCCP, Department of Finance and Budget

## REFERENCES

- [1] Gillis, Malcolm; Perkins, Dwight H.; Roemer, Michael and Snodgrass, Donald R., *Economics of Development*, Second Edition, W.W. Norton & Company, New York, London, 1987.
- [2] Balassa, Bela, "Structural Adjustment Policies in Developing Economies", World Bank Staff Working Paper No. 464, July 1981.
- [3] World Bank: *Accelerated Development in Sub-Saharan Africa, An Agenda for Action*, World Bank, 1981.
- [4] Yagci, Fahrettin; Kamin, Steven and Rosenbaum, Vicki, "Structural Adjustment Lending: An Evaluation of Programme Design", *World Bank Staff Working Paper No. 735*, May 1985.
- [5] Edwards, Sebastian and Montiel, Peter, "The Price of Postponed Adjustment", *Finance & Development*, Volume 26, No. 3, IMF and the World Bank.
- [6] Morely, Richard, *The Macroeconomics of Open Economies*, Edward Elgar, Hants, England, 1988.
- [7] The World Bank: *Financing Adjustment with Growth in Sub-Saharan Africa*, 1986-90, The World Bank, Washington, D.C., 1986.
- [8] Gulhati, Ravi; Bose, Swadeshi and Atukorola, Vimal, "Exchange Rate Policies in Eastern and Southern Africa, 1965-1983", *World Bank Staff Working Paper No. 720*, 1985.
- [9] International Monetary Fund: "Formulation of Exchange Rate Policies in Adjustment Programs", International Monetary Fund, Occasional Paper No. 36, Washington, D.C., August 1985.
- [10] Khan, Moshin S. and Knight, Malcolm D., "Some Theoretical and Empirical Issues Relating to Economic Stabilization in Developing Countries", *World Development*, Volume 10, Number 9, (September 1982), pp. 709-728.
- [11] May, Ernesto, "Exchange Controls and Parallel Market Economies in Sub-Saharan Africa, Focus on Ghana", *World Bank Staff Working Papers, No. 711*, 1985.
- [12] Takagi, S., "A Basket Peg Policy: Operational Issues for Developing Countries", *World Development*, Volume 16, Number 2, (February 1988), pp. 271-278.
- [13] Mansur, Ahsan H., "Determining the Appropriate Levels of Exchange Rates for Developing Economies: Some Methods and Issues", *International Monetary Fund Staff Papers*, Vol. 30, No. 4 (December 1983), pp. 784-818.
- [14] Cleaver, Kevin, "The Impact of Price and Exchange Rate Policies on Agriculture in Sub-Saharan Africa", *World Bank Staff Working Papers, No. 728*, 1985.
- [15] Bond, M.E., "Agricultural Responses to Prices in Sub-Saharan African Countries", *IMF Staff Papers*, Vol. 30, pp. 703-726.
- [16] The World Bank, *Ethiopia: An Export Action Programme*, Report No. 6432-ET, June 30, 1987.
- [17] The World Bank, *Ethiopia: Policy Agenda for Economic Revival*, Report No. 8062-ET, October 23, 1989.
- [18] Office of the National Committee for Central Planning, Price Studies & Policy Department, 1989: *Coffee Producer Price Study* (published in Amharic).