

# AN ASSESSMENT OF THE GRAIN MARKETING POLICIES AND ITS IMPACT ON PEASANT PRODUCERS: THE CASE OF ARSI ZONE

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## **Abstract**

*In late 1970s and through 1980s, state control in agricultural marketing was taken as the best for the development of peasant agriculture. Later, however, state failure was claimed and the need for market oriented strategy has been advocated. Both had their own impact on peasant producers. This paper discusses their impact on the peasantry. It is found that it should not be a question of statist or markets substituting each other but should operate in a complementary way to improve the agricultural marketing system and enhance peasant agriculture.*

## **1. INTRODUCTION**

### **1.1. Statement of the Problem**

Efforts have been made to tackle food shortages in Ethiopia through different policy measures. Various rural development projects and programmes have been undertaken. Co-operative farms have been promoted in rural areas during the 'socialist' regime. Much of the agricultural budget was diverted to state farms and co-operative farms, giving less attention to peasant<sup>1</sup> agriculture. Furthermore, the state was involved in the marketing and pricing of agricultural products. But, instead of improving, the situation seems to have worsened. Grain marketing and pricing policies appear to have had disincentive effects on peasant producers. Some studies reveal that these policies have hampered the growth of the agricultural sector (Franzel 1989; Cohen *et al.*, 1988). Indeed, because agriculture, which is dominated by the peasantry, is the foundation of the economy of Ethiopia, policies which negatively affect peasant producers will have a negative impact on the country's economy as a whole.

In the grain marketing system, attention has been focused on a few regions with good agricultural potential. Arsi is one of these areas. More than 90% of the

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population of Arsi zone reside in rural areas and in one way or another depend on the agricultural sector for their survival. Data from 1990/91 to 1993/94 reveals that 96% of the area cultivated and of the volume of food grain production of the Arsi zone comes from the peasant sector, while the rest is produced by state farms (Central Statistical Authority, various issues). The peasant sector is characterised by low production and productivity levels, which can be attributed to a lack of resources, low infrastructural development and low technological inputs. It is, however, categorised as one of the surplus producing areas of the country. Surplus was extracted in the 1980s from the zone's peasantry through a quota delivery system and low fixed prices by the state's marketing parastatal, the Agricultural Marketing Corporation (AMC). Peasants were discouraged from selling in open markets. Through such mechanisms, Arsi and two other surplus producing areas, Shewa and Gojjam, used to deliver more than 75% of the purchases of the AMC (Alemayehu 1994a; Cohen *et al.*, 1988; Cohen 1987).

By reversing past practices, the government liberalised the grain marketing system in 1990. This reform remained intact after the change of the government in 1991. The general trend of policy, which is part of the Structural Adjustment Programme (SAP), promotes a gradual withdrawal of the state, leaving resource allocation to market forces (Alemayehu 1994a; Fantu *et al.*, 1992; Walday 1992). The effects of the policy on peasant producers needs to be examined, because while different studies have been made on the grain marketing system and its effect on peasant producers at the national level, at the local level few studies have been made. This paper therefore investigates the impact of the grain marketing system on peasant producers at the local level. The results of the paper may be helpful for scholars who wish to further study the area and for the policy makers who shape agricultural development policies at the national level and at the local level.

## **1.2. The Data and Scope of the Study**

This study is carried in Arsi-central Ethiopia. Arsi is a reasonable area to be studied. It is endowed with agro-ecological conditions that are suitable for agricultural production. Since the 1960s, Arsi zone has been a focus of agricultural development and state presence is prevalent. Different production systems such as co-operatives, state farms and private peasant production systems have been practised in Arsi zone. It was also a focal area of the AMC's operation.

Due to time and data constraints, the study covers only the major food grains (wheat, barley and *teff*) in Arsi zone. It is, however, an acceptable limit because wheat, barley and *teff* cover more than 80% of the volume and area of the food crops produced in the zone and are the major staple foods of the population. However, there is a limit to this paper: it depends on secondary data, while a full study would require exhaustive examination of marketing and consumption patterns.

The data used is obtained from various sources and covers the period from 1982/83

to 1993/94. Data on production of the major crops have been obtained from the Central Statistical Authority (CSA). Cost of production data have been obtained from on-farm trial sites conducted by Arsi Agricultural Development Department (AADD). The Department is also a source of data on fertilizer consumed by the peasant sector and the prices for fertilizer. Data regarding the prices of grains, fixed farm gate prices prior to market liberalisation policy and free market prices, have been obtained from the AMC. Average producer prices data have been obtained from the data collected by the CSA. The CSA is also the source of the population data used in this study. Other research works previously undertaken in this field of study are also sources of data for this paper.

## **2. ANALYTICAL APPROACH AND CONCEPTUAL FRAMEWORK**

### **2.1. Analytical Approach**

For this study, an historical approach to the problem will be deployed, giving emphasis on meso-level problems. This will help us to understand policy as a process; the context behind adopting a strategy and the rationale governing present policy choice.

The effect of statist marketing and pricing policies will be analysed by comparing the prices delivered by the AMC with free market prices and the cost of production. The impact of the pricing system on input utilisation will be analysed by using the fertilizer value-cost ratio.

The marketable surplus of the Arsi Zone will be estimated and used to judge the extent to which the AMC hindered the peasants from selling their produce on the free market, where they might have received a better price for their produce.

To analyse after market liberation grain marketing system and its impact, the institutional changes in the marketing system and the behaviour of grain prices will be assessed. The new grain marketing policy gave due attention to free market prices that are governed by market forces. The incentive power of the price will be assessed by looking at the price elasticity of output, with its well-established weaknesses, of the major food grains selected for this paper.

The conceptual framework for this study explores general views on states and markets and assesses agricultural marketing and pricing policies under state intervention and free market economies.

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## **2.2. General Views on States and the Markets**

During most of the 1950s to the 1980s, there was an assumption that the state had a central role to play in accelerating the pace of economic growth. Moreover, regulation and control of markets were pursued as essential measures in promoting social welfare. The inability of markets to deliver the ingredients of development, taken together with the imperfection of many markets, provided set of 'market failures' that state action was considered necessary to overcome. These 'market failures' include (see Ellis 1996; Kibre 1994): a) failures of competition—the existence of various types of monopolies and hence generally inefficient outcome; b) failures of provision of public goods—class of goods and services that private markets are not prepared to supply; c) externalities that are spillovers created by economic activities; d) incomplete markets—where markets fail to produce goods and services that people desire even at price above production cost. Examples are credit markets where they are weakly linked to the modern sector because of weak transportation system, communication, marketing and credit facilities, etc.; e) information gap—markets have tendencies to under-produce information to which access can be limited like information on prices and technologies and f) poverty and inequality—markets may result in a highly skewed distribution of income and wealth or an incidence of poverty that are regarded as socially and ethically unacceptable by the majority of the society.

This view of 'market failure' is based on the assumption that the state acts benevolently to serve the public interest. However, the assumption that the state was benign in its intentions and its policy is centered around the question of how best the state could maximise social welfare is questioned. It is this quest that resulted in the identification of 'state failures' which one would argue is more detrimental in its impact on the material well-being of people in society than the 'market failure' (see Ellis 1996).

Particular emphasis on 'state failure' has been placed on the pervasive inefficiency and impropriety of state institutions in many LDCs which lead to assume the state as 'parasitic' or predatory than a 'benign' or beneficial. A second approach derives from public choice theory of the neo-classical school. This approach stresses the self-interest motivation of government officials and state employees. This monopoly power enables them to maximise the surplus accruing to themselves. A third approach considers the state as operating on the basis of personal rules systems override and replace the rule of law. The weaker the person in power the more the person has to resort to personal rule mechanisms to stay in power. Apart from these arguments, the following constraints may be placed against intervention (see Ellis 1996; Kibre 1994).

a) information failure—it is always wrong to assume that state is necessarily fully informed about the nature of a given problem or the full impact of its policy measures.

b) implementation failures—though a policy is well designed to increase social welfare, expected gains may be lost due to poor implementation capacity. This may arise from the difficulty in improving the accountability and control of the bureaucracy.

c) second-best theory—when market failures exist, state action to correct any single one of them may result in a worse outcome.

d) motivation failure—state officials are mainly paid low wages which necessitate them to search another source of income for subsistence life.

### **2.3. State Intervention in Agricultural Marketing**

Although the form of state intervention during the 1980s substantially changed than in 1950s, all governments in developed countries and LDCs intervened in agricultural markets to accelerate the rate of growth of agricultural production and the generation of a surplus from the sector (Spoor 1994)

At least three main reasons for the state to intervene in agricultural markets were articulated: (i) income distribution; (ii) price stabilisation; and (iii) surplus transfer (see Spoor 1995).

#### **Income Distribution**

In many African countries, market intervention has been used as an instrument for political control and the market place was conceived as a political arena. Governments tried to influence income distribution for political or social reasons. Income distribution can be manipulated by changing the prices of basic goods, particularly food. This was done on the assumption that lower income groups spend more of their income on food. Lower food prices would benefit these groups. As a result, there was highly subsidised consumer food prices. Price control of the urban retail trade was accompanied by state intervention in the distribution and rationing of food (Bates 1981). However, the manipulation of agricultural markets affected both consumers and producers. The price of food has very differential effects on peasants and landless labourers, when compared to the urban poor. The low producer prices provided by the state parastatals have had a distinctive effect on production and reduced the marketing of any surplus above home consumption (Streeten 1987). As a result, states use subsidised inputs and public investment to increase production.

#### **Price Stabilisation**

Output price policies were mainly designed to stabilise or increase producer prices. They require state marketing interventions to achieve their aims. This is mainly done by fixing producer prices, which could only be fully implemented if all market output was channelled similarly; otherwise, even with less intervention, traders could have a destabilising effect. The state system of using buffer stocks was designed to place limits on the instability caused by such interventions (Eliis 1996). However, bulk grain

buffer stocks have proven to be costly in operation and resulted in high losses. Re-assessment of this system has come to emphasise on-farm storage and the role of small traders. In general, however, if there are effective price policies and efficient management, grain buffer-stocks can be useful (Spoor 1995).

### **Inter-sectoral Surplus Transfer**

This is related to income distribution, discussed earlier. It played an important role, specifically in those countries, which have followed a socialist strategy. Principally, they have sought to follow Preobrazhensky's argument of 'squeezing agriculture'. Based on the recommendation of Preobrazhensky's concept of primitive socialist accumulation, Russia introduced government control over all markets. The price squeeze that resulted from this policy of holding down food prices was met by the peasants' massive withdrawal from the market, which threatened to bring the Soviet economy to the brink of disaster. Stalin's solution, the forced collectivisation of the peasantry and state farms, broke the power of the peasants and managed to industrialise peasant Russia. However, the human costs were enormous, and long-term agricultural productivity in Soviet economic development was a major bottleneck. Industrialisation by reducing the relative prices of agricultural products can thus harm the output of the rural sector (Bacha 1989). Moreover, this siphoning off agricultural resources did not always result in transfer of funds to the state. The transfer was often off set by increasing costs incurred by parastatals, or waste in armaments or bureaucratic consumption (Spoor 1995).

These interventions require instruments of intervention. Three instruments of market intervention by governments in developing countries were predominant throughout the 1960s and 1970s. First, the imposition of official or administrative prices at producer, wholesale and retail levels, to achieve some or all of the objectives for market intervention; second, there was transformation of the market through the creation of parastatal marketing agents, supplemented by the banning or control of private trade by licensing, movement restrictions, price inspections, and promoting other non-private agents, such as marketing co-operatives; and thirdly, intervention in input markets (Ellis 1996).

### **Price Policy and Market Intervention**

Governments of LDCs have intervened in agricultural markets by fixing producer and consumer prices. They fixed food prices as low as possible in order to keep urban consumer food prices down. The lower producer price rather proved to be a disincentive to producers and resulted in unintended effects such the development of parallel markets (Thorbecke 1993).

LDCs also used pan-territorial, spatially uniform, pricing systems. This was defended for reasons of not discriminating against peasants in the remotest areas. Peasants who were living in marginal areas received low prices, after taking into account

transportation costs. If transportation costs are heavily subsidised, these peasants were in advantageous position. However, uniform pricing systems are not attractive for peasants who are closer to the market. They could have had the possibility to receive better prices than the fixed uniform price set by the state because they incur lower transport costs and have alternative outlets to market their products than peasants in remotest areas.

### **State Intervention in the Structure of the Market**

During the last four decades, the governments of LDCs have substantially altered the structure of their agricultural markets by introducing marketing parastatals, limiting or banning private trade and promoting other non-private marketing agents. Parastatal marketing boards became the leading agents of market intervention policies in LDCs. They were seen as efficient in avoiding any unnecessary inter-mediation between producers and consumers. Private traders were often considered as exploitative and were often not allowed to operate in the wholesale grain trade. If they did, they often operated under a strict licensing system, regulation of prices and marketing margins (Ellis 1996). However, this has resulted in inter-regional and interstate smuggling as well as in higher marketing costs. Corruption among officials also produced disincentives for marketing output (Spoor 1995).

In general, state grain market organisations and policies to restrict private trade had adverse effect on smallholder income and food production in Africa. Low producer prices reduced farmers' incentives to use improved inputs and increase grain production. Market suppression has harmed the rural poor by distorting the structure of their outputs and incomes. If resource extractions are strong enough to suppress many agricultural markets it is wrong to expect structural or technical change to bring major gains to many farmers (Lipton 1991; Franzel *et al.*, 1989).

The disincentive character of state intervention can be examined by various methods. The excessive extraction by the parastatals can be explored by comparing the marketable surplus and the amount the peasants were obliged to sell to parastatal organisations; the relationship between the fixed farm gate prices paid to peasants and free market prices; the terms of trade as expressed by the consumer price index and the price paid to peasants; the cost of production as compared to the price received by the producers; and the fertilizer value-cost ratio. Further, other non-measurable policy instruments can also be examined.

### **2.4. Agricultural Market Liberalisation**

The liberalisation of agricultural markets started in the 1980s, when a great number of countries adopted liberalisation policies. These policies came in in the belief that the working of the market could overcome the adverse effects of state intervention (Spoor 1995). It was recommended that LDCs get rid of state intervention so that market prices reflect opportunity costs and benefits (Streeten 1993). Market

liberalisers argue that the economic conditions of many countries have only improved through market liberalisation. Its advantage is perceived in terms of improved resource allocation and technical efficiency which provide an incentive to farmers (Thompson 1991).

In Sub-Saharan Africa (SSA), this change was identified by the International Bank for Reconstruction and Development (IBRD) (1981a) study known as 'Berg Report', which suggested far reaching reforms and radical deregulation. Emphasis was shifted from the public sector to the private sector, based on a perception of state failure. Liberalisation included the abolition of parastatal import and export monopolies, domestic monopolies, deregulation of many food markets, an increase in private sector participation, cuts in food subsidies and devaluation (Alemayehu 1994a). However, in general, neo-liberals have concentrated on price liberalisation. They have emphasised that price liberalisation can contribute to agricultural performance in LDCs, and that government actions distort the structure of agricultural outputs and incomes. The World Bank has made price liberalisation a conditionality for its loans on the grounds that since prices are the primary determinant of the incentive structure for agriculture, an almost universal concern of adjustment loans must be to 'get the prices right' (see Lipton 1991).

Liberalisation advocates assumed that reform could improve the marketing system and enhance agricultural production. The reality of the resultant effect can be explored by a variety of ways. First, the institutional development of the marketing system, the different market participants and their role in the marketing system can be examined. Second the impact of the new pricing system can be looked at in terms of the share of producer prices in wholesale and consumer prices. The net profit of the wholesale traders can be estimated and then analysed against the cost of capital. Lastly, the response of the peasant's output to price changes can be examined. The own-price elasticity of supply could be estimated for the output of the grains under study. These factors are explored below in the Arsi's context.

### **2.5. States Versus Markets: Complements or Substitutes?**

One may agree with the inefficiency associated with state intervention and the need to liberalise. However, one needs to ask who benefits and who suffers from reform. Studies show a range of unintended and undesirable effects. Liberalisation is mainly implemented independently of the complexity of and problems in markets. It is not wise to ignore the realities of market structures and the institutional context in which policies are implemented. For both, state interventionists and the neo-liberals, agricultural markets and the dynamics of policy implementation remain a 'black box' (Spoor 1995:36). Structural adjustment programme, may have little impact upon the operation of markets. Indeed, it may enhance inefficient resource allocation by enhancing monopoly power. For markets to efficiently operate, they need to be strengthened by non-market mechanisms which co-ordinate allocation and

distribution so that economic agents can deal with uncertainty and bounded rationality (Akram-Lodhi 1997). Therefore, states cannot be ignored in the reform process. The assumption by the reformers that optimal prices and comparative advantage will stimulate growth may not hold true without the participation of the state.

Market liberalisers may be wrong to focus on state actions disturbing farm prices when physical barriers in the public and private sector environment may also affect farm incentives to produce and exchange. Market suppressers may be further wrong when they imply that market relaxation a) comprises 'getting the price right'; b) is achieved mainly by government abstention from distorting markets in farm output and input prices; c) can often achieve, on its own, large and rapid rises in total farm outputs; and d) can substitute for the structural or technical changes necessary to permit a big response to market incentives (Lipton 1991).

The need for the state to intervene in the market is further elaborated by Rao (1994). He argues that prices may provide the incentive required of producers but should be supplemented by state intervention. States should provide infrastructure, organise research and extension and regulate supplies of inputs critical for agricultural growth. Even in a free market economy, the state would have to intervene in the commodity markets in the situation of a price collapse or an extreme scarcity of commodities. Moreover, the state needs to find ways to support farmers to become self-reliant. The state should enhance irrigation practices, evolve varieties capable of withstanding adverse conditions, and assist in improving cultivation practices in order to reduce fluctuations in production. Better roads and market infrastructures, wide and quick market intelligence and fair marketing practices would help farmers get better returns in the market. Supportive intervention by the state should promote growth by developing agriculture, not discriminating against it. It could be expected that with growing and increasing participation in commodity markets, farmers would gradually improve their understanding of market operations and their ability to make effective use of such understanding in their own decisions and actions (Rao 1994).

Finally, then, both the statist and the liberalisers cannot alone create a conducive environment for an efficient marketing system which helps to increase peasant production. It should not be a question of markets or states. Both should operate in a complementary way to improve the marketing system and enhance peasant production.

### **3. EVOLUTION OF THE GRAIN MARKETING SYSTEM IN ETHIOPIA**

In the previous section, literature on general views on states and the markets and the policies of marketing of agricultural products under statist and market systems were reviewed. These policies will enhance or retard the marketing of food from peasant

agriculture. In this section, the grain marketing system in the Ethiopian will be reviewed to look at policies at a macro level that will help to assess their effect at the meso and then at local level.

### **3.1. Grain Marketing during the Period 1974-90**

#### **3.1.1. State Intervention in Grain Marketing**

Government intervention in grain marketing started in 1950 with the establishment of the Ethiopian Grain Board to undertake export licensing, quality control and market intelligence. It was followed by the establishment of the Ethiopian Grain Corporation in 1960 to participate in grain marketing and bought grain in larger amounts. Both were ineffective: the former did not hold stocks and could not stabilise the market while the latter suffered from limited market information, working capital and a price policy which made it unable to compete with private traders (Alemayehu 1989).

Active participation by the government in grain marketing developed in the post 1974 period (Alemayehu 1989). The main reasons for the government's participation in grain marketing were both ideological and pragmatic. On the ideological side, there was a strong belief that merchants and other intermediaries exploited the peasantry and consumers and that state intervention was required to curtail exploitation. The pragmatic reasons were associated with the post revolutionary land reform. Following the 1975 land reform, the harvest of farm production was estimated to be relatively good but nevertheless marketed surplus declined. The end of share tenancy in grain surplus areas led to increased on-farm consumption; thus the share of peasant production that was marketed, through private traders, declined from 25% to 10% between 1974 and 1978 (Franzel *et al.*, 1989). This led to high urban food prices which increased pressure on lower income urban groups such as urban civil servants and workers. Basic grain prices jumped by more than 30 per cent in 1976 and continued to rise in the following years. This pragmatic necessity coincided with and reinforced the ideological trend toward establishing agrarian socialism (Dessaiegn 1994; Franzel *et al.*, 1989; Cohen *et al.*, 1988).

To fulfil its objectives, government sought ways to increase the volume of the marketed surplus while, at the same time, keeping urban prices low. Government established state farms and imposed government control over the distribution of inputs to more 'reliable' producers such as peasant producer co-operatives and peasant service co-operatives giving less attention to peasant agriculture (Cohen *et al.*, 1988).

#### **3.1.2: Purchasing Operations of the AMC**

In 1979/80, the marketing system, under which the AMC had competed in its first four years with private traders, was changed. The assigning of quotas at prices determined by the government was established (Befekadu *et al.*, 1990). Each year,

grain quotas were set for each crop and each region by the Central Planning Supreme Council (CPSC). These quotas were sent to the regional Grain Purchase Task Forces (GPTFs) and to the AMC for implementation. The regional quotas were passed down and distributed among the districts (Awrajas) and the sub-districts (Woredas) to the service co-operatives (SCs) and the peasant associations (PAs). Finally, the latter distributed their quota among peasants (Cohen *et al.*, 1988; Franzel *et al.*, 1989; Alemayehu 1989).

The minimum grain quota for a PA was 100 quintals in 1979/80, but this floor was raised to 150 in 1980/81. The size of the quota per family was intended to be related to the marketable surplus available. But, evidences suggested that the quota was inequitably allocated among PAs and among regions; a few regions were obliged to supply a larger portion of the AMC purchase (Alemayehu 1989; Franzel *et al.*, 1989).

Licensed grain traders, on the other hand, had to supply a minimum of 30% of their purchases in 1979/80, which was then raised to 50% in 1980/81. They were required to sell their quota to the AMC as a condition for receiving permits to transport cereals, pulses, and oil seeds from one region to another. Unless traders fulfilled this criterion, they could not sell any grain on a free market. On the other hand, state farms and Producers Co-operatives (PCs) were also supposed to deliver all their marketable output to the AMC (Alemayehu 1989).

Peasants who failed to fulfil their quota were not allowed to use the service co-operative shops to buy non-agricultural commodities. As a final sanction, they could be deprived of the right to use land. There are cases where peasants who failed to fulfil their quota obligations from their own produce were forced to purchase the shortfall from other producers or on the market (Befekadu *et al.*, 1990). Even those who were mainly dependent on relief assistance were obliged to deliver their quotas on time and at the right collection centres. A study made by Dessalegn (1991) in the Wollo region of Ethiopia found a number of peasants that had to sell livestock or other possessions to buy the grain required of them on the free market and at free market prices, and to deliver it to the authorities at AMC prices, involving a loss of anywhere up to 300 per cent (Dessalegn 1991:96). This shows the need to have a thorough look at the pricing system followed by this parastatal organisation.

### **3.1.3. The Pricing System of the AMC**

In the development of controlled grain prices in the post 1974 period, three distinctive phases can be identified (Alemayehu 1989).

During the first two periods (1975/76 to 1978/79 and 1979/80), government attempted to stabilise prices through legislative price control. The government did so because fixed prices were assumed to be detrimental to producers and consumers. However, despite all revisions made, the result proved unsatisfactory. The major cause for the instability of fixed prices was that they were not established at a level

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attractive to both producers and traders. As a result, agricultural supply fell below demand (Befekadu *et al.*, 1990).

Thirdly, in 1980/81 the government adopted a fixed nation-wide pricing policy. The prices paid by the AMC were established by the Council of Ministers for the farm gate, wholesale markets and state farms. The system of pan-territorial pricing was in force and provided peasants throughout the country with the same price for the same type and quality of products. There were no consideration of geographic difference, transport and storage costs, and demand. The wholesale price was set at Ethiopian *Birr* four to five per quintal above the price paid to farmers, and the state farm price was 20% above the wholesale price (Alemayehu 1989; Cohen *et al.*, 1988).

Peasants were also exposed to unfair terms of trade. While they were forced to sell at fixed prices, non-agricultural products tended to get more expensive from year to year. This pattern of holding prices down was intended to subsidise consumers at the expense of the agricultural sector. Peasants sold and delivered their products at cheap prices and in turn bought non-agricultural products and got social services at higher prices. Thus, the terms of trade moved against agricultural producers, who had to pay more in terms of agricultural output for commodities which they purchased from the industrial sector.

The following data on rural consumer items indicates how prices of non-agricultural products and services increased. If we contrast this with the fixed AMC's farm gate prices, we can easily understand the disincentive effects on the peasants. For example, the 1989/90 AMC farm gate price index was 7.7% for *teff*, 6.5% for wheat, and 7.4% for barley over their 1982/83 prices. On contrary, the 1989/90 rural national consumers price index for food, cereals, clothing, medical, and education has shown a growth of 42.5%, 39.5%, 17.2%, 23.4%, and 28.5% over their 1982/83 prices, respectively. The implication is that these policies created disincentive structures in the agricultural sector, particularly peasant agriculture. This disincentive called for a new policy.

Table 3.1. AMC's Farm Gate Price Indices for *Teff*, Wheat and Barley and Rural National Consumers Price Index (1982/83-1989/90)  
(1982/83 = 100.00)

Year	Teff	Wheat	Barley	Food	Cereals	Clothing	Medical	Education
1982/83	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
1983/84	100.00	100.00	100.00	99.00	101.70	100.40	110.30	103.00
1984/85	100.00	100.00	100.00	161.50	193.90	100.00	131.40	112.00
1985/86	100.00	100.00	100.00	150.10	164.10	101.40	118.80	122.70
1986/87	100.00	100.00	100.00	126.20	120.90	105.80	123.00	132.00
1987/88	107.70	106.50	107.40	131.60	118.20	103.70	129.90	133.20
1988/89	107.70	106.50	107.40	145.90	140.00	106.70	127.90	131.20
1989/90	107.70	106.50	107.40	142.50	139.50	117.20	123.40	128.50

Source: Computed from data provided by AMC Annual Reports; CSA (1994), Statistical Bulletin 128.

### 3.2. The Post 1990 Grain Marketing System

Government regulations, inter-regional fixed prices and quotas had a negative impact on peasant agriculture. These policies resulted in chronic food shortage which had emerged as the major problem in the Ethiopian economy. Since 1980, available grain equivalent food production per capita declined from 162.4 kg. per capita grain equivalent in 1975/76 to 128.7 kg. per capita grain equivalent in 1988. The poor performance of the cereal sector led policy makers to question Ethiopia's cereal marketing policies (Kuma *et al.*, 1995).

Different international organisations, governments and scholars began insisting on a radical liberalisation process. They set conditions related to policy changes in order to get access to loans (Cohen and Isaksson, 1988). Most of the conditions set by the donors were not accepted by the Provisional Military Government of Ethiopia (PMGE) because of the underlying ideological motivation of transforming peasant agriculture into agrarian socialism (Alemayehu 1994a; Walday 1992).

However, the impetus for market based reform deepened in December 1987 when the government introduced its 'agricultural marketing and pricing policy reform' so as to stimulate food production. This policy statement for the first time acknowledged, among other things, the need to reorganise problems of marketing, pricing and distribution systems of goods and services. Further, it acknowledged that increased output in the peasant sector could not be achieved without improved infrastructure, soil conservation, better provision of fertilizer and improved seeds and farm implements. The government openly admitted the weakness of the late 1970s and 1980s policies that discouraged the private sector and the free market system. This partial retreat from socialism was further influenced by the change in the socialist block and internal factors. The ideological and economic reform of the USSR and other Eastern European countries and the low performance of public enterprises at home forced the government to introduce a liberalisation policy (Fantu 1994; Walday *et al.*, 1992).

The policy reform, which was adopted in March 1990, included (Fantu 1994; Walday *et al.*, 1992):

- a) allowing the food grain trade to function without restrictions;
- b) giving the right to abandon co-operatives to members if they so wish to;
- c) abolition of the fixed price and quota system; the AMC was to compete with private traders in the open market;
- d) allowing the private sector to operate in grain marketing in a free market environment.
- e) inheritable legal usufructuary rights on the land peasants tilled, and the right to sell their produce privately;
- f) removing capital ceilings for private investment; and
- g) selling and leasing unprofitable government enterprises to private entrepreneurs.

The reform marked a significant shift from extreme regulation to extreme deregulation. Following this announcement, peasants seized the opportunity to take over unused government land, including state farms, disbanded producer co-operatives (PCs) and removed government appointed PA leaders. However, the rapid disintegration of rural institutions and political instability throughout the country hampered the implementation of the reform.

Following the downfall of the military government in 1991, the new government, established in May 1991, committed itself to increasing the role of the private sector in business and trade. In November 1991 the transitional government issued Ethiopia's Economic Policy, to be implemented during the transitional period. This policy re-affirmed the appropriateness of the grain marketing reform of March 1990 (Alemayehu 1994a). Based on the economic policy most of the previous laws restricting competition were replaced. New regulations removed most of the barriers, which prevented competition in grain production, transport, processing and marketing. Producer prices increased. Resource allocation was no longer discriminatory among participants. Farmers could freely sell their produce at prevailing prices in the market. Traders could move agricultural products from one area to other though controls stations (*kellas*) still existed. No restriction on the margins of grain traders were enforced (Kuma 1995).

After the reform, in 1992, the AMC also was reorganised as the Ethiopian Grain Trade Enterprise (EGTE) Its objectives are: to stabilise markets and prices for farmer's produce; to encourage farmers to increase their output; and to protect consumers from unfair price increases. It also sought to generate foreign exchange by exporting grains as well as maintaining buffer stocks for market stabilisation (Mulumebet 1994). Its purchase share, however, has declined since the reform.

## **4. THE GRAIN MARKETING SYSTEM IN ARSI**

In the previous section an evolution of grain marketing in Ethiopia was made. As earlier discussed in the paper, there have been different policies adopted to transfer food grains from peasants to consumers. The policies have mainly been made at the national level and then applied to the lower levels. This section explores the agricultural marketing system of Arsi to examine the impact of those policies on peasant producers.

### **4.1. Pre-grain Market Liberalisation**

#### **4.1.1. Policy Instruments of the AMC's Operation**

The policy instruments that were adopted by the military government during the command economy period included the fixed pricing systems, the obligatory quota delivery of grain, the regulation of market days, the setting up of *kellas* (road blocks),

and the regulation of trade by the banning of traders (Alemayehu 1994a; Franzel *et al.*, 1989).

### Low and Fixed Prices

The government used a fixed, pan-territorial pricing system. Peasants were obliged to sell their produce at prices lower than that in free markets. The prices paid farmers were the same for output of any quality in all areas in the zone. As compared to local free market prices, the AMC's prices were much lower (Annex, 4.3). As Arsi was a surplus producer and was also located almost at the centre of the country, peasants would have benefited from selling their produce at free market prices.

### The Obligatory Delivery of Grain

In the late 1970s, SCs were established and made to buy grains from the peasant sector and then sell all their purchases to the AMC at prices offering a small margin over the fixed farm gate prices. Soon, the SCs were made effective agents of the AMC. The PCs were also required to sell their marketable outputs to the SCs, while peasants were required to deliver annually set quotas.

Quotas were theoretically determined by the size of land holdings, the yield of the holdings as determined by the soil fertility of the land, the number of the household's dependent members, the production situation of the previous years, and the economic well-being of the holder. In Arsi's case, however, assigning quotas to the peasantry was largely dependent upon the will of the politicians. Some PAs used quota allocations to reward those who supported them and to punish those who fought their actions in leading the PA (Cohen 1987). In Arsi, peasants who did not fulfil their quota obligation were prohibited from selling grain in the open markets and their movement was strictly controlled at *kellas* and elsewhere. There was also punishment in the form of restrictions in buying consumer goods and getting fertilizer or improved seeds at SCs.

During the five years covered in Table 4.1 below, the AMC purchased about 3.92 million quintals of grain from Arsi. On average, over 70% of the purchases were from the peasant sector; over 80% of the grains purchased from the peasant sector constituted *teff*, wheat and barley (Annex 4.2.).

Two important issues then emerge from Table 4.1. First, in spite of the government's policy of giving attention to state farms, the urban economy remained dependent on the peasant sector for its food supply. Second, one may judge that food consumption of the peasants could not have improved very much. A survey of selected households conducted in two places in Arsi in 1986 revealed the severity of the AMC's quota. For example, the AMC's purchases accounted for 75% of Bekoji and 63% of Abomsa area's marketable products (Franzel *et al.*, 1989).

Table 4.1. Share of Peasant Sector and State Farms in the Supply of Grains to the AMC (1982/83-1986/87)

	1982/83	1983/84	1984/85	1985/86	1986/87
Total purchases					
('000 quintals)	1038.66	775.48	419.30	748.10	937.74
Percentage share of					
Peasant sector*	77.15	62.02	40.15	71.91	80.40
State farms	22.85	37.98	59.85	28.09	19.60

\* Includes grain supplied by PAs, SCs, PCs, and private traders.

Source: Arsi Planning and Economic Development Office (APO), 1988; Annex 4.2.

### Restriction of Market Days

Market days were also restricted to once a week, and arranged to be on Saturdays or Sundays. This was done to increase the time farmers spent working on their farms and thus increase production so that they would have more surplus to supply the AMC. However, both the suppression of private grain trade and the control of traditional market days prevented rural markets from playing an important role in marketing peasant produce and supplying food to other regions. Traders were unable to visit different rural markets on different days.

### Kellas (Check points)

Parallel with restricting market days, *kellas* were set up along major routes from Arsi to other regions. Small roadside markets were closed. There was the manning of gates of rural markets on major market days with squads, who prevented people with grains from entering the market before fulfilling their assigned quota. They forced the peasantry to sell their grains to SCs even if they fulfilled their quota. This was even done in situations where the PAs could not fulfilled its assigned quota.

### Banning of Traders

To promote state control over the grain trade, the administrators of Arsi zone restricted the private sector. Traders were totally prohibited from moving their stocks not only to the other parts of the country but also within Arsi zone. They were made to sell all their purchases to the AMC at a margin of *Birr* five over the fixed farm gate prices. They sold the grain at prices less than they bought in parallel markets. They incurred some losses, though in many cases the losses were covered by selling grains illegally at higher prices in parallel markets. Thus, there was active involvement by traders in local parallel markets. In 1984, traders were totally banned from Assella, the zonal capital and the main market centre. The government confiscated their stocks and transferred them to SCs. Throughout Arsi, petty traders were denied licences or harassed, partly through political pressures from the SCs,

number of peasant households in Arsi, which gives about two quintals per peasant household during the same period.

To know the possible excessive effects of the quota delivery system, we need to take the purchase of the AMC from the peasant sector including the purchase from traders. We need to compare the estimated marketable surplus with the amount of grain actually purchased by the AMC. The base year taken for this calculation was a year widely considered to be a 'normal year' in the country, 1982/83. The last year, 1989/90, was the year when the quota delivery system was officially abolished. Comparing these figures might give us some insight about the burden on the peasantry.

**Table 4. .2. Share of the AMC's Purchase in Peasant's\* Marketable Surplus (1982/83-1989/90)**

	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90
Marketable surplus from the peasant sector ('000 quintals) (1)	1325.0	406.3	-88.1	258.6	982.8	2192.8	1576.6	2404.8
AMC purchases (2)	801.3	480.9	168.3	538.0	753.9	672.3	512.2	305.2
from peasants ('000 quintals) (3)	477.1	311.9	155.7	526.8	748.4	635.4	333.4	171.1
from traders ('000 quintals) (4)	324.2	169.0	12.6	11.2	5.5	36.9	178.8	134.1
Percentage share(2/1)	60.5	118.4	-191.0	208.0	76.7	30.7	32.5	12.7

\* Includes purchases from private traders.

Source: Own computation based on data obtained from APO, 1988; Central Ethiopia AMC Annual Reports; Annex 4.1.

Table 4.2 shows that 1983/84 to 1986/87 was the worst period for the peasants. In 1982/83, peasants delivered 60.5% of their surplus, while in 1986/87 they delivered 76.7% of their marketable surplus to the AMC. During these periods, the urban population of Arsi was estimated to be 139,000 and 163,200 (estimated from CSA 1996) and they required 278,000 and 326,400 quintals, respectively. In 1982/83, the zone had about 245,000 quintals of grains in excess of the needs of its population. In 1986/87, however, Arsi required additional 98,000 quintals of grains to fulfil the basic requirement of its population.

The years from 1983/84 to 1985/86 were also the worst times for both the rural and urban population of Arsi. The data on Table 4.2 reveals an excessive extraction of food grains from Arsi. In 1983/84, the peasants delivered 76.8 % of their marketable surplus to the AMC and sold 41.6% to traders to settle their debts and to buy non-agricultural consumer goods. The sum of the two sales exceeded by 18% the marketable surplus from the peasant sector. The data shows that nothing was left for the urban population and even less than the basic food requirements of the rural population. Both peasants as well as the urban population did not fulfil their basic minimum requirement needs.

If we look at the year 1984/85, Arsi's peasantry had no agricultural marketable surplus. There was a shortage of 88.1 thousand quintals of grain to feed the rural population with the minimum basic grain food requirements. However, they were required to deliver 155.7 thousand quintals of grain to the AMC. Further, they sold 12.6 thousand quintals of grain to traders to settle their debts. The calculated figure shows that the rural population alone had a shortage of 256.4 thousand quintals of food grain. Since the purchases were exported outside of Arsi, it is evident how difficult it was for both the rural and urban population to feed themselves. In the latter year, 1985/86, the AMC purchased double the amount of the marketable surplus. Of the available marketable surplus grains, the peasants were required to deliver an additional 268.2 thousand quintals of grain. This implies that the peasantry was underfed by an amount almost equal to the marketable surplus. One can assume how hard the situation was not only for the rural population but also for the non-agricultural population.

These years were the most intense and harsh times for the peasants of Arsi. The banning of traders, the control of *kellas*, and restricting market days worsened the situation. Peasants were forced to feed below the basic minimum requirement needs. As noted by Cohen (1987), the problem was exacerbated by shortage of industrial products. However, in the years following 1986/87, there was some relaxation by the government in letting traders move from one place to another, with lesser control on *kellas*. There were also better climatic conditions.

The above discussion gives us a clue about how excessive the quota was. The peasants, the traders, and the consumers were all dissatisfied by the quota system. This policy instrument was supplemented by pricing policy, which will be dealt with in the following section.

### The Pricing System

The AMC's fixed farm gate prices were lower than local market prices. The data in Table 4.3 shows that *teff* free market prices were double that of the AMC's farm gate prices, while wheat and barley prices were more than 130% of the prices paid to peasants by the AMC. Producers could hardly be expected to offer their produce to the AMC under such circumstances. This was at odds with the stated objectives of encouraging production through price incentives. A general picture shows that the difference between the AMC price and the free market price was mainly the surplus extracted from the peasantry. Although all the differences would not go to the peasants, because of considerable segmentation in grain markets, there is no doubt that a major portion would have accrued to the peasants.

The size of surplus that had been extracted by the price differential may be judged by looking at the AMC's farm gate prices, the AMC's selling prices, and the free market prices<sup>2</sup>. In 1988/89, the AMC's farm gate price for *teff* was *Birr* 42, for wheat *Birr* 39, and for barley *Birr* 29. Whereas the AMC selling price was *Birr* 63 for *teff*, *Birr*

54.3 for wheat, and *Birr* 48.8 for barley per quintal, the free market price in Addis Ababa was *Birr* 110.2, *Birr* 84.2, and *Birr* 89.3 per quintal for *teff*, wheat, and barley respectively. At least from this sizeable difference between the AMC selling price and the free market price, some amount should have accrued to the peasantry (Eshetu 1990).

As can be seen in Table 4.3, free market prices were better than the AMC farm gate prices. Over the four years period, the free market prices show an average annual growth rate of 9.1 %, 9.7%, and 13% for *teff*, wheat and barley respectively, over the AMC farm gate prices.

**Table 4. 3. Assella Free Market and AMC Fixed Farm Gate Prices (*Birr* per quintal).**

Year	<i>Teff</i>			Wheat			Barley		
	FM*	AFG**	%	FM	AFG	%	FM	A FG	%
1986/87	73.00	39.00	187.18	39.00	31.00	125.81	30.50	27.00	113.00
1987/88	81.30	42.00	193.57	42.00	33.00	127.27	34.50	29.00	119.00
1988/89	91.70	42.00	218.33	47.50	33.00	143.94	39.50	29.00	136.20
1989/90	105.00	42.00	242.86	54.50	33.00	165.15	47.00	29.00	162.10

\* Free Market Price

\*\*AMC Fixed Farm Gate Price

Source: AMC Annual Reports.

Let us make a simple calculation to see roughly what the effect looks like. The amount of *teff* sold to the AMC by the peasantry during the years begun 1986/87 to 1989/90 was 1827, 15, 410 and zero quintals in that order. During the same years, the amount of wheat sold was 443257, 440773, 234440, and 142834 quintals while the amount of barley was 196107, 153073, 58527, and 24147 quintals respectively (AMC Annual Reports; APO 1988). If we calculate the differences in value of AMC fixed farm gate prices and the free market prices for the specified years, the following results will be obtained. The differential for *teff* was *Birr* 83.39 thousand, for wheat *Birr* 14 million, and for barley *Birr* 2.6 million. Details can be seen on Table 4.4.

This reveals, without any doubt, that pricing policies represented an important means of surplus transfer from peasant agriculture, which probably had a disincentive effect for the peasantry.

In addition to the compulsory grains delivery, peasants had to dispose of what was left over, if any, even by reducing their consumption requirement, in the immediate post harvest period either because of the need to fulfil their various obligations or because of a lack of storage capacity. They had to settle obligations such as income tax and land tax fees, make special contributions such as for famine victims or for war, and the many informal and uncounted contributions requested by their

respective PAs, SCs, and officials of the upper administrative strata. Estimates show that by 1984, about 15% of an average peasant household's cash income went to the latter activities (Eshetu 1990; Cohen 1987).

As noted earlier, the fixed price of grains was initiated in 1980/81. Thereafter, there was no marked increase in these prices until 1987/88, when the price was raised by 2 to 3 *Birr* per quintal. On the other hand, a steady rise of the consumer price index, as seen in Table 3.1, means an equally steady decline in the peasant's purchasing power. The World Bank affirmed that the real 1985/86 price expressed as a percentage of the real 1979/80 price was 68% for mixed *teff* and 91% for mixed wheat (Eshetu, 1990). To cope up with it, peasants had to sell their animals or any fixed assets, which made Dessalegn (1991) say that restricted markets and inter-regional trade threatened to cripple 'one of the most critical weapons of the peasantry in its fight against death and deprivation'.

Table 4.4. The Difference in the value ('000 *Birr*) of Free Market and AMC Fixed Farm Gate Prices in AMC's Purchase ('000 Quintals) for *Teff*, Wheat, and Barley From the Peasants (1986/87-1989/90)

	1986/87				1987/88			
	Total Purchase	Total Value		Difference	Total Purchase	Total Value		Difference
		FM	AFG			FM	AFG	
<i>Teff</i>	1.83	133.59	71.37	62.22	0.02	1.63	0.84	0.79
Wheat	443.23	17285.97	13740.13	3545.84	440.77	18512.34	14545.41	3966.93
Barley	196.12	5981.66	5295.24	686.42	153.07	5280.92	4439.03	841.89

	1986/87				1987/88			
	Total Purchase	Total Value		Difference	Total Purchase	Total Value		Difference
		FM	AFG			FM	AFG	
<i>Teff</i>	1.83	133.59	71.37	62.22	0.02	1.63	0.84	0.79
Wheat	443.23	17285.97	13740.13	3545.84	440.77	18512.34	14545.41	3966.93
Barley	196.12	5981.66	5295.24	686.42	153.07	5280.92	4439.03	841.89

Source: Own computation based on data obtained from APO, 1988 for 1986/87 data; AMC Annual Reports for the other data. Note: Total purchase in '000 quintals.

The SCs were not only to be used as a purchasing centre for the AMC, but were also to deliver consumer goods at reasonable prices to the peasantry. They did, but it was inadequate. For example, of the total sales of the Ethiopian Domestic Distribution Corporation (EDDC) in 1987/88, only 14% went to peasant society while 34.9% went to the private traders (Eshetu 1990). This should not be considered as a minor inconvenience on the peasant life. Arsi's peasantry became poor amidst the production of surplus. Despite their innovative capacity and their input utilisation position, policies made them less fruitful.

### Cost of Production

The AMC's farm gate prices were not only very low, but also were less than the cost of production. According to the on-farm trials conducted by the South Eastern

Agricultural Development Zone (SEADZ) (1987), the cost of production at the peasant level in 1985/86 for *teff* was *Birr* 42, for wheat *Birr* 40, and for barley *Birr* 37 per quintal. The official AMC farm gate prices during the same year, however, were *Birr* 39, *Birr* 31, and *Birr* 27 per quintal respectively. The prices paid by the AMC were 7.1%, 22.5%, and 27% less than the cost used to produce *teff*, wheat, and barley respectively. The figures are greater if we compare them with the prevailing market prices of the grains. In principle, cost of production should have been used, at the minimum, to determine a floor price for the AMC.

In Arsi's case, the variation in cost of production to AMC price for barley and wheat was much higher than for *teff*. Arsi is known for producing wheat and barley, yet these grains also occupied the bulk of AMC's purchase. The disincentive of Arsi's peasantry to produce wheat and barley, when they used to sell these grains at lower prices than the prevailing free market prices (and even below the cost of production), may have been greater.

### **Fertilizer Value- Cost Ratio**

The opportunity to increase production in Arsi through area expansion is a limited one. The potential for increasing production is likely to come from increasing yields. Increasing yields, by using modern irrigation practices, improved cultural practices, and the use of organic fertilizers, requires high investment, more research, and time. Moreover, fallowing, which is a traditional method of increasing soil fertility, became impossible for the peasants due to land scarcity. The use of organic fertilizer is also limited, as animal dung plays a more important role as fuel than as farm manure. Consequently, the use of chemical fertilizers is the major means to maintain soil fertility and increase agricultural production in the short run (Mulat 1996; Mulat 1995; Mulugeta 1994).

Fertilizer utilisation, among other things, is determined by the relative prices of grains and of fertilizer. According to FAO, a value-cost ratio (VCR) of 2 is commonly regarded as the minimum ratio required to induce fertilizer use (Teshome 1989). The implication is that a peasant should get an output with a value double as much as the fertilizer cost in order to bear the risk of adopting fertilizer.

However, if additional costs in the form of travelling to a sale point to buy fertilizer, applying it to fields, and the extra weeding, harvesting, and processing costs associated with the additional output obtained due to fertilizer application are taken into account, the VCR should be greater than 2. In the Ethiopian case, instead of VCR of 2, a high benefit-cost ratio is necessary to expand fertilizer use; a VCR of 2.5 should be regarded as a threshold (Mulat 1995), given the poor infrastructural conditions of the country.

In Arsi's case, although the use of fertilizer is relatively higher than in the rest, the application rate is still low. This is attributed to the unavailability of the input and the

ever increasing price of fertilizer the peasants pay in relation to the increase in grain prices. As can be seen from Table 4.5 below, until 1990/91 the VCR for *teff* and barley was less than 2. The VCR for wheat was in the range of 2 and 2.2 except in 1988/89, when it was 1.8. After 1990/91, the VCR for all crops increased to more than 3.8, except for barley in 1992/93. However, the increasing trend in the price of fertilizer may reduce the use of fertilizer. As can be calculated from data on Annex 4.4, the price elasticity of fertilizer use for the period 1989/90-1993/94 was -1.28, which shows a 10% increase in the price of fertilizer could result in a 12.8% decline in fertilizer use. This may have been further aggravated when state subsidies declined and then terminated in 1997.

Table 4.5. A Summary of Value-Cost Ratio for *Teff*, Wheat, and Barley (1982/83- 1993/94)

	82/83	83/84	84/85	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93	93/94
<i>Teff</i>	1.7	1.7	1.7	1.7	1.8	1.9	1.5	1.7	4.4	4.4	3.4	3.9
Wheat	2.1	2.1	2.1	2.1	2.1	2.2	1.8	2.0	4.6	4.2	3.4	4.2
Barley	1.8	1.8	1.8	1.8	1.8	1.9	1.6	1.8	3.8	3.5	2.7	3.3

Source: Extracted from Annex 4.4.

## 4.2. Post Grain Market Liberalisation

After the deregulation of grain markets, the institutional structure of grain marketing, including the AMC, changed. This section of the paper deals with institutional changes in the AMC and the development of other market institutions in grain marketing, the evolution of prices after the reform, and finally with an assessment of the response of the peasants to the changing prices.

### 4.2.1. The AMC and Institutional Development in Grain Marketing Network of the AMC before Liberalisation

Before the deregulation of the grain marketing system, the AMC used to purchase grain by establishing its grain purchase centres and collection centres. Functionally, the AMC grain collection centres were vertically integrated with the purchase centres, at the next stage of the marketing system. Service co-operatives served as intermediary points where grains were transferred from the peasants to the AMC. The AMC purchase centres served as temporary-bulking centres, where grain purchases from different collection points to the nearest AMC warehouses could be stored. In Arsi's case, the warehouse was located at Nazareth, the town located in Shewa about 75 km north of Assella.

In 1987/88, there were 16 grain purchase centres and 181 grain collection centres in Arsi. Of the total grain collection centres, 76% were service co-operatives located mainly in rural areas and small rural market areas. Each SC had a grain store, with a capacity of 500 to 2000 tons. The stores were constructed by the funds raised by the peasants and with profits generated by the SCs. The SCs facilitated the AMC's bulk building in rural areas by bringing together large quantities at one central point.

Without SCs, it would have been very difficult for the AMC to arrange transport for widely dispersed peasants or itinerant grain merchants in remote areas. The evolution of SCs as grain collection centres therefore marked not only the emergence of controlled grain marketing but also the diminishing role of rural markets as grain bulking centres (Alemayehu 1994b; Alemayehu 1992).

SCs were mainly located in inaccessible areas far from the main road. At the national level, only 15% of the SCs were accessible by road. This also held true for Arsi, though no exact percentage is known. This had an impact on the economic performance of the AMC. Its scarce manpower, marketing facilities, and bank overdraft had to be scattered over a large operational area, putting strain on its scarce resources. Moreover, whatever grain was bought from the SCs located in remotest areas, the AMC used to transport with its trucks. An estimate of up to 20% of the operational costs of the AMC went to maintaining trucks damaged during the collection of grain from the collection centres. This caused inefficiency in grain collection (Alemayehu 1994b).

### **Network Shrinkage of the AMC**

Deregulation of grain markets in March 1990 undermined the role of the AMC and put its economic viability in doubt. After deregulation, the SCs ceased to be major collection centres of grain handled by the AMC.

The number of collection centres<sup>3</sup> diminished from 2013 in 1989 to 42 in 1992 at the national level. The AMC grain purchase network in Arsi declined from two to one branch office (50%), from 16 to 6 purchase centres (37.5%), and from 181 to 16 collection centres (8.8%). These six purchasing centres are located in the central part of Arsi, while purchase centres in the eastern part of the zone were totally closed (Alemayehu, 1994b). This resulted in decreased purchases of the AMC, from 801297 quintals of grain in 1982/83 to 2384 quintals in 1993/94 (Annex 4.2). One should note however that of the noted 42 collection centres at the national level, 16 (38%) were found in Arsi. Even after deregulation, though the purchases decreased to the noted figure, Arsi remained a main focal area for the purchases of the AMC.

Immediately after the termination of grain quotas, the role of SCs in grain marketing stopped. Their link with the AMC was cut immediately after the liberalisation of grain marketing. About 37% of the SCs ceased to function fully as a result of looting and the dismantling of SCs fixed assets (warehouses, flour mills, etc.) when the military regime collapsed in 1991 (APO 1995). In some cases, the SCs savings had been squandered and embezzled by corrupt leaders. As a result, some SCs did not have working capital to participate in grain marketing. Like the AMC warehouses, the under-utilisation of the SCs stores raised a serious concern about the wastage of public resources in rural areas. No SC would take up grain marketing on their own initiative or respond positively to deregulation. The reasons were: the peasantry's reluctance to sell grains through SCs, peasants' distrust of co-operatives and

maltreatment by SC officials in the past, lack of funds, lack of leadership, and fear of competition with the private traders. Further, peasants in accessible areas and closer to major roads had better access to private marketing channels after the deregulation of grain markets (Alemayehu 1994a; Alemayehu 1992).

### The Declining Share of the AMC in Grain Purchase

After the reform, the purchasing capacity of the AMC declined. The SCs stopped supplying grain and peasants refused to sell grain to the AMC on local markets. Since the AMC had limited experience in competing with private traders and the supply of grains from state farms declined as some parts of the state farms were reclaimed by the peasantry after 1991, the grain procurement of the AMC further dwindled. The purchase of the AMC from the peasant sector declined by 81%, from 512212 quintals in 1988/89 to 96619 quintals in 1990/91, and further declined by 99% of the 1990/91 level in 1993/94 (Annex 4.2). This shows the increasing role of the private sector in grain marketing and distribution and the decreasing role of the public sector.

In terms of its clients and the demand for grains, the pattern of AMC sales changed drastically. At the national level, its sales to its former clients fell by 75% from 647010 tons in 1988/89 to 161600 tons in 1991/92. Most of the clients shifted to the private sector, except the flour mills, which buy wheat and maize. Some procured grain directly from state farms or from local markets, and the AMC has to compete with other sellers to sell grain (Alemayehu 1994b).

The withdrawal of the AMC from low potential areas opened space for the private sector. After the reform, however, the number of licensed private grain traders concentrated in surplus producing areas of the country. The number of grain traders increased significantly in Arsi. The number of licensed traders in 1982/83 was 362 while in 1987/88 there were no licensed grain traders in Arsi. After legalisation of trade in 1988, the number of licensed grain traders grew to 112 in 1988/89 and increased by 77.7% to 199 in 1989. After deregulation, the number became 187 in 1990/91 and further increased by 239.6% to 448 in 1991/92, which has resulted in an increasing rate of the private sector in grain trade (Alemayehu 1994b; Walday 1992). Many people also become employed in various grain trading activities such as unlicensed petty trade, brokerage, cleaning, packing, weighing, loading and unloading, transportation, shopping and guarding. However, different studies show that the capacity of the private sector in terms of working capital, storage and trucking too low to manage a large-scale food crisis. They have very limited capacity to transport food from surplus to deficit areas (Alemayehu 1994a).

### Purchasing Strategies of the AMC after the Reform

After deregulation, the AMC had no clear direction to go. It had no clear policy as to how to purchase, what to purchase, by how much to purchase, where to sell and for

what purpose. Moreover, the state stopped its subsidy to the AMC in 1992. As a result, the cost of administration increased and it was obliged to adopt a new policy. The new policy of the AMC was to purchase grain in high demand, to use free market prices as opposed to fixed prices, to use private traders as supplying agents, to freeze new hiring, and to layoff more than half its manpower (Alemayehu 1994a, 1994b; Wolday 1992).

Following the abolition of uniform pricing, the AMC adopted seasonally and distance differentiated prices. Producer prices decreased with distance from the central markets. The pan-territorial pricing system used by the AMC in the 1980s benefited the peasants in the marginal areas through transport subsidies at the expense of the incomes of those peasants living closer to the major market areas. On the other hand, the abolition of pan-territorial prices benefited those peasants living closer to major markets.

The AMC followed a pricing policy of offering a slightly lower price than that offered by traders and which was fixed for a month. Although this system was an improvement over the fixed pricing system, it failed to keep pace with the fast changing free market prices paid by private traders. Actual market prices fluctuated from day to day and from week to week. This affected the AMC's capacity to make effective procurement. The only time the AMC secured procurement was when prices fell to the level of the AMC's monthly set prices. This forced the AMC to adopt another policy, which was to pay licensed grain traders *Birr* five per quintal for *teff* and *Birr* three per quintal for other grains, together with funds and sacks for grain purchases. The supplying traders were those traders with a shortage of capital and storage facilities. They also included those traders who had no capacity to transport to upper marketing channels. This new link was the result of the AMC's failure to attract peasants in local markets and the traders' lack of resources to handle grain entering in local markets. The deregulation of grain markets created temporary inter-linkages and interdependence between the public and the private sector in grain marketing. However, it is difficult to judge about the future of the symbiotic relationship between the AMC and the private traders (Alemayehu 1994b)

#### **Institutional Development in Grain Markets after the Reform**

Besides the institutional relationship between the AMC and private traders, there are other institutional developments in grain marketing. Deregulation allowed intermediary firms to enter and leave grain trading whenever they wished. Private traders, the AMC, non-governmental organisations (NGOs), and private share companies entered the grain marketing temporarily or permanently. As can be seen from Figure 4.1, peasants can sell to either petty rural traders, assemblers, wholesalers, rural consumers or urban consumers. Urban consumers have also alternative channels. They can buy either directly from peasants, retailers, or *kebele* shops.

At local level, established wholesalers with long trading experience and trade arrangements have a greater influence as they have access to transport facilities and access to market information. They tend to monopolise grain purchases by advancing credit to peasants and traders at lower strata (Alemayehu 1994a). In general, the wholesalers determine the quantity of grain collected from the different parts of Arsi. They influence the quantity, the size and direction of flows, and stock levels to be maintained from season to season.

Brokers influence the size and direction of the flow of grains by providing information. Brokering is a difficult task that needs to have links with different parties in the marketing structure. As a result, the number of brokers is limited.

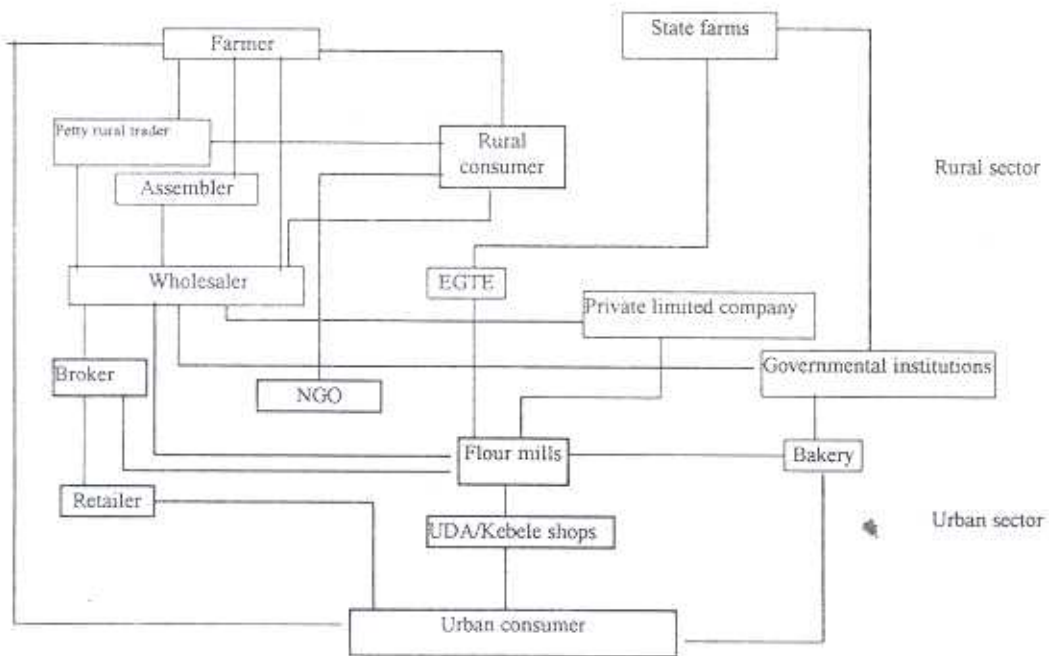
Retailers and collectors also influence grain markets. Both activities are more competitive, as most of the time licensing restrictions are not enforced. Demand for grain is usually high during the pay periods of civil servants and other waged employees, which is mainly at the end of each month. There is high competition among retailers and assemblers to sell more during the pay period. Unlike wholesalers, it is not obligatory for retailers to possess warehouses. As a result, the size of grain handled by retailers is not necessarily large.

Consumers are the final destination of grain produced by the peasants. They mainly buy from retailers, particularly in towns and terminal markets. One should, however, understand that they might not follow the complete channel through which grains are marketed. Consumers could directly buy from peasants or assemblers or retailers. The flow on figure 4.1 shows the major movements of grains, and is not a fixed set of transactions.

The change in the structure of the market resulted in the relatively free movement of grains from one place to another. Prices are determined by the supply and demand conditions of the market. The following section of the paper deals with the behaviour of the prices after the deregulation of the grain markets.

The behaviour of prices of food grains in response to marketing policies and changes in market structure is one of the performance criteria of a market. After the deregulation of grain markets, the volume of grains sold by peasant households increased and, at the same time, the price the peasants received also increased.

Figure 4.1. Domestic Grain Marketing Channels After Deregulation (1992)



Source: Alemayehu 1994a: 13.

A sample survey made in Arsi and Shewa reveals that peasant households increased their sales by about 150% of the quota level. The share of the price peasants received as a proportion of the price paid by the final consumers increased from 36% in 1980/81 to 57% in 1991/92 (Alemayehu 1994a). An attempt is made below to show the gross share of Arsi's peasants in the wholesale and final consumer price.

Two things can be read from Table 4.6: an almost continuous rise in the price of grains over time and a better share of producers in both wholesale and consumer prices compared to the time of quota. The increase in grain prices since liberalisation resulted in the share of peasants in the final price of their product going up, which might show that peasants benefited from liberalisation.

Table 4.6. Producer Prices, Wholesale Prices, and Consumer Prices for *Teff*, Wheat, and Barley and Percentage Share of Producer prices in Wholesale and Consumer Prices (1989/90-1993/94)

	1989/90		1990/91		1991/92		1992/93		1993/94		Average*	
	Price	%	Price	%	Price	%	Price	%	Price	%	Price	%
<i>Teff</i>												
Producers	69.00		111.10		130.67		140.00		na		113.20	
Wholesale	93.00	74.2	na	na	165.70	78.9	174.00	80.5	162.70	na	144.20	77.8
consumers	105.00	65.7	141.00	78.8	174.30	75.0	179.30	78.1	169.30	na	152.90	74.4
<i>Wheat</i>												
Producers	45.00		78.00		84.0		95.00		na		74.70	
Wholesale	48.50	92.8	na	na	108.50	77.4	115.00	82.6	120.50	na	90.70	84.3
consumers	54.50	82.6	85.00	91.8	115.00	73.0	120.00	79.2	126.00	na	96.50	81.6
<i>Barley</i>												
Producers	38.00		64.00		70.00		74.00		na		60.70	
Wholesale	44.00	86.4	na	na	91.00	76.9	95.50	77.5	98.00	na	76.80	80.3
consumers	47.00	80.9	79.00	81.0	99.50	70.4	101.00	73.3	103.50	na	82.50	76.4

Note: Prices are in Birr per quintal.

na = Data not available

\* Average is taken for the years 1989/90, 1991/92, and 1992/93 as some data are missing for the other years

Source: Computed from data obtained from AMC Annual Reports for free market prices and wholesale prices; CSA for producer prices.

The share of the peasants shown in Table 4.6 is somewhat less than that computed for the Addis Ababa retail price of *teff* in 1994. Kuma *et al.*, (1995) has found that the share of the producers price was 82.3% of the wholesale price and 78.83% of the final consumers price. Wholesalers constituted 15.14% of the consumers price while the rest, 7.03% of consumers price, was shared among collectors and retailers. In Arsi, on the average, peasants received 77.8%, 84.3% and 80.3% of the wholesale price for *teff*, wheat and barley respectively, and their share in the consumers price was 74.4%, 81.6% and 76.4% respectively, revealing that peasants benefited compared to the share they had before the reform. Their share of the price after the reform was better when compared to the pre-reform period. However, even if prices are increasing in gross terms, the share of peasants in consumer prices show a declining trend over time. The reason may be attributed to the share going to the wholesalers.

To know whether the price received by the traders is a reasonable mark-up, the following simple calculation is made. A basic economic assumption is that if net profit is greater than the cost, then, in neo-classical terms, excess profit is made; in a perfectly competitive market, trader's net profit should be equal to the cost of capital. Due to lack of detailed data needed for a calculation of the net benefit to traders, the

percentage share of each cost breakdown is taken from the survey made by Kuma *et al.* (1995) in 1994. Wholesalers are the focus of the survey, as they have more marketing facilities than other market participants. The trader's margin is divided into three parts: variable costs, fixed costs and traders profit. Variable costs constituted 64.53% <sup>4</sup> of the trader's average margin, while variable costs and traders profits constituted 7.1% <sup>5</sup> and 28.37%, respectively.

Transport cost covers the major part of the traders margin, followed by traders profit, *kella* and labour charges. Transport is done by trucks to terminal markets. The charge of transport is high during the post harvest period. *Kella* charges are charges that are paid on the main outlets to the terminal markets. In some areas, traders are charged excessive and arbitrary charges; refusal can lead to unloading the whole commodity in an inconvenient place (Kuma *et al.*, 1995).

Let us continue with a simple calculation of the traders margin. On Table 4.6, the average producer price for *teff*, wheat, and barley was 113.2, 74.7, and 60.7 *Birr* per quintal respectively while wholesale price for the respective grains was 144.2, 90.7, and 76.8 *Birr* per quintal. The trader's average gross margin per quintal then would be *Birr* 31 for *teff*, *Birr* 16 for wheat, and *Birr* 16.1 for barley. From this average traders gross margin, trader's profit, which, following the evidence of Kuma *et al.* (1995) noted above, is assumed to be 28.37% of the gross margin, would become 8.8 *Birr* per quintal for *teff*, 4.54 *Birr* per quintal for wheat, and 4.57 *Birr* per quintal for barley. To come up with the traders' net profit, we need to deduct other costs<sup>6</sup> borne by the owners. Traders must pay bank interest on money they have borrowed to purchase grain; the interest rate can be assumed to be the cost of capital. Traders must also pay a salary to themselves. If these deductions are made, the result would be their net income. Tax on income is then deducted from the net income to get net profit of the traders. The bank interest rate on capital invested was an official bank interest rate on money invested to buy grain, which was at 15% per annum. One *Birr* per quintal per turnover is assumed to be a salary for the owners. Deducting interest paid to the bank and owners' remuneration from trader's profit will give us the net income of the traders. Finally, traders are also expected to pay income tax, which was 40% of net income. Following this methodology, a crude estimate of trader's net profit and its share of the interest paid to the bank for *teff*, wheat and barley is given in Table, 4.7.

**Table 4.7. Excess of Net Profit Over Cost of Capital (1989/90, 1991/92, and 1992/93 Average).**

	Trader's profit	Bank interest (IR)	Owner's remuneration	Net income	Tax	Net profit	% of net profit in IR
<i>Teff</i>	8.80	1.67	1.0	6.13	2.46	3.67	219.80
Wheat	4.54	0.97	1.0	2.57	1.03	1.54	158.80
Barley	4.57	0.80	1.0	2.77	1.11	1.66	207.50

Source: Own computation based on data obtained from Table 4.6.

Table 4.7 reveals that the net profit on *teff*, wheat, and barley was 3.67, 1.54, and 1.66 *Birr* per quintal respectively. On the other hand, the interest paid by the wholesale trader for *teff*, wheat, and barley was 1.67, 0.97, and 0.80 *Birr* per quintal. When net profit is compared with the interest paid to the bank, the profit gained is greater. A *teff* and barley wholesaler gained more than twice the interest paid to the bank on capital, while wheat wholesaler enjoyed about 1.6 times more than the interest paid to the bank. The gain by the wholesalers in Arsi was even greater than that calculated from a survey made by Kuma et al (1995), which was 150%. Traders net profit at wholesale stage could be considered excessive in neo-classical terms, as the profits greatly exceeded interest. The gain may be attributed to the greater relative access of traders to market information, better transportation facilities, and access to credit. This made the wholesalers more influential in the grain marketing system after the reform.

Better off peasants and those who are closer to major roads and terminal markets have also benefited more from the reform than poor peasants and those living in remote areas (Kuma *et al.*, 1995; Alemayehu 1994a, 1994b; Wolday 1992). The better off peasants sell and loan grain and loan cash to poorer peasants at higher than market prices and interest rates, respectively. This might imply that the economic reform accentuated existing social differences among peasant producers by transferring resources to better off peasants. Peasants closer to major roads and markets incur lower transport costs and have alternative outlets to sell their grain than those living farther away (Table 4.8). Moreover, the prices of manufactured goods and services increase as we move away from the central market areas and main routes. This could suggest that peasants living in marginal and in inaccessible areas further lost out in the reform.

Table 4.8. Comparison of Producer Prices for Mixed Wheat in Different Markets of Arsi Before and After the Reform.

Market	Distance from Addis Ababa (kilometres)	Transport cost <i>Birr</i> per quintal	Producer price April 1985	Producer price April 1992
Etheya	150	6.00	31.00	105.00
Assella	175	7.00	31.00	908.0
Bekoji	235	10.00	31.00	970.0
Assassa	290	12.75	31.00	95.00

Source: Alemayehu, 1994b:93.

As noted earlier, fertilizer is the main farm input peasants are using. Although a rural consumer price index in Arsi is lacking, the fertilizer value-cost ratio (VCR) can be used to show some effects of the inter-sectoral terms of trade. The terms of trade can be measured by the VCR as it takes into account the price paid by the peasants to purchase fertilizer and the price they used to sell their grain. The VCR became higher after the reform than during the quota period (Annex 4.4). There was an increase in the ratio during the first two years of the reform, and then a declining trend. However, it is doubtful whether the terms of trade will continue in favour of the peasants if the price of fertilizer is further deregulated and its distribution privatized,

or if the prices of consumers goods continue to increase by in more remote rural areas.

In the preceding section, it was shown that many peasants benefited from liberalisation in terms of selling their produce at better prices. An increase in producer prices may or may not induce further grain production. The following section of the chapter explores the responsiveness of peasants to the increase in producer prices.

#### **4.2.3. Effects of Grain Prices on Peasant Production**

In peasant economics, some viewed the peasant's acceptance of new factors of production as dependent upon the profit generated, with due allowance for risk and uncertainty. Others argued that peasants in subsistence agriculture behave inversely on the assumption that peasant's expenses are limited. Peasants are not in a position to increase output beyond their consumption needs. Still others said that peasants in LDCs have several structural and institutional problems that hinder them in responding to price changes. Irrespective of these differing ideas, most LDCs now use market prices to induce a supply response.

Grain marketing in Ethiopia was liberalised in 1990. Free markets determine grain prices. It was assumed that this would benefit peasants by inducing them to increase their production. One way of assessing the response of the peasants is by measuring the price elasticity of supply for food grain output after the liberalisation of grain markets.

According to the view of the World Bank, a percentage change in the price of agricultural output will bring about a proportionately greater percentage change in agricultural output, and thus the price elasticity of supply for agricultural outputs is greater than one. In contrast, many structuralists argue that a percentage change in the price of agricultural output may bring about a proportionately smaller percentage change in output. As a result, the price elasticity of supply for agricultural output may be less than one (Akram-Lodhi 1996). Structuralists argue that if price elasticity of output is greater than one, it is only in the long run. Moreover, as Lipton (1991) argued, the level of statistical significance assigned to farm outputs with respect to price is very low, revealing that determinants of agricultural output supply are factors other than price.

The price elasticity of supply can be calculated using the following formula:

$$\epsilon_i = (\Delta Q_i / \Delta P_i) (P_i / Q_i)$$

Where  $Q_i$  is the quantity of crop  $i$ ;  $P_i$  is the price of crop  $i$ ; and  $\Delta$  is the change in  $Q$  or  $P$ .

We now attempt to compute the own-price elasticity of supply for *teff*, wheat and barley for the Arsi zone. For our estimation, prices are lagged by one year, on the assumption that high prices for this year will induce peasants to produce more next year. The time taken is the period after the liberalisation of the economy.

Table 4.9. Summary of Own-Price Elasticity of Supply for Output *Teff*, Wheat and Barley (1990/91-1993/94)

Type of crop	1990/91	1991/92	1992/93	1993/94	Average
<i>Teff</i>	1.32	0.02	-1.33	0.88	0.22
Wheat	-0.65	-0.51	3.66	0.61	0.78
Barley	-1.80	0.07	1.00	-0.87	-0.40

Source: Extracted from Annex 4.5.

Table 4.9 depicts that, on average, all three crops are inelastic with respect to price: *teff* and wheat have positive elasticity while barley shows a negative price elasticity. The increase in the price of these grains did not induce peasants to increase production in a proportionate manner. The result of this calculation do not support the World Bank's view that an increase in prices will result in more than a proportionate change in grain output. The result rather supports the view of structuralists, revealing that other non-price factors, have to be given due attention. Let us examine some of the non-price factors, other than natural calamities, that could have an influence on grain marketing and peasant production in Arsi.

#### 4.2.4. Rural Infrastructure and Information Transfer in Arsi

Rural infrastructure plays a decisive role not only in marketing food grains to consumers but also in facilitating the provision of productive inputs to the peasants. Rural infrastructure includes a variety of areas. However, not all of them have a direct linkage with marketing activities. Those which have include transport, storage facilities, credit and market information.

##### Transport

Transportation is vital for making goods and services available at the proper place and time. Inefficient transportation systems might result in less efficient marketing system. The major share of consumers' money might not reach the producers' pocket, leaving a larger share to market intermediaries. Based on this assumption, the Chilalo Agricultural Development Unit (CADU) and Arsi Agricultural Development Unit (ARDU) projects gave due attention to infrastructural development in facilitating the development of agriculture in Arsi.

CADU-ARDU's main infrastructural activities were the construction of rural roads to facilitate the technological innovation in the zone. Road construction programmes held by the project was on the basis of community participation, in which 75% of the

cost was covered by the local population (Teshome 1989), which was a heavy burden for the community to bear. The project tried to construct about 380 kilometres of RR50<sup>7</sup> of rural roads (Zelalem 1988). In most cases, the roads are not functioning all year round due to a lack of maintenance, though recently the government and the community are trying to rehabilitate some of them.

As of 1994, other than the 60 km of asphalt road that connects the zonal capital, Assella, with the main road to Addis, all weather roads are gravel surfaced and have a total length of 665 km. There are also poorly maintained feeder roads, having a total length of 188 kilometres, but serviceable only during the dry season. Though Arsi's road density (31 km. of road per 1000 sq. km.) (Oromia Planning and Economic Development Bureau 1996) is better than the national average (21 km. per 1000 sq. kilometres) (Mulat 1996), the demand for vehicles to transport produce is far greater than the supply. So, transportation facilities in the zone can be classified as poorly developed. As a result, the dominant way of transporting agricultural products to local markets and bringing farm inputs to the farm is by pack animals and human beings travelling long distances to market places. The quantities delivered by these means are small, and in most cases are not more than 100 kilograms at a time.

#### **Storage Facilities**

Peasants in the zone use traditional storage systems. They store their grains in special bins (*Gotera*) placed within the compound. The *gotera* is made of wood and reinforced and plastered with a mixture of mud, *teff* straw and cow dung. The cover or the roof of the *gotera* is mainly made of wood and covered by grass. Grains are also stored in *dibignit* (conical mud bins), a local store made of a mixture of soil and *teff* straw and placed inside the house. Furthermore, sacks are used for storing grains and kept in the house as *dibignit*.

These storage materials are exposed to deterioration by insect pests, rodents, wet conditions, etc. Studies show that losses from improper storage on the farm range between 20% in the drier areas to the extreme of 50% in the humid areas (see Gebre Egziabher *et al.*, 1989). In such a situation, it is not surprising if peasants dispose of their produce at lower prices during the harvest time. Even, traders have lower capacity to stock sufficient grain. A survey made in Arsi and Shewa shows that the average storage capacity of wholesale and retail traders was only 2.2 tonnes per trader (Alemayehu 1994b).

#### **Credit Services**

Most of the peasants in the zone get credit from local moneylenders. The only institution that renders credit to the peasants is the Development Bank of Ethiopia. There is only one branch in the zone, which is located in the zonal capital. The services mainly rendered are the provision of fertilizers and improved seeds in-kind.

Services are rendered through service co-operatives and it is difficult for individual peasants to have access to loans because of the collateral problem. There are also problems in advancing loans, as it requires the return of any previous loans by all members of the PA. The inaccessibility of the peasants to credit obliged them to rely on local moneylenders to settle their debts and accomplish their farming operations. Moreover, traders have a problem of working capital. According to a survey made in Arsi and Shoa, average working capital of wholesalers was *Birr* 38750 per trader. Like the peasants, the main sources of their capital was from informal credit sources (Alemayehu 1994b).

### Market Information

Market information is a necessary tool for both parties: the peasants and the traders. Peasants could have better bargaining power if they had access to the prices of the grains they sell. However, peasants have no up-to-date market information on prevailing grain prices in the market. The majority of them are aware of the prices after their arrival in the marketplace. They know the prices of grains by asking and observing other market participants. Others get information about previous market days and other market places by asking their neighbours who have been there. On the other hand, traders have relatively better access to market information. They have market information through telephone calls or messages delivered by truck drivers from the terminal markets. Peasants have no such access to market information.

## 5. SUMMARY AND CONCLUSIONS

In the 1980s, grain marketing received much government attention not only because of its importance in the national economy but also due to the alleged imperfections in the private marketing system. This led the state to intervene in the marketing and distribution of food grains. Active state participation started with the establishment of the AMC in 1976. The objective of the AMC was to encourage agricultural production and to supply food to the public. However, the grain marketing policy failed to provide incentives to peasants. Peasants were obliged to deliver more than the surplus they produced and indeed often they were unable to fulfil their minimum basic food requirements. Moreover, the situation became worse as the terms of trade turned against peasants. The state interest served by the AMC monopoly was to feed the urban population with subsidised food. The AMC, however, could not meet the demands of consumers. Most consumers fulfilled their demand by purchasing from parallel markets at higher prices.

The reaction of producers and traders to the enforcement of the policies adopted by the government were strong and negative. It ranged from refusing to sell to the AMC to the operation of parallel markets. The implementation of the policy measures,

which used coercion, had adverse effects on grain production, farm income, rural and urban food security, and private traders' incentives.

The AMC benefited neither the producers nor the consumers. The effort of intervention proved to be contrary to the stated objectives of encouraging agricultural production and an adequate distribution of food to the public. Additionally, government intervention in grain marketing and pricing prevented private traders from playing a sustained and complementary role in grain markets.

Since 1990, however, the grain marketing system has undergone major restructuring. The collapse of socialism in Eastern Europe, sustained donor pressure from outside, intense internal political pressure, and worsening economic conditions forced the military government to deregulate grain markets in 1990. The reform included the abolition of the delivery quota imposed on peasants and traders, the removal of the fixed grain pricing system, the lifting of restrictions on the inter-regional movement of grain, allowing the private sector into grain markets, and reducing the role of the public sector in the grain trade. The price subsidy paid by the government to the AMC was reduced after 1990 and totally cancelled in July 1992. After the reform, private sector involvement in grain markets has increased. Producer prices have also increased. The reform helped peasants to allocate their grain for consumption, seed, and to sell surplus freely in any market and at any time.

Despite the increase in the prices of food grains, the responsiveness was not proportionate as measured by the own-price elasticity of supply. The available data shows that peasants may have been constrained by non-price factors. The implication seems that a rise in the price of grains alone has not been sufficient to a rise in the production of grains. The state may therefore have to take on new responsibilities. Unless food grain marketing policy is accompanied by structural reform in the productive, transportation, and credit systems, continuous improvement in the efficiency of the food grain marketing might cease in the near future. The most important measures relating to grain production should include the provision of short term cash loans to peasants who want to buy inputs, farm oxen, and improve rural storage conditions. Furthermore, improving road infrastructure and investing in timely and widely disseminated market information are likely to improve the efficiency of grain markets. We have to learn from the experiences of many African countries: liberalisation is not simply a one-shot event but rather a process of market oriented development with continuous adjustment to new events.

From the discussion throughout the paper, there is a critical question that need to be settled. The statist period had a negative effect on peasant producers. On the other hand, the deregulation of grain markets had freed the market and producer prices had increased. However, the benefits for peasants are less than might have been expected because of information, storage, transport, and credit problems. Should the state therefore withdraw from the market?

The low capacity of the private sector in terms of working capital, storage facilities and transportation reveals that the private grain marketing system cannot manage a large-scale food crisis without the participation of the state. If we assume that there is high amount of surplus production in Arsi, private traders have very limited capacity to export to food deficit areas. Moreover, small traders without collateral had no access to formal credit and many of them are dependent on the EGTE for grain purchasing after the reform. The implication is that traders had no capacity to procure large amounts of grain using their own capital.

At present, the state's role in grain marketing is minimal. However, the state still has a capacity to intervene in marketing. The state should participate in grain marketing for emergency purposes. They often should facilitate price stabilisation through buffer stocks, buying when output is cheap (to protect the peasants) and selling when prices rise (to protect consumers). The EGTE should continue its links with the private sector by providing accurate market information and market training in market management like bookkeeping and quality control.

Infrastructural development is the main obstacle both for peasants and traders. Peasants and traders will not have a capacity, at least for the next few years, to handle infrastructural development. The state should promote the construction and improvement of roads, the provision of credit, the construction of storage facilities, the provision of market information, and the training of personnel in different disciplines. State participation is, therefore, a necessity for the development of private trade in agricultural markets.

#### NOTES

- <sup>1</sup> Peasants are "households which derive their livelihood mainly from agriculture, utilise mainly family labour in farm production, and are characterised by partial engagement in input and output markets which are often imperfect or incomplete" (Ellis, 1993: 13)
- <sup>2</sup> As there is no data for AMC selling and free market prices for Assella, the prices used refers to Addis Ababa prices.
- <sup>3</sup> Denotes SC sites before reform and traders' location after reform. The later is a collection centre that constituted a certain number of traders that used to supply grain to the AMC. The AMC used them as collection centres as there are no SCs that could supply grain to the AMC after reform.
- <sup>4</sup> Includes average road transport (44.16%), kella charges (8.07%), labour charges (7.2%), brokers fees (4.54%) and municipal charges (0.56%).
- <sup>5</sup> Includes storage rent (1.42%) and depreciation of sacks (5.68%).
- <sup>6</sup> Bank interest rate 15% per annum on capital invested; owners remuneration 1 Birr per quintal and tax on profit 40% of net income. The turn over time taken is to be a month (Kuma et al, 1995).
- <sup>7</sup> Rural roads which have a capacity of 50 traffic per day.

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Annex 4.1. Estimated Agricultural Marketable Surplus From the Peasant\* Sector (1993/94)

Year	Production ('000 quintals)					Balance				Marketable surplus of Peasant sector per rural population* (Quintal)
	Rural population (000s)	Peasant sector	state farm sector	Total Prod.	Food required (000qt.)	Losses & seed (000qt.)	Amount (000qt.)	% share of peasant sector		
a	b	c	d	e	f=2*b	g=0.2*e	h=e-(f+g)	i=(e-(0.2*c+(f+g)))/h*100	k=h/(0.01*a)/b	
1962/63	1569.8	5580.8	558.0	6138.8	3139.6	1227.8	1771.5	74.8	0.8	
1963/64	1604.8	4519.9	444.5	4964.4	3209.6	992.9	762.0	53.3	0.3	
1984/85	1640.6	3991.4	507.3	4498.7	3281.2	899.7	317.7	-27.7	-0.1	
1985/86	1677.2	4516.3	574.9	5091.2	3354.4	1018.2	718.6	36.0	0.2	
1986/87	1714.6	5615	442.3	5957.3	3429.2	1191.5	1336.7	73.5	0.6	
1987/88	1752.8	7123.0	306.3	7431.3	3505.6	1486.3	2439.4	89.9	1.3	
1988/89	1791.9	8450.5	542.3	8992.8	3583.8	1398.6	2010.5	78.4	0.9	
1989/90	1831.9	7585.8	494.9	8080.7	3663.8	1616.1	2800.7	85.9	1.3	
1990/91	1872.7	7006.8	421.6	7428.5	3745.4	1485.7	2197.4	84.6	1.0	
1991/92	1914.5	5616.8	286.1	5902.9	3829.0	1190.6	893.3	74.4	0.3	
1992/93	1957.2	7075.0	174.3	7249.3	3914.4	1449.9	1885.0	92.6	0.9	
1993/94	2000.8	7204.6	197.8	7402.4	4001.6	1480.5	1920.3	91.8	0.9	
<b>Averages</b>										
1962/63-1989	1698.0	5660.3	484.1	6144.4	3395.9	1228.9	1519.6	58.0	0.7	
1990/91-1993	1936.3	6725.8	270	6995.7	3872.6	1389.1	1724.0	85.8	0.8	

\* Includes the private peasant farm sub-sector and the co-operative peasant farm sub-sector.

Source: Own computation based on CSA, 1996.

: CSA, Agricultural Sample Survey: Results of Area, production and Yield, Statistical Bulletins of Various Years.

: Aral State Farms Development Enterprise Annual Reports.

: Aral Agricultural Development Department Annual Reports.

: Oromiya Planning and Economic Development Bureau (1996), Statistical Bulletins.

Annex 4.2. AMC Purchases by Crop Type From the Peasant\* Sector (1982/83-1993/94)

Crop type	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94
Total Purchases (quintals)	801297	480915	168337	537973	753914	672307	517212	305155	96619	116528	123605	2384
Percentage share of												
Cereals	88.20	87.17	71.44	82.52	92.74	96.15	90.36	96.40	88.23	95.20	100.00	100.00
Teff	1.30	0.90	0.23	0.58	0.26	0.01	0.32	0.03		8.43		
Barley	37.45	13.46	16.15	22.32	26.06	23.65	19.20	22.02	46.06	25.88		
Wheat	43.04	67.84	53.91	51.68	59.25	71.58	66.58	75.10	42.17	60.33	100.00	100.00
Other cereals	6.41	4.97	1.14	7.94	7.18	0.91	4.26	1.24	0.00	0.57		
Pulses	1.45	0.41	0.40	1.03	2.26	2.05	8.71	0.11	6.14	4.80		
Oil seeds	10.35	12.43	28.16	16.45	5.00	1.80	0.92	1.49	5.64			

\* After 1989/90, grains have been delivered by traders.

Source: APO, 1988 for the data from 1982/83 to 1985/87 and APO, 1995 for 1993/94  
Central Ethiopia AMC Annual Reports for the data from 1987/88 to 1992/93.

Annex 4.3. Arisi Average Free Market, Producer, and AMC Farm Gate Prices for Teff, Wheat, and Barley (Birr per Quintal) (1982/1993/94)

	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94
Free Market Prices												
Teff	NA	NA	NA	NA	73	81.33	91.67	105.00	141.00	174.33	179.33	169.30
Wheat	NA	NA	NA	NA	39.00	42.00	47.50	54.50	85.00	115.00	120.00	126.00
Barley	NA	NA	NA	NA	30.5	34.5	39.5	47	79	99.5	101	103.5
Producer prices												
Teff	48.15	93.52	65.51	69.20	48.96	77.00	59.00	69.00	111.10	130.70	140.00	NA
Wheat	38.14	74.72	69.42	40.04	32.53	37.00	41.00	45.00	78.00	84.00	95.00	NA
Barley	25.35	50.05	53.02	35.5	27.27	30.00	34.00	38.00	64.00	70.00	74.00	NA
AMC fixed farm gate												
Prices												
Teff	39.00	39.00	39.00	39.00	39.00	42.00	42.00	42.00				
Wheat	31.00	31.00	31.00	31.00	31.00	33.00	33.00	33.00				
Barley	27.00	27.00	27.00	27.00	27.00	29.00	29.00	29.00				

NA = Data Not Available.

Source: AMC Annual Reports for Free Market Prices and AMC Fixed Farm Gate Prices. CSA various publications for producers price.

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**Annex 4.4. Fertilizer Value-Cost Ratios for Tef, Wheat, and Barley (1993/94)**

	82/83	83/84	84/85	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93	93/94
<b>Tef</b>												
Incremental yield (q/ha)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
AMC FG Price (Birrr/q)	39	39.0	39.0	39.0	39.0	42.0	42.0	42.0	111.1	130.67	140	154.8
Additional value obtained (Birr)	140.4	140.4	140.4	140.4	140.4	151.2	151.2	151.2	400	407.4	504	557.3
Fertilizer Price (Birrr/q)	81.4	81.4	81.4	79.8	79.8	81.4	96.6	88.8	91	107.1	149.7	143.3
Value-cost ratio	1.7	1.7	1.7	1.8	1.8	1.9	1.6	1.7	4.4	4.4	3.4	3.9
<b>Wheat</b>												
Incremental yield (q/ha)	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
AMC FG price (Birrr/q)	31	31.0	31.0	31.0	31.0	33.0	33.0	33.0	78.0	84.0	95.0	111.3
Additional value obtained (Birr)	167.4	167.4	167.4	167.4	167.4	178.2	178.2	178.2	421.2	453.6	513	601
Fertilizer Price (Birrr/q)	81.4	81.4	81.4	79.8	79.8	81.4	96.6	88.8	91	107.1	149.7	143.3
Value-cost ratio	2.1	2.1	2.1	2.1	2.1	2.2	1.8	2	4.6	4.2	3.4	4.2
<b>Barley</b>												
Incremental yield (q/ha)	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
AMC FG price (Birrr/q)	27	27	27	27	27	29	29	29	64	70	74	86.6
Additional value obtained (Birr)	145.8	145.8	145.8	145.8	145.8	156.6	156.6	156.6	345.6	378	399.6	467.6
Fertilizer price (Birrr/q)	81.4	81.4	81.4	79.8	81.4	81.4	88.8	96.6	91	107.1	149.7	143.3
Value-cost ratio	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.6	3.8	3.5	2.7	3.3

Notes: AMC Prices are only up to 1989/90; the Rest are Producer Prices at Market Prices.

Sources: Own Computation From Data Obtained From Minimum Package Programme 2 (1982); Evaluation Report to Revise fertilizer Price for Incremental Yield  
; AMC Annual Reports, CSA.

Annex 4.5. Estimates of the Price Elasticity of Output for Teff, Wheat, and Barley (1989/90-1993/94)

	Qt	$\Delta Qt$	$(Qt + Qt - 1) / 2$	$\% \Delta Qt$	Pt	$\Delta Pt$	$(Pt + Pt - 1) / 2$	$\% \Delta Pt$	$\% \Delta Qt / \% \Delta Pt$
Teff					59				
1989/90	299.78						64	15.63	1.32
1990/91	368.92	69.14	334.35	20.68	10	42.1	90.05	46.75	0.02
1991/92	372.05	3.13	370.49	0.84	111.1	130.67	120.89	16.19	-1.33
1992/93	299.81	-72.24	335.93	-21.5	140	9.33	135.34	6.89	0.88
1993/94	318.46	18.65	309.14	6.03					0.22
Average Wheat					41				
1989/90	2432.53				45	4	43	9.3	-0.65
1990/91	2289.55	-142.98	2361.04	-6.06	78	33	61.5	53.66	-0.51
1991/92	1736.68	-550.87	2014.12	-27.35	84	6	81	7.41	3.66
1992/93	2284.29	545.61	2011.49	27.12	95	11	89.5	12.29	0.61
1993/94	2462.98	178.69	2373.64	7.53					0.78
Average Barley					34				
1989/90	2740.75				38	4	35	11.11	-1.8
1990/91	2242.89	-497.86	2491.82	-19.98	64	26	51	50.98	0.07
1991/92	2327.99	85.1	2285.44	3.72	70	6	67	8.96	1
1992/93	2546.94	218.95	2437.47	8.98	74	4	72	5.56	-0.87
1993/94	2427.13	-119.81	2487.04	-4.82					-0.4
Average									

Source: Own Computation From Data Obtained From Annex 4.1.

: CSA, Agricultural Sample Survey: Results of Area, Production and Yield, Statistical Bulletins of Various Years

: Arsi Agricultural Development Department Annual Reports.

: Oromiya Planning and Economic Development Bureau (1996), Statistical Bulletin.

: Annex 4.3.

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