Trade Liberalization and the Coffee Sub-Sector: Some Implication for the Food Sub-Sector

Alemayehu Geda

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Address:

Alemayehu Geda, Ph.D.
Asst. Professor of Economics
Department of Economics
Addis Ababa University
P.O.Box 81146, Addis Ababa, Ethiopia
Fax: (251-553504 or 551399
Tel: (251-1) 553900ext 228/232 or 116902 (Off)
(251-1) 559338 (Resd.)
Alemayehu@excite.com ***OR***
Economic.dept@telecom.net.et

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LIST OF ABERVIATION USED

AAU	Addis Ababa University
CSA	Central Statistical Authority
CBD	Coffee Bury Disease
CPDC	Coffee Plantation Development Corporation
CDPI	Coffee Development and Project Implementation Department
CTA	Coffee and Tea Authority
ECEE	Ethiopian Coffee Export Enterprise
ECMC	Ethiopian Coffee Marketing Corporation
ECPSE	Ethiopian Coffee Purchase and Sale Enterprise
ICO	International Coffee Organization
MEDaC	Ministry of Economic Development and Cooperation
MIT	Ministry of Trade and Industry
NBE	National Bank of Ethiopia
SAPs	Structural Adjustment Programs
UR-AoA	Uruguay Round -The Agreement on Agriculture
USD	United States Dollar
WTO	World Trade Organization

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Trade Liberalization and the Coffee Sub-Sector in Ethiopia: Some Implications for the Food Sub-Sector

Alemayehu Geda
Alemayehu@excite.com

1. INTRODUCTION

Ethiopia is a predominantly agricultural country with 85% of the population deriving its livelihood from subsistence agriculture. Agriculture is the leading sector contributing 50% to GDP, 90% to export revenue, and 85% to total employment. This shows that the overall economy of Ethiopia and the food security of the majority of the population are highly dependent on what happens in the agricultural sector.

The major export commodity of Ethiopia, coffee, contributes an average of 65% to total export earning (foreign exchange) and provides a source of livelihood for a substantial number of farmers. The volume of coffee export, prices and farm income are largely dependent on both national and international market and trade policies. It is therefore very important to assess the impact of domestic and international agricultural trade policies on coffee exports in Ethiopia and how this affects national and household food security.

There are a number of policy measures, both national and international, that have an impact on the export sector and food security in Ethiopia. One of the most relevant policy measures that needs to be considered in the context of this study is the Structural Adjustment Program (SAP) prescribed by the IMF and the World Bank and accepted and currently being implemented in Ethiopia since 1992. This policy package, which includes trade liberalization as its one component, has the same effect as the implementation of the rules provided in the Agreement on Agriculture (AoA) since Ethiopia had already committed itself to lifting most agricultural subsidies and made a substantial reduction of tariffs although it is still not a member of the World Trade Organization (WTO). This

study is concerned with the evaluation of components of SAPs that are relevant to the coffee sub-sector and their implication for food security.

The rest of the study is organized as follows. Section 2 will outline the methods employed in evaluating liberalization schemes such as SAPs and justify the one adopted in this study. In section 3 Ethiopia's external trade policy is examined so as to give background for the analysis in section 4 and 5. Section 4 deals with the evaluation of liberalization and its impact on the coffee sub-sector. Section 5 is devoted to draw implications for food security by examining the existing micro-based studies. Section 6 will conclude the paper.

2. THEORETICAL ISSUES IN THE EVALUATION OF LIBERALIZATION

Since the 1980s, the World Bank and IMF, and increasingly WTO, inspired programs of liberalization had been carried in almost all-African countries. There is a serious disagreement about the effect of these programs, in particular that of Structural Adjustment, in the literature (See Alemayehu 1999a). One major problem in understanding the effect of these programs is lack of appropriate methodology to evaluate such liberalization schemes.

The analysis of the impact of liberalization on the coffee sub-sector in Ethiopia can not be immune to this problem. In this study we will attempt to see the impact of trade liberalization on the coffee sub-sector and its implication for the food sub-sector. Before commencing such analysis, however, it is worth mentioning the methods employed in carrying such evaluation and the approach adopted in this study.

There are at least five approaches employed in the evaluation of the impact of Bank/Fund supported programs in general and trade liberalization in particular:

(1) the *before-after* approach

(2) the *with-without* approach;

(3) the *actual-versus-target* approach;

(4) the *modeling/simulation* approach, and

(5) the *econometric* approach

(See Khan 1990; Pio 1994)

The literature of evaluation of structural adjustment programs and the attendant liberalization is dominated by the *before-after* approach. The first study to use this approach is the one by Rechmann and Sillson (1978). Other works cited include, *inter alia*, Killick (1984), Zulu and Nsouli (1985), Poster (1987) (see Goldestin and Montiel, 1986; Khan 1990). This approach basically compares performance of the economy (or major macro variables) before and after liberalization or the implementation of SAPs. While easy to apply, the approach is fundamentally based on the *cetirus paribus* (other things being equal) assumption which made it difficult to claim that it has captured the independent effect of the reform (Khan, 1990: 201). In other words, it has no mechanism to filter out the effect of other factors, other than the reform, which could have a bearing on the outcome.

The *with-without* approach is designed to overcome the weakness of the *before-after* approach and hence serves as a supplement to it (Montiel 1986:305; Khan, 1990:201). The approach attempts to distinguish between the program and non-program countries and compares the outcomes. It assumes that countries with and without a (liberalization) program are facing identical environment and, hence, any difference observed in the program countries is attributed to the effect of the program. The *with-without* approach is first used by Donovan (1981, 1982). Latter works using this approach include Loxley (1984), Gylfason (1987) and Pastor (1987) (all cited in Khan 1990). The major weakness of this approach is that countries with and without program, however accurately they are picked, could not be identical. Moreover, as noted by Khan (1990), program countries are not randomly selected. Instead, they are adversely selected in the sense of having relatively poor economic performance prior to the program period. Goldestin and Montiel (1986), however, suggested identifying and controlling the specific differences in the

initial position of the program and non-program countries can overcome this limitation. With this modification they came up with *Modified Control Group* approach.

The other strand in the literature is the *actual-versus-target* approach. This approach allows to compare the actual outcome of major macro variables to the targets set for such variables (See Pio 1994, Khan 1990). Although it is not frequently used, one of the major weaknesses of this approach is the bias that could arise in evaluation because the targets might have been set either below or above what could realistically be attained.

The *Modeling/Simulation* approach compares the outcome of different polices, such as liberalization, using an economy-wide (usually macro) model. It basically carries a counterfactual analysis. Comparatively speaking this approach is theoretically neat. According to Khan (1990) it has three advantages. First, one can draw on wider body of adjustment/liberalization experiences. Second, since the policy simulations can be specific, one does not have to worry that incomplete implementation of the polices will blur the result. Finally, the approach by its very nature, focuses on the relationship between policy instrument and policy targets (Khan, 1990: 207). The problem is that this approach is extremely demanding in terms of having an empirical model and is vulnerable to what is called the 'Luca's Critique'[1] (Khan, 1990).

The final approach cited in the literature is the *econometric approach*. This approach makes use of regression analysis to evaluate policy performance, after correcting for socio-economic and external variables (Pio, 1994:299). The approach is basically similar to the *Modeling/Simulation* approach. Their difference being the econometric approach is a partial equilibrium based analysis while the modeling approach is closer to a general equilibrium analysis.

As noted above, all these approaches have merits and demerits of their own. This is partly the reason for obtaining a wide range of results, which more often than not are conflicting, when program evaluation of a country or countries is made. Ideally it would

[1] Parameters of the predicting model could change along policy change/simulation.

have been illuminating to employ all the methods and explore the impact of liberalization in the coffee sub-sector of Ethiopia using these different methods. Neither time nor available data allows us to do that in this paper, however. Thus, we will basically use the *before-after* approach. At times we will also resort to the *econometric* approach based on some research work done at the Department of Economics of Addis Ababa University.

3 Ethiopia's External Trade Policy

An examination of the external trade policy of the three successive regimes in Ethiopia (the pre-1974, 1974-1991 and the post-1991) reveals that the country's external trade policy has moved from a 'free trade policy' to 'a controlled trade policy regime' and back to 'a free trade policy' one.

3.1 The Pre-1991 (Pre-Reform) Period

Before 1974, the foreign trade policy of the country was largely informed by 'the free trade' doctrine. Various measures to facilitate trade such as the establishment of the Chamber of Commerce, the establishment of various boards (Coffee Board, Grain Marketing Board and Office of National Standards) were taken. These measures were aimed at controlling the quality of imports and exports and facilitating trade. In terms of imports, imports of capital goods and raw materials were free of duty while others were taxed (MIT, 1987).

The period 1974 -1991 was on the other hand characterized by a centralized economic system, where the state is given a significant role in all spheres of economic activity including external trade. This period is characterized by:

a) an attempt to control the participation of private capital in trade and strengthening the state's role both in export and import trade
b) an attempt to closely monitor the price, quantity and distribution of goods

c) an attempt to emphasis the external trade sectors deemed essential for economic growth as well as the trading of medical equipment and goods that ensure the health and security of the population.
d) an attempt to diversify the type and destination of goods (especially from developed capitalist countries towards socialist countries) externally traded.

3.2 The Post-1991 (Post-Reform) Period

The post-1991 government's foreign trade policy has the following objectives:

(a) ensure private sector participation
(b) mange the sector by issuing foreign exchange and import-export regulation
(c) design and provide adequate incentive to the export sector
(d) replace quantitative restriction with tariffs
(e) encourage diversification of exports and minimize illicit trade, and
(f) Carryout restructuring of the state-owned trading enterprises.

To realize these objectives the post-1991 government has designed and implemented various policies and institutional measures. The most prominent ones are:

a) liberalization of the exchange rate market using the auction system that provides foreign exchange both to the private and the public sectors.
b) licensing procedure is enormously simplified
c) supportive services to private exporters are designed in areas of transport, package training, overseas market research etc.
d) in addition, a simplified tariff structure and foreign exchange retention scheme, as described below, is also designed (MIT, 1997).

In relation to point (d) above most goods which used to be imported duty free and those with specific duty rates are replaced by *advalorem* rates. Goods dutiable or not are given

a tariff code and classified on the basis of their type and characteristics in to 21 sections and 99 chapters. These chapters contain 5291 goods classification of which 169 are duty free, 5119 with *advalorem* rates from 5%-50% and 3 with specific rates (worn clothing, worn textiles and rags). Currently the weighted-average tariff rate is 24.6%. The least tariff being 5% and the maximum being 50% (MTI, 1996: 17; MIT, 1997: 3). These rates were used to be as high as 230% in the previous regime (MIT, 1997). Apart from customs duty there are payments of sales and excise taxes on imported goods. The sales tax ranges from 5%-12% of the value of goods depending on the nature of the good. Similarly excise tax varies from item to item. The highest is 200% and the lowest 10% (MTI, 1996: 19).

With regard to imports an attempt to facilitate import-licensing procedure is made. Currently there is no export duty except on coffee. The amount of customs duty on coffee is Birr 15 per 100 kg. There is also a transaction tax of 2% of sales and Cess tax of Birr 5 per 100 kg. Surtax is also collected on coffee based on the daily surtax rate of the international coffee market prices (MTI, 1996: 25; See also Taye 1997).

The current government has also established two types of duty incentive schemes. 'Duty Drawback Schemes' for those who wholly or partially or occasional engage in export sector and 'Duty-free Importation Scheme' to those wholly engaged in supplying of their products to foreign market (MTI, 1996: 25). Moreover, exporters have the right to retain 50% of their export earning and remittance in foreign currency in retention account. From the 50%, the account holder shall offer 40% for sale no later than 21 days from the date of entry to commercial banks at negotiated rates, or to the auction market through their banks. The remaining 10% should be used by the account holder for the purpose of import of goods and services, export promotion and any other payment specifically approved by the National Bank (MTI, 1996).

In general we observe that compared to pre-1991 period there is a major policy shift in the post-1991 period. Essentially the policy regime has shifted form a 'controlled regime' toward 'more liberalized' one. This change is chiefly related to the Structural Adjustment

Program the country has adopted since 1992. The question that will be explored in the next section is what the impact of this liberalization scheme is in the coffee sub-sector.

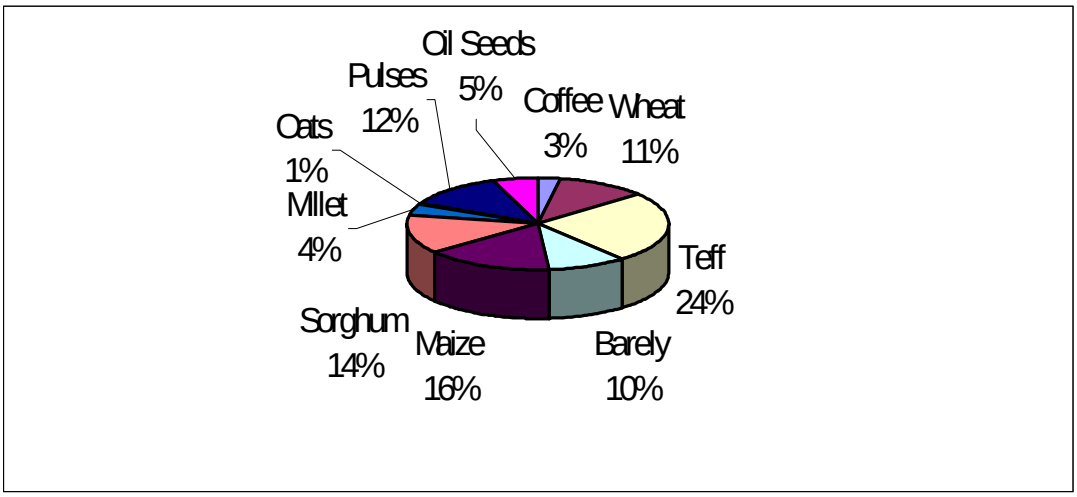
4 THE ROLE OF COFFEE IN THE ETHIOPIAN ECONOMY AND THE IMPACT OF LIBERALIZATION

As noted above coffee is the most important export crop in Ethiopia. Accordingly, its contribution to create a dynamic economy by allowing the importation of developmental goods and creating employment is enormous. This section will briefly examine the pattern of production in the sub-sector, the place of coffee in the total exports of Ethiopia and the contribution of coffee to the government's revenue. Exploration of these aspects is believed to show the role of coffee in the economy.

4.1 Pattern of Production in the Coffee Sub-Sector.

Diagram 1 shows area under cultivation in 1997/98. It is based on agricultural sample survey conducted by the Central Statistical Authority. As can be read from the Diagram the share of coffee is not more than 3% of the total area under cultivation (195,700 hectares). If we consider coffee, pulses and oil seeds as cash crop, the combined share is in the vicinity of 20%. Thus, the bulk of area under cultivation is on food crops.

Diagram 1: Area Under Cultivation (1997/98)



Source: Central Statistical Abstract (CSA): Agricultural Sample Survey 1990EC (1997/98)

Although we couldn't find sufficient data to make our point, there was a sustained increase in the size of area under coffee cultivation since the beginning of liberalization in 1991/92. This can be seen form Table 1 below. Table 1 shows that area under coffee cultivation has increased from 1991/92 until 1995/96 and declined a little there after. Notwithstanding this decline, area under cultivation in 1997/98 is much higher than the 1991/92 level. It would have been interesting to get similar data for pre-reform period. However, we couldn't mange to get such data from CSA.

In general, its seems reasonable to tentatively conclude that area under coffee cultivation has increased since the onset of the liberalization program in Ethiopia. During this period the Birr (the local) currency was depreciating – from Birr 5 per USD in 1992 to Birr 8.12 per USD now. This implies that the return from coffee in terms of local currency has increase and could be considered one of the reasons for the increase in area under cultivation. If we assume fixed supply of factors of production (in particular labour and land) and full employment of these resources, no fundamental change in productivity it is reasonable to predict that area under food production has declined. This could be against the notion of 'food sovereignty' – a concept advocated by critics of trade-based food security (see below).

Table 1: Area Under Coffee Cultivation: (000 hectares)

Year		Area
Ethiopian Calendar	**European Calendar**	
1984	1991/1992	130.84
1987	1992/1993	183.56
1988	1993/1994	202.13
1989	1994/1995	191.63
1990	1995/1996	195.7

Source: Central Statistical Authority, Agricultural Sample Survey, Various Issues

Table 2 shows the nature of coffee production in Ethiopia. The peasant sector or small holder producers are the dominant features of Ethiopia's coffee production. This sector contributes more than 95% to coffee production, leaving less than 5% to the modern (commercial farm and state) sector.

As can be read from Table 2 the modified forest coffee (normally grown in a single stand with very little cultivation such as slashing once a year to facilitate picking) and garden coffee (coffee grown around home, intercrossed with food crops) constitute more than 90% of total coffee production (See also Taye 1997, Itana 1999). Table 2 also shows that the bulk of coffee production in the country is located in five regions: Keffa, Illubabor, Wellega, Sidamo and Hararghe.

Taye (1997), based on the 1984 'National Coffee Survey', noted that 85.3% of coffee in the above major regions is grown by small households, 88% of land under coffee is also found in these regions and this accounts for more than 90% of natural coffee output. Another interesting aspect of coffee production in Ethiopia is that nearly 20-30% of total output is lost due to Coffee Bury Disease (CBD).

Table 2 Production pattern: The Peasant Sector

Type	**Productivity, Yield/ha**	**Share of Total**	**Region**
Modified Forest*	350kgs/ha	55%	Keffa, Illubabor, Wellega
Garden Coffee**	450kgs/ha	35%	Sidamo, Shoa and South and North Omo
Hararghe Coffee***	400kgs/ha	5-10%	Harraghe

* Grows under shades at densities around 4000 trees per hectare

** Planted at low density (100-1800 trees/ha and sometimes inter-cropped with food crops)

*** Grows in marginal climate at 900-1200 trees/ha, sometimes inter-cropped with food crops and *Chat*

Source: ULG consults Limited (1987) (Itana, 1999, Page 75).

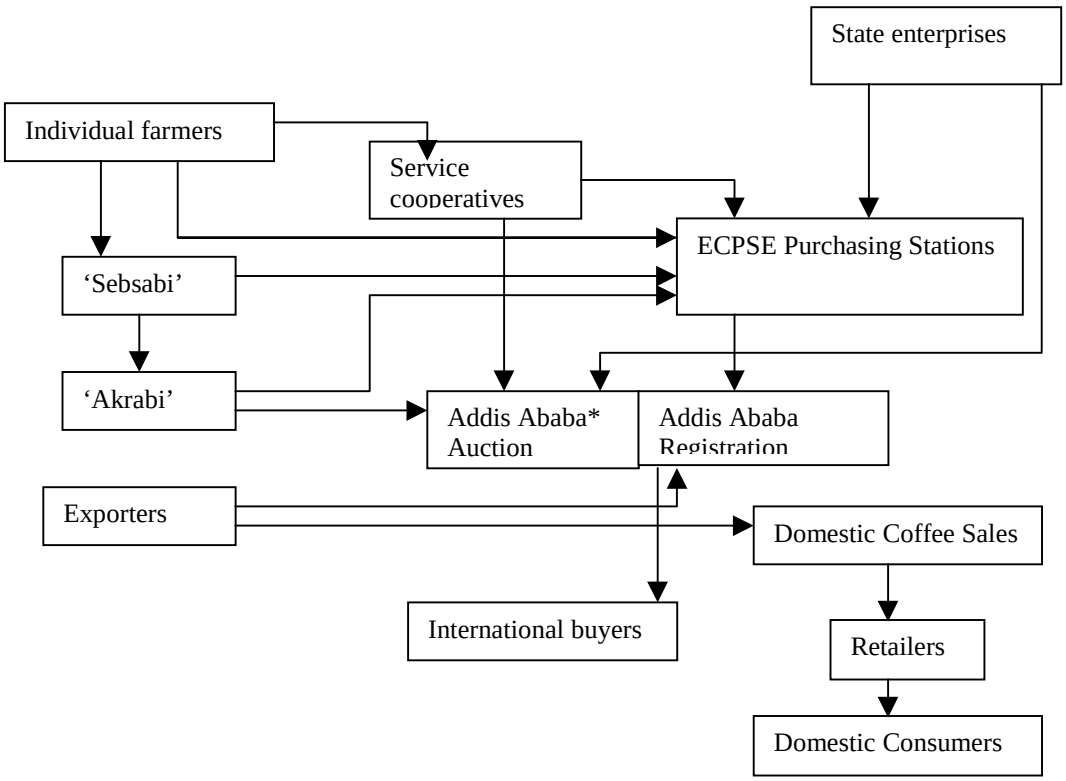
4.2. Liberalization Scheme Relevant For The Coffee Sub-Sector And Its Impact

4.2.1 Domestic Trade Liberalization

One of the components of the liberalization scheme relevant to the coffee sub-sector is domestic trade liberalization. This can be seen from two important angles: measure taken in marketing and pricing. These two issues are briefly discussed in this sub-section.

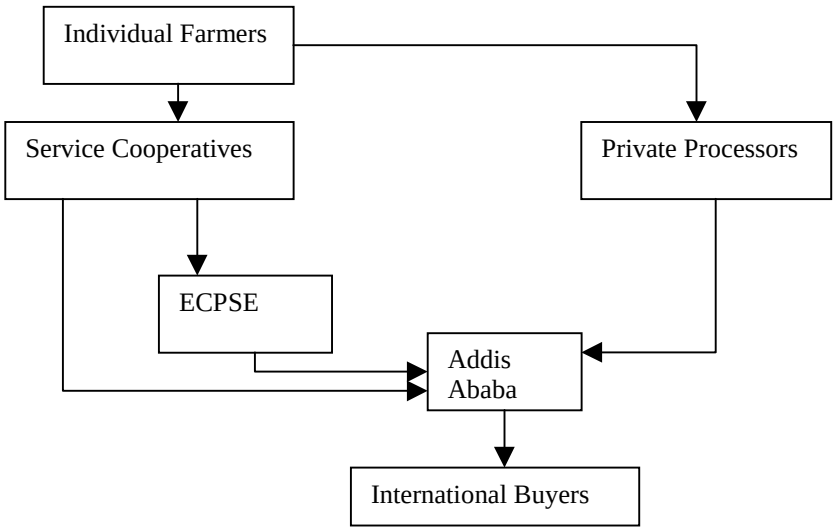
The liberalization scheme adopted in Ethiopia has a significant impact on marketing of coffee. Before the 1992 reform the Ethiopian Coffee Marketing Corporation (ECMC) had the monopoly in purchasing and exporting of coffee. It had the control of more than 80% of the total supply. The Coffee Plantation Development Corporation (CPDC) on the other hand was established to run nationalized commercial farms and to develop them in to state farms. A Coffee Development and Project Implementation Department (CDPI) was responsible for managing the small peasant sector. Institutionally speaking this centralized controlling of the marketing activity is stopped after the 1992 reform. The ministry is reduced to an authority and mandated to promote growth of coffee and tea production, trade and processing. Coffee development activities are largely left for regional buraux. Moreover, two institutions: the Ethiopian Coffee Purchase and Sale Enterprise (ECPS) – limited to domestic operation – and the Ethiopian Coffee Export Enterprise (ECEE) – which operates competitively with the private sector- are established (See Taye 1997: 36-39). Briefly the new marketing structure can be depicted by the Diagrams given below.

Diagram 2a: Market Structure for Sun-dried Coffee



** Hararghe coffee goes to Dire Dawa Market*

Diagram 2b: Market Structure for Washed Coffee



Source: Taye (1997)

Another dimension of the pre-reform period is that it was characterized by price control. The government determines the price after setting the level of taxes and marketing margins. The basis for computing the local price (which includes taxes such as surtax) had initially been based on the price for the Brazilian Santos 4, then the 'composite price of ICO' is adopted. Both of them are found to depart from world price for coffee. Since the 1990 the base for the calculation of coffee surtax and the auction price is the fob daily price of Jimma 5. To arrive at the auction price deduction for clearing costs, transport, bank and insurance charges, taxes and exporter's margin are made out of the fob price.

Since 1992 a floor farm-gate (producer's) price is also introduced. The price varies across regions as shown below. Participants in this market may compete above this price level. Since we could not come across actual farm-gate prices the analysis below is based on this official farm-gate price.

Table 3: Farm-gate Price

Regions	Producer's Price (Birr/Kg)
Jimma	4.20
Illubabor	4.20
Wallaga	7.00
Sidamo	6.50
Hrarghe	9.10

Source: Coffee and Tea and Development Activity (cited in Abdurahman 1995; Taye 1997)

Diagram 3 shows the farm-gate and fob prices for unwashed and washed coffee. The data for each type of coffee (washed and unwashed) is also computed both using actual price in Birr (which includes the effect of exchange rate liberalization) – denoted Wash_Dev and Unw_Dev, respectively; and a hypothetical price where the exchange rate is assumed to remain as it was before devaluation (Birr 2.07 per USD)-Wash_Xdev and Unw_Xdev.

The Diagram shows that both washed and unwashed coffee's farm-gate prices are above the floor set for farm-gate price for Jimma and Illubabor only. If the effect of devaluation were not taken into account the fob prices would have been below the floor farm-gate

price set for Hararghe. From this it can readily be inferred that other liberalization schemes (except devaluation) had no significant effect on the unit fob (in Birr) value of both washed and unwashed coffee.

However, when the effect of devaluation is taken into account the fob price (in local currency) has dramatically increased. This upward trend has a similar pattern both for unwashed and washed coffee, the highest being for the latter. The highest floor price (the Hrarghe farm-gate price[2]) constituted 25% and 50% of washed and unwashed coffee fob price, respectively, in 1997/98.

[2] There is no time series data on farm-gate price. Abdurahman's (1994) study for Hararghe shows that the actual farm-gate price ranges form Birr 11 to 20 per kg in 1994.

Diagram 3: Farm-gate and Fob Prices of Coffee (Based on Table 10)

4.2.2 Foreign Trade Liberalization

The liberalization of foreign trade in coffee is part of the general liberalization program commenced in 1992. Two important issues can be singled out in this connection. The first relates to an enormous simplification of entry in to the coffee export business. This is shown by Proclamation No 70/1993 that amended the Coffee Trade Proclamation No 263/1984. This amendment gave both the licensing and renewal fees for involvement in the coffee export sector (details are given in section 4.2.5). A second and related reform measure in relation to foreign trade in coffee is the simplification of coffee export taxes. The post-reform period witnessed an enormous reduction and simplification of tax levied on coffee exports. The details of this are given in section 4.2.4 below.

The overall effect of this liberalization program in the foreign trade sector is to raise the participation of the private economic agents in the export of coffee. For instance the share of private coffee suppliers increase form 20% in 1989/90 to 82% in 1992/93 while the share of private exporters increased from 37% in 1989/90 to 85% in 1992 (Abdurahman 1995). In 1997 62 private exporters are engaged in the coffee exporting trade. This figure was merely 13 in 1991. According to Taye's figure obtained from Coffee and Tea Authority, the share of private exporter in the total exports has jumped form 13.52% in 1989/90 to 52.51% in 1995/96 (Taye, 1997: 44). Currently it is estimated that the share of private exporters is in the vicinity of 70%. Similarly, the number of coffee processing stations has also increased following trade liberalization. According to the figures of the Coffee and Tea Authority, by August 1998 there were a total of 388 wet coffee processing stations (164 owned by cooperatives, 195 by private and 29 by public). The comparable figure for dry coffee processing is 206 (10 owned by cooperatives, 135 by private and 10 by public).

4.2.3 Exchange Rate Liberalization: Devaluation

A liberalization policy that has a direct bearing on the coffee sub-sector is the exchange rate policy pursed after 1992. The exchange rate reform is commenced by devaluing the currency that was fixed nearly for two decades at Birr 2.07 per 1 USD by 140%, to 5 Birr per US$, in October 1992. Such massive devaluation was partly justified by the premium on the parallel market that was close to 238%. In 1993 the NBE introduced the auction-based exchange rate system. This used to be conducted on fortnight basis and takes the form of the 'Dutch Auction' system (discriminatory price), where the marginal rate, which clears the market, is taken as the ruling rate for the coming two weeks. The supply of funds for this market comes from export earnings and loans & grants. The auction-based exchange rate system was initially working side by side with the official exchange rate. This system has been overseen by a committee composed of the NBE, Ministry of Finance, Ministry of Economic Development and Cooperation (MEDaC) and two representatives of the private sector.

In the course of its implementation more liberalization efforts (such as reducing the bid cover requirement, abolishing of negative import list as well as the ceiling on demand for foreign exchange etc) were made. Moreover, after the 86th auction (in July 1996), the NBE introduced a weekly auction replacing the previous auction which used to be held on fortnight basis. By August 1995 the official or fixed exchange rate (that had been used for importation of fertilizer, petroleum and pharmaceutical products as well as Ethiopia's contribution to international organization and external debt-service payments) is also unified with the auction rate (Table 4 shows the evolution of the official, the parallel and the auction rates). Moreover, the NBE has also replaced the retail auction system by a wholesale auction system where banks are taken as wholesale bidders.

Table 4: The Exchange Rates in the Post-Reform Period (Birr per US$)

Annual Average, Birr/US$	**1993/94**	**1994/95**	**1995/96**	**1996/97**	**1997/98 (Qrt I)**	**1999**
1. Official Rate	5.09	5.86	6.32	6.47	6.80	~8.12
2. Marginal Rate	5.77	6.25	6.32	6.47	6.80 (Sept.)	~8.12
3. Divergence = [1-2]	Birr 0.68	Birr. 0.39	unified			
4. Parallel Market	7.05	7.30	7.64	7.16	7.23	~ 8.16

Source: NBE, Quarterly Bulletin, 1997/98. ~ Recent daily rate (approximate value)

The immediate implication of the policy of devaluation and the subsequent auction-based exchange rate determination is to raise the value of coffee export earning in terms of domestic currency. This, it is presumed, not only raises export earnings in terms of Birr but also the farm-gate prices of coffee. The latter may in turn encourage resource (such as land and labour) shift towards the coffee sector. This well could be at the expense of other sectors – most importantly the food sector. The existing evidence on this issue is discussed in section five (5) below.

The export earning from coffee has also a direct bearing on the auction-based exchange rate. This is because coffee export earnings do form part of the supply of foreign exchange in the auction market. Thus, not only the auction-based exchange rate affects the supply of exports but also the export earnings affect it. This in turn implies that an increase in supply of coffee might have a dynamic detrimental effect (through lower auction-based exchange rate) on coffee supply.

4.2.4. Tax Reforms and Coffee's Contribution to Government Revenue

The recent liberalization inspired tax reform can be read from proclamation No 70/1993 - 'A Proclamation to Amend the Coffee Trade Proclamation No. 263/1984' and Proclamation No 99/1998 which is a 'Proclamation to Provide the Payment of Tax on Coffee Exported from Ethiopia'. The former basically provides the coffee trade and license issuance and renewal fees as shown below.

Table 5 Fees for Issuance and Renewal of License

No	Description of License	Fees for Issuance and for Renewal (Birr)
1	Coffee Export License	200
2	Coffee Supply License	150
3	Coffee Clearing License	150
4	Coffee collecting License	150
5	Coffee Trade Auxiliary License	150
6	Coffee Washing License	150

Source: Proclamation No 70/1993 in Negarit Gazeta, 4th Year No. 18, 1998.

Proclamation No. 99/1998 has the objective of: (a) consolidating the various taxes and duties levied by different Proclamations and Regulations into a single tax facility, (b) converting specific rates into *advalorem* rates so as to ensure equitability of tax and also (c) to lay down procedures to protect revenue against fluctuations due to change in prices and adjust the tax rate following market trend (See Proclamation No. 99/1998 in *Negarit Gazeta*, 4th Year No. 18, 1998).

In this proclamation it is declared that the FOB price (selling price quoted at the port, agreed between the exporter and her customer and approved by the National Bank of Ethiopia, which excludes freight and insurance costs) will be the basis for computation of the tax. The tax rate is set at 6.5% of the FOB price. The issuing of this new law repeals other previous Proclamations and Regulations. These include: Transaction Tax Proclamation No. 205/1963, The 'Third Schedule' (export duties) attached to the Customs Tariffs Regulation No. 42/1976, Coffee Surtax Regulations No. 280/1964 and all subsequent amendments as well as Cess on Coffee Exported from Ethiopia Regulation No. 47/1976 (See Proclamation No 99/98 in *Negarit Gazeta*, 4th Year No. 18, 1998).

The above proclamations are important because apart from generating foreign exchange to the country, coffee is an important source of tax revenue to government. Thus, it is worth examining the impact of the above reform measures on the contribution of coffee to the government revenue. Table 6 shows the type of tax levied on coffee export and their combined contribution to the government revenue. As can be read from Table 6 there are three types of taxes (Coffee Surtax, Coffee Duties and Coffee Cess tax – in the order of their importance) levied in the export of coffee. There is a marked difference in the contribution of coffee to tax revenue in the pre and post-reform period. In the pre-reform period coffee export's contribution (leaving the abnormal period of 1990) was around 8% of the total government revenue. This figure has dramatically dropped to around an average of 1%. The latter is including the abnormal increase in coffee taxes' contribution due to a huge rise in surtax in 1994/95. If this abnormal year is excluded, the average figure would have dropped to 0.89%.

The tax revenue from coffee export for the Post-reform period, notwithstanding its small size compared to the pre-reform period, shows a positive growth trend. This positive trend is largely attributed to the growth in the tax base. Thus, it can be concluded that the immediate effect of liberalization is to reduce government revenue dramatically (from 8% to 1%). This definitely has a detrimental effect on the government's ability to provide necessary services, including ensuring food security, to the public at large. The liberalization advocators argue that this initial drop in revenue will eventually be captured by a surge in volume of trade in the long run. The evidence in Table 6 seems to point to that direction. However, the most pressing question is that the reform in Ethiopia is more than 7 years old and yet the figure for the share of taxes from coffee export in total government revenue is in the vicinity of 1%. Thus, one may ask, how long is the long run?

Table 6. Coffee Taxes in Total Government Revenue (Millions of Birr)

Year	Coffee* Duties	Coffee Surtax	Coffee * Cess & Others	Total tax on Coffee	Total Gov. Revenue	% of Coffee tax in total Gov. Rev.(exc.. Grants)
Before Reform						
1982/83	15.2	173.1	0.8	189.1	2183.8	8.66
1983/84	13.2	224	5.1	242.3	2242.8	10.8
1984/85	10.1	152.2	1.2	163.5	2261.7	7.23
1985/86	9.1	236.7	5.8	251.6	2806	8.97
1986/87	12.2	118.1	4.1	134.4	2858.6	4.70
1987/88	10.4	117.4	3.9	131.7	na	na
1988/89	11.1	134.8	5.5	151.4	na	na
1989/90	13.3	19.4	12.6	45.3	3142.6	1.44
1990/91	7.9	5.6	6.3	19.8	2703.7	0.73
After Reform						
1991/92	2.2	1.4	1.9	5.5	2208.0	0.25
1992/93	6.3	2.7	3.1	12.1	3191.3	0.38
1993/94	13.0	17.5	7.3	37.8	3938.8	0.96
1994/95	11.5	171.4	7.2	190.1	5912.9	3.22
1995/96	14.2	83.2	9.7	107.1	6839.2	1.57
1996/97	17.9	72.9	9.0	99.8	7764.5	1.29

Source: National Bank of Ethiopia, Quarterly Bulletin, Vol.13 No.1, 1997/98 and Various Issues

Note: For the period1982-1988/89 'Coffee Duties' (shaded) appeared as 'Coffee tax' and 'Coffee Cess & others' as 'others'.

4.3 Ethiopia's Exports Performance and The Coffee Sub-Sector: Before and After the Reform.

Exports of primary commodities and imports of manufactured goods characterize Ethiopia's external trade. The export-sector, in particular, is characterized by huge fluctuations and extreme dependence on few primary commodities.

As can be read from Table 7, in the last 10 years (for that matter even before) the export sector is characterized by over-dependence on few commodities such as coffee which constitutes nearly an average of 65 % of export earning, followed by hides and skins. On the average the combined share of six major export items constitute more than 80% of total exports. Recently this figure shows a declining trend (from nearly 90% in 1988 to 80% in 1997).

Table 7: Percentage Share of Ethiopia's Major Exports in the Total Value of Exports for Selected Years (in Percent)

Year	Live Animals	Haricot Bean	Sugar	Coffee	Hides & Skins	Petroleum & Petrol	Combined Share
Before Reform							
1988	3.4	2.3	1.7	65.0	14.4	3.0	89.9
1989	1.5	1.4	1.8	65.1	14.6	4.0	88.4
1990	1.6	7.0	6.0	44.4	20.5	6.9	86.4
1991	0.4	0.9	0.9	61.6	13.3	0.7	77.8
After Reform							
1992	-	0.5	0.8	54.4	16.4	6.7	78.8
1993	0.5	1.0	2.5	64.1	16.1	4.0	88.1
1994	0.5	2.5	0.1	65.3	14.3	5.2	87.8
1995	0.2	3.3	-	60.5	12.7	2.7	79.4
1996	0.1	3.6	-	66.5	12.5	3.4	86.0
1997	0.4	2.7	-	65.3	10.1	0.7	79.2

Source: Computed from Data Obtained from Customs Authority

Table 8 shows the annual growth rate of major export items of Ethiopia. A striking feature of the annual growth rates of major exports is that they are characterized by an extreme fluctuation. This is aggravated by concentration of exports in few commodities such as coffee. This pattern is the major factor behind export earning instability in the country. This in turn has implication for capital formation instability. Various factors are responsible for such performance. Some of the major reasons are poor weather condition as well as other production and marketing problems.

Table 8: Annual Growth Rates of Major and Total Exports (Selected Years, Volume)

Year	Total Exports	Coffee	Annual Growth Rates		
			Hides & Skins	Petroleum & Petrol	Live Animals
Before Reform					
1989	-4.7	21.3	18.8	4.2	-56.4
1990	-7.1	-37.0	-22.5	-3.2	-31.7
1991	-70.9	-20.5	-54.7	-96.2	-89.6
After Reform					
1992	92.5	-14.1	23.2	1715.1	-
1993	19.4	58.9	79.0	2.8	-
1994	46.0	15.0	6.1	41.6	95.2
1995	-27.6	-4.9	3.1	-40.9	-74.1
1996	26.1	44.1	-11.3	7.1	-73.2
1997	7.3	7.7	24.6	-65.1	1389.4
Average Rate of Growth(1989-1997)	*9.0*	*7.8*	*7.45*	*173.9*	*165.7*

Source: Computed from Data Obtained from Customs Authority

When we move from this general picture to coffee, we note that actual coffee production data is hard to come by. Thus, a lot of researchers use coffee arrival at the central/terminal markets (of Addis Ababa and Dire Dawa) as an indicator of total supply. Table 9 shows these data in the period before and after the 1992 reform. The data clearly shows that there is unprecedented increase in the supply of coffee following the liberalization program. The total supply has reached its historic pick of 165 thousands metric tones in 1996/97.

However, the share of exports out of the total arrival, although is showing an increasing trend in the post-reform period, is generally lower when compared to the pre-reform period. In the early days of the reform period this is attributed to low level of exports in absolute terms while the trend in the recent past is attributed to the huge increase in total supply.

Table 9: Coffee Arrivals and Approval for Exports (in metric tons)

			Accepted for Export	
Year	Arrival for Inspection	Approval for Domestic Sales	(In Metric Tone)	(as share of arrival)
Before Reform				
1978\79	102692	2176	83133	81.0%

1979\80	96429	2946	82142	85.2%
1980\81	89006	3843	75447	84.8%
1981\82	91766	4077	80157	87.4%
1982\83	112140	3331	87573	78.1%
1983\84	102432	4849	94957	92.7%
1984\85	70123	3731	66392	94.7%
1985\86	91997	6451	54490	59.2%
1986\87	156295	19955	154066	98.6%
1987\88	64287	2859	53244	82.8%
1988\89	109299	3268	77707	71.1%
1989\90	90650	4498	83251	91.8%
1990\91	77316	2500	53456	69.1%
After Reform				
1991\92	60155	4024	36076	56.0%
1992\93	87669	3290	69263	79.0%
1993\94	113680	n.a.	73004	64.2%
1994\95	102302	n.a.	78420	76.7%
1995\96	141361	n.a.	101823	72.0%
1996\97	165536	n.a.	117979	71.3%
1997\98	na	na	na	
1998\99	na	na	na	

Source: NBE, Quarterly Bulletin, 1998

Table 10 shows a rather extended version of the export data given in Table 9. The late 1980s witnessed a decline both in volume and unit price of unwashed coffee. This obviously had a depressing effect on value. Similar trend is observed for washed coffee, which is relatively a high quality product.

The period after liberalization is symmetrically opposite to the situation described above. Both the volume and unit price has shown a sustained upward trend in the post-reform period. This, in particular, is true of the huge growth in volume of unwashed coffee. Similar trend is also observed for the washed coffee. Thus, following the *before-after* approach it is sensible to conclude that the liberalization carried have a positive effect on coffee export growth.

Table 11 shows the share of Ethiopia's export in the world coffee market. The Table shows that Ethiopia's share in the world market is in the vicinity of 2%. Observed in the range of the entire period, this figure has shown a declining trend. It has shown a small decline in late 1980s and early 1990s, and reached its lowest in 1991/92 (the period of

change in government). Following the 1992 liberalization Ethiopia's share in the world market has shown some signs of recovery, although the historic maximum figure of 2.5% (which was achieved in 1980/81) is not attained yet.

This low share of Ethiopia's export in the world coffee market is partly attributed to the growth in the world supply of coffee not only from the traditional major suppliers such as Latin American (Brazil, Colombia etc) and African (Uganda, Cote d'Ivoire etc) countries but also new entrants into the market from Asia.

In terms of the destination of exports the bulk of Ethiopia's exports are destined to industrialized countries (Germany, USA, Italy, France, UK, Japan and Saudi Arabia in Asia, in particular). This pattern seems to remain unchanged over the past ten to 15 years. The only exception could be the increasing importance of Asian countries (in particular Japan and Saudi Arabia).

It should also be noted that a few countries such as Germany, Japan and Italy and recently Saudi Arabia are increasingly becoming important destinations to exports from Ethiopia. Table 12 shows the need to increasingly diversify the destination of exports so as to avoid over-dependence on few countries. Diagram 4 below shows the export market destination for 1997 (the latest available figure). The diagram clearly shows the dominant position of Germany.

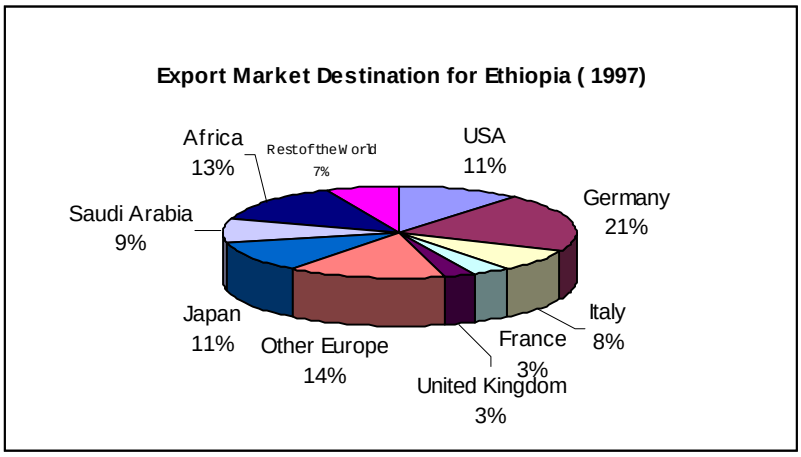


Diagram 4: Export Market Destination for Ethiopia (1997) [See Table 12]

Table 10: Volume and Value of Coffee Export by Coffee Year, Washed and Unwashed

Year	Unwashed				Washed				Total (Unwashed + Washed)		
	Qty(Tons)	Value'000 Birr	Unit Value(Birr/ton)	Hypothetical level*	Qty(Tons)	Value'000 Birr	Unit Value(Birr/ton)	Hypothetical level*	Qty(Tons)	Unit Value(Birr/ton)	Hypothetical level*
1976/77	39031	425892	10912	10912	3928	46669	11888	11888	42959	11001	11001
1977/78	68430	527710	7712	7712	5410	51245	9472	9472	73840	7841	7841
1978/79	75227	492428	6545	6545	7679	51655	6727	6727	82906	6563	6563
1979/80	71563	548158	7660	7660	6944	60213	8671	8671	78507	7749	7749
1980/81	79876	428217	5361	5361	8030	56082	6984	6984	87906	5509	5509
1981/82	69009	410595	5950	5950	10605	41179	6995	6995	79614	6089	6089
1982/83	80657	451225	5594	5594	10111	62618	6223	6223	90768	5664	5664
1983/84	88448	541607	6123	6123	9446	54321	6809	6809	97894	6190	6190
1984/85	58805	369338	6281	6281	10158	69580	6850	6850	68963	6365	6365
1985/86	60759	594270	9781	9781	12431	120926	9728	9728	73190	9772	9772
1986/87	58743	329905	5616	5616	14669	93688	6387	6387	73412	5770	5770
1987/88	69290	449982	6494	6494	13809	105956	7673	7673	83099	6690	6690
1988/89	61648	365270	5925	5925	22374	168124	7514	7514	84022	6348	6348
1989/90	66583	279059	4191	4191	16347	73325	4486	4486	82930	4749	4749
1990/91	39799	180331	4531	4531	11168	63133	5653	5653	50967	4777	4777
1991/92	32766	162420	4954	4954	7334	51678	7046	7046	40100	5336	5336
After Reform											
1992/93	59628	469111	7867	3257	9982	173049	17336	7177	69610	9225	3819
1993/94	70800	796997	11257	4542	9120	171594	18815	7592	79920	12120	4891
1994/95	68843	1608004	23358	7711	10401	290835	27962	9231	79244	23962	7911
1995/96	93512	1511872	16168	5287	13127	255762	19484	6372	106639	16576	5421
1996/97	93809	1909751	20358	6375	17397	409882	23560	7378	111206	20859	6532
1997/98	109555	2271408	20733	6175	15839	514565	38801	11557	125394	23015	6855

Source: Coffee and Tea Authority

* A hypothetical level of price per ton (in Birr) - if there was no exchange rate reform and hence the exchange rate remains at Birr 2.07 per USD.

Note: From 1976/77-1992/93 1USD=2.07 Birr
For 1992/93 1USD= 5.00 Birr
For 1993/94 1USD= 5.13 Birr
For 1994/95 1USD= 6.27 Birr
For 1995/ 96 1USD= 6.33 Birr
For 1996/ 97 1USD= 6.61 Birr
For 1997/ 98 1USD= 6.99 Birr
(Exchange rate values are implicit exchange rate: export in Birr as ratio of export in USD)

Table 11: Ethiopia 's Share in the World Coffee Trade under International Coffee Agreement (In Metric tons)

Year [1]	Exports of All Members to All Destinations [2]	Exports of All Members to Quota Markets [3]	Exports of Ethiopia to All Destinations [4]	Exports of Ethiopia to Quota Markets [5]	[4] as % of[2]	[5] as % of[3]
Before Reform						
1978/79	3887100	3518100	82906	63415	2.13	1.80
1979/80	3674640	3302280	78507	59728	2.14	1.81
1980/81	3567900	3083220	87906	72029	2.46	2.34
1981/82	3812040	3271440	79614	73676	2.09	2.25
1982/83	3943860	3305880	90768	80453	2.30	2.43
1983/84	4201080	3596100	97894	86991	2.33	2.42
1984/85	4136640	3447540	68963	59438	1.67	1.72
1985/86	4132740	3716220	73190	64844	1.77	1.74
1986/87	4383360	3925260	73412	66447	1.67	1.69
1987/88	3730560	3077040	83099	74576	2.23	2.42
1988/89	4302600	3497520	84022	77891	1.95	2.23
1989/90	4870260	4209900	82930	71197	1.70	1.69
1990/91	4458720	3806640	50967	47518	1.14	1.25
After Reform						
1991/92	4668300	3976608	40120	31149	0.89	0.08
1992/93	4670700	3912480	69610	60629	1.49	1.55
1993/94	4317600	3588660	79920	58447	1.85	1.63
1994/95	3826620		79244	63751	2.07	
1995/96	na	na	na	na		
1996/97	na	na	na	na		

Source: Coffee and Tea Authority, 1996

Table 12: Share of Total Exports by Destination (1989-1997)

	Share of Total Exports (1988/89)	After Reform: Share of Total Exports (191992-97)					
		1992	**1993**	**1994**	**1995**	**1996**	**1997**
USA	12.4	3.9	9.1	6.5	6.4	6.1	11.4
Germany	23.2	9.7	19.7	31.7	29.1	29.7	20.6
Italy	6.5	6.5	7.6	8.1	8.6	7.4	7.8
France	4.9	5.0	3.7	4.9	5.0	3.4	3.2
United Kingdom	1.9	16.3	4.6	3.5	3.6	3.1	2.9
Other Europe	-	5.1	6.7	5.8	6.4	7.2	14.3
Japan	15.1*	21.5	19.0	14.5	13.0	12.0	11.2
Saudi Arabia	15.1*	20.1	9.9	5.3	9.0	10.6	8.6
Africa **		7.2	13.4	9.1	11.5	12.4	13.2
Rest of the World	-	4.8	6.3	10.5	7.3	8.0	6.8
Total		**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

* The combined figure for Japan and Saudi Arabia is 15.1%.
** Predominantly Djibouti (and recently Sudan and Egypt).
Source: Computed from National Bank of Ethiopia. Quarterly Bulletin, 1997/98.

5 SUPPLY RESPONSE AND FOOD SECURITY

5.1 Supply Response: The Macro and Econometric Evidence: A Brief Summary

The analysis in section four shows the impact of Ethiopia's liberalization program in the coffee sub-sector using the before and after approach. In section four we have used various macro data sets to see if there is any change before and after the reform period. The broad conclusion that could be drawn from that section is that the liberalization scheme in Ethiopia is accompanied by a positive performance (except in contribution to government revenue) in the coffee sub-sector as measured by supply, export, quality of export (washed and unwashed), area under cultivation etc. In this section we will also explore the available micro/econometric evidence about supply response and attempt to relate it to the issue of food security. The econometric evidence is compiled based on research carried out by the Department of Economics of Addis Ababa University.

The Econometric /Micro/ Evidence

It wold have been quite interesting to design a survey and examine sample households at micro level by squarely focusing on the research questions raised in the context of this study. However, this is both time and resource consuming. In the absence of such survey we have resorted to a review of micro-based econometric research carried out in coffee producing areas[3].

Taye (1997) made an econometric analysis of coffee supply response to the liberalization or reform carried in Ethiopia. His analysis is based on a sample of farm households drawn from two districts (Gomma and Manna) of the Jimma region. According to his finding there is micro evidence that after liberalization there is an increase movement of resources to the coffee sub-sector. This is shown by the fact that area under coffee cultivation in the two districts, number of coffee seedlings, hired labour and frequency of weeding as well as coffee yield has increased (Taye, 1997: 92; See Table 13 below). Given the coefficients of 0.48 for land and 0.22 for labour in the coffee production function estimated using a log-linear Cobb-Dougals production function by the author, this shift in resources has definitely contributed to increase in the supply of coffee. Moreover, given the shortage of factors of production in the study area this shift must have occurred at the expense of other food crops.

Table 13: Resource Shift Effect in Sample Households of Taye's Study

	Pre-Reform	Post-Reform
Area under Coffee (ha)	0.4867	0.6265
Coffee Seedlings (no.)	201.00	497.61
Hired Labour (MDs)	19.19	30.49
Wedding (frequency)	2.20	3.08
Coffee Yield (kg/ha)	425.35	452.51
Spraying against CBD (kg)	18.10	2.06

Source: Survey Data of Taye (1997).

[3] The Department of Economics of AAU has also complied a longitudinal data of both urban and rural households. If that data can be systematically compiled and analyzed it would have given more insight. Again this is both time and resource consuming. Future studies in this area can bring about value added to issues discussed in this paper.

This finding of Taye has implications for food security, especially, in the light of his other two findings - (a) land and labour are important resources with positive marginal and average product and (b) that the estimated marginal values of using land (216.96 kg per ha) is nearly equal to the value of food crop (maize) forgone – thus there is allocative efficiency. The implication is that in the context of the existing market structure it is rational for the peasants to substitute coffee for food crops and that is exactly what the peasants are doing.

This issue brings us to the important question of whether countries such as Ethiopia which depend on volatile coffee market for their foreign exchange earning can afford to forgo the important issue of 'food sovereignty' relying on the possibility of ensuring food security through higher export earnings – trade-based food security. The evidence in this paper is not encouraging to pursue the latter option.

Another micro-based econometric study is Abdurahman's (1995) work on two districts in Hararghe highlands (another important coffee growing area). In this area average holding of the peasants is divided in to 53% for maize and sorghum (major food crops in the area) and an average of 30% for coffee and *chat*. Using a survey data of two districts he found strong short-run (two years) supply price elasticity value of 0.60 which is statistically significant. He convincingly argued that this short-run response is attributed to marketing efficiency following liberalization, reallocation of labour to the cash crop sector and a shift of supply from smuggling to the formal channels. The finding about the latter is also in line with the study of Dercon and Lulseged (1994) about coffee smuggling although Dercon and Lulseged argued that the effect of the parallel market is not as large as sometimes thought (Dercon and Lulseged, 1994: 71). Dercon and Lulseged (1994) noted that following devaluation there is a trend of an increase in coffee production although the increase is unlikely to be large. The latter is partly attributed to the relative price of other competing crops such as *chat*

Abdurahman (1995) also found that land and labour are the most important constrains of production activity in the region. The implication of the positive supply price elasticity,

acute shortage of land and labour and the food problem in the area is an excellent demonstration of the limitation of using export earning to ensure food security not only at macro level but also at micro level. The study area is a food shortage area. Traditionally farmers engaged in cash crop production such as coffee and *Chat* to buy cereals/grain. The study by Abdurahman (1995) shows that peasants in the study area are seriously food insecure and are dependent on precarious regional food markets/flows. Thus, even if one has the capacity to buy food crops from the earnings by selling coffee, food security for that group of farmers is dependent on the sustained existence of the regional food market/food flow. Abdurahman (1995) also noted that, after liberalization the terms of trade have moved against the agricultural sector in general and the food production in particular. This has created a disincentive effect on the food production (Abdurahman, 1995: 57-58).

Another study by Yoseph (1994) that is based on survey conducted in Gomma district in Jimma region also confirms the importance of land and labour as crucial inputs in coffee production. Yoseph's study shows that the supply price elasticity is not really important (in the range of 0.14 using a log-log model and statistically significant only at 13%). Rather an interesting finding of Yoseph is that in the sample area coffee producers spend 91.3% of their earning from coffee on food crops. Moreover, in the period from 1992/3 to 1993/4 the price of food crops (maize and sorghum) changed by 11% while coffee price has changed by 61%. This certainly entails a huge incentive to shift to coffee production if only to spend the bulk of those earnings on food crops. Here although food security may be attained at the household level indirectly it could be at the expense the concept of 'food sovereignty' and unreliable owing to volatile world coffee market.

5.3 The Uruguay Round (The Agreement on Agriculture), Supply Response and Food Security

The rather delicate relationship between 'food security' and trade has attracted the attention of governments in developing countries, multilateral institutions and Non-Governmental Organizations. Trade-based food security (imports of food paid by

exports) has become an accepted norm in many multilateral circles. Many others (including some NGOs) question such an approach and opt for 'food sovereignty' instead. The latter implies introducing the elements of national-decision or policy making into food security (See Murphy, 1999:8). The issue of 'food sovereignty', as opposed to trade-based food security, has also a supporting micro explanation that warrant its capacity to ensure household food security. There is evidence that a strong correlation exists between household food security and the proportion of food consumption, which is home produced. This is because women have control over the use of food crops where as men on cash crops. Unless the increase in income from coffee is very high to offset the negative control effect, there could be problem to ensure food security based on earnings from cash crop production (Westlake, 1999: 29).

When a country relies on trade-based food security its actual food security will extremely be dependent on international trade (especially prices). In the Ethiopian context trade-based food security could be justified if only the international market for coffee is promising. A study commissioned by Ethiopian government to design a 'strategy for development of the coffee sector' noted that there is no prospect of price rise for coffee in the coming 20 to 25 years. Moreover, the world coffee market is recently being characterized by a huge volatility (price in 1998 being substantially declining from a pick in 1996) (See Westlake, 1999). Trade-based food security is also dependent on the rules that govern international trade. One such rule is the Uruguay Round Agreement on Agriculture (UR-AoA). The AoA includes, *inter alia,* issues of increased market access, domestic support for farmers, food security, environmental protection etc.

Although the AoA gives developing countries longer time to implement reduction commitment and demands lesser cuts, it is expected that most developing countries will be dependent on food imports not only because of higher productivity and existing policy practice in developed countries but also the distortion effect of stocks in the developed countries. In 1983 for instance the Common Agricultural Policy of the European Union cost 70-75% of the entire EU budget, 50% of whish is spent on handling surplus

production. This could definitely result in cheap food which could crowd-out food production in developing countries (See Murphy, 1999: 10).

Given the rather uncertain nature of dependence on trade-based 'food security' it is worth examining the trend of domestic production and food import in Ethiopia as can be read from Tables 14 to 17. Tables 14 and 15 show area under major crops for private peasant holdings, which constitute nearly 97% of total crop output and 98% of coffee production, in pre and post-reform periods. The conclusion that can be drawn by looking the trend of area under major crops is that although it is characterized by a great annual fluctuation, area cultivated has increased in the post-reform period. In terms of periodic growth we have moved from negative rates in the pre-reform period to a positive one in the post-reform period. As can be read from Table 16, similar pattern in output is also observed. Thus, notwithstanding the micro evidence of substitution of cropland for coffee, the macro data shows an increase both in area under cultivation and total output. This can be attributed, assuming the macro data is reliable, both to an increase in the size of total holding and/or a rise in productivity.

Despite the increase in the domestic production, food imports (See Table 16) constitute the fourth important item in the total imports of the country. The share although varies annually (the highest figure being registered in drought years) has not fundamentally changed in the post-reform period. Moreover, the country is dependent on food aid to bridge the gap between demand and domestic supply. The annual volume of cereal food aid has ranged from 2.3% to 26% of total domestic production over the period 1985-1996. In an average year the volume of cereals food aid can account for up to 25% of the marketed surplus (MEDaC, 1999: 200). This volume of imports and aid will have price depressing and hence negative incentive effect on domestic production. The government is attempting to tackle the food aid impact by efficient targeting of the needy (MEDaC, 199:200).

In sum it can be said that the macro evidence given in this section shows an increase production of food crops. On the other hand the same macro data shows the increasing

importance of food imports and food aid. The latter two thorough their price depressing effect could bring detrimental effect on domestic production. This is especially important in the light of the micro evidence of supply response discussed in the previous section. What the net effects of these two opposing tendencies would be? is an empirical question that needs further investigation using large sample of reliable macro and micro data?

Table 14: Area Cultivated under Major Crops for Private Peasant Holdings (Both Seasons, in '000 ha)

Year	Cereals	Pulses	Oilseed	Total
Before Reform				
1984/85	4553.81	738.98	264.37	5557.16
1985/86	4666.80	668.24	275.36	5610.40
1986/87	4642.80	599.24	208.45	5450.49
1987/88	4915.40	729.00	185.10	5829.50
1988/89	383.14	37.88	17.20	438.04
1989/90	4851.10	627.96	220.94	5700.00
1990/91	4199.00	701.90	244.00	5144.90
After Reform				
1991/92	4087.00	683.15	237.47	5007.62
1992/93	7740.50	1032.6	373.33	9146.43
1993/94	6107.70	867.47	322.12	7297.29
1994/95	6448.50	919.57	342.03	7710.10
1995/96	7670.55	1005.67	394.36	9070.58
1996/97	7436.97	1012.26	484.51	8933.74
1997/98	6619.70	938.88	416.00	7974.58

Source: Ministry of Economic Development and Cooperation (MEDaC), 1999.

Table 15: Trends in Area Cultivated Under Major Crops (1980/81 - 1997/98) Period Growth Rates

Crop Type	Before Reform 1980/81-1990/91	After Reform 1991/92-1997/98	Average 1980/81-1997/98
Cereals	-6.6	5.7	3.4
Pulses	-9.3	3.8	2.3
Oil Seeds	-6.4	8.6	4.6
Total	-6.9	5.6	3.3

Source: Ministry of Economic Development and Cooperation (MEDaC), 1999.

Table 16: Estimates of Production of Major Crops by Private Peasant Holdings (Both Seasons, in '000 Quintals)

Year	Cereals	Pulses	Oilseed	Total
Before Reform				
1984/85	38727	4838	1046	44611
1985/86	44278	4605	1153	50036
1986/87	62775	5741	1089	69605
1987/88	59570	5640	881	66091
1988/89	57472	5953	891	64316
1989/90	61383	6749	983	69115

1990/91	57131	9968	3141	70240
After Reform				
1991/92	55603	9702	3057	38362
1992/93	70639	8425	1240	80304
1993/94	61912	7501	1107	70520
1994/95	65891	7947	1172	75010
1995/96	92654	8662	1963	103279
1996/97	93591	8609	2168	104368
1997/98	74349	7323	1817	83489

Source: Ministry of Economic Development and Cooperation (MEDaC), 1999.

Table 17: Imports by Commodity Categories

Year	Food	Textiles	Machines. & Transport Equip.	Manufactured Articles	Petroleum Product	Others	Total Imports (In Million Birr)
Before Reform							
1986	21.4%	1.5%	32.2%	22.6%	9.1%	13.2%	2278.7
1987	10.8%	1.7%	41.7%	24.6%	10.4%	11.4%	2279.4
1988	14.5%	0.8%	29.9%	21.1%	9.9%	14.8%	2246.0
1989	8.7%	1.7%	33.6%	31.9%	11.3%	12.9%	1967.2
1990	12.5%	2.0%	na	23.6%	11.9%	12.6%	2225.7
1991	4.0%	3.0%	38.8%	25.2%	19.3%	9.7%	1081.7
After Reform							
1992	11.4%	4.9%	24.7%	17.0%	30.4%	11.7%	2251.8
1993	10.8%	2.3%	24.7%	31.0%	25.8%	5.5%	4074.9
1994	18.4%	2.7%	25.9%	22.2%	22.7%	7.6%	6147.0
1995	11.2%	2.6%	30.5%	20.2%	22.6%	12.9%	8086.6

Source: Computed from Customs Office Data

6. CONCLUDING REMARKS AND POLICY IMPLICATIONS

In this study an attempt to examine trade liberalization and its implication for the coffee sub-sector is made. In terms of method of analysis the study is based on 'the before after approach' which is chosen for its simplicity and owing to time consuming and irrelevant nature of some of the other methods. Using 'the before and after approach' the data in pre and post reform period are examined. The following are the main conclusions and policy implications that can be drawn from the study.

1. It is found that the trade liberalization, which is one component of the Ethiopia's government Structural Adjustment Policy, has led to an increase in the level of export (both in quantity and quality), area under coffee cultivation, private sector

participation both in the process and marketing of coffee. The rise in value of earnings from coffee export is also found to be chiefly due to the exchange rate policy.

2. This liberalization scheme, however, does not show that SAP (or the AoA, which has a similar effect) has enhanced the competitiveness of Ethiopia's coffees in the international market. Ethiopia's share in the world market is fond to be too small (around 2%) to bring about such effect. In fact most micro evidences examined in this study show that the price elasticity is either small or statistically insignificant. Thus, it is recommended that price liberalization by itself may not bring major change in the coffee sub-sector and need to be accompanied by supply side policies.

3. The volume of coffee export, prices and farm income derived is largely dependent on both national and international trade policies. In this regard the government's domestic (national) policy of coffee market (both domestic and export) deregulation as well as the reduction of coffee taxes are very relevant. However, this does not necessarily imply that the country will benefit from international market. In fact the evidence in this study shows that the world coffee market is volatile and with no prospect of rise in prices. The latter has an important implication for food security. The government can not rely on the international market to ensure food security and caution need to be exercised in this regard.

4. Some of the micro evidences in the paper have shown that even if peasants' earnings from cash crop could increase following liberalization, acquiring the required food depends on the efficiency of inter-regional trade in food. This requires the government or relevant institutions to invest in infrastructure and efficient information system to help ensure nation food security.

5. One of the potential impacts of liberalization schemes such as SAPs, WTO or AoA is dumping. Dumping, by depressing prices, can eventually reduce domestic

food production. In Ethiopia the increasing trend of food imports and food aid need proper management and sensible intervention by state before they lead to the collapse of domestic food production and rehabilitation becomes costly. Concrete policy implication here could be efficient targeting of the needy regarding food aid and domestic support or protection with regard food imports.

6. Trade liberalization in the coffee sub-sector has also resulted in the decline in the share of taxes on exports in total government revenue. This basically implies that there is a transfer of resources from the government to the private exporters. It is worth examining the opportunity cost of this fund when used under the state or the private sector.

7. Since primary commodity exporting countries, such as Ethiopia, are price takers in the international market, global liberalization by all developing countries implies a relative increase in global supply which in turn depresses export earning and, hence, triteness ‘trade-based food security’. This has the policy implication of either strengthening collective action to fight against the price taker position or resort to ‘food sovereignty’ by collective negotiation on the rules of the game such as AoA.

8. Finally, it should be underscored that an in-depth study using micro evidence about farm-gate price, resource substitution and food market efficiency, among others, is required to come up with much more micro focused policy implication.

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