

ETHIOPIAN JOURNAL OF ECONOMICS

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THE STATE AND PERFORMANCE OF PUBLIC ENTERPRISES IN ETHIOPIA

Eshete Tadesse

Abstract: This paper analyzes and reviews the major problems of Public Enterprises (PEs) in Ethiopia with particular focus during the 1974 - 1991 period. Their objectives, role, significance and management structures, have been surveyed. At the same time, their financial performance and financial positions have been analyzed and reviewed in view of identifying their internal and external constraints. In view of improving the PEs' financial performance and efficiency, in resource allocation and utilization, the paper concludes that the PEs in Ethiopia have to be restructured in such a way that the root causes of their poor performance or inadequate performance are properly addressed.

I. INTRODUCTION

The aim and scope of this paper are to diagnose the problems of Public Enterprises (PEs) in Ethiopia, which could be categorized under the following three periods : before the 1974 revolution, during the 1974-1991, and from 1991 to date. It attempts to focus mainly on the financial performance and problems of PEs during 1974-1991 period in Ethiopia. To this effect, the major problems of PEs with particular reference to Ethiopia are made. In the process, the rationale and objectives for which PEs were established, their organizational structures as well as their revenue contributions to GDP, employment and the generation of surplus to the central treasury have been highlighted. Second, the policy environment of PEs, particularly regarding financial, employment and wage policies and the privileged, access PEs had to factor inputs and foreign exchange has been reviewed. Third, based on a ten year sectoral trend analysis of PEs showing losses and profits have been analyzed. This analysis is based on provisional actual financial plan and on audited account figures. Fourth, based on a ten year trend analysis of PEs' contributions to public sector deficits are shown by investigating the PEs capital investment, net savings and financing conditions. Fifth, an attempt has been made to highlight the general weakness of PEs' financial position, using debt/equity ratios and net income/total assets ratios. Finally, a modest attempt has been made to identify and categorize the basic causes of the poor performance of PEs, under internal and external factors.

II. THE STATE AND PERFORMANCE OF PUBLIC ENTERPRISES IN ETHIOPIA

2.1 Background

2.1.1 The Nature of PEs

The term Public Enterprise (PE) is used here broadly to mean all industrial, commercial, agricultural or service rendering undertaking and financial intermediaries controlled to some extent by the government. PEs are expected to "earn their revenue from the sale of goods and services, as self accounting, and have a separate legal identity" [13, p.2].

The circumstances and characteristics under which PEs operate appear varied. They exist both in a market economy and a centrally planned economy with various degrees of monopoly power or competitiveness. In whatever type of economy or mixtures of markets and central controls PEs operate, their problems in trying to assure efficiency are similar. Conflicting objectives, insufficient PE autonomy, inadequate measures for judging performance, lack of incentives linked to performance, and bureaucratic rather than commercial management styles - these problems arise in all sectors and have prompted attempts at reform in socialist and market economies alike [12].

Increased PE efficiency requires not only internal improvement but also solving the wider problems of PE - government relations. The reasons for creation of PEs particularly in Africa, are associated with historical, economic, social and political considerations. Some PEs were inherited from the colonial era. Others were based on political ideologies. In others the apparent absence of the indigenous private sector has led governments to create PEs to bridge the "entrepreneurial gap". In addition, politicians were attracted to the creation of PEs to use them as patronage mechanism to distribute jobs to their loyal supporters [13]. Review of PEs' performance in Sub-Saharan Africa leads to the conclusion that PEs' performance has been poor. Their earnings or rate of returns were generally low with losses "Far from contributing to government revenues, African PEs have more regularly become a burden on already strained budgets. Few PEs generate revenue sufficient to cover operating costs, depreciation and financial charges, a good percentage do not cover operating costs alone" [12, p.ix].

Often, closer and careful investigation of profitable enterprises, reveal that distorted prices, direct subsidies, hidden transfers, preferential interest rates and a host of other factors have had an adverse impact on resource allocation and utilization.

The major determinants of PEs' poor performance in general, can be accounted for by the unclear and contradictory objectives the excessive political interference in issues and decisions that should be taken by enterprise managers or Boards of Directors. Second, the

excessive rotation of management due to the shortage of competent managers or the lack of incentives to retain them negatively affects PEs' performance. Third, the incompatibility of civil service procedures with commercial operations ultimately results in inefficiencies and heavy losses. Fourth, inappropriate investment decisions, that emanate from lack and non-existence of economic and feasibility studies are another major contributor to PEs' poor performance [12, p.22]. Fifth, the inadequate nature of PEs' capital structure and the inappropriate price policies, have resulted in under capitalization, with high debt/equity ratios. This shortage of funds is aggravated further when large amounts of working capital are tied up in inventories and especially receivables. Finally, the common existence of poor reporting systems, weak accounting methods and weak or non-professional Boards of Directors have adverse impact on PEs' performance.

2.1.2 The Rationale and Objectives of Establishing PEs

Ethiopian PEs exhibit all the problems noted above. Before the 1974 revolution, PEs had existed in the Ethiopian economy for many years. The rationale and the objective of creating PEs, were to stimulate and strengthen the weak national private sector of the economy and serve as a solution to the "entrepreneurial gap". During the 1974-1991 period, scientific socialism became the official approach to economic development of Ethiopia. The rationale and the objectives of the PEs were based on the nationalization and control of the major means of production, exchange and distribution in the economy. Consequently, more than 150 selected manufacturing and financial establishments and private business concerns were nationalized. In addition, land and extra houses were nationalized.

In view of regulating and coordinating the activities and financial operations of PEs, Proclamation No. 163/1979 came into effect on June 30/1978. PEs were expected to operate on a self-sufficiency basis and at the same time serve as an important source of resource mobilization. Each PE was expected to pay 5% of its capital and reserve as "Capital Charge"¹. In addition it has to surrender the "residual surplus"² to the treasury.

2.1.3 Organizational Structure

In spite of the fact that the designation of PEs had not been finalized the total number of state-owned PEs had reached 235 at the end of the EFY 1981. The number of Public Corporations could be estimated to be 41, while that of Public Enterprises and financial agencies were expected to be 190 and 4 respectively. Variations in the number of PEs' were caused by the mergers of PEs and the differences in the numbers of the accounting units³ that existed in certain PEs at the time.

All PEs and public agencies were under the direct or indirect jurisdiction of the relevant ministries while financial agencies are under the direct supervision of the National Bank of Ethiopia. Their organizational structure generally consisted of supervising ministries,

authorities or executive boards of management.

Under each ministry, a number of corporations and enterprises, with legal personality, had been established. The duties and responsibilities of corporations were generally to coordinate and control the operations of public enterprises. Public corporations were established, in the major economic sectors, i.e, industry, agriculture, trade etc., to organize direct and supervise the operations and activities of public enterprises. The functions of a corporation manager were distinct from that of an enterprise manager. The general manager of a corporation was appointed by the government upon the recommendation of the minister concerned. The Manager was responsible for the administration and operation of the general manager of an enterprise subject to the general directives of the minister. The general manager of the enterprise, on the other hand, was appointed by the minister upon the recommendation of the corporation manager. Thus, the enterprise Manager was responsible for the proper execution of the day to day activities and administrative matters of the enterprise subject to the general directives of the corporation manager. The general manager of a PE is supposedly responsible for the proper operation and administration of the enterprise. However, Labor Proclamation No. 64/1975 established that the workers had the right to participate in management. This implied that the power and autonomy of a general manager of a corporation or an enterprise to employ, administer, promote, transfer, and dismiss personnel and fix their salaries and allowances were limited. Moreover, the existence of the several layers of authorities in the organizational structures of PEs' i.e Workers' Control Committees, plants, enterprises, corporations, and supervising authorities (ministries), reduced the autonomy of management as regards decisions on production, prices and investments.

According to the new economic policy of the Transitional Government of Ethiopia, however, the organizational and management structure of a public enterprise consist of a general manager, a management board and a supervising authority. Proclamation No 25/1992 attempts to clarify the financial responsibility and accountability of each PE management structure. Corporations have been abolished. The supervising authority, based on the proposals of the board, shall determine the amount of state dividend to be paid to the government from the net profits of PEs in each financial year. In addition, it approves the investment plan of the enterprise submitted to it by the board. At the same time, an enterprise shall establish and maintain annually a legal reserve fund of 5 percent of its net profit, until such reserve fund equals 20 percent of the capital of the enterprise⁴.

2.1.4 PEs' Contribution to GDP and Employment

PEs contributed about 20-25 percent of GDP in 1982/83 [14, p.6]. In the manufacturing sector, PEs accounted for almost 98 percent of the total manufacturing industries' output and employed 94 percent of the total employment in the manufacturing industries in the EFY 1982. In trade, 80 percent of imports and 70 percent of exports were handled by PEs. As far as domestic trade is concerned, 30 percent of the agricultural products and 60 percent of the

manufactured goods in whole sale trade, were accounted for by PEs [17], such as The Agricultural Marketing Corporation (AMC) and the Ethiopian Domestic Distribution Corporation (EDDC). In the Construction sector, PEs accounted for well over 71 percent of the total services provided in the construction industry. In the transport industry, PEs contributed for some 16 percent of GDP [18]. In terms of investment, it has been estimated that the share of PEs rose to 9.9% of GDP in the EFY 1981 from its previous level of 5.0 percent in the EFY 1973. Thus, from 1972 to 1981, PEs' capital expenditure averaged 37.5 percent of the total government investment or represented an average of 6.9 percent of GDP. (See Table 1). As regards employment, PEs engaged over 218,785 employees at the end of the EFY 1982 (see Annex 5).

During the 1970-1981 period, the capital charge and residual surplus collected by the Ministry of Finance amounted to Birr 4,428.9 million as compared with the planned figure of Birr 5,317.2 million of the plan figures.[14, p.5]. This implies that only 83.3 percent of the financial obligations of PEs which was supposed to have been collected was actually collected. The uncollected portion of 16.7 percent (Birr 888.3 million) could partially reveal the effects of the financial constraints encountered by PEs in the last two decades.

The total revenue (profit tax, sales and transaction taxes, capital charge and residual (surplus) generated by PEs, during the period 1972-1981 averaged 56.3 percent of the total average domestic revenue or 13.4 percent of GDP (see Table 1). In the same period, the total amount of capital charge and residual surplus estimated to be collected averaged 20.8% of the total domestic revenue or 4.8 percent of GDP. During the period 1970-1981, however, the actual amount of collection averaged 15.0 percent of the total domestic revenue or 4.4 percent of GDP. The total profit tax of PEs increased from Birr 205.3 million in 1972 to Birr 375.2 million in 1981, indicating an average growth rate of 6.2% per annum. The average profit tax generated during 1972-1981 amounted to Birr 319.8 Million, which accounted for 13.1 percent of the total domestic revenue.

In conclusion, the role and significance of PEs in resource mobilization clearly reveal that during the period 1972-1981 capital charge and residual surplus generated by PEs averaged about 20.8 percent of the total domestic revenue. Furthermore, the contribution of PEs to GDP in terms of output, investment and employment clearly reflected the significant role of PEs in the economic development of Ethiopia.

2.3 Policy Environment

2.3.1 PEs Access to Resources

During the 1972 - 1983 period , the PEs had a specially privileged position in obtaining factor inputs such as raw materials, credit and a relatively easy access to foreign exchange. State farms in particular, had a relatively favorable access to foreign exchange for the purchase

of fertilizer and machinery to ensure a constant supply of raw materials such as cotton, wheat, oil seeds, hides & skins etc. Similarly, the PEs in other sectors of the economy had a favorable access to foreign exchange to purchase, raw materials, spare parts and machinery.

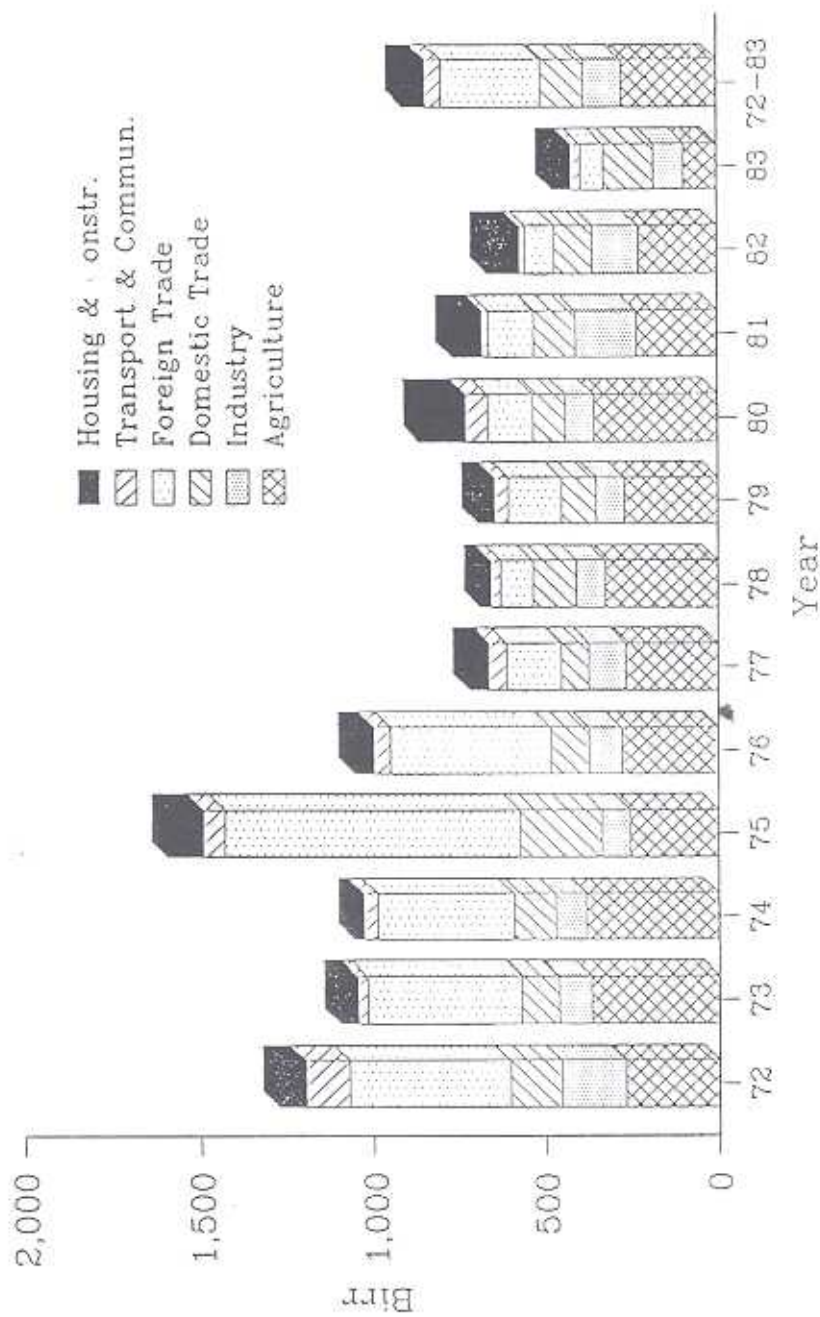
Table I
PEs' Capital Charge, Residual Surplus, Tax Revenue and Capital
Investment (in Birr millions)

	EFY 1972	EFY 1981	Average 1972-1982	Growth Rate %
<u>CAPITAL CHARGE & RES. SUR.</u>				
PEs' Capital Charge	61.9	104.8	80.3	5.4
PEs' Residual Surplus	258.2	498.9	414.0	6.8
TOTAL	319.1	603.7	494.2	6.6
<u>PEs' Tax Revenue</u>				
Income Tax	205.3	375.2	319.9	6.2
Turnover & Tran. Tax	387.4	172.0	313.4	(8.0)
EXCISE TAX	121.9	457.1	245.9	14.1
TOTAL	714.6	1,004.3	879.2	3.4
<u>CAPITAL INVESTMENT</u>				
Central Government	443.3	1,743.8	1,179.8	14.7
Public Enterprise	427.0	1,237.9	706.1	11.2
TOTAL	890.3	2,981.7	1,937.5	13.1
<u>MEMORANDUM ITEMS</u>				
TOTAL PE REVENUE	1,033.7	1,608.0	1,373.3	4.5
-As a % of Tot. Dom. Rev.	65.9%	42.0%	56.3%	
-As a % GDP	12.2%	12.9%	13.4%	
<u>CAPITAL CHARGE & RES. SUR.</u>				
-As a % of Tot. Dom. Rev.	31.9%	60.3%	49.2%	6.6
-As a % of GDP	20.4%	15.8%	20.8%	
	3.8%	4.8%	4.8%	
<u>PEs' CAPITAL EXPENDITURE</u>				
-As a % of Total Govt. Inv.	427.0	1,237.9%	706.1	11.2
-As a % of GDP	49.1%	41.5%	37.5%	
	5.0	9.9%	6.9%	

Source: MOPED and MOF

As regards access to bank credits, the PEs particularly in state farms, had a very favourable position, with relatively lower rates of interest. Credit policy was used as an active tool in the utilization of resources. Consequently, as shown in Figure 1 and Annex 6, the average proportionate share of loans granted and disbursed to the PEs was more than 60% of the total loans granted and disbursed during the 1972-1983 period. In addition, the total outstanding loans as of the end of June 30, 1983 stood at Birr 3,876.7 million out of which

FIGURE 1
HISTORICAL TREND OF LOANS GRANTED & DISBURSED BY SECTORS
 (in Birr millions)



SOURCES: VARIOUS FINANCIAL PLAN DOCUMENTS, MOPED FILES

Birr 3,046.7 million or 78.6 percent were those of PEs [8]. The shares of cooperatives, and private enterprises and individuals were 7.7 percent and 13.3 percent respectively. Out of the total outstanding loans of Birr 3,046.7 million, the shares of PEs in agriculture, industry, foreign trade and housing and construction sectors of the economy were 56.5 percent, 16.8 percent, 11.2 percent and 9.6 percent respectively.

2.3.2 Financial Policy

After paying 50 percent of profit tax, the PEs are required, by proclamation No.163/1979, to transfer 90 percent of the retained earnings in the form of capital charge and residual surplus to the treasury. The remaining 10 percent is retained by the enterprise into the general reserve until such reserve fund equals 30 percent of the state capital of the PE and 60% for Financial Agencies (FAs). The ultimate result of this financial policy is that while the profit making enterprises retain a very small proportion of their profit; the losing ones would simply face the chronic problem of the shortage of working capital and decline in their equity. In addition, since the proclamation does not specify clearly from what source the PEs ought to service the principal amount of their long term debt; proper servicing of PEs bank loans and their financial performance were adversely affected. The proclamation provided that in any PE that had incurred losses for three consecutive years, the financial affairs and the viability of the PEs concerned will be investigated and prompt remedial measures including dissolution would be taken. However, this was not implemented.

2.3.3 Price Policy

The issuance of Public Notice No. 18 of 1975, had resulted in a general price freeze of all locally manufactured goods. Since then, the government had started to control the prices of a wide range of products, especially of basic consumer goods that were in short supply. The rationale for this policy was the governments' desire to keep price within the reach of the population.

Since 1980, the task of fixing prices had been transferred to the ONCCP, and the PEs were not permitted to make automatic price adjustments even if costs escalate. Upward price adjustments were permitted when unavoidable increases in costs were believed to lead to losses. Thus, ex-factory prices were fixed on the basis of cost plus a "reasonable margin" of profit. There were often lengthy delays between the enterprises' request for a price increase and the government's ruling on the request.

In marketing PEs' output, eg. agricultural products, state farms sold their products to government institutions or other PEs by government directives. The PEs' credit sales to government agencies, ministries or other PEs have often resulted in the interlocking of debts and shortage of working capital, which ultimately increased the interest cost. As of the end of

Since 30, 1973 a total debt of Birr 689.6 million existed among PEs and between PEs and other agencies of the government [8]. For instance, the Ministry of Defence owed a total of Birr 150 million out of which Birr 34.5 million, Birr 87.2 million, and Birr 16.2 million, were the sales of PEs in industry, transport and communication and construction, respectively. It is important to note that the price of the major exportable commodities such as coffee, hides and skins and oil seeds were determined in the world market.

2.3.4 Employment and Wage Policy

Wages and salaries had in principle been frozen since the labor proclamation order of 1975 except for the lower income groups. In the civil service, only those employees who earned between Birr 50 and Birr 636 a month, were eligible for salary increases. In the PEs, on the other hand, only those employees earning between Birr 65 and Birr 650 a month are eligible for salary increases. The salary of the workers earning more than Birr 650 a month had also been frozen since 1975. Undoubtedly this had a negative impact on the technical efficiency of PEs.

In view of enhancing the effective utilization of factor inputs to produce the maximum output, the government introduced a wage policy reform program in 1979/80, with the ultimate objective of linking incentives to the PEs' performance. Wage rates were revised annually according to the following formula: If production, productivity per worker and profits of a PE exceed that of the previous year workers were entitled to a salary increase of 5% and 1 percent respectively, on additive basis.

This incentive system has its own limitation since increase in output did not pay attention to quality and improvement in technical efficiency. Consequently, misutilization of resources could not be ruled out in the process.

III. THE FINANCIAL PERFORMANCE OF THE PEs

The performance of PEs is usually measured by reviewing their profitability or efficiency. It must be noted, however, that the measurement and evaluation of PEs' performance indicators require careful construction and interpretation due to the following inherent practical limitations. First any indicator of enterprise performance should be consistent with the objectives of the enterprise. Second all the achievements of PEs goals and objectives cannot be quantified and expressed in terms of financial profits alone. Third, the use of perfect competition model as a basis for deriving performance indicators may not reflect reality, due to the fact that pricing and investment criteria are often influenced by income distribution, and the structural and behavioral characteristics of markets. This section attempts to review the profitability or efficiency of PEs in Ethiopia.

3.1 The Relation of Efficiency to Profits

The performance measurement criteria of Public Enterprises (PEs) are generally efficiency or book profits. The concept of efficiency refers to the amount that is derived from a given input. Efficiency is therefore increased if output rises without an increase in inputs or when output outstrips the increase in inputs. It refers to the output performance of all the productive factors employed in the enterprise. Profit on the other hand, represents the reward to those that provide the enterprise with capital. The enterprises' efficiency can be measured by its book profit in addition interest paid, plus taxes paid fewer subsidies received. This implies that the measures of efficiency and the measures of book profit, although closely related, are not identical.

In the case of a losing enterprise, the measurement of efficiency, shows that the enterprises' output has less value than the inputs required to produce the output. Thus, in spite of the fact that efficiency and book profit could deviate considerably from each another; book profit or loss analysis could throw sufficient light on the financial performance of PEs in Ethiopia.

3.2 Profitability

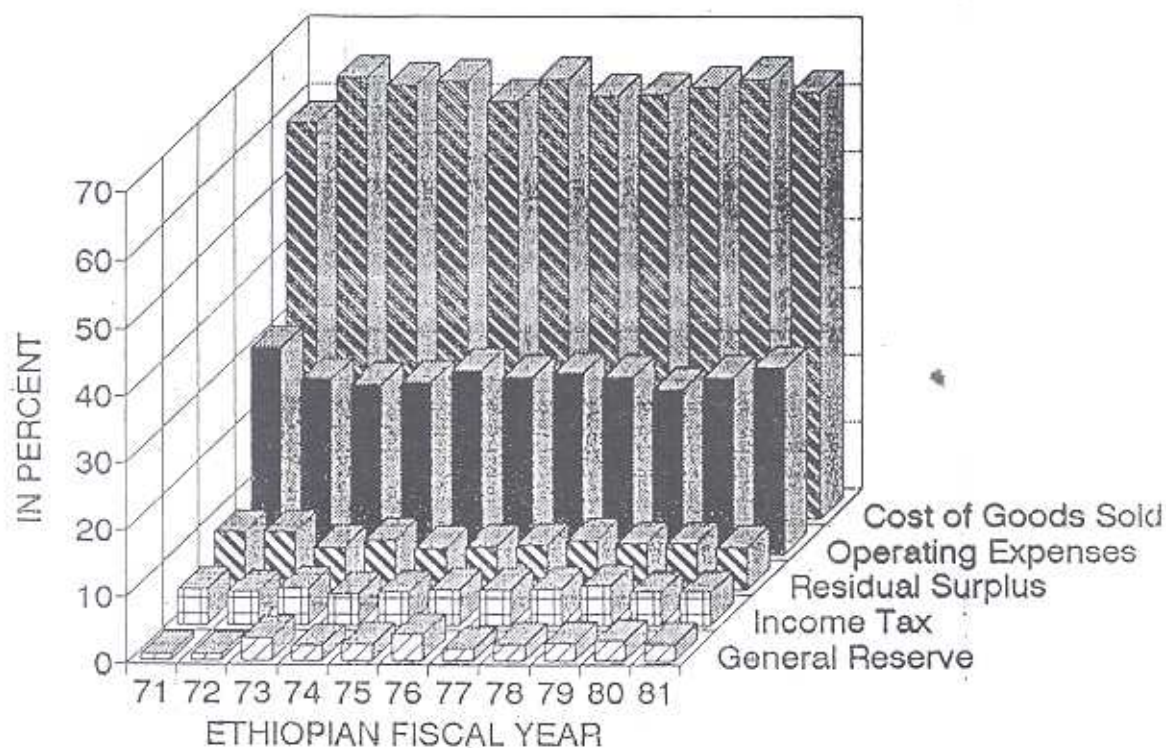
The total consolidated profit and loss statements of PEs during the 1972-1981 period, reveal that the average yearly total net sales amounted to Birr 6,156.4 million (see Table 2). Net sales increased from its level of Birr 4,152.2 million in 1972 to Birr 7,732.3 million in 1981, indicating an annual growth rate of 6.4 percent. In the same period, the cost of goods sold showed a yearly growth rate of 6.1 Percent. It represented, on average 64.8 percent of the total net sales (see Figure 2 and Annex).

As a result, the average gross margin of profit, the average net income before income tax, and income tax represented only 36.6 percent and 14.2 percent and 5.2 percent of the total net sales respectively. This could be mainly attributed to the increased cost of production and the unfavorable private business environment which resulted in a greater growth rate in the cost of goods sold than net sales especially in the productive sectors (i.e. agriculture and industry).

As regards stock position, the highest average stock inventory as a percentage of cost goods sold recorded 48.6 percent in hotels and tourism and 31.4 percent in the health sector. In the same period, domestic trade and foreign trade registered 25.6 percent and 23.7 percent average stock inventory as a percentage of cost goods sold respectively. Thus, PEs engaged in the operation of duty free shops, the supply of medicine and the import and export of goods required a minimum of stock holding for at least six months. This would ultimately result in financial squeeze and higher interest cost and possible inefficiency in the allocation and utilization of capital.

Figure 2

CONSOLIDATED PROFIT AND LOSS STATEMENT (In Percent)



3.2.1 Sectoral Distribution of losses

According to the provisional actual plan figures, during the 1971-1981 period, the aggregated total loss of the PEs amounted to Birr 1,625.3 million [14, p.9]. Out of this, Birr 949.3 million was the loss in the agricultural sector, representing 58.4 percent of the total loss. In the same period, the total loss in state farms was Birr 840.7 million, in manufacturing industry Birr 321.9 million, and in mining Birr 219.9 million, which was 51.7, 19.8 and 13.5 percent of the total loss respectively.

During the period 1971-1981, on average 31 percent of PEs incurred a yearly loss of Birr 147.6 million. PEs in the agricultural sector averaged a yearly loss of Birr 86.3 million. At the end of 1981, however, 87 PEs that represented 37 percent of the total number of PEs registered Birr 236.5 million loss.

As regards the sectoral distribution, the PEs in the agricultural sector registered Birr 147.3 million loss out of which Birr 126.8 million and Birr 20.5 million was that of 18 PEs in state farms and 5 PEs in coffee and tea respectively. on the basis of audited account figures, as shown in Annex 2, the numbers of audited PEs making losses increased from 44 in 1975 to 65 in 1980, indicating an annual growth rate of 6.7 percent. This represented that on average 28.1 percent of the total audited numbers of PEs were annually registering an average of a total loss amount of Birr 100.6 million. The average annual loss of the PEs in the agricultural, industrial and mining and energy sectors were Birr 41.6 million, Birr 26.9 million and Birr 15.6 million respectively. Thus, PEs in the above mentioned sectors alone accounted for 83.4 percent of the total yearly average loss. State farms alone, on the average represented 34.6 percent of the total annual loss amount while that of manufacturing industry accounted for 26.6 percent. The average annual share of the PEs both in the mining and energy sectors represented for 15.5 percent of the total loss amount. The comparative study of the audited and accounts before auditing reveals that based on the provisional actual plan figures, 31 percent of the total PEs incurred a yearly loss amount of Birr 147.6 million while the audited accounts showed that only 28.1 percent of the total PEs registered an average total loss amount of Birr 100.6 million. This difference is caused by the minimum time lag of 3-5 years required to complete the closing and auditing of the books of accounts of the PEs particularly in the agricultural sector. For instance, as of February 1985, in the agricultural sector alone, a total of 29 PEs⁵ have not completed and finalized the audited accounts for the period ending Sene 30, 1980.

Table 2
Sectoral Distribution of PEs' Profitability During the
EFY (1972-1981) (in Birr millions)

Sectors:	Av. Stock Inventory as % of Cost of Goods Sold	Av. Cost of Goods Sold	Growth Rate %	Av. Net Sales	Growth Rate %	Net Profit Before Tax	Average Profit/Net Sales %
1. Agriculture		371.1	12.5	43.8	11.4	25.1	5.7
- State Farms	12.8	306.8	9.0	358.8	8.2	15.6	4.3
- Coffee & Tea	12.1	11.1	16.6	13.6	15.7	6.5	47.8
- Agriculture	20.5	53.2	42.0	65.4	33.0	3.0	4.6
2. INDUSTRY	13.0	1,462.4	6.2	1,814.1	4.8	192.8	10.6
3. DOMESTIC TRADE	25.6	1,082.6	5.5	1,205.6	5.6	53.9	4.5
4. FOREIGN TRADE	23.7	382.8	-2.3	457.9	-3.1	21.4	4.7
5. HOTELS & TOURISM	48.6	25.5	10.6	60.8	9.3	6.0	9.9
6. TRANSPORT & COMMU	27.6	57.7	18.3	846.6	9.8	91.7	10.8
7. HOUSING & CONST.	1.7	047.4	20.0	56.1	22.0	1.5	2.7
8. MINES & ENERGY	6.0	465.3	2.6	629.2	10.3	112.8	17.9
9. URBAN DEVELOPMENT	13.1	3.0	40.0	110.5	3.9	47.5	43.0
10. BANKING		212.0	-11.0	501.2	3.7	310.1	61.9
11. HEALTH	31.4	72.0	10.4	89.8	10.7	N.A	8.0
12. OTHERS		13.1	11.2	26.7	9.4	13.3	N.A
TOTAL		3,984.2	6.15%	6,156.4	6.4	876.1	14.2

Source: Annual Financial Plan Report of SOEs (1972-1982)

3.2.2 Sectoral Distribution of Profits

The numbers of PEs showing net profits before income tax, in numbers and amounts and in their sectoral distribution is given in Annex 3. During the 1975 - 1980 period, the numbers of audited PEs making net profits, before income tax, increased from 122 in 1975 to 156 in 1980, indicating on average an annual growth rate of 4.2 percent. In the same period, the amount of net profit increased from Birr 599.5 million in 1975 to Birr 1129.8 million in 1980, showing a yearly growth rate of 11.1 percent. Thus, on average, 71.9 percent of PEs were registering about Birr 876.1 million profit per annum.

The profit making PEs were largely in the service sectors. Financial institutions generated a yearly average net profit of Birr 272 million, while transport and communications

registered Birr 120.9 million. The average yearly share of PEs in domestic trade was Birr 69.9 million while that of mines and energy was Birr 142.9 million respectively. In short, PEs in the above mentioned service sectors accounted for 70.2 percent of the profit. The total share of PEs net profit in industry and agriculture accounted for Birr 182.6 million and Birr 31.5 million respectively. Thus PEs in the productive sectors of the economy, i.e in agriculture and industry, registered only 24.8 percent of the yearly average profit, due to the constantly increasing level of the cost of production and overhead cost and the low level of productivity, particularly in agriculture as will be shown later.

3.2.3 The Ratio of Net Profits Before Tax to Total Income

The consolidated profit and loss statements for the operations of public enterprises together with financial agencies is shown in Figure 2, Table 3 and Annex 1.

As shown in Table 3, the total net sales together with other non-operating income increased from Birr 4,188.4 million in 1972 to 7,851.4 in 1981, indicating an average annual growth rate of 6.5 percent. In the same period, the total amount of cost of goods sold increased from its level of Birr 2,709.8 million in 1972 to Birr 4,876.1 million in 1981, showing an average annual growth rate of 6 percent. However, for the same period, the selling and distribution expenses and the administrative and general expenses grew at an average annual growth rate of 6.9 percent and average annual growth rate of 6.2 percent, in current prices. The ratio of net profits before tax to net sales (profit margin) for these years declined from 13.9% in 1972 to 13.6% in 1981 indicating an average annual growth rate of -0.3 percent. The sectoral distribution is shown in Annex 7.

The profit margins have been consistently higher in the service rendering enterprises than the ones in the industrial and agricultural sectors. During the 1972-1981 period, the average ratio of net profits before tax to total net sales averaged 61.9 percent in the financial institutions, 43.2 percent in National Lottery Administration, 43.0 percent in urban development, 24.5 percent in the audit service corporation and 17.9 percent in mines and energy. The average shares in the other service rendering enterprises were 10.8 percent in transport and communications, 9.9% in Hotels and tourism, 8.0 percent in health 4.7 percent in foreign trade, and 4.5 percent in domestic trade.

The average share of PEs' in industry was 10.6 percent while those in Agriculture were only 5.7 percent. Furthermore during the 1972 - 1981 period, the historical trend of the ratio of profits to sales of PEs registered an average annual decline of 7 percent in industry and 14 percent in agriculture indicating the increasing cost of production and well as the rising trend of administrative and operating expenses, especially in the industrial and agricultural sectors of the economy.

The major factors contributing to the increased cost of production and the rise in the total operating expenses are the PEs' inadequate level of capital structures, the unclear and dual objectives⁶ of creating the PEs the existence of basic technological problems and the unnecessary delays in implementing the remedial measures stipulated in the proclamation No 163/1979.

In many instances, PEs were allowed to be established and operated, without finalizing the proper feasibility studies and providing them with the appropriate level of capital required. For instance, the origin and growth of the presently existing state farms, goes back to the nationalization of rural lands. Few commercial farms⁷ established as share companies and several privately owned small farms⁸ were nationalized and organized to operate as state farms with borrowed funds. In many instances, their accounting systems were diverse and their assets and liabilities were not adequately specified. Furthermore, the locations of the farms were scattered, escalating the farm management overhead cost and increasing the cost of production. In addition, the delay in implementing the remedial measures for the constantly loss making PEs, has aggravated weakness in their financial positions. In the "Regulation and Coordination of Public Financial Operations Proclamation No 163/1979" Article 9, provides that the PEs or financial Agencies⁹ that have incurred loss for three consecutive years or used up more than 50 percent of their state capital must be liquidated. However, most PEs particularly in Agriculture, have registered total liabilities that exceeded their total net assets and still continued operations.

3.2.4 Financial Rate of Return (FRR)

Another measure of financial profitability is the financial rate of return (FRR). The FRR can be defined as the ratio of operating surplus to book value of fixed assets, where operating surplus is defined as value added at factor cost less wages and salaries, employees' benefit and depreciation.

As Table 4 indicates, the average FRR for the public manufacturing industries was 28.4% during 1976-1980 period and then declined to 22 percent and 10 percent in 1981 and 1982 respectively. This increasing trend in the decline of the financial rate of return of the manufacturing enterprises has created the shortage of financial resources in most PEs that made them increasingly dependent on short-term and long-term loans from the banking system. Their financial structures grew weaker over time. The debt-equity ratio has been steadily increasing for the sector. This is partly due to the government's financial policy that leaves enterprises with a generally small amount of money at their disposal.

Table 3
PEs' Ratio of Net Profit/Total Income During 1972-1981 (In Birr Millions)

EFY	Total Sales & Other Incomes	Cost of Goods Sold	Selling & Distrib. Exp.	Adm. & General Exp.	Net Profit Before Tax	Profit/Total Income %
1972	4,188.4	2,709.8	475.0	600.8	584.1	13.9
1973	5,296.6	3,312.5	602.7	700.0	788.9	14.9
1974	5,591.5	3,594.0	607.1	807.2	713.4	12.8
1975	5,451.5	3,314.4	663.6	793.5	752.7	13.9
1976	6,070.8	3,897.7	738.6	834.2	790.7	13.0
1977	5,103.3	3,645.7	609.2	951.6	819.6	16.1
1978	6,937.4	4,294.0	698.1	1,092.9	977.6	16.1
1979	7,830.5	4,907.9	775.5	1,106.4	1,183.6	15.1
1980	8,276.2	5,290.1	948.1	1,185.0	1,080.0	13.0
1981	7,851.5	4,876.1	923.4	1,218.1	1,070.3	13.6
AVERAGE	6,156.4	3,984.2	611.8	929.0	876.1	14.0
GROWTH RATE	6.5%	6.0%	6.9%	7.3%	6.2%	-0.3

Sources: Various Financial Plan Documents; MOPED Files

3.3 Efficiency in Resource Allocation and Utilization

To measure and evaluate enterprise performance the most widely used efficiency concepts include: technical efficiency, allocative efficiency (price efficiency), economic efficiency (productive efficiency), and "x-efficiency". Technical efficiency is defined as the maximum attainable level of output for a given level of production inputs and alternative levels of technologies [3, p.66]. The concept of allocative efficiency (price efficiency), on the other hand, refers only to the adjustment of inputs and outputs to reflect relative prices and the technological levels of production. It relates to the welfare gains obtainable by removing monopoly power and the restriction of output. Thus, it measures the skill in achieving the best combination of the different inputs and their relative prices [11, p.321]. The term economic efficiency (productive efficiency) refers both to technical and allocative efficiency. Therefore, "the simultaneous achievement of both efficiencies provides the sufficient condition to ensure economic efficiency" [3, p.66].

Productive efficiency and x- efficiency are also distinct from each other. As already indicated productive efficiency can be defined in terms of its two main components: technical efficiency and factor price efficiency. The term "x-efficiency" was developed initially by Leibenstein. The determinants of "x-efficiency" level include the role of competitive market pressures and the interpersonal relations within firms which promote work motivation.

3.3.1 A Measure of Economic Efficiency

Inter-industry and inter enterprise comparisons of PE's can not be complete unless some measure of efficiency in resource allocation is applied to standardize the comparison. This measure is referred to as the Domestic Resource Cost (DRC) coefficient, which is the ratio of domestic factor cost in social prices to domestic value added (revenue minus tradeable inputs) in social prices [16, p.127]. It assesses the domestic resource cost of saving foreign exchange by the production of import-competing goods or earning foreign exchange by the production of export. As shown in table 5, the enterprises which appear to be efficient include Babile Mineral Water ,Ethiopian Foot Wear, Awash Tannery, Ethio-plastic. The inefficient enterprises include those with high positive DRC coefficients (eg Addis Garment and Ethiopian Rubber and Canvas shoe with actual long-run DRC of 14.73 and 14.03, respectively.) and some others with negative domestic value added, eg., Combolcha Textiles - 4.24 DRC. The negative value indicates that the value of the commodity produced is even less than the value of the tradeable inputs utilized.

Table 4
Financial Rate of Return (FRR) of Public Manufacturing Enterprises¹⁸ by Corporations

CORPORATION	Average	1988/89	1989/90
		1981	1982
Ethiopian Food	34.2	21	14
Ethiopian Sugar	21.8	49	49
Ethiopian Beverages	28.4	24	12
National Tobacco & Matches	149.6	172	210
National Textiles	11.2	(5)	(2)
National Leather & Shoes	68	103	54
Ethiopian Printing	198.0	154	90
National Chemical	129.6	70	67
Ethiopian Cement	(8.6)	3	1
National metal works	50.2	11	(10)
Share Companies	102.2	3	12
Average	28.4	22	10

Source: MOI, 1992. Statistical Bulletin, Volume VIII.

A comparison of financial and economic profitability shows some conflicting different combinations results such as government firms that are financially profitable but allocatively inefficient and vice-versa. The reason for the divergence is the difference between market prices and economic prices of inputs and outputs [16, p.128]. The governments' pricing and trade policies are therefore, the main factors causing the difference. These DRC measures become more useful and meaningful when considered against the background and reality of policy environment in which the PEs operated. As already indicated, price controls in Ethiopia have been used to control the production and distribution costs of the PEs. In general, prices were determined on the basis of cost plus some margins of profit that were based on actual costs that may involve inefficiency. The effect of the governments' trade policy on the PEs is seen from its impact on input and output prices through taxes and subsidies. For instance: from coffee surcharge imposed on coffee during the period 1974-1983 Birr 118.6 million was collected by the treasury, resulting in a cumulative loss of Birr 184.3 million [2].

In the agricultural sector, an attempt has also been made to calculate the DRC ratio of producing coffee, wheat, maize, sorghum and cotton in the state farms and the peasant sector. In this case, DRC is defined as the economic value of domestic resources used to generate or save a unit of net foreign exchange. The study indicated that in state farms the DRC ratio [18, p.110] for cotton was 0.78, for wheat - 6.93 and for maize 1.78. The DRC for cotton was less than one that means that it was socially profitable for maize and wheat. In the peasant sector, however, the DRC ratios for coffee was 0.31, for wheat 0.60, and maize 0.41 indicating their social profitability.

3.3.2 Technical Efficiency

Efficiency in the allocation of primary inputs like labor, capital and other tangible materials is referred to as technical efficiency [4, p.392]. As shown in Table 7, the average yield per hectare for such crops as corn, wheat and barley were technically greater in state farms than in private peasant farms due to the increased use of labor, capital and improved agricultural inputs. However, unless the increase in yield is related to cost, this may not indicate the effective utilization of factor inputs to produce the maximum output with minimum cost. The motivational pressure or incentives of labor and management and the competitive environment in which PEs operate play a crucial role in minimizing cost and maximizing output. In addition, the organizational structure of PEs, particularly in state farms had been highly centralized. Consequently, decisions on new investments, expansions and improvements were made at the top, leaving little or no room for managements' autonomy and discretion. Furthermore, the existence of idle labor, and the labor law that adversely influenced managements' decisions on wages, placement, promotion, and transfer of workers ultimately resulted in increased cost and low productivity of labor. The capital structure of the PEs, were generally inadequate. Thus, the PEs often resorted to heavy bank borrowing to meet their investment and working capital requirements thereby increasing interest expenses. As a result, state farms had over 60 percent of their expenses represented by overhead and administrative

costs that made them unprofitable.

Furthermore, as indicated in Table 6, the differentiated cost of capital had led to increased inefficiency because, the cost of capital did not reflect the economic cost or economic benefits of capital.

There were different bank rates for different sectors and borrowers (as shown in Table 6) Cooperatives and public enterprises enjoyed lower rates of interest than private enterprises or individuals.

In the coffee sector, as shown in Table 8, the ten year average yield in state farms was 3.8 qtls per hectare while that of private coffee farms covered by the coffee improvement project (CIP) registered 6.5 qtls per hectare during the 1978-1983 period [5, p.6]. Assuming that all the other factors remain the same, the difference in yield may be accounted for by the incentives of labor and management and the coffee management activities such as "weed control, application of fertilizer, irrigation, application of insecticide, spacing, pruning, stumping, spraying, hoeing, mulching, slashing etc. [5, p.29].

As shown in Table 8, the average break - even yield of State-Owned coffee farms was 6.5 qtls per hectare, indicating economic inefficiency that resulted in a total loss amount of Birr 183.9 million during 1974-1983 period. This was the result of the actual yield of lower than the required break - even yield, on the farms, in the new Teppi and Arbagugu coffee farms.

Among the major factors explaining the losses in State Farms including the coffee farms, were the increasing overhead and administrative costs, the lack of appropriate technical and economic feasibility studies; the inability to use machinery at full capacity; idle labor and the bureaucracy that caused delays in decision making. Among the external factors affecting the profitability and efficiency of government controlled cereals and coffee farms include: the policy environment, such as that of price, wages, trade and tax; and the increasing cost of imported raw materials such as chemicals, fertilizers; and the unpredictable weather.

Table 5
Efficiency Measurement for Selected Industrial PEs'

Enterprises	1983		1988(1981)		1989(1982)	
	DRC	Financial Profitability in Birr '000	DRC Long-Run	Financial Profitability in birr '000	DRC	Financial Profitability in Birr '000
1. Babile Mineral Water	.89	-337	NA	-58	0.78	-104
2. Awash Winery	1.20	2458	0.42	3,371	0.72	385
3. Addis Ababa Glass works	4.37	748	NA	-997	1.54	-997
4. Combolcha Textiles	NA	NA	NA	-2189	-4.24	NA
5. Dire Dawa Textiles	1.37	5494	0.63	-2522	0.59	-2552
6. Ethiopian Fibre Factory	-2.94	1743	1.16	-1202	0.78	-2589
7. Ethiopian Foot Wear	.84	219	1.03	-297	0.63	-297
8. Awash Tannery	.36	1904	0.33	7086	0.47	3402
9. Addis Garment	NA	NA	14.73	-135	1.70	-135
10. Ethiopian Rubber & Canvas	NA	NA	14.03	2063	2.22	866
11. Ethio plastic	.83	5245	0.23	1107	0.32	2322
12. Ethiopian Iron & Steel	2.87	584	0.75	-2064	0.55	198
13. Kalitie Steel	2.68	5063	0.17	237	0.36	237
14. Ethiopian Pulp & paper	-4.34	2441	NA	-1994	NA	-858
No. of Sample Surveys	19 Industrial PEs		35 Industrial PE's		41 Industrial PE's	

Source: - World Bank 1989 Ethiopia Industrial Sector Review Report No. 7831-ET
 - World Bank 1990 Revision of Production Incentives for exports & the domestic market by Road Falvey and Chris Jones.
 - Audited Relevant Reports.

Table 6
Lending Interest Rates (In Percent Per Annum) July 1, 1986-October 1,1992

	Cooperatives	Public Enterprises	Private Enterprises & Individuals
- Agriculture	5	6	7
- Industry	6	8	9
- Domestic Trade	6	8	9-5
- Import Trade	5-6	6-8	7-9.5
- Hotels & Tourism	6	8	9
- Construction	6	8	9
- Housing			
(1) purchase	6	6	8
(2) Construction	4.5	4.5	7
- Personal Loans	-	-	10

Source: National Bank of Ethiopia

Table 7
Average Yield Per Hectare in Qtls. 1979/80-1985/1986

	State Farms	Private Farms
Corn	24.7	15.6
Wheat	14.2	10.7
Barely	16.5	11.7
Cotton	15-24	N.A

Source: Ministry of State Farms. Towards a Strategy for the Development of State farms in Ethiopia. Vol. 1. 1986

Table 8
Actual and Breakeven Yield of State-Owned Coffee Farms

	1974-1983 Av. Productivity Actual Yield Qtls./ Hectare	1974-1983 Break Even Yield Qtls./Hectare	Total Profit (Loss) (in millions)
Limmu Coffee	4.9	6.8	(32.9)
Bebeka Coffee	3.9	12.8	(138.2)
Old Teppi	2.6	7.1	(12.8)
New Teppi	4.5	3.3	0.1
Arbagugu	2.9	2.7	0.3
Average	3.8	6.5	183.5

Source: Ministry of State Farms: Coffee Development Corporation; Financial Review 1974-1983. Vol.5,1984

3.3.3 The PEs' Contribution to Public Sector Deficits

Total public sector deficit increased from Birr 439.2 million in 1972 to Birr 2,045 million in 1981. As a percentage of GDP, this represented an increase from 5.2 percent in 1972 to 16.4 percent in 1981. The average share of the central government deficit was Birr 915.4 million while that of PEs' was Birr 706.1 million. In the same period, total PEs' deficit as a percentage of GDP increased from 0.6 percent in 1972 to 4.3 percent in 1981.

During the 1972-1981 period, the total Capital Expenditure required by PEs for new investments, replacements or expansions increased from Birr 427.0 million in 1972 to Birr 1,237.9 million in 1981 indicating an 11.2 percent annual growth rate. At the same time, the total net savings of PEs rose from Birr 120.7 million in 1972 to Birr 196.2 million in 1981, indicating an annual growth rate of only 5.0 percent.

In addition, analysis of the financing of the PEs reveal that net savings of the PEs' as a percentage of GDP rose from its level of 1.4 percent in 1972 to 1.6 percent in 1981. In the same period, the PEs' capital expenditure as a percentage of GDP increased from 5 percent in 1972 to 9.9 percent in 1981. This indicates that the PEs contributed a much smaller share to national savings, (a fifth of their investments).

These large proportions of PEs' deficits, have their root causes from the inadequate PEs' savings performance which was mainly due to the operating inefficiency or inadequate cost recovery. Thus, the PEs' deficits had been financed by substantial net outflows from

government borrowing, from the domestic banking system and foreign borrowing. As a result, at the end of 1980, the percentage share of the total outstanding loans of PEs was 37 percent while that of the central government represented 53 percent.

The foregoing analysis of PEs' financial performance and efficiency in resource allocation and utilization, reveal that the PEs have failed to generate internally a sufficient amount of working capital or adequate amounts of savings for investment [12, p.23]. Particularly, in the productive sectors of the economy, such as agriculture and industry the PEs have demonstrated a limited capacity to finance new, expansion or replacement investments. Most of them have moved from being a burden on the budget to a state of being a burden on the domestic banking systems:

IV. THE FINANCIAL POSITION OF PEs

In addition to the investigation of the financial profitability of PEs, the analysis of Debt/Equity ratios as well as the Net Income /Total Assets ratios, could reveal the financial strength of PEs in the different sectors of the economy.

4.1 Debt/Equity Ratios¹⁰

The debt/equity ratio, which is the ratio between total liabilities and the net worth of enterprises varied significantly among the PEs in different sectors of the economy (see Annex 4). In general, 53 percent of the total number of PEs, have registered debt/equity ratio levels in excess of 80 percent. Twenty two percent of the total number of PEs have shown debt/equity ratios over and above 100 percent, indicating a weakening of the financial position of the PEs. The PEs, particularly in agriculture and industry had accumulated large debts. State farms, and the manufacturing sub - sectors (food, textiles and beverage) have faced serious working capital shortages and problems to service their accumulated debt.

4.2 Net Income/Total Asset

The ratio of net income/total assets shows that about fifty percent of the total number of PEs, had negative returns or returns less than one percent (see Annex 4). In general, about 30 percent of the PEs had returns over six percent, pointing out the general weaknesses of their financial positions. In the manufacturing sector, most of the PEs in food, textiles, beverage and metal work sub-sectors, were loss makers. In state farms, during the 1972-1981 period, the total net sales and the other non-operating incomes, increased at an annual growth rate of 8.4 percent while the cost of goods and services sold and the total operating expenses increased at an annual growth rate of 9.1 percent and 10.4 percent respectively. Consequently, the financial position of state farms became so weak that at the end of June 30,1983, state farms that had accumulated a deficit of Birr 1,112.5 million and registered a negative net equity

position of Birr 695.5 million (see Annex 5). Similarly the PEs in the coffee and tea sectors had used up their capital of Birr 68.6 million and accumulated Birr 150.5 million deficit and registered a negative net equity position of Birr 82.0 million at the end of EFY 1983. As a result, the total liabilities of state farms, at the end of EFY 1983, stood at Birr 2,190.7 million while their total assets were only Birr 1,495.2 million, indicating a debt/equity ratio of 1.46 percent. At the same time, the PEs in the coffee and tea sector had a total liability of Birr 69.9 million with a corresponding level of total assets value of Birr 61.7 million showing a debt/equity ratio of 1.13 percent.

In the manufacturing industry, the total net sales together with the other non-operating income, increased from Birr 1,402.4 million in 1972 to Birr 2,226.2 million in 1981, giving an annual growth rate of 4.7 percent. At the same time, the cost of goods sold and the total operating expenses increased at annual growth rate of 6.2 percent and 5.3 percent respectively. Consequently, the profitability ratio of profits before tax/total sales declined from 14.7 percent in 1972, to 7.4% in 1981. This annual decline of 7 percent in the profitability ratio can be mainly accounted for by the increasing cost of raw materials and the continuously rising trend of the total operating expenses. In addition, as a result of old age and frequent breakdown of machinery and the search for spare parts, that were scarce, often resulted in a waste of production time, increasing the cost of goods sold and the total operating expenses.

As a result, the financial position of the PEs in industry revealed that the percentage of net equity to capital was on the average 87.1 percent at the end of EFY 1982 (see Annex 5). However, in the cement, food, leather and shoe sub-sectors, the amounts of negative capital and reserve substantially increased, resulting in the percentage of net equity to capital of 8.3 percent, 68.4 percent and 69.9 percent respectively. In the same period, the debt/equity ratio in industry was 85:15 indicating a heavy debt burden. In the cement sub-sector, the debt/equity ratio registered 175 : 75, indicating that the total asset of the PEs was not in a position to cover their total liabilities. In food and the textile sub-sectors, the debt/equity ratios showed 91:9 and 88:12 implying that out of the total equities 91 and 88 percent respectively, were covered by debt. In the construction and foreign trade sectors, the debt/equity ratios indicated 127: -27 and 97:3 indicating an accumulated deficit of Birr 57.1 million and Birr 3.9 million in the respective sectors.

V. THE BASIC CAUSES OF THE POOR PERFORMANCE

The major causes of the poor financial performance and inefficient use of resources of the PEs during the last two decades, may be categorized under internal and external factors.

5.1 Internal Factors

i. As mentioned earlier, the existence of the several layers of authorities in the organizational structure of the PEs i.e, workers' control committee, plants, enterprises, corporations, and

supervising authorities (ministries) etc, seriously curtailed the autonomy of management particularly as regards decisions on employment, production, prices and investments. The organizational structure of state farms involved the corporations, enterprises, state farms/plants. Fourteen enterprises managed and controlled farm operations. The enterprises in turn were managed and controlled by seven corporations that were horizontally differentiated on the basis of specialization¹¹ and location. The multiplication of the number of the management levels caused delays in communication and decision making of the operational units required that managers given more authority to make decisions on the spot.

ii. Poor initial investment decisions, particularly in agriculture made many PEs loss makers. New investments and expansions in agriculture were in most cases made arbitrarily, without proper technical and economic feasibility studies eg. in Bebeke, Sheneka, Wajiffo and Wama state farms.

iii. Lack of clearly specified objectives in some of the PEs had resulted in creating unnecessary conflicts and confusions in their performance evaluation. For instance, PEs such as the Agricultural Marketing Corporation (AMC), the Ethiopian Domestic Distribution Corporation (EDDC), Office of the Rented Houses Administration etc. had combined administrative and regulatory functions with that of the maximization of profit. Therefore, the absence of a systematic assessment of the social costs and benefits of non commercial operations had an adverse impact on scarce resource utilization.

iv. As a result of old age and frequent break-down of machinery in industry and other sectors, considerable production time was wasted in the search for spare parts and the repair of old machines. In addition, the inability to use machinery at their full capacity, particularly in agriculture and industry had adversely affected production and encouraged the inefficient utilization of machinery. For instance, it had been reported that the capacity utilization of machinery in Bebeke farm was 60% while that of Limmu was 50%, due to the shortage of spare parts and other maintenance problems.

v. The problem of scarcity of capital for most of the PEs was very common. There were instances, where some of the PEs started operation with only bank loans¹².

vi. Most the PEs, especially in state farms were faced with the chronic financial constraint in servicing their heavy debt burden. For instance, at the end of the EFY 1983 state farms registered an outstanding loan totaling of Birr 1,711.4 million out of which 90.4% (Birr 1,546.3 million) was loan in arrears.

vii. The increasing cost of special services, such as the maintenance and construction of clinics, health centers, transportation, in - farm and off - farm roads, community centers, schools etc. for farm labourers had increased the financial burdens of state farms and negatively affected their profitability. Thus, it had been reported that the social costs (excluding salaries

and wages) in Bebekka represented Birr 20 million and in Limmu 7 million.

viii. The inappropriate management of human resources in PEs, particularly in the state farms and industry were quite common. Some state farms had experienced, not only the presence of unutilized and idle labor force, but also shortage of skilled and qualified personnel, at the level of the operating units. In most cases, very young and inexperienced managers managed the state farms. For instance, it has been reported that in the North-West and Southern Agricultural Development corporations, over 80% of the managers at the farm level were below 31 years of age [6].

ix. Since the PEs do not close their books of accounts on time, the timely evaluation of the PEs' financial performance will not be possible. For instance, in state farms most of the audited accounts for preceding years had not been finalized to date. Furthermore, even if the audited reports were available, the weaknesses or shortcomings indicated in the audit findings were not properly dealt with. In several instances, management did not make any effort in correcting the weakness indicated in the audit findings.

x. The absence of a standard and uniform system in the use and handling of assets of the PEs and the lack of uniform administrative and control procedures in the treatment of depreciation, sales etc. of the PEs had undoubtedly encouraged wastage of scarce resources, particularly in agriculture and trade.

5.2. External Factors

i. The capital structure of the PEs in general tends to be under capitalized. High debt/equity ratios were very common. In many instances the absence of clearly defined objectives and performance criterion of the PEs was not uncommon. Moreover, the amount of capital given to the PEs was not commensurate with the duties and responsibilities assigned to them.

ii. The increasing cost of raw materials and machinery together with the absence of appropriate price and investment policies had affected the profitability and financial position of the PEs. A rise in the cost of production and its poor relation with the selling price had increased the number of loss making PEs and the amount of loss. In addition, the insufficient amount of the general reserve fund provided to the PEs, and the delay in investment decisions of the PEs, had become bottlenecks in the production and distribution of goods and services.

iii. The lack of foreign currency to the import materials, spare parts and machinery had resulted in the under-utilization of the existing capacities of the PEs.

iv. The delays in the timely correction of some apparent weakness in the "Regulation and Coordination of Public Financial Operations Proclamation No. 163/1979" and the lack of its proper implementation had adversely affected the PEs financial performance. The proclamation

failed to specify clearly from what source the PEs could adequately service the principal amount of their long-term debt. More-over, the remedial measures stipulated in the proclamation such as the dissolution of chronically loss making PEs were not properly implemented.

v. The institutional and legal environment in which the general managers of the PEs operated was such that excessive political interference frequently occurred in issues and decisions that should from an efficiency standpoint be taken by an enterprise manager or board of directors. Since the Workers' Control Committees, Ministries or Corporations frequently interfered in the day to day management decisions, such as who should be hired or fired, to whom contracts should be awarded, who should receive credit etc. management autonomy was seriously curtailed [12, p.35]. Moreover, the accountability and responsibility of the PE managers were not specified. Furthermore, the scarcity of experienced managers was an acute problem. This problem was even aggravated when the appointment policies in the PEs often followed political loyalty rather than competence and operational skills. This definitely resulted in over-staffing which had a negative impact on the PEs' performance.

vi. Failures of the PEs to settle their sales or purchases transactions in time amongst themselves had often resulted in the interlocking of debt and negatively affected their operations. Furthermore, contrary to the existing financial rules and regulations a good number of the PEs had been allowed to operate without having a legal personality¹³. This implied that a considerable amount of public resources had been exposed to illegal handling and mismanagement.

VI. CONCLUSION

The analysis and review of the PEs' financial performance, allocative, technical and economic efficiency, show that an increase in financial profit does not necessarily mean that a PE is more efficient. On the other hand, a PE that incurs losses may not necessarily be inefficient in the utilization of resources. This leads us to the conclusion that in a policy environment where inter-sectoral and inter-enterprise competition does not exist and input and output prices of the PEs are largely determined by monopoly or monopsony powers, inefficiency in resource allocation and the misutilization of resources can not be ruled out. In fact, the productive sectors of the economy i.e. agriculture and industry together generate only 24.8% of the total yearly average PEs net profit, while the share of the service sectors accounted for 70.2%. As far as losses are concerned, the share of the agricultural sector represented 58.4 percent while that of manufacturing industry was 26.6 percent of the total PEs' loss amount. Thus, the service sectors became relatively profitable at the expense of the productive sectors. For instance, financial institutions alone represented 31.5 percent of the yearly average net profit. Furthermore, analysis of the PEs' capital investments, savings and financing, during the last two decades, reveals that PEs' contribution to national savings is only a fifth of their investments.

As regards the PEs' financial position, 22 percent of the total numbers of the PEs have shown debt/equity ratios over and above 100 percent indicating a weakening of their financial strength. In addition, the review and analysis of the ratio of net income to total assets reveal that about 50 percent of the total number of the PEs had registered negative returns or returns less than one percent. This weakening of the PEs' financial position is particularly conspicuous in the agricultural and industrial sectors. The causes of this inadequate financial performance and inefficient use of resources have been already identified and categorized under internal and external factors.

In view of improving the PEs' performance and efficiency, in resource allocation and utilization, the PEs in Ethiopia have to be restructured in such a way that the root causes of poor or inadequate performance are properly addressed.

In this regard, the restructuring program of the PEs has started. In accordance to the New Economic Policy, "Proclamation No. 25/1992" has been issued to ensure management autonomy and accountability. Corporations, in the industrial sector, are in the process of being phased out. "Labor Proclamation No. 42/1993", came into effect last January, in view of defining the rights and obligations of both workers and employers. In short, the privatization process appears to be underway. However, it remains to be seen, whether these measures alone, important as they are, will provide all the solutions to the above mentioned problems of the PEs' and guarantee the successful implementation of the privatization program of PEs in Ethiopia.

Notes

1. Capital Charge: The money annually payable to the government by State Owned Enterprises (SOEs) which is 5% of the state capital plus the general reserve fund. (Proclamation No. 163/1979).
2. Residual Surplus: The remainder after allowing 50% taxes of gross profit less 10%/30% of the balance for the general reserve fund until such funds reach a level of 30% of the state capital for Public Enterprise's and 60% for the Financial Agencies. (Proclamation No. 163.1979).
3. The Ethiopian Import and Export Corporation, The Ethiopian Retail Trade Corporation and the Public Transport Corporation, individually had 5,6 and 4 accounting units respectively, MOPED Files.
4. Negarit Gazeta. "Public Enterprises proclamation No. 25/1992"
5. 17 in State Farms; 7 in Coffee and Tea and 5 in agriculture
6. The creation of Agricultural Marketing Corporation (AMC) and the Ethiopian Domestic Distribution Corporation (EDDC) was meant to stabilize prices and promote an equitable distribution of income.
7. The commercial farms established as share companies included; Seblele; Ambash; Kessem Kebena; Algeta; Upper Awash; Arba Minch Farm; Awassa Agro-Industry; Abaya, Yalge and Bilate

8. Apart from the commercial farms privately owned 438 farms in The Middle Awash and The Sidamo Agricultural Development alone were nationalized and converted into state farms.

9. Only those enterprises administered by MOI are included. These enterprises counted for about 89% of employment, 77% of the total number of establishments in the public manufacturing sector in 1986/1987

10. The Debt/Equity ratio as well as the Net Income/Total assets ratio of 125 PEs were calculated on the basis of 1982 audited figures. However, for the remaining PES, the audited figures available for the latest years, were considered in the calculation (MOPED Files)

11. The North Western Agricultural Development Corporation specializes in growing corn, sorghum, niger seed, paper, soya beans. The Southern Agricultural Development Corporation specializes in growing wheat, barley, corn, cotton. The Awash Agricultural Development Corporation specializes in cotton production. Horticulture Corporation produces citrus fruits oranges, grape fruits, vegetables etc

12. PEs that have operated by bank loans for a long time without having capital include the following, Gondar Meat Processing Factory, Ada Macaroni Factory, Tea Development Corporations of Wollega, Arsi, Bale, Birr, Agricultural Equipment and Technical services, Seed Corporation.

13. PEs that stated operation without having a legal personality include the following:- Fish Production and Marketing Corporation.

- Natural Gum Processing and Marketing Corporation.
- Wood, Charcoal Products Processing and Marketing Enterprise.
- Saw Mills and Joiners Production and Marketing Enterprise.
- Agricultural Mechanization Service Enterprise.
- National Engineers and Contractors.

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Annex 1:
Public Enterprises, Public Agencies & Financial Institutions
Consolidated Profit & Loss Statements (in Birr million)

ETHIOPIAN PUBLIC ENTERPRISES	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	AVERAGE (1991-2001)	100	200	500	1000	2000	5000	10000							
1 Gross Sales - RECEIPTS	439.4	5,541.5	1,474.8	3,944.6	3,115.4	5,116.8	2,137.1	5,025.4	2,137.1	4,026.6	4,493.7	3,127.9	3,127.9	3,127.9	3,127.9	3,127.9	3,127.9	3,127.9	3,127.9	3,127.9	3,127.9	3,127.9	3,127.9	10111.0		
2 Less: Operating Costs	373.8	373.8	265.4	308.5	285.1	352.1	308.5	285.1	308.5	386.4	319.9	272.9	319.9	319.9	319.9	319.9	319.9	319.9	319.9	319.9	319.9	319.9	319.9	319.9	232.8	
3 Gross Margin	65.6	2,167.7	1,109.4	1,536.1	830.3	1,764.7	828.6	2,240.3	828.6	2,184.2	1,873.8	1,455.0	1,455.0	1,455.0	1,455.0	1,455.0	1,455.0	1,455.0	1,455.0	1,455.0	1,455.0	1,455.0	1,455.0	1,455.0	441.0	
4 Net Sales (REV) INCOME	1,432.9	4,167.7	1,109.4	1,311.1	1,311.1	3,351.9	1,311.1	3,351.9	1,311.1	3,351.9	3,351.9	3,351.9	3,351.9	3,351.9	3,351.9	3,351.9	3,351.9	3,351.9	3,351.9	3,351.9	3,351.9	3,351.9	3,351.9	3,351.9	3,351.9	991.6
5 Cost of Goods Sold	1,685.5	2,208.9	2,322.1	2,344.4	1,997.7	1,345.7	2,344.4	1,345.7	2,344.4	2,344.4	2,344.4	2,344.4	2,344.4	2,344.4	2,344.4	2,344.4	2,344.4	2,344.4	2,344.4	2,344.4	2,344.4	2,344.4	2,344.4	2,344.4	2,344.4	4,033.1
6 Gross Margin	1,271.3	1,939.8	1,387.7	1,311.1	1,311.1	2,006.2	1,311.1	2,006.2	1,311.1	2,006.2	1,311.1	1,311.1	1,311.1	1,311.1	1,311.1	1,311.1	1,311.1	1,311.1	1,311.1	1,311.1	1,311.1	1,311.1	1,311.1	1,311.1	1,311.1	2,027.2
7 Income (Expense and Share)	65.6	211.9	401.9	308.5	308.5	377.9	308.5	377.9	308.5	451.9	383.3	308.5	308.5	308.5	308.5	308.5	308.5	308.5	308.5	308.5	308.5	308.5	308.5	308.5	308.5	308.5
8 Other Income & Exp	206.1	133.5	206.2	188.1	188.1	308.5	188.1	308.5	188.1	278.7	471.4	423.90	423.90	423.90	423.90	423.90	423.90	423.90	423.90	423.90	423.90	423.90	423.90	423.90	423.90	311.5
9 Other Assets and Liabilities	559.6	866.9	769.9	769.9	769.9	308.5	769.9	308.5	769.9	1,692.8	1,385.3	769.9	769.9	769.9	769.9	769.9	769.9	769.9	769.9	769.9	769.9	769.9	769.9	769.9	769.9	1,066.3
10 TOTAL OPERATING INCOME	868.1	1,478.8	1,387.7	1,311.1	1,311.1	2,308.8	1,311.1	2,308.8	1,311.1	2,791.7	2,233.2	1,311.1	1,311.1	1,311.1	1,311.1	1,311.1	1,311.1	1,311.1	1,311.1	1,311.1	1,311.1	1,311.1	1,311.1	1,311.1	1,311.1	2,894.5
11 Total Income Before Tax	378.4	58.5	385.5	311.4	311.4	610.6	311.4	610.6	311.4	971.6	1,080.0	311.4	311.4	311.4	311.4	311.4	311.4	311.4	311.4	311.4	311.4	311.4	311.4	311.4	311.4	1,060.0
12 Income Tax	(11.1)	(14.5)	(22.4)	(28.5)	(28.5)	(38.8)	(28.5)	(38.8)	(28.5)	(48.0)	(48.0)	(28.5)	(28.5)	(28.5)	(28.5)	(28.5)	(28.5)	(28.5)	(28.5)	(28.5)	(28.5)	(28.5)	(28.5)	(28.5)	(28.5)	(28.5)
13 NET INCOME AFTER TAX	367.3	44.0	363.1	282.9	282.9	571.8	282.9	571.8	282.9	923.6	1,032.0	282.9	282.9	282.9	282.9	282.9	282.9	282.9	282.9	282.9	282.9	282.9	282.9	282.9	282.9	931.5
14 Current Reserve	31.1	(18.6)	(188.9)	(282.9)	(282.9)	(188.9)	(282.9)	(188.9)	(282.9)	(188.9)	(188.9)	(282.9)	(282.9)	(282.9)	(282.9)	(282.9)	(282.9)	(282.9)	(282.9)	(282.9)	(282.9)	(282.9)	(282.9)	(282.9)	(282.9)	(282.9)
15 RESIDUAL SURPLUS	336.2	62.6	552.0	565.8	565.8	760.7	565.8	760.7	565.8	1,112.5	1,220.9	565.8	565.8	565.8	565.8	565.8	565.8	565.8	565.8	565.8	565.8	565.8	565.8	565.8	565.8	648.6
16 CAPITAL CHANGE	51.5	51.5	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4
17 DISBURSEMENTS	119.2	236.4	460.9	460.9	460.9	460.9	460.9	460.9	460.9	460.9	460.9	460.9	460.9	460.9	460.9	460.9	460.9	460.9	460.9	460.9	460.9	460.9	460.9	460.9	460.9	460.9
18 TOTAL INCREASE (DECREASE) IN EQUITY	148.0	109.0	291.1	305.0	305.0	305.0	305.0	305.0	305.0	305.0	305.0	305.0	305.0	305.0	305.0	305.0	305.0	305.0	305.0	305.0	305.0	305.0	305.0	305.0	305.0	305.0

Ethiopia: T. The Size and Performance of Public Enterprises in Ethiopia

CONTINUOUS APPENDIX I

Percentage (Billionair)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	AVERAGE 1972-81	1981 (ESTIMATE)	1982 PLAN
1. Gross State Personnel	107.18	108.99	106.18	106.18	106.44	110.48	108.74	104.48	104.48	106.28	106.24	103.18	103.08
2.1.2.2.5. Indirect Taxes	4.18	5.18	5.88	6.28	6.78	7.08	6.88	6.48	6.48	6.78	6.78	6.48	6.78
3.1.2.2.5. Contributions and Don.	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48
4. NET SALES (REVENUE)	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
5. Cost of Goods Sold	66.74	65.78	64.88	65.08	65.18	65.08	62.88	61.88	61.88	61.88	61.88	61.88	61.88
6. Gross Margin	33.26	34.22	35.12	34.92	34.82	34.92	37.12	38.12	38.12	38.12	38.12	38.12	38.12
7. Raw Material (input cost base)	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.08
8. Other Selling & Distrib. Exp.	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18
9. Other Admin. & Other Exp.	12.88	14.58	14.88	14.88	13.88	13.88	14.88	14.88	14.88	14.88	14.88	14.88	14.88
10. TOTAL OPERATING RESPONSIBILITY	30.84	31.88	31.88	31.88	30.88	30.88	30.88	30.88	30.88	30.88	30.88	30.88	30.88
11. Total Income Before Tax*	17.18	18.18	18.18	18.18	18.18	18.18	18.18	18.18	18.18	18.18	18.18	18.18	18.18
12. Income Tax	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78
13. Net Income After Tax	15.40	16.40	16.40	16.40	16.40	16.40	16.40	16.40	16.40	16.40	16.40	16.40	16.40
14. Dividend Reserve	3.48	3.28	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18
15. RESIDUAL PROFIT**	11.92	13.12	13.22	13.22	13.22	13.22	13.22	13.22	13.22	13.22	13.22	13.22	13.22

Source: Various Financial Plan Documents, MOEPD.

* = Item 11 plus 13. do not add up to item 11 due to the fact that total income before tax does not include extraordinary items in gross and prior year adjustments.

** = Item 6 plus item 5 do not add up to item 6 due to the excess of cost of goods sold in relation to set rates in the financial books.

Annex 2

Sectoral Distribution of the Low Making (PEs) in Numbers and Accounts
(in millions of Birr) Audited Figures

SECTOR	1977		1978		1979		1980		1981		1982		1983		1984		1985		1986		1987				
	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT			
1 AGRICULTURE	14	45.8	16	46.5	18	51.2	20	60.3	19	50.2	12	41.8	3	24.0	4	34.4							10		
2 STATE FARMS	11	41.4	12	34.9	15	31.5	15	24.4	11	38.6	11	41.4	5	24.0	4	34.4									
3 MINISTRY OF AGRICULTURE			1	2.5	5	11.2	1	0.4																	
4 MINISTRY OF COFFEE & TEA	1	4.2	2	4.9	3	11.9	4	15.5	2	1.5	1	0.2													
5 INDUSTRY	6	12.1	7	11.8	20	36.2	18	36.2	30	37.5	35	34.2	47	31.4	31	45.1	32	24.8							
6 FOREIGN TRADE	1	0.4	1	0.4	1	0.4	1	0.4	1	0.4															
7 DOMESTIC TRADE																									
8 TOURISM & HOTELS	1	0.4	1	1.0	1	0.4	2	0.7	2	5.1	1	5.6	2	1.1											
9 TRANSPORT & COMMUNICATIONS	1	4.9	1	3.1			1	3.8	2	0.8	1	0.8	2	1.9	2	2.6									
* MINING	1	19.9	1	11.0	2	16.7	1	13.7	2	8.1															
* CONSTRUCTION	1	12.8	1	8.1	1	4.3	10	4.2	1	2.1	1	2.2	1	1.3	1	1.4	1	1.4	1	1.4	1	1.4	1	1.4	
* FINANCIAL INSTITUTIONS			1	4.5			1	4.2																	
00 OTHERS																									
TOTAL	44	94.8	52	100.1	65	114.4	47	104.1	66	68.7	48	94.2	31	61.2	45	101.1	34	34.4							

Total number of PEs: 106

NO. of Indices Number of PEs

Source: Audited Account Figure, MOPED Files

200

219

226

220

221

188

125

64

Exhibit T: The State and Performance of Public Enterprises in Ethiopia

Annex 5

Sectoral Distribution of the Gross Holdings of PE/State Enterprises and Accounts
(in Millions of Birr) (Actual Figures)

CITY	1975		1976		1977		1978		1979		1980		1981		1982		1983	
	NO. AMOUNT	NO. AMOUNT	NO. AMOUNT	NO. AMOUNT	NO. AMOUNT	NO. AMOUNT	NO. AMOUNT	NO. AMOUNT	NO. AMOUNT	NO. AMOUNT	NO. AMOUNT	NO. AMOUNT	NO. AMOUNT	NO. AMOUNT	NO. AMOUNT	NO. AMOUNT	NO. AMOUNT	
1. AGRICULTURE	14	49.6	16	61.3	19	75.2	20	80.9	16	60.0	22	81.8	5	24.0	4	28.6		6.0
STATE FARMS	11	41.3	12	36.9	12	10.2	10	26.4	12	28.8	11	41.4	5	26.0	4	28.6		
MINISTRY OF AGRICULTURE			1	0.7	1	0.2	1	1.0										
MINISTRY OF COFFEE & TEA	3	4.2	3	4.0	3	12.1	4	20.7	2	1.8	11	6.2						
1. INDUSTRY	16	13.5	27	17.6	29	20.2	26	24.2	32	27.5	14	14.7	47	71.4	31	40.8	22	27.6
1. PERSON TRADE	1	0.4	1	0.4	1	2.6	1	1.2	1	0.0								
4. DOMESTIC TRADE									1	7.6								
1. TRADING & HOTELS	1	0.4	4	1.3	2	1.6	2	0.7	3	0.2	3	2.8	2	1.1				
6. TRANSPORT & COMMUNICATION	2	4.8	1	1.1			1	2.8	2	0.8	1	1.6	2	2.8	2	7.4		
7. MINING	1	10.4	1	20.0	2	18.2	1	0.2	2	0.0								
8. CONSTRUCTION	7	12.6	9	4.3	9	4.2	10	6.8	6	2.1	9	2.0	4	1.9	9	11.4	2	1.0
9. PSYCHOLOGICAL INSTITUTIONS			1	0.9			1	1.2							1	4.9		
10. OTHERS							3	9.7	2	0.7	2	0.2	1	4.4				
TOTAL	44	96.1	52	106.5	59	136.6	47	138.1	64	107.7	40	88.2	61	141.7	48	140.0	24	34.1

Total Number of PE: 106
NO. = Indicate Number of PE.

Sources: Audited Annual Figures, MOPE's Files

207 208 209 210 211 212 213 214 215 216

Annex 4.

PE's Debt/Equity Ratio and Net Income/Total assets
on the Basis of Audited Figures.*

	DEBT/EQUITY RATIO					NET INCOME/TOTAL ASSETS					
	Low 50%	50-80%	80-100%	Over 100%	Total No PUs Aud.	Profit margin	Low 1%	1-5%	5-10%	Over 10%	Total No. PUs Aud.
1. INDUSTRY	21	56	40	21	144	30	18	29	11	24	171
Food	2	11	33	8	32	13	4	6	3	4	30
Sugar	2	1			4	1		2	1		4
Beverage	4	7	7	1	18	7	1	3	1	2	11
Tobacco & Matches		2			2		1	1			2
Textile	4	3	4	7	20	10	3		1	1	15
Leather & Shoe		11	3	1	14	2	8	2			11
Chemical	1	2		2	4	4		1			5
Printing	1	1	2		10		1	2		7	10
Electrical	1	4	4	3	12	4		4	1	7	13
Metal Works	2	4	11	4	21	7	1	6	3	1	21
Steel	3	11			4	2		5			4
2. AGRICULTURE	2	7	7	11	29	18	3	4	2	6	30
State Farms	2	4	5	10	19	14	3	1		7	19
Ministry of Agriculture		2	2		4	1		2		1	4
Coffee & Tea		1	2	1	6	3			2	1	6
3. FOREIGN TRADE			1	1	4			1		1	4
4. DOMESTIC TRADE	1	3	4		10			3	2	4	10
5. TOURISM AND HOTELS		2	2	2	7	4	1		1	1	7
6. TRANSPORT & COMMUNICAT.	1	2	5		8	3		5	7	2	10
7. MINES & ENERGY	2	1	0		4			1		1	4
8. CONSTRUCTION	1	3	4	4	19	12	2	2	0		14
9. URBAN DEVELOPMENT	1	4			7	3			2		7
10. PUBLIC HEALTH		1	4		5			1	1	1	5
11. AUDIT SERVICE		1			1					1	1
12. LOTTERY ADMINISTRATION			1		1					1	1
	31	81	79	72	237	91		44	23	44	233

Sources: Various Financial Plan Documents and Audited Accounts.

*The Debt/Equity ratios as well as the net Income/Total Assets ratios in US PUs were calculated on the basis of 137 (1982) audited documents. However the remaining PUs the audited available figures for the latest years were considered.

Annex 5:
 Percentage of Net Equity to Capital and
 Debt/Equity Ratio of PEa.

SECTORS/SUB-SECTORS	CAPITAL & RESERVE IN '000	ACCUM. SURP- DEFICIT IN '000	NET EQUITY IN '000	PERCENTAGE OF NET EQUITY -CAPITAL	DEBT/EQUITY RATIO	FORM-KINET EMPLOYEE 1982
1. INDUSTRY	906,264	(166,441)	741,297	81.7	83-13	78,313
- Food	85,077	(26,895)	58,182	68.4	99.9	5,730
- Sugar	86,772	(21)	86,751	99.9	48-52	4,717
- Beverage	95,679	(17,846)	77,834	81.3	75-27	9,821
- Tobacco & Matches	9,000		9,000	100.0	74-26	1,284
- Textiles	277,638	(51,296)	226,344	81.5	89-12	34,283
Leather & Shoe	78,302	(22,397)	55,905	69.9	73-27	5,719
- Cotton	17,279		1,441	8.1	171-71	1,400
- Printing	22,553	(13,838)	12,411	59.4	69-31	3,290
- Chemical	21,524	(124)	22,224	94.3	79-21	2,717
- Metal Works	176,132	(1,298)	164,837	89.7	82-18	4,836
State Companies	26,127	(29,559)	26,127	100.0	30-70	N.A.
2. AGRICULTURE	989,091	(1,266,149)	(782,467)	-11.1	112-12	72,430
- State Farms	305,466	(1,112,519)	(695,947)	-162.0	146-46	31,264
- Coffee & Tea	417,251	(130,542)	(81,969)	-120.0	115-15	72,132
- Agriculture	44,374	(1,080)	14,733	32.7	78-22	4,054
3. DOMESTIC TRADE	72,182		72,182	100.0	76-24	13,404
4. FOREIGN TRADE	17,823	(3,928)	13,102	76.9	92-2	1,072
5. TRANSPORT & COMMUNICATION	85,189	(1,362)	86,127	89.3	48-52	12,307
6. CONSTRUCTION	71,859	(57,057)	16,302	22.3	127-23	2,891
7. URBAN DEVELOPMENT*	184,225	(13,071)	171,204	92.2	93-48	2,978
8. HEALTH	22,239		22,895	100.0	87-13	N.A.
9. MINOR & ENERGY	466,679	(14,348)	450,411	96.9	57-43	11,981
10. HOTELS & TOURISM	37,754	(11,196)	26,558	69.9	81-19	4,067
11. FINANCE	200	N.A.	200	100.0	77-23	N.A.
12. CREDIT SERVICE	1,927	N.A.	1,927	100.0	52-48	N.A.
13. FINANCIAL INSTITUTION	408,791	(94,115)	324,642	79.4	N.A.	7,334

SOURCE: Ministry of State Farms & Aided Reports - MOPED P1

Annex 6
 Historical Trend of Loans Granted & Disbursed by Sectors
 (in Birr millions)

SEC-TORS	1971	1975	1979	1984	1987	1988	1989	1990	1991	1992	1993	1994
Agriculture	175.1	368.7	315.1	310.8	368.9	158.4	271.5	370.4	215.0	215.6	34.0	279.4
Industry	184.1	42.9	45.1	65.7	208.5	82.8	46.5	41.1	136.7	133.3	83.6	107.8
Domestic Trade	144.1	109.8	258.4	221.2	109.2	129.8	101.8	114.9	121.3	116.8	140.8	115.6
Foreign Trade	68.1	447.4	852.8	2162.5	251.2	82.8	141.0	311.2	117.0	112.2	87.1	284.9
Health and Education	0.7	5.1	11.7	6.1	8.5	11.8	15.8	4.3	13.8	11.3	21.9	11.8
Transport & Communication	131.7	38.8	60.4	99.4	69.1	24.0	18.5	32.4	16.1	17.2	31.1	45.1
Housing & Construction	74.8	51.9	106.1	38.4	104.6	31.1	48.2	110.0	66.0	61.8	34.2	68.8
Water & Energy	11.8	6.1	3.0	4.3	4.4	3.8	21.8	-	32.8	15.3	-	8.0
Services	24.6	8.2	10.5	9.4	11.6	11.2	8.2	12.4	7.9	14.1	28.8	12.4
Other	-	-	7.9	7.9	3.7	3.7	7.9	2.8	7.6	8.7	6.8	6.7
Total	1321.8	1111.8	1620.4	1070.1	1063.7	744.2	760.9	810.9	619.7	713.8	525.8	2001.1
Business	-	-	-	-	-	-	-	-	-	-	-	-
Public Enterprises	784.8	811.1	1118.4	715.4	678.5	454.8	452.4	517.4	486.0	477.2	107.4	104.0
Cooperatives	41.4	54.4	80.2	58.2	24.9	86.0	84.2	109.1	175.1	142.2	100.3	82.3
Private Enterprise & Industry	475.9	241.3	465.1	322.4	330.4	211.8	172.4	203.5	187.6	204.2	208.8	261.9
Total	1304.2	1111.8	1624.8	1076.2	1044.2	733.9	729.0	811.2	610.7	721.7	527.7	1448.3
PERCENTAGE share of P/E	29.3%	21.2%	44.3%	44.3%	44.3%	44.3%	44.3%	44.3%	44.3%	44.3%	44.3%	44.3%

Source: Various Financial Plus Documents, MOPED Files.

Exhibit T: The Size and Performance of Public Enterprises in Ethiopia

Annex 7
Ratio of Profit Before Tax/Total Sales + Non-Operating Income

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	AVERAGE 1972-1980
1. AGRICULTURE	1.2	2.8	1.4	-0.3	8.9	4.1	3.1	1.2	2.8	2.9	3.8
- State Farms	1.8	2.8	2.8	0.1	27.2	15.2	3.7	3.1	2.8	4.8	-1.4
2. COFFEE & TEA	8.1	36.4	1.2	0.1	62.2	115.5	4.4	5.1	1.2	7.4	55.0
- Agriculture	30.9	4.3	11.8	-0.1	0.6	14.3	6.7	5.6	6.4	2.3	4.2
3. INDUSTRY	14.2	11.8	10.1	11.4	12.6	8.4	30.2	10.8	8.6	7.3	10.7
3.1. DOMESTIC TRASH	2.7	2.5	3.1	2.7	4.7	3.6	4.4	6.3	4.9	3.4	4.2
3.2. FOREIGN TRADE	4.2	11.3	3.4	3.5	3.4	3.8	6.4	5.8	2.8	3.5	2.2
3.3. HOTELS & TOURISM	7.4	5.5	8.3	4.1	11.4	11.2	12.2	6.3	7.2	4.1	3.8
4. TRANSPORT & COMMUNICATION	8.1	7.4	9.9	12.1	14.0	12.1	15.5	11.2	6.4	14.4	50.4
7. HOUSING & CONSTRUCTION					1.9	-0.4	1.4	1.4	3.2	1.6	1.4
8. MINES & ENERGY	0.02	12.8	9.8	10.7	12.3	33.4	17.1	13.1	22.4	24.4	18.8
9. URBAN DEVELOPMENT	22.8	93.8	49.8	48.1	42.3	32.0	44.0	43.3	32.6	31.1	28.4
10. FINANCE	42.8	28.1	47.7	63.3	44.2	42.0	64.8	46.8	43.1	45.1	47.2
11. BANKING & INSURANCE	43.8	44.4	60.2	27.3	17.3	28.2	37.4	43.2	18.3	60.4	40.7
12. AUTOS & OTHERS	7.4	25.4	38.1	23.4	26.1	24.2	26.0	17.2	23.4	31.8	24.2
13. HEALTH	7.1	2.7	4.9	1.0	10.2	6.3	13.2	8.8	6.5	2.1	4.0
14. OTHERS											-2.0
NET PROFIT/TOTAL INCOME	13.8	14.9	11.8	11.8	33.0	18.1	16.1	11.1	13.0	12.4	14.4

Source: Various Financial Plan Documents, MOFED.

AN INTRODUCTION TO A UNIFORM ACCOUNTING SYSTEM: THE EGYPTIAN EXPERIENCE

Mosaad M. El-Sharkawy*

Abstract: This paper is an attempt to give an insight into the Egyptian Uniform Accounting System, which has sought to achieve the following objectives:

1. To provide the necessary accounting information for planning and control at all levels of the economy.
2. To coordinate financial accounting with national accounting in order to facilitate the computation of the gross national product (GNP). This is done through unifying terminology, standards, accounting concepts, and so on.
3. To facilitate the tabulation and storage of data by an enterprise so that it would be easy for each enterprise to supply the information needed by the governmental bodies.

The paper has highlighted the Egyptian Chart of Accounts and how financial and control accounts have been classified and coded in such a manner that links the micro-accounting with macro-accounting.

Finally, an empirical case study has been examined where the Current Operations Account has been prepared in addition to the Value Added Statement (VAS). Such a VAS has been prepared on the basis of:

1. The factor income model which is adopted by the Egyptian Uniform accounting System; and
2. The sectoral income model which is to be recommended by the author for some reasons. For instance, it distinguishes between the value added achieved by the company and that available for distribution.

I. AN INTRODUCTION TO THE EGYPTIAN UNIFORM ACCOUNTING SYSTEM

1.1. What is Meant by a Uniform Accounting System?

A uniform accounting system may be defined as 'specific arrangements that aim at recording the accounting data related to an accounting entity and the preparation of the financial statements according to a specific framework which is based on uniform accounting rules and concepts for the purpose of achieving particular objectives.'

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From the above definition, the following essential elements can be recognized:

- a. The uniform accounting has been described as a 'system' because it represents some specific arrangements and requirements.
- b. This system has been described as 'accounting' because such arrangements tackle the functions of financial, managerial, and cost accounting.
- c. Finally, this system has been described as 'uniform' because it deals with the unification or standardization of the following:
 - (1) The unification of the chart of accounts;
 - (2) The unification of bases, rules, terminology, accounting concepts, standards... etc;
 - (3) The unification of accounts, financial statements and the bases on which such accounts and statements are prepared;
 - (4) The unification of the models of budgets and the bases on which they are prepared; and finally,
 - (5) The unification of the financial year.

1.2. The Objectives of the Egyptian Uniform Accounting System

The Egyptian uniform accounting system has been designed to provide the Ministry of Planning, the Ministry of Finance, the Supervising Ministry, banks and other institutions with a flow of information that helps in the process of planning and control. Enterprises are required to submit their financial statements and other returns to such governmental institutions in which various aspects and activities of the enterprise should be disclosed. Accounting, not surprisingly, plays a significant role in this system.

Specifically, the Egyptian uniform accounting system has been designed to achieve the following main objectives:

- a. To provide the basic accounting information and other analytical tools necessary for planning, implementation and control at all levels of the economy, i.e. the micro and macro levels. On the preparation of the Egyptian uniform accounting system, it has been considered that such a system should be able to provide reliable and relevant accounting information required for the preparation of financial statements and budgets. Such financial statements and budgets are of utmost importance for planning purposes and making decisions regarding the drawing up of policies and strategies at both micro and macro levels.

Moreover, such a uniform accounting system will help in supervising, monitoring and performance evaluation at all levels of individual enterprises, the supervising ministry and other external bodies whether they are planning or controlling bodies.

- b. To link the accounts of the individual enterprises with the national accounts. This means that the micro accounts will be helpful to the national accountants when preparing the accounts at the state level.

In my opinion, such a linkage between the micro and macro accounting is the main objective of the Egyptian uniform accounting system though it has been ranked as the second objective by the system.

Needless to say that such a linkage requires the development of the traditional accounting principles so that the national accountant should be able to prepare the national accounts by referring to the financial statements prepared by their counterparts at the enterprise level.

The accurate calculation of the national income would, of course, require the unification of bases, rules, terminology, accounting concepts, standards...etc. Such a unification will help to diagnose the accounting data and information at the enterprise level for the preparation of national accounts.

To sum up, the Egyptian uniform accounting system has designed the enterprise accounts in a manner that will meet the needs of national accountants.

c. To facilitate the process of collecting, tabulating and storing accounting data and information. Needless to say that before the adoption of the unified accounting system, it was very difficult for enterprises to provide such accounting data and information which are essential for external bodies according to a framework required by such external bodies. This is due to the fact that such a required framework is absolutely different from the accounting concepts on which the financial statements of these enterprises are based.

Therefore, tabulating accounting data and information in a uniform manner would help to achieve the following:

- (1) Facilitating the task of the state and other external bodies in collecting accounting data and information from enterprises without the need for retabulating or reclassifying such data in another form.
- (2) Ensuring an improvement in the accuracy and the reliability of accounting data and information.
- (3) Shortening the time required for collecting data on all economic activities in the country
- (4) Enabling the management to evaluate the performance of all its departments and divisions that are located at corporate headquarters or division levels.

1.3. The Scope of the Application of the Uniform Accounting System

The Egyptian uniform accounting system has been designed to be applied to all public business sector enterprises. Banks, insurance companies and other financial and credit institutions have been excluded due to specific considerations related to the nature of their activities. So, they are subject to specific regulations and laws that organize and

control their activities.

It is noteworthy to point out that the uniform accounting system may be applied to some private business sector enterprises. This will be based on a decree issued by the competent authority for the purpose of providing accounting data and information necessary for planning, controlling, monitoring and evaluating performance at the national level.

The Egyptian uniform accounting system has defined the economic entity that will be obliged to apply the system as:

It is that entity which is to be engaged in carrying out an industrial, commercial, agricultural or land activity in addition to other organizations that are obliged to prepare their balance sheets in the same manner followed in the preparation of commercial balance sheets even if such organizations do not practise any of the aforementioned activities by themselves.

Moreover, the uniform accounting system has mentioned that the economic entity may be one of the following forms:

- a. The supreme council of the sector or the public organizations.
- b. A public enterprise.
- c. A co-operative society or a firm that works under the supervision of a public organization.

Finally, it is worth mentioning that the Egyptian Uniform Accounting System (UAS) is viable not only in planned economy but also in market oriented economy. This is due to the fact that the UAS is to be regarded as a positive step towards making available some data needed at the macro level when national accounts are to be prepared. So, it is not true to say that the UAS is to be reduced when trends are for increased privatization and reduction of state ownership and control of economic activities.

II. THE CHART OF ACCOUNTS

2.1. Introduction

A chart of accounts may be defined as a list of the accounts used by an organization, with each account usually assigned a number or code.

The first chapter of the Egyptian uniform accounting system has been designed to explain in detail the measures taken to unify the chart of accounts. So, it deals with the general framework of the chart of accounts and its main characteristics or features.

Specifically, this chapter is designed to highlight the following:

- a. The general framework of the chart of accounts;
- b. Diagnosis of the chart of accounts; and finally,
- c. The main characteristics of the chart of accounts.

2.2. The General Framework of the Chart of Accounts

2.2.1. The Coding of Accounts

There are, of course, various techniques for the coding of accounts. However, the Egyptian uniform accounting system has adopted the digital (decimal) system. This is due to the flexibility of such a technique.

Based on the digital technique, the accounts of enterprises have been divided into nine main homogeneous classes, i.e. from 1-9. Such a classification will help to prepare the national accounts as well as to satisfy the needs of the financial accountant.

These nine classes have been termed as 'Accounting Totals or Aggregates', which include financial accounts and control accounts. Here is a discussion on such two distinguished categories of accounts.

a. Classification and Coding of Financial Accounts

Numbers from (1) to (4) have been assigned to the category of financial accounts as follows:

Code Number	Financial Accounts
1	Assets
2	Liabilities
3	Uses of Resources
4	Resources

Each of the above accounting totals or classes can be analyzed into several sub-classes by adding one number or more, up to six numbers, on their right side as follows:

- (1) General account; it has two numbers.
- (2) Sub account; it has three numbers.
- (3) Sub-sub account; it has four numbers.
- (4) Partial account; it has five numbers.
- (5) Analytical account; it has six numbers.
- (6) Detailed account; it has seven numbers.

The following is an example to indicate the above-mentioned seven levels of accounts:

Level of Account	Code Number	Name of Account
Accounting class or aggregate	1	Assets
General account	12	Under implementation projects
Sub account	121	Commodity formation
Sub-sub account	1211	Land
Partial account	12111	Land for agricultural exploitation,
Analytical account	121111	Land purchasing price
Detailed account	1213111	Purchasing price of machinery bought at local market

b. Classification and Coding of Control Accounts

The chart of accounts has given numbers to the control accounts starting from (5) to (9). Control accounts indicate the main functions of the economic entity. Needless to say that such control accounts have been designed mainly for the purpose of analyzing the uses of resources in cost centres.

Control accounts include the following accounts:

Code Number	Control Account
5	Production centre control
6	Production service centre control
7	Marketing service centre control
8	Administrative & financial service centre control
9	Capital transactions centre control

2.2.2. Diagnosis of the Chart of Accounts

Based on the previous discussion in paragraph 2.2.1., the general framework of the chart of accounts has included the following three main categories of accounts:

- Balance sheet accounts;
- Operating and revenue accounts; and finally
- Control accounts.

The following is a brief discussion on the aforementioned categories.

a. Balance Sheet Accounts

Balance sheet accounts include eight general accounts for each category of assets and liabilities as follows:

Code Number	Assets	Code Number	Liabilities
11	Fixed assets	21	Capital
12	Projects in progress	22	Reserves & carried surplus
13	Inventories	23	Provisions
14	Long-term lending	24	Long-term loans
15	Financial investments	25	Credit banks
16	Debtors	26	Creditors
17	Miscellaneous debit accounts	27	Miscellaneous credit accounts
18	Cash in hand & at banks	28	The year's result

b. Operating and Revenue Accounts (Result Accounts)

Operating and revenue accounts have been divided into:

- (1) Uses of resource accounts; and
- (2) Resource accounts

The Egyptian uniform accounting system has used the term 'uses of resources' to indicate the various types of expenditures and other charges borne by the accounting entity during a specific period of time for the use of services or factors of production in carrying out its activities.

In contrast, the Egyptian uniform accounting system has used the term 'resources' to clarify the various types of revenues and other gains achieved by the accounting entity during a specific period of time.

It is worth noting that the uniform accounting system has used the term 'resources' instead of the term 'revenues.' This is because, in my opinion, the former term is to be regarded as comprehensive since it may include some items that can not be regarded technically as revenues such as capital gains.

Operating and revenue accounts include six general accounts for uses of resources against five general accounts for resources.

The following is an indication of operating and revenue accounts:

Code Number	Uses of Resources 3	Code Number	Resources 4
31	Wages	41	Revenues from normal operations
32	Commodity requirements	42	Subsidies
33	Services acquired	43	Revenues from portfolios
34	Goods purchased for sale	44	Transferred revenues
35	Current transferred expenses	45	Profits from construction, housing projects and land reclamation
36	Appropriated Current transfers		

e. Control Accounts and Cost Allocation

Needless to say that a control account (or total account) is a single account that summarizes (or controls) a number of subsidiary accounts. So, the sum of balances in the subsidiary ledger should equal the balance in the control account.

However, the Egyptian uniform accounting system has used the term 'control account' in a specific meaning where a 'control account' has been used for indicating a specific function performed by the accounting entity, i.e. uses of resources are to be allocated to such control accounts.

Generally, the functions of a manufacturing enterprise are traditionally categorized into three main functions as follows:

- (1) The manufacturing function;
- (2) The marketing function; and finally
- (3) The administrative and financial function.

The Egyptian uniform accounting system has added two amendments. The first amendment has designed two accounts for the cost allocation of the manufacturing function. These two accounts are (i) production centre control, and (ii) production service centre control. The second amendment has added a control account for capital transactions. Such an account has been designed for the purpose of cost allocation of the internally manufactured assets, i.e. assets that are manufactured by the enterprise to be used internally and not for the purpose of sale.

Control accounts are regarded as a link between the financial accounts and cost accounts. The main purpose of analysing costs in the cost centre control accounts is to help prepare the Production and Trading Account and Profit and Loss Account (See Appendix B).

The following is a general framework for the allocation of uses of resources to the control accounts:

Code Number	Uses of Resources	Allocation of Uses of Resources to Control Accounts				
		5	6	7	8	9
31	Wages	531	631	731	831	931
32	Commodity Requirements	532	632	732	832	932
33	Services acquired	533	633	733	833	933
34	Goods purchased for sale	534	-	-	-	-
35	Current Transferred expenses	535	635	735	835	935
36	Appropriated current transfers	-	-	-	836	-

It is worthwhile to highlight the following main observations:

- (1) All control accounts have been charged with their proportions of wages, commodity requirements, services acquired and current transferred expenses. This is because all the functions of the enterprise have benefited from such uses of resources;
- (2) Goods purchased for sale has been allocated in full to the production centre control only; and finally
- (3) Appropriated current transfers have been allocated in full to the administrative and financial service centre control. This is because such transfers are not regarded as cost of production at both the enterprise level and the national level. Therefore, the total cost of such transfers has been allocated to the administrative and financial service centre control since the cost of such a centre is not included in the cost of production**.

2.2.3 Characteristics of the Chart of Accounts

It can be said that the Egyptian uniform accounting system has some unique features. Among such features are:

- a. Classification of Accounts into Balance Sheet Accounts and Operating Accounts. Such a classification is unique since it is different from the traditional classification of accounts. For instance, traditionally accounts may be classified into personal accounts, real accounts and nominal accounts.

** It is noteworthy that the Egyptian uniform accounting system has adopted the factor income model when calculating the value added.

Therefore, the classification adopted by the uniform system has concentrated on the relationship between accounts and financial statements, i.e. their relationship with the balance sheet and the current operations account.

b. The Absolute Independence of both Balance Sheet Accounts and Operating Accounts. This feature is a unique characteristic related only to the Egyptian uniform accounting system. This means that the methodology followed in the classification of accounts into balance sheet accounts and operating accounts has achieved the independence of the category of balance sheet accounts from that of operating accounts.

In other words, operating accounts found in the chart of accounts are sufficiently enough to prepare the Current Operations account at the end of the financial year. In the same manner, balance sheet accounts found in the chart of accounts are sufficiently enough to prepare the Balance Sheet. This means that, once again, there is no interference of any kind between these two categories of accounts.

The following are some examples to indicate the independence of balance sheet accounts and operating accounts:

- (1) Provisions A/C (other than Depreciation Provisions).
- (2) Stock Change of Finished Products at Cost.
- (3) Accrued Current & Appropriated Revenues A/C.
- (4) Accrued Current & appropriated Expenses A/C.

c. The Chart of Accounts Has Diagnosed Accounts into Seven Various Levels. These levels are:

- (1) Accounting class or aggregate: it has one number.
- (2) General account: it has two numbers.
- (3) Sub account: it has three numbers.
- (4) Sub-sub account: it has four numbers.
- (5) Partial account: it has five numbers.
- (6) Analytical account: it has six numbers.
- (7) Detailed account: it has seven numbers.

The aforementioned diagnosis reflects the flexibility of the Egyptian uniform accounting system. This flexibility is also reflected in the establishment of a permanent committee for the purpose of providing a continuing review and appraisal of the system. The committee also suggests modifications whenever the need arises.

The flexibility of the uniform system is of great importance. This is due to the fact that it will enable the system to respond to changing circumstances in the environment in which enterprises are carrying out their activities.

d. Reconciliation Between Production Basis and Sale Basis: Revenue recognition. The Egyptian uniform accounting system has succeeded in bridging the gap between those who

advocate the calculation of income on a sale basis, i.e. enterprise accountants, and those who prefer the calculation of income on a production basis, i.e. national accountants.

As the uniform system aims at linking the enterprise accounts with the national accounts, it has attempted to reconcile between the realization of revenues at the time of sale and its realization on a production basis. Such a reconciliation appears clearly in the chart of accounts in the following four aspects:

- (1) Accounting treatment of stock change accounts;
- (2) Valuation difference of stock change accounts;
- (3) Accounting treatment of internally manufactured assets; and finally
- (4) Accounting treatment of remnants of production (Scrap)

Needless to say that stock change and its valuation difference help facilitate the computation of the value of production at selling price.

e. Linking Micro-accounting With Macro-Accounting. The chart of accounts includes four contra accounts to link micro-accounts with macro-accounts.

These opposite twin accounts are:

Code Number	Uses of Resources	Code Number	Resources
358	Valuation difference of stock change of finished goods	413	Valuation difference of stock change of finished goods
359	Valuation difference of stock change of goods for sale	4183	Valuation difference of stock change of goods for sale
354	Imputed rent difference	447	Imputed rent difference
357	Imputed interest difference	448	Imputed interest difference

It is worthwhile to indicate that the accounts related to imputed rent difference and imputed interest difference help the national accountant to compute the value added in an objective way (see Appendix A which indicates how the above mentioned opposite twin accounts are to be calculated).

Moreover, the accounting treatment of imputed rent difference and imputed interest difference in the Current Operations Account indicates the following important points:

- (1) Account 354 and Account 357 are among the accounts related to imputed uses of resources and they are related to the normal activity of the enterprise. So, such two accounts appear in the first stage when preparing the Current Operations Account. This treatment helps:

- To provide the basic data necessary for getting two components of Value Added (rent and interest) in an objective manner. This will not have an impact on enterprises whether they own their premises or not. Also, the financial structure of enterprises will not be affected.

- The objective measurement of the first stage of the Current Operations Account, i.e. the surplus from normal operations. So, performance of similar enterprises can be evaluated and compared in an objective manner.

(2) Account 447 and Account 448 are among the accounts related to imputed resources and they are not related to the normal activity. So, such two accounts appear in the second stage when preparing the Current Operations Account. Such a treatment enables the accountant to measure the final result of the financial year based on actual uses and actual resources.

f. Disclosure System. Under the Egyptian uniform accounting system, enterprises should prepare the following financial statements:

(1) Balance Sheet.

(2) Current Operations Account. Such an account has three stages; each stage achieves a specific objective as follows:

- . Stage I: it is designed to compute the surplus/deficit from normal operations;
- . Stage II: it is designed to compute the distributable surplus/current deficit;
- . Stage III: it is considered to be an appropriation account where the distributable surplus is to be disposed as follows:
 - * Retained Surplus; and
 - * distributed surplus.

(3) Traditional accounts:

- . Production & Trading Account; and
- . Profit & Loss account.

(4) Statement of changes in Financial Position which shows the sources and uses of capital.

(5) Cash Budget.

Needless to say that the Current Operations Account, Statement of Changes in Financial Position and the Cash Budget help to prepare the national accounts as follows:

National Accounts	Enterprise Accounts
1. Production A/C	1. The first stage of the Current Operations A/C
2. Appropriation A/C	2. The second and the third stages of the Current Operations A/C
3. Capital A/C	3. Statement of Changes in Financial Position
4. Cash Flow Tables	4. Cash Budget

g. The Egyptian Uniform Accounting System as a Source of Information. One of the main objectives sought by the Egyptian uniform accounting system is to be a permanent and regular source of information. In this regard, it is believed that the Egyptian system has succeeded to a great extent in providing governmental bodies with the required information through the collection, tabulation and storage of data by enterprises:

Moreover, it has been shown in practice that various types of information at different levels of detail can be easily collected at the macro level within a relatively short period of time.

For instance, on the wages side, a great deal of information can be obtained such as wages in cash, wages in kind and the company's contributions to social insurance. Thus, the Egyptian system has been able to provide timely and reliable data and information at both micro and macro-levels. Such a great success may be due to the following main reasons:

(1) The accounts have been carefully preclassified. This classification reflects the types of information required by the management and the governmental institutions.

(2) The Egyptian uniform accounting system has been designed by a team of experts in various fields of specializations. Such a team of experts included macro-accountants, micro-accountants, enterprise managers, representatives of the governmental bodies, bankers and university professors.

Thus, the various interests of all those classes had been carefully considered when the Egyptian uniform accounting system was prepared.

(3) The adoption of uniform accounting rules and concepts has ensured the provision of data and information in a homogeneous form.

(4) The regular auditing of accounts. Thus, the continuous auditing approach has helped to minimize the time that might elapse between the occurrence of a mistake and its revelation.

III. A CASE STUDY

This chapter indicates the main financial statements of one of the public business sector enterprises in Egypt.

3.1. The Current Operations Account

Current Operations Account of Misr Company For Spining & Weaving For the year Ended June 1991 (in Thousands of Egyptian Pounds)

A/C No.		L.E.	L.E.	A/C No.		L.E.	L.E.
31	Wages:			41	<u>Revenues From</u>		
311	monetary wages	96,603			<u>Normal operations</u>		
312	wages in kind	5,876			<u>Value of</u>		
313	Social insurance	<u>13,681</u>	116,160		<u>Production at selling price:</u>		
	General Expenditures			411	Net sales of finished goods	639,235	
32	Commodity requirements	416,341					
33	Services acquired	28,519		412	Stock change of Finished goods at cost	16,155	
34	Goods purchased for sale	<u>241</u>	445,101				
35	Current Transferred Expenditures			413	Valuation difference of stock change of finished goods	8,432	

351	Taxes & customs duties:						661,822

Cont'd

A/C No.		L.E.	L.E.	A/C No.		L.E.	L.E.
3511	Customs duties	5,251					
3512	production excise	5,257					
3513	Treasury collection	-		414	Stock change of Unfinished products at cost		4,349
		<u>3,831</u>	14,339				
3514	Other taxes		30,466				
352	Depreciation			415	Internally Manufactured assets at cost	4,393	
	Rent Expenses:	26					
353	Actual Rents	<u>1,501</u>	1,527	416	Revenues from Operations for others	165	
354	Imputed rent difference						
	Interest Expenses:	13,179		417	Services sold	493	
355	Local interest	3,127					
356	Foreign interest	<u>39,268</u>	55,574	418	Goods for sale:	331	
357	imputed interest difference						
			8,432	4181	Net sales	--	
358	Valuation difference of stock change of finished goods			4182	Stock change	--	
				4183	Valuation difference	--	

Cont'd

A/C No.		L.E.	L.E.	A/C No.		L.E.	L.E.
359	Valuation difference of stock change of goods for sale	--		419	Remnants of production (Scrap)	4,351	14,082
	Surplus from normal operations (carried forward)		6,305	42	<u>Subsidies</u>		
				421	production subsidies	--	
				422	Export subsidies	--	
			<u>667,904</u>				<u>667,904</u>
36	<u>Appropriated current Transfers:</u>	--			Surplus from normal operations (b/f)		= 6,305
361	Donations/Gifts	48		43	Revenues from portfolios		357
362	Contributions to others	1,475		44	<u>Transferred Revenues:</u>		
363	Compensations & fines			441	Interest earned	--	

Cont'd

A/C No.		L.E.	L.E.	A/C No.		L.E.	L.E.
364	Capital losses	---		442	Rents earned	161	
365	Prior years' expenses	3,167		443	Capital gains	539	
366	Bad debts	-				8,082	
367	Provisions (other than depreciation provisions)	4,981		444	prior year's revenues		
368	Taxes on land & buildings	258				119	
369	Income taxes (Corporate tax + tax on revenues from portfolios)	14,226		445	Compensations & fines earned	4,824	
		---	24,155	446	Other revenues		
						1,501	
			37,001	447	Imputed rent difference	39,268	
2811	Distributable surplus (c/f)			448	Imputed interest difference		54,494
			<u>61,156</u>				<u>61,156</u>

Cont,d

A/C No.		L.E.	L.E.	A/C No.		L.E.	L.E.
	<u>Retained Surplus</u>			281	Distributable surplus (b/c)		37,001
221	Legal reserve	1,823					
222	Reserve invested in governmental bonds	1,823					
223	Reserve for financing investment projects, Renewals & Expansions	-					
224	General reserve	9,116					
225	Reserve for repayment of government contribution						
226	Reserve for higher prices of assets	1,823					
227	Other reserves	<u>716</u>	11,771				
	<u>Distributed Surplus</u>						
2643	Employees' share	4,089					
2641	State's share	17,268					
2642	Shareholders' share	5,223					
2649	Other shares		21,680				
			-----				-----
			37,001				37,001

It is obvious from the Current Operations Account that it has been designed by the Egyptian Uniform Accounting System mainly for linking the enterprise accounts with the national accounts. Thus, such an account is to be considered the most important final account in Egypt. Moreover, such an account is equivalent to the following macro-accounts:

- . Production Account; and
- . Appropriation Account

a. Key Rules Related to the Preparation of The Current Operations Account

There are five key rules regarding the preparation of the Current Operations Account. These rules are:

- (1) The Current Operations Account is the account of the year's result. It is, therefore, the account in which all accounts of resources and the uses of resources are to be closed. So, the Chart of Accounts has designed a number (281) for it. By doing so, the traditional accounts, i.e. the Production

and Trading Account and the Profit & Loss Account have become statistical statements only. This means that they are outside the double entry system.

- (2) The differentiation between adjustment entries and closing entries. Making entries regarding the uses of resources for the first time, or making adjustment entries through using the Current Operations Account directly is not, of course, allowed. Instead, such entries are made in the Journal Book by using the proper balance sheet accounts as it has been indicated in chapter two of this research. This means that, once again, the Current Operations Account is designed for closing all accounts of resources and their uses based on the accrual principle of accounting.
- (3) Classification has been made by the type of uses of resources when preparing the Current Operations Account. Such a classification will help provide the accounting data required for the computation of Value Added.
- (4) Internally manufactured assets (at cost) have been treated as a resource on the Current Operations Account. Such a treatment coincides with the economic concept of production. This means that there is no difference between goods produced for sale or goods produced for capital formation.
- (5) Finally, the Current Operations Account has been divided into three main sections: the first section shows the surplus from normal operations; the second section shows the surplus available for distribution; and the third section indicates how the income available for distribution is to be disposed of. In other words, the third section is an Appropriation Account. The difference between the surplus from normal operations and the income available for distribution lies in the appropriated current transfers on the expenditure side and the transferred revenues on the revenue side. The former is to be deducted from the surplus from normal operations and the latter is to be added to yield the distributable surplus.

b. Linking Macro-Accounts With Micro-Accounts

Current Operations Account is a quick and efficient tool for calculating Value Added in such a way as to satisfy the needs of the national accountant without sacrificing the needs of the financial accountant. So, contra accounts have been designed in the Chart of Accounts.

Account number 354 represents the difference between the depreciation on the premises owned by the enterprise and the rent that would have been paid if such premises were leased. There is a corresponding contra account (Number 447) on the revenue side to nullify the effect of this imputed cost and to reconcile the final net income figure with the accounting income.

Account number 357 similarly reports the difference between the actual interest expenses on outside loans and the imputed interest on invested capital based on interest rates provided by the Ministry of Finance. It should be noted that assets already included in account number 354 are excluded when determining the imputed interest on capital invested to avoid double-counting. Account number 448 is the corresponding contra account on the revenue side.

Account number 358 represents the difference between cost and selling price as applicable to the net change in finished goods on hand which are manufactured by the enterprise. Account number 413 on the revenue side serves as a contra account.

Account number 359 similarly shows the difference between cost and selling price as applicable to the net change in finished goods on hand acquired from outside for sale. Account number 4183 serves as a contra account.

3.2. The Value Added Statement

a. Preparing a value added Statement Based on the Factor Income Model

The Egyptian uniform account system has adopted the factor income model when calculating the Value Added. This means that transferred revenues and current transfers (Accounts number 44 and 36 respectively) are excluded from the calculation of Value Added.

Here is the Value added Statement of Misr Company based on the factor income model:

Code No.		(in thousand pounds)	
		L.E.	L.E.
	Production at selling price:		
411	Net sales of finished goods	639,235	
412	Stock change of finished goods at cost	16,155	
413	Valuation difference of stock change of finished goods	<u>8,432</u>	
			663,822
414	Stock change of unfinished goods at cost	4,349	
415	Internally manufactured assets at cost	4,393	
416	Revenues from operations for others	165	
417	Services sold	493	
419	Remnants of production (Scrap)	<u>4,351</u>	
			13,751
418	Goods for sale:		
4181	Net sales	331	
4182	Stock change	-	
4183	Valuation difference	-	

		331	
34	(-) Goods purchased for sale	241	

			90

Cont'd

Code Number		(in thousand pounds)	
		L.E.	L.E.
	Value of production and services at selling price		677,633
42	<u>Add:</u> Subsidies		--

			677,663
351	<u>Less:</u> Taxes & customs duties:		
	customs duties	5,251	
	production excise	5,257	
	other taxes	3,831	

			14,339

	Value of production and services at factors of production costs		663,324
	<u>Less:</u> Intermediate commodities & services:		
	Commodity requirements	416,341	
	Services acquired	<u>28,519</u>	
			444,860

	Gross value added		218,464
352	<u>Less:</u> Depreciation		<u>30,466</u>
	Net value added at factors of production costs		<u>187,998</u>

cont'd

Code No.		(in thousand pounds)	
		L.E.	L.E.
	Distribution of Value Added:		
31	Wages		116,160
	Rent expenses:		
353	Actual rents	26	
354	Imputed rent difference	<u>1,501</u>	
			1,527
	Interest expenses:		
355	Local interest	13,179	
356	Foreign interest	3,127	
357	Imputed interest difference	<u>39,268</u>	
			55,574
413	Valuation difference of stock		
	Change of finished goods	8,432	
4183	Valuation difference of stock		
	Change of goods for sale	-	
	Surplus from normal operations	6,305	
			<u>14,737</u>
			<u>187,998</u>

Thus, the first section of the Current Operations Account has facilitated the preparation of the Value Added Statement as follows:

- (1) Value of production and services at selling prices = revenues from normal operations A/C 41 (goods for sale A/C 418 is not included) + the outcome of commercial activity (goods for sale A/C 418 - goods purchased for sale A/C 34).
- (2) Value of production and services at factors of production costs = value of production and services at selling prices + (subsidies A/C 42 - taxes and customs duties A/C 351).
- (3) Gross Value Added = Value of production and services at factors of production costs - intermediate commodities and services (Commodity requirements A/C 32 + services acquired A/C 33).

(4) Net value added = gross value added - depreciation A/C 352.

(5) Finally, distribution of value added:

. Wages: it includes wages in cash A/C 311 + wages in kind A/C 312 + Company's contributions to social insurance A/C 313.

. Rent expenses: they include actual rents A/C 353 + imputed rent difference A/C 354.

. Interest expenses: they include local interest A/C 355 + foreign interest A/C 356 + imputed rent difference A/C 357.

. Surplus (based on a production basis): it is equivalent to surplus from normal operations adjusted by the valuation difference of stock change A/C 358 and A/C 359.

Moreover, it is noteworthy to indicate that taxes and customs duties (A/C 351) are not regarded part of production cost at the macro level. This is because such taxes and customs duties, in addition to subsidies, are regarded as a tool for price determination.

b. Preparing a Value Added Statement Based On the Sectoral Income Model

In such a case, transferred revenues, revenues from portfolios and current transfers will be included when computing Value Added as follows:

Code Number		In thousand pounds	
		L.E.	L.E.
	Value of production and services at selling price (as it was computed before)		677,663
	Value of production and services at factors of production costs (as it was computed before)		663,324
32	(-) commodity requirements	416,341	
	(-) services acquired	<u>28,519</u>	
			<u>444,860</u>
	Gross value added by the company		218,464
352	(-) depreciation		<u>30,466</u>
	Net value added by the company		<u>187,998</u>
43	+ Revenues from portfolios	357	
44	+ Transferred revenues	<u>54,494</u>	
		59,851	
36	(-) Current transfers	<u>24,155</u>	
			<u>30,696</u>
	Value added available for sharing or retention = Company's contributions to the national income		<u>218,694</u>
			=

Cont'd

Code Number		In thousand pounds	
		L.E.	L.E.
	Distribution of Value Added:		
31	Wages	116,160	
353,354	Rent expenses	1,527	
355,356	Interest expenses	<u>55,574</u>	
357	Valuation difference of stock change of finished goods	8,432	173,261
	Valuation difference of stock change of goods for sale	-	
2811	Distributable surplus	37,001	
	Retained surplus 15,321		
	Distributed surplus <u>21,680</u>	-----	
			<u>45,433</u>
			<u>218,694</u>

In my opinion, preparing a value added statement based on the sectoral income model is to be recommended than that prepared according to the factor income model.

This is due to such reasons as:

- (1) It distinguishes between the value added achieved by the company and that available for distribution;
- (2) It avoids the double counting;
- (3) It facilitates the calculation of the contributions made by the company to the national income; and finally
- (4) It facilitates the computation of contributions made by the company to the net national product as follows:

Total Revenues:

Value of production & services at selling price	677,663
Revenues from portfolios	357
Transferred revenues	54,494

	732,514
(-) Intermediate goods & services	<u>444,860</u>
Gross Value - added	287,654
(-) Depareciation	<u>30,466</u>
Contributions to net national product	<u>257,188</u>

Contributions to national income are contributions to net national product less indirect taxes and business transferred payments as follows:

Contributions to net national product	257,188
Less:	
Indirect business taxes	14,339
Business transfer payments <u>24,155</u>	<u>38,494</u>
	<u>218,694</u>

IV. SUMMARY & CONCLUSION

This paper is an attempt to give an insight into the Egyptian Uniform Accounting System, which has sought to achieve the following objectives:

1. To provide the necessary accounting information for planning and control at all levels of the economy.
2. To coordinate financial accounting with national accounting in order to facilitate the computation of the gross national product (GNP). This is done through unifying terminology, standards, accounting concepts, and so on.
3. To facilitate the tabulation and storage of data by an enterprise so that it would be easy for each enterprise to supply the information needed by the governmental bodies. Of course, such information is reported in a uniform format and in terms of uniform treatment.

This paper is divided into three main chapters. Chapter one has been designed to indicate what is meant by a uniform accounting system, its objectives and finally to indicate its scope of application. It has been indicated that the uniform system is applied to all public business sector enterprises. The uniform system may be also applied to private business sector enterprises through a decree issued by the competent authority. However, banks and insurance companies have been excluded since they are subject to specific regulations and laws.

Chapter two has been designed to highlight the Chart of Accounts.

The following topics have been discussed:

1. The general framework of the Chart of Accounts where the classification and coding of financial accounts and control accounts have been highlighted.

2. Diagnosis of the Chart of Accounts where accounts have been categorised into three main categories as follows:

- (a) Balance sheet accounts;
- (b) Operating accounts; and finally
- (c) Control accounts.

3. Characteristics of the Chart of Accounts. The following are the main characteristics of the Chart of Accounts:

- (a) Classification of accounts into balance sheet accounts and operating accounts.
- (b) The absolute independence of both balance sheet accounts and operating accounts.
- (c) Diagnosis of accounts into seven various levels.
- (d) Reconciliation between production basis and sales basis.
- (e) Linking micro-accounting with macro - accounting.
- (f) The uniform system is to be considered as a disclosure system through the preparation of the following statements.
 - Balance Sheet
 - Current Operations Account
 - Production & Trading Account
 - Profit & Loss Account
 - Statement of Changes in financial position
 - Cash Budget
- (g) Finally, the Egyptian uniform accounting system is regarded as a source of information for planning and control at all levels of the economy.

Finally, Chapter three has provided an empirical case study where the Current Operations Account of one of the leading public business sector enterprises in Egypt, namely, Misr Company for Spinning & Weaving, in addition to its Value Added Statement were exhibited. It has been shown that how the Current Operations Account is to be prepared in three stages: where stage I indicates the surplus from normal operations, stage II indicates the distributable surplus, and finally, stage III shows how such a distributable surplus is to be allocated as:

- 1. Retained Surplus; and
- 2. Distributed Surplus.

Moreover, the Value Added Statement of the aforementioned company has been prepared on the basis of:

- 1. The factor income model which is adopted by the Egyptian Uniform accounting system; and

2. The sectoral income model which is to be recommended for such reasons as:
 - (a) it distinguishes between the value added achieved by the company and that available for distribution;
 - (b) it avoids double counting;
 - (c) it facilitates the computation of the contributions made by the company to the national income; and finally
 - (d) it facilitates the computation of contributions made by the company to the net national product.

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Appendix A

This appendix deals with the following four opposite twin accounts.

1. Valuation difference of Stock change of finished goods;
2. Valuation difference of stock change of goods for sale;
3. Imputed rent difference; and finally
4. Imputed interest difference.

Example I: This example covers the first opposite twin account.

- Ending finished stock at cost and selling prices: \$ 19,000 and \$ 21,000 respectively.
- Beginning finished stock at cost and selling prices: \$18,000 and \$ 19,500 respectively.

The following are the calculation of stock change and its valuation difference:

$$\begin{aligned} \text{a) Stock change at cost} &= \text{Ending finished stock at cost} && - && \text{beginning finished stock at cost} \\ &= 19,000 - 18,000 = \$1,000 \end{aligned}$$

Then stock change at selling prices is calculated as follows:

$$\begin{aligned} \text{Ending Finished Stock at Selling Prices} &- \text{Beginning finished stock at selling prices} \\ &= 21,000 - 19,500 = \$ 1,500 \end{aligned}$$

$$\begin{aligned} \text{b) Valuation difference of stock change of finished goods} & \\ &= \text{stock change at selling price} - \text{stock change at cost} \\ &= 1,500 - 1,000 = \$ 500 \end{aligned}$$

Needless to say that stock change of goods for sale and its valuation difference will be calculated in the same manner applied to stock change of finished goods and its valuation difference.

Example II: This example clarifies how the imputed rent difference will be computed.

The Egyptian UAS defined the imputed rent difference as it is equal to the difference between the rental value of premises owned by the entity as if such premises were rented and the depreciation on such premises which is to be calculated on a historical cost basis. Thus to calculate the imputed rent difference, the following steps should be carried out:

1. Calculation of the rental value of all premises owned by the entity.
2. Calculation of the depreciation expense on such premises based on the historical cost.
3. The difference between (1) and (2) will equal the imputed rent difference.

Example III: This example deals with the computation of the imputed interest difference.

The imputed interest difference was defined by the Egyptian UAS as it is equal to the difference between the interest due on the invested capital according to the interest rate declared by the Ministry of Finance and the interest expense due on the borrowed amounts that are to be considered as a part of such an invested capital.

Based on the above definition, the calculation of the imputed interest difference requires the following steps:

1. To determine the invested capital in accordance with what the Egyptian UAS has adopted in this regard.
2. To reduce the invested capital by the historical value of the premises owned by the entity to avoid the double counting.

3. To calculate the interest due on the net invested capital using the interest rate declared by the Ministry of Finance.
4. To compute the interest expense due on the borrowed amounts that are included in the invested capital. This will be carried out through the diagnosis of local and foreign interest accounts.
5. Finally, the imputed interest difference will be equal to the difference between (3) and (4), i.e. the difference between the interest due on the net invested capital and the interest expense due on the amounts borrowed that are to be considered as a part of the invested capital.

Moreover, the Egyptian UAS has indicated two definitions to show how the invested capital will be computed.

The first definition is based on the sources of the invested capital. Based on such a definition, the invested capital will be computed as follows.

Paid in capital		X
Reserves (excluding the reserve invested in governmental bonds)		X
Retained surplus	X	
Provisions including provisions for depreciation	X	
Long - term loans	X	
Amounts used in financing the entity's expansions	X	
	_____	X
(-) Losses (carried forward)		X
		X
Invested capital		_____
		X

The second definition is based on the uses of the sources of invested capital. So, the calculation will be as follows:

fixed assets at cost (and before the deduction of accumulated depreciation)		X
<u>Added:</u> the difference between: Current assets (excluding the amount invested in the purchase of governmental bonds)	X	
Current liabilities (excluding the amounts used in financing the entity's expansions)	X	
	_____	X
Invested capital		_____
		X

Finally, the following is a numerical example on the calculation of the imputed interest difference:

Invested capital	\$ 1,500,000
(-) Historical cost of premises	<u>300,000</u>
Net invested capital	<u>1,200,000</u>
Interest due on the net invested capital based on the interest rate declared by the Ministry of Finance (10% for instance)	120,000
(-) Interest expense due on the amounts borrowed which are a part of the invested capital	
Imputed interest difference	50,000
	<u>70,000</u>

Appendix B
Balance Sheet as at

Code No.		Code No.	
	<u>Capital</u>		<u>Fixed Assets</u>
211	Equity	111	Land
212	Government contribution (to be repaid)	112	Buildings, constructions and utilities
	<u>Reserves & carried Surplus</u>	114	Means of Transport
221	Legal reserve	115	Tools & Instruments
222	Reserve invested in governmental bonds	116	Furniture & Office Equipment
223	Reserve for financing	117	Animal & water wealth
	investment projects, renewals & expansions	118	Deferred Revenue Expenditures
224	General reserve		<u>Projects in Progress</u>
225	Reserve for repayment of government contribution	121	Commodity Formation
226	Reserve for higher prices of assets	122	Investment Expenditure
			<u>Inventories</u>
227	Other reserves	1311	Materials
228	Carried surplus	1312	Fuel
	<u>Provisions</u>	1313	Spare parts & Materials for maintenance
231	Depreciation provision	1314	Packing Materials
232	Provision for disputed taxes	1315	Remnants (Scrap)
233	Provision for doubtful debts	132	Unfinished products & work in progress
		133	Finished products
		134	Goods consigned to others
234	Other provisions	135	Goods For Sale
		136	Documentary Credits for purchasing Goods

Cont'd

Code No.		Code No.	
	<u>Long-term-loans</u>		<u>Long-term-lending</u>
241	Domestic long-term loans	141	Domestic Long-term Lending
242	Foreign long-term loans	142	Foreign Long-term Lending
	<u>Credit Banks</u>		<u>Financial Investments</u>
251	Bank overdraft	151	Investments in
252	Short-term loans with guarantee		governmental bonds
253	Credit current account against documentary credits	152	Investments in securities
	<u>Creditors</u>	153	Investments in Foreign portfolios
261	Suppliers		<u>Debtors</u>
262	Bills payable	161	Clients
263	Miscellaneous creditors	162	Bills Receivable
264	Creditors of distributed profits (dividends)	163	Miscellaneous debtors
	<u>Various Credit Accounts</u>		<u>Various Debit Accounts</u>
272	Various creditors	171	Various Debtors
273	Other credit balances	172	Other Debit Balances
274	Accrued current & appropriated expenses	173	Accrued Current & Appropriated Revenues
	<u>Year's Result</u>		<u>Cash in Hand & Cash at Banks</u>
281	Current Operations Account	181	Cash in Hand
		182	Bank Current Account
		183	Bank Deposit Account

Appendix C
Production & Trading Account For

Code No.				Code No.		
	<u>Cost of production centres</u>					
531	Wages	X		414	Stock change of unfinished goods at cost	X
532	Commodity requirements	X			Cost of goods manufactured (carried forward)	X
533	Services acquired	X				
535	Current transferred expenses	X	X			
		-				
		-				
	<u>Cost of production service centres:</u>					
631	Wages	X				
632	Commodity requirements	X				
633	Services acquired	X				
635	Current transferred expenses	X	X			
		-	-			-
		-				
			X			X
			-			-
			X		<u>Revenues from normal operations:</u>	
	Cost of goods manufactured (brought forward)				production at selling price	
				411	Net sales of finished goods	X
				412	Stock change of finished goods	X
534	Goods purchased for sale		X			

Cont'd

358	Valuation difference of stock change: finished goods	X		413	Valuation difference of stock change of finished goods	X	
359	Goods for sale	X		416	Revenues from operations for others	X	
		--	X	417	Services sold	X	
	Gross surplus of production (c/f)		X	419	Remnants of production	X	
				418	Goods for sale:	--	X
				4181	Net sales	X	
				4182	Stock change	X	
				4183	Valuation difference	X	
					Gross deficit of production (c/f)	--	X
						-	X
							-
							X
	Gross deficit of production (b/f)		X		Gross surplus of Production (b/f)		X
	<u>Costs of Marketing Service Centres</u>						
731	Wages	X			<u>Subsidies</u>		
732	Commodity requirements	X		421	Production subsidies	X	
733	Services acquired	X		422	Export subsidies	X	
735	Current transferred expenses	X				--	X
		--	X			-	X
					Gross deficit of production & Trading (Carried forward to profit & loss A/C)		
	Gross surplus of production & Trading (carried forward to profit & loss A/C)		X				
							--
							X
							--

Appendix D
Profit & Loss Account For...

Code No.				Code No.			
	Gross deficit of production & Trading (b/f)		X		Gross surplus of production & Trading (b/f)		X
	<u>Cost of administrative & financial centres</u>			43	Revenues from portfolios		X
831	Wages	X			<u>Transferred Revenues</u>		
832	Commodity requirements	X		441	Interest earned	X	
833	Service acquired	X		442	Rents earned	X	
635	Current transferred expenses	X	X	443	Capital gains	X	
	<u>Appropriated current Transfers</u>			444	Prior years' revenues	X	
361	Donations/Gifts	X		445	Compensations & fines	X	X
362	Contributions to others	X		446	Other earned revenues:		
363	Compensations & Fines	X		4461	Revenues from scrap sold	X	
364	Capital losses	X		4462	Discount received	X	
365	Prior years' expenses	X		4463	Bad debts received	X	
366	Bad debts	X		4464	Profits from raw materials sold	X	
				4465	Commissions earned	X	X
						-	
367	Provisions (other than depreciation provisions)	X		447	Imputed rent difference	X	X
368	Taxes on land & buildings	X	X	448	Imputed interest difference	X	
						-	X
						-	
	Surplus (c/f)		X		Deficit (C/F)		X
			-				-
			X				X
			-				-

Cont'd

Code No.				Code No.			
	Deficit (b/f)		X		Surplus (b/f)		X
369	Income taxes	X		3812	Current deficit		X
3811	Distribution surplus (carried forward to Appropriation (A/C))	X					
			X				X
			-				-

N.B. Appropriation Account is to be prepared in the same manner of preparing the third section of the current operations Account.

THE NEW REFORM AND EMPLOYMENT ADJUSTMENT

Teshome Mulat*

Abstract: The on-going macroeconomic and public sector reform programme in Ethiopia is aimed at reducing the relative share of the public economy and public employment. Under labour market conditions of unregulated wages and rightward shifting labour supply curves, conditions that are aided by the reform process, the employment response in the private economy is contrary to expectations.

I. INTRODUCTION

The main elements of the on-going institutional and economic reforms in Ethiopia are outlined and reviewed in many publications [62,63], [43,p.1], [44,p.1], and [5,p.8]. These reforms have diverse objectives, serving in some way, the cause of market liberalization, economic development and the improvement of social welfare.

The focus of this short paper is on the employment effects of these reforms. It may be argued that any reform measure affects directly or indirectly the level and structure of employment. This calls for a complete coverage of government legislation, measuring and analyzing the employment effect of each proclamation, decree, regulation, or government directive. While this approach may give the study a semblance of comprehensiveness, it is difficult to measure net employment effects in this way and may not even be necessary to explain the employment changes arising from public sector reform measures. Part of the problem emanates from the difficulties in defining stable cause and effect relationships. A particular legislation affects many macroeconomic goals, including employment, and the direct and indirect employment effects may tend to be diffused. The other problem arises from the fact that policy reform, in practice, is an on-going activity with new legislations which have both short- and long-run as well as direct and indirect employment effects being introduced all the time (thus, complicating the task of model specification).

Instead, we focus on the main reforms introduced so far (following the adoption of the World Bank and the International Monetary Fund sponsored structural adjustment programme for the country) and on their short-run employment effects by interpreting the provisions in the legislations themselves, and not using a formal econometric model of the kind suggested above (for which there is also an utter dearth of information).

II. THE WORK-LEISURE CHOICE, THE RESERVATION WAGE AND PARTICIPATION

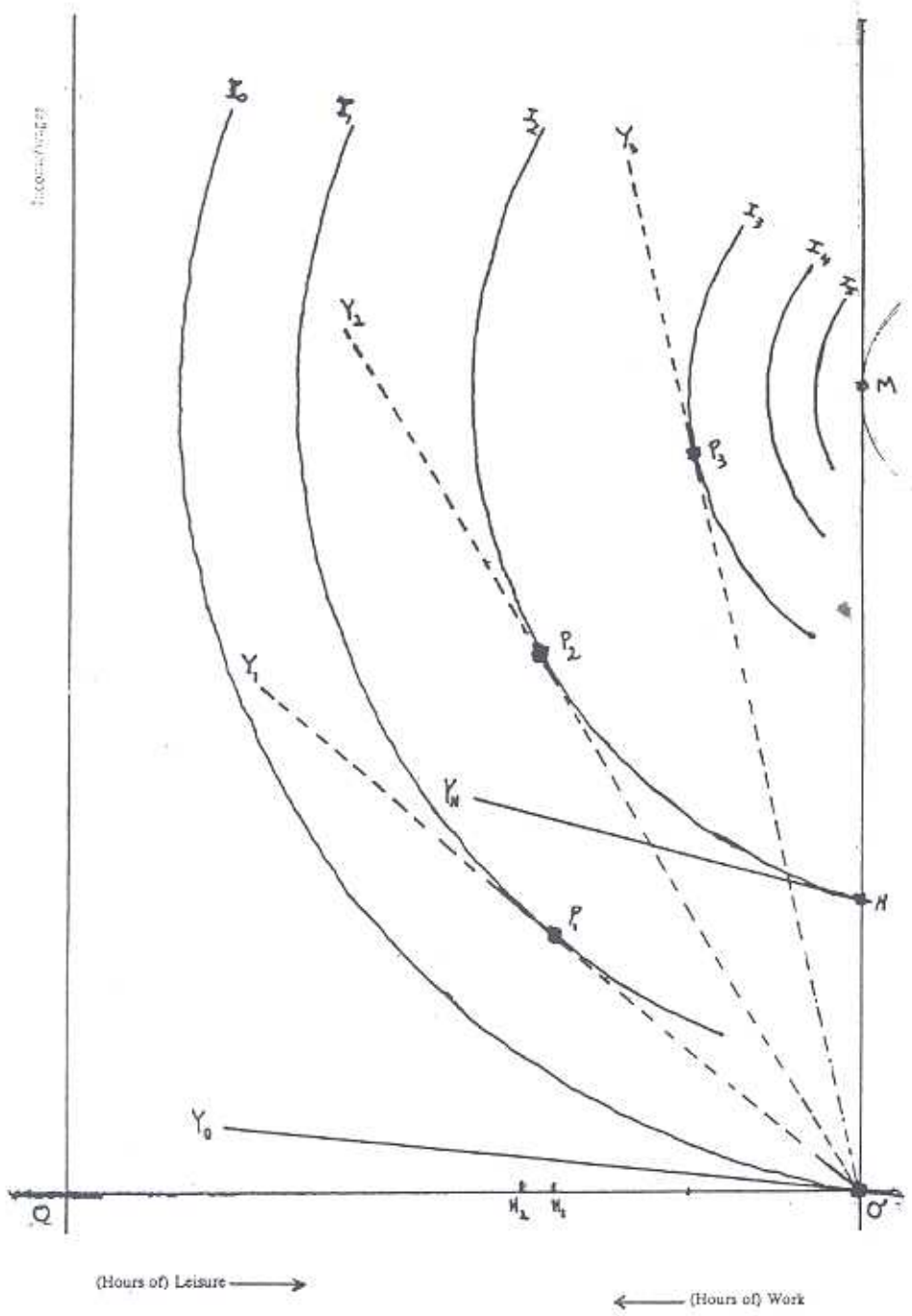
Given the individual worker's indifference map¹ (as shown in the accompanying diagram), a corner solution is provided at a wage rate of zero, with the worker not participating in the labour force and with the reservation wage (i.e. the minimum wage rate that induces participation) equal to the slope of $O'Y_0$ line, or $y_0(h)$, at its minimum. As the wage rate rises above $y_0(h)$, participation increases, gradually reaching a maximum (somewhere between p_1 and p_2) and then declining. $O'P_1P_2P_3M$ traces the equilibrium solutions where the worker's subjective valuation of the opportunity cost of leisure (given by the slopes of the indifference curves) equals the going wage rate (given by the slope of the broken lines).

Note, as the wage rate increases (i.e. as the slope of the rays that are drawn from the origin O' rises), the worker is placed on ever higher indifference curves. Also, as the wage rate rises, beyond the point of maximum participation, the rate of participation declines. It is only natural that the worker prefers to enjoy leisure to work, now that he/she can do so as a result of high wage incomes. If the wage rate rises to infinity (that is the case at M , where the slope of the $O'M$ line, or the wage rate line, is tangent to the highest indifference curve possible and is equal to infinity), the individual ceases to work altogether, or participation is reduced to zero.

The effect of high wages and wage increases is thus to reduce participation. The rate of worker participation or employment also declines as a result of the availability of non-wage incomes. The negative employment effect of the level of non-wage incomes is also shown in the accompanying diagram. If $O'N$ amounts of non-wage income are available to the worker, he/she would demand a wage rate of at least $y_N(h)$ to participate in work. With larger amounts of non-wage incomes, higher levels of reservation wages would be required to induce participation.

Note too, that the reservation wage, given the indifference map, has a value in the range of $y_0(h)$ and infinity². It gradually increases starting from its lowest value at O' [equal to $y_0(h)$], where the lowest indifference curve possible is just tangent to the reservation wage line, and reaches its maximum value of infinity at M [equal to $y_M(h)$, the slope of the vertical line $O'M$]. As the wage rate increases (or as the worker moves onto higher indifference curves) the minimum wage required to induce participation (the reservation wage) increases.

The Work-Leisure Choice and Participation



The implications of the above propositions for public policy are fairly obvious. Public sector reform may aim at improving workers' welfare (try to place the worker on the highest possible indifference curve) or increasing worker participation. The two goals are different. To achieve the former one tends to M , while the latter goal is achieved at the wage rate which induces maximum participation. But both goals relate to the wage rate, and to the availability or non-availability of non-wage incomes. Furthermore, the higher the wage rate, the higher will be the reservation wage that induces participation. In other words, the reservation wage and the wage rate are positively correlated. They are both inversely related to the rate of participation as are non-wage incomes. High wage levels and wage increases, minimum wage legislation and the availability of non-wage incomes to the worker (such as dividends, rent incomes, business profits, family income, pensions, etc.) adversely affect participation in work, i.e. employment.

III. THE EMPLOYMENT STRATEGY OF PUBLIC SECTOR REFORM

Estimates of the relative size of the public economy and of public employment are scanty, with many gaps, and have limited coverage. The most comprehensive estimate of the relative size of public employment is produced by the Ministry of Labour and social Affairs Survey in 1983 [52, p.45].

Table 1
Estimate of the Relative Size of Public Employment⁽¹⁾, 1983

Sectors	Estimate of Public Employment	Estimate of total wage-employment	Share of Public Employment (percent)
Agric., Forestry & Hunting	103,705	103,802	99.9
Manufacturing	179,206	217,184	82.5
Construction	45,176	46,551	97.0
Wholesale and Retail Trade	15,057	51,445	29.3
Transport, Storage, & Communic.	34,744	37,176	93.5
Community, Social & Personal Service	147,942	223,522	66.2
Others ⁽²⁾	27,495	28,885	95.2
Total	553,325	708,565	78.1

Notes: ⁽¹⁾ Excludes "private sector" employment in agriculture, forestry, and hunting

⁽²⁾ "Others" includes mining and quarrying; electricity, gas & water; and finance, insurance, real estate and business services.

Source: Ministry of Labour and Social Affairs (1984), p. 45

While the relative accuracy of the public employment estimate in the above Table is confirmed by a subsequent survey and reports, the estimates of the total wage-employment are off the mark by large magnitudes, because of gross under-estimation of the level of "private sector" wage-employment³. The MLSA 1983 Survey itself notes that wage-employment in private agriculture and in all establishments "employing less than 10 persons" was excluded, the geographical coverage of the survey was incomplete and there was under-representation of employment in the private sector "construction and transportation services" [54, p.45]. An important omission is also the military under the Ministry of Defence and the police force (although the civilian employees of these establishments are included in the survey) which are perhaps twice as numerous as the public sector employees. A 1986 survey [53] estimated the total public sector employment at 539,464, indicating a 2.5 percent drop over its 1983 level⁴. This survey also shows the distribution of public employment between workers of the public enterprises, who are governed by the Labour Law (Proclamation No. 64/1975) and numbered 299,934 or about 56 per cent of total public employment, and the civil servants working on the basis of the Civil Service Commission rules, (Order No. 23/1961), totalling 229,156 or 42 per cent of the total public employment.

Thus, the true share of public employment is much lower than indicated by these estimates, if the base is total wage-employment in the economy. However, the public economy and public employment dominate in the relatively large sectors of economic activity which provide relatively better pay and stable employment. That the public economy is dominant in certain areas of economic activity is also evident from the results of specific surveys. For example, the most comprehensive Small-scale industry (SSI) survey ever conducted in Ethiopia, [40], estimated the total number of SSI establishments and wage-employment in 1985 at 7,684 and 36,846, respectively⁵. This shows the relative smallness of wage-employment in the organized or "formal" sectors of private manufacturing. According to a recent industry survey, which covers the relatively large industrial enterprises [1], the shares of the public economy in total manufacturing production, fixed capital assets and employment are, respectively, 96, 97 and 93 percent⁶.

Perceptions about the relative productivity or efficiency of public employment vary⁷. One view is that under the socialist management of the economy public employment expanded considerably, especially in the services and in administration, which harboured a large share of "non-productive" activities. Elaborate hierarchical control, coordination and monitoring systems engaged large numbers in relatively unproductive work, unnecessarily inflating labour cost and raising the real prices of industrial output. Long delays, red-tape, graft and corruption characterised the bureaucracy and indicate that the public sector system is perhaps over-manned as well. In addition, in times of economic difficulties, which is often the case, excess capacity occurred in the public economy, with large numbers of paid workers waiting for spare parts, industrial inputs, or even increases in the demand for their produce or service in order to be engaged optimally. These indicate potential redundancies in the public economy, and suggest that redeployment and/or retrenchment is possible through lay-off and streamlining. Under such conditions, a public sector "leaning" programme would make it relatively more efficient and cost-effective.

An alternative view point about public sector employment under socialism is that civil servants and workers in government owned enterprises worked over-time without pay and offered free service in various committees. Senior officers of government held simultaneously many responsibilities and participated, as most public servants did, in civil functions outside the office and in various "campaigns" which the government organized without being compensated in return. This line of argument suggests that the public economy is under-manned, and if the activities outlined are in the nature of economic goods (which are not inferior goods), public sector reform would lead to an increase in the level of public employment (as free labour is substituted by paid work).

There is also another view about the direction of public employment, which is that "reform" may necessarily result in "new" employment as well as job loses in departments and enterprises facing expenditure retrenchment. The net employment effect of reform is thus difficult to measure and may become obvious, if at all, only in the long term.

In the light of the above, what is the employment strategy of the on-going macroeconomic and public sector reform measures? To what extent are the recent reforms introduced by the Transitional Government of Ethiopia affecting public employment in particular and wage-employment in the economy generally?

The reform measures which affect output and employment can perhaps be divided into three groups. First, a principal concern of the reform has been the *reorganization of the public sector system* itself so that it would become, in the end, relatively "smaller" (than the private economy) and more efficient and cost-effective (than it was in the past). This is closely related to budgetary reform, which, in the light of the experiences of countries undergoing structural adjustment, often entail expenditure retrenchment and restructuring, and revenue growth enhancement and consolidation. Together, these provide the major ingredients of a public sector "leaning" programme, which give the public sector system a new direction and responsibility (in the area of economic regulation) and render it relatively efficient and cost effective in the delivery of public goods.

The reform measures introduced so far and contributing towards the enhancement of the above objective include the reorganization of the ministries, the establishment of regional self administrations, the introduction of public enterprise reforms, retrenchment and restructuring of government expenditures and, perhaps, the new labour law.

Second, there are some policy measures taken with a view to *changing the public and private economy balance*. The aim is to transfer responsibilities and assets from the public to the private sector, so that the latter and market forces have dominant roles to play in the national economy. Obviously, this calls for a new relationship between the government and the public and private economies on the one hand, and between the private and public sector economies themselves, on the other. The reform measures directly aimed at distorting the public/private economy balance are few and can be evaluated in terms of their effectiveness to achieve the indicated objective⁸.

Third, and related to the above is the *enhancement of the growth and development of the private economy*. Toward the realization of this goal a number of reform measures were recently introduced including price and market deregulation, a new investment law, monetary and foreign exchange policy changes, fiscal policy reforms, and measures to diversify and increase investment finance. Some of these reform measures have direct employment effects while others affect employment only indirectly.

IV. THE EMPLOYMENT EFFECT OF THE REFORM MEASURES

All the three aspects of reform, viz. reforming or reorganizing the public economy, changing the relative public/private sector balance, and enhancement of the development of the private economy, affect employment growth.

4.1 Public Sector Reform⁹ and its Employment Effect

The aim of the new labour law (Proclamation No.42/1992) is perhaps "industrial peace" which may possibly affect employment indirectly and in the long-run. However, it is uncertain that Proclamation No. 42/1992 will achieve this goal more effectively than the laws it repealed¹⁰. Workers argue that the new law denies them job security which the previous law, Labour Proclamation (No.64/1975), gave them. Employers, on the other hand, think that the new labour law does not give them the freedom to act in matters of employment and conditions of work as much as they wish. Beyond that Labour Proclamation No. 42/1992 appears to be neutral in its short-term employment effect.

The reorganization of government, which is the other element of reform, has taken several forms (see Table 2). One aspect of the reform is reducing the size of government and streamlining central government institutions, including the ministries. As a direct outcome of the reform process, some institutions are scrapped, the two sectoral ministries in agriculture, trade and construction are collapsed into one ministry in each case, three new ministries (that had not been there as ministries prior to the coming of the Transitional Government) are established, and all public institutions and ministries are required to introduce internal reorganization. The result of these processes has been a marked reduction in overall personnel size in central government institutions which was achieved through large-scale dismissals, lowering the pensionable age, and compulsory retirement of eligible pensioners. Large numbers of civil servants were also allowed to "float" (go on forced leave of absence from work with pay), for several months in some cases, pending dismissal or relocation decisions.

However, the main feature of the reform had been the institutional replication in the regions (Proclamation No. 41/1993) and that has the potentials for employment expansion (see especially the last two rows in Table 2). Following the issue of the Regional Government Establishment Proclamation (Proclamation No. 7/1992), and the proclamation defining the powers of governments (Proclamation No. 41/1993), there has been a relocation of some public employees from the "centre" to the regions and the employment of others in the "regional bureaus".

Table 2
The Reorganization of Government

Government	Proclamation No. 8/1987	Proclamation No. 41/1993
Ministries ⁽¹⁾	20 (Art. 15)	20 (Art. 3)
State Committees ⁽²⁾	2 (Art.37)	
Commissions, the National Bank, Authorities and Institutes ⁽³⁾	16 (Art. 41)	12 (Art. 25, 57)
Branch Offices	All to continue (Art. 59)	
Regional Planning Offices	As per ONCCP Proc. 262/1984. There were 8 such offices	
Regional Administrations	Regional, Awraja and Wereda administrations to continue until the establishment of autonomous regions (Art.60)	
Executive Organs of Regional Self-Governments		Regional offices plus (No. of regions X 17 "Bureaus") (Art. 33) ⁽¹⁾
Executive organs at Wereda and other regional administration levels		not defined (Art. 58)

Notes: ⁽¹⁾ The Ministry of State Farms Development and the Coffee and Tea Development Ministry in (Proc. 8/1987) are replaced by the Ministry of State Farms, Coffee and Tea Development in Proc. 41/1993. In place of the two ministries, Urban Development and Housing and the Construction Ministry, (in Proc. 8/1987) there is only one Ministry of Public Works and Urban Development in Proc. 41/1993. Likewise, instead of the former ministries of Domestic Trade and Foreign Trade, there is one Ministry of Trade in Proc.41/1993. Three new ministries are introduced by Proc. 41/1993: the Ministry of Natural Resources Development and Environment Protection, the Ministry of Economic Co-operation and the Ministry of Planning and Economic Development. The last two constituted the two "state committees" in Proc. 8/1987. ONCCP stands for the "Office of the National Committee for Central Planning".

⁽²⁾ The following four institutions (in Proc. 8/1987) are not included in Proc. 41/1993: The Price Study and Policy Institute, the Building and Transport Construction Design Authority, the Water Resources Commission, and the Defense Industries Commission.

⁽³⁾ 17 and not 20 bureaus because defense, foreign affairs and central banking functions are not regionally replicated

Although, as shown later, this raises questions about the "quality of employment"¹¹ and may prove difficult to justify on economic grounds, it is estimated that the regionalization programme, if fully implemented, may result in net additions to public employment. However, there is no indication that the possibilities exist for a full implementation of the regionalization programme at present, and what is observed on the ground is the substitution of old public sector functionaries by new "loyalists" in the regions. Only a few "regional bureaux" are established in some regions, and bureau replication at sub-regional level administrations are not yet reported.

The reorganization of the public enterprises, the other aspect of public sector reform, is being carried out on the basis of the Public Enterprise Proclamation (Proclamation No. 25/1992)¹². Previously public enterprises were organized under the "corporations" of certain ministries. In 1990, the Ministry of Industry, for example, owned and managed a total of 164 establishments organized under 10 corporations (and 4 share companies) [48, p.v]. The changes introduced by Proclamation No. 25/1992 are basically two: the "corporation" system is replaced by a "board" system of industrial management, and the enterprises are given a degree of autonomy that permits independent action in matters relating to enterprise economic management.

It is unclear whether the board system introduces efficiency and cost-effectiveness to public enterprise management any more than the previous system it replaced did. If some public enterprises are reported to be "profitable" after the reform, their success may have more to do with foreign grant and loan financing of imported inputs than with the change in management. The corporation system of industrial management was adopted as a cost saving measure. It was also regarded as an efficient method of using scarce technical and managerial skills and services concentrated at the corporation level. Since some functions previously concentrated at the corporation level are now distributed to the enterprises, the "board" system may lead to some employment increase in these critical areas. However, the over-all employment effect of the reform, if any, are likely to be indirect and are only likely to be felt in the long-term (through the growth of the public enterprises made possible by the changes from a corporation to a board management system).

What is evident in the short term, however, is that some public enterprises have been closed and others allowed to operate with a reduced work force. Among the enterprises that were closed are the Ethiopian Import-Export Corporation (ETMEX), Marine Transport Authority, Ethiopian Building Construction Authority (EBCA), and Development Projects Studies Authority (DEPSA). A factor that complicates the measurement of net employment effects of closure is that some of these enterprises have reappeared in a new form and with reduced staff. For example, ETMEX is partly replaced by a new public enterprise, Ethiopian Whole Sale Trading Company (EWSTC) and EBCA by the new Awash Construction Enterprise (ACE).

Institutional reform, the aspect of public sector reform discussed above, is closely related to government budgetary reform, the twin objective of which is expenditure retrenchment and restructuring and budgetary balance. The argument for retrenching government expenditure has been that it is possible to do so (because a major cutback in

defence expenditures can be made) and that the resultant "peace dividend" can be used to expand economic capacity. A cutback in defence expenditures, permits, in the limit (i.e. at a zero level of defense expenditure), the use of some 42 per cent of the normal expenditure budgets of government in the development of economic infrastructures, to reduce excess capacity in public enterprises, and to enhance the development of private industry [57]. In other words, public expenditure retrenchment and restructuring is an important element of the public sector reform measures.

In practice, reducing the level of government expenditures is proving a difficult task. The planned devolution of power to the regions (increased bureaucratization), the need to combat increased lawlessness and political instability, the management of "transitional politics", and the carrying out of large-scale relief and rehabilitation programmes are requiring financial resources in excess of the economic capacity to pay for these things. Expenditure retrenchment is also advocated at a time of declining government domestic revenues [54, p.33], caused in the main by a sharp drop in incomes and by tax administration difficulties. It is also difficult to establish whether expenditure restructuring has been growth enhancing. While the cutback in defence expenditures is sizable, there has been little change (if any) in the real expenditure allocations to health, education and economic infrastructure.

Therefore, the employment effect of this particular measure is difficult to assess. Retrenchment of expenditure is deflationary and the contraction of economic activity it implies can only result in job losses. The restructuring of government expenditure along growth enhancing lines, on the other hand, is expansionary and has the potential to increase employment. But there is no conclusive evidence that the Transitional Government of Ethiopia has succeeded in restructuring public expenditure in such a way that economic growth can result from it.

The conclusion which can be drawn is that public sector reform measures have brought about a reduction in the level of public employment. In the view of the Transitional Government, existing government ministries and institutions are "over-staffed" and retrenchment is an inescapable course to take¹³. According to government policy papers, the number of public employees to be retrenched as a result of the reform measures are estimated at about 80,000 (or about 15 percent of the total public sector employment)¹⁴. These figures do not include the demobilized soldiers (demobilized as a result of change and reform) variously estimated at between 500,000 and 1.2 million who are contributing to the accentuation of the unemployment crisis in the economy [41, p.27],[9]. There is also a large group of "displaced" persons (following disturbances in various localities), and "returnees" (who were previously refugees in neighbouring countries) who are contributing to unemployment growth. According to a World Bank report, the "displaced, returnees, and ex-soldiers" together are estimated at 2.1 million [44, p.22], which constitutes a sizeable addition to labour supply. Furthermore, the predictions for 1994 are that the famine afflicted population can rise upto 10 million or more, which may result in large-scale migrations to the towns and other centres of population concentration (such as refugee camps, state farms, etc.). There is also a large increase in labour supply induced by population growth (estimated at about 3 percent per annum).

Thus the overall effect of public sector reform and these demographic developments is to shift the labour supply curve to the right. In as much as it is the "educated" and/or the relatively "skilled" workers that have left the public sector system, it is the specific supply curves that would be so shifted. But, that also holds true (following our review of the demographic developments) of the situation in the labour market generally.

In terms of the Model described in section 2, the effect of public sector reform is to create a labour market situation similar to that faced by a monopsonist. The labour supply curve is positively sloped (and not the perfectly elastic one of the competitive market) and is pushed further towards the right further pushed to the right with a drop in the level of the reservation wage. Excessive unemployment and the absence of wage regulation (there is no minimum wage legislation in Ethiopia) permit the wage rate to drop to any level to adjust or equilibrate the market [62]. This precipitates a move in the direction of $MP_3P_2P_1O'$ and toward I_1 , indicating a continuing deterioration of the conditions of the working population (i.e. the relocation of the worker on a lower indifference curve).

4.2 The Public/Private Sector Balance and Employment

A specific policy pursuit of the TGE has been the deliberate distortion or change of the public/private economy balance so that the latter and market forces become dominant features of the economy. Two types of measures are proposed in this connection. On the one hand, government expenditure retrenchment and restructuring are to be used to deflate the public economy. On the other hand, other reform measures are introduced to enhance the transfer of assets and other resources from the public to the private economy.

The limitations of the first measure is already discussed (see previous section). During the past three years (since the adoption of SAP), the Transitional Government has failed to introduce a radical departure from the past budget practice: it was not possible to reduce significantly the level of government expenditure, and to restructure government expenditure along growth enhancing lines.

With regard to the second measure, that of public asset transfers to the private sector, the new economic policy document [62], identifies the specific enterprises to remain in government hands. These include large-scale engineering and metallurgical, fertilizer, and pharmaceutical plants and industries which supply strategic raw materials to major chemical industries¹⁵. The rest are targeted for liquidation or transfer to the private economy through sales and other modes of "de-nationalization".

The proclamations that permit the dissolution of public enterprises (Regulations No. 5/1992, and No. 126/1993) are issued to facilitate the transfer of some of these public enterprises to the private sector. The government, on the basis of these regulations and the provisions of Proclamation No. 25/1992 (Art. 47), can declare uneconomic enterprises bankrupt or force their closure to minimise loss. Alternatively, ailing enterprises can be re-established under a new management, or such enterprises would be able to transfer their assets to private buyers or enter into negotiations to permit non-government equity participation.

Although some enterprises are closed as a result of the policy measures¹⁶, no large-scale transfer of public assets to the private economy has been recorded to-date. The details on asset transfers, which presumably are drawn to make the exchanges attractive economic propositions, have not been made public so far. But a main problem has been and remains the lack of domestic buyers, and foreign buyers have so far shown little interest in loss making businesses.

Recent reports on SAP experiences elsewhere in Africa corroborate the above trend. Liquidation and closure of public enterprises are more numerous than asset sales. Planned privatization (or sales of government property) outstrips "actual" privatization (or actual asset transfers) several fold; and years of active discouragement and failure to develop national private entrepreneurial capacity and poor credit facilities have curtailed large private domestic buying of public assets in most cases [8].

Since public enterprises are being re-organized (and this has often resulted in a decrease of employment in specific departments), while no major asset transfers to the private economy have occurred, the net employment effect of the policy is possibly negative. The extent of public employment reduction is perhaps difficult to measure, partly because one is dealing with an on-going process and partly because the employment status of affected workers changes all the time¹⁷.

In terms of the Model in Section 2, the effect would be to increase labour supply and push the level of wages down in specific and general labour markets, i.e. cause a relocation of the worker on a lower indifference curve (indicating a further deterioration in the working conditions) than previously.

4.3 The Development of the Private Economy and Employment

The main strategic consideration in current government reform measures is the development of the private economy. Among the measures taken to enhance growth of investment, output and employment in private industries is the recent deregulation of prices and markets. The measure is apparently aimed at improving the rate of return on investment, by allowing the upward adjustment of market prices, while keeping a regime of price regulation in areas where market failures are noted [58]. Early reports indicate that the observed rise in real incomes of cash crop farmers, following market liberalization, is not accompanied by increases in supply or production. This lack of supply response is also observed in relation to foreign exchange rate adjustments. Exports could not increase as much as expected because domestic prices also soared following the devaluation of the Birr. But, a major factor behind the lack of supply response is a structural one: the land market has not been liberalized and farmers and entrepreneurs generally could not respond to the price and foreign exchange incentives provided by the reform measures.

A main objective of monetary reform under SAP¹⁸ is to contribute to economic stability by maintaining low to moderate seigniorage and a level of the "real interest rate" that is neither "highly negative" nor "highly positive" [66, pp.48-51]. A mark of the

relative success of monetary policy is that the growth of inflation has so far been low or moderate. However, the underdeveloped capital market and the low level of monetization of the economy limit what can be achieved by an improved monetary reform stance; and the extreme dependence on foreign financial grants and loans to finance the foreign exchange needs of the economy shows the vulnerability of the (monetary) system.

The fiscal reforms introduced recently have diverse objectives, including improving the welfare of low paid workers¹⁹, raising the level of industrial production²⁰, and restructuring output (special fiscal incentives for export-gearred production)²¹. The Investment Proclamation (No. 15/1992) provides administrative services (through the Investment Office of Ethiopia) and fiscal incentives and makes arrangements for land and water allocations to investors in the private economy.

Although these reforms, as a package, are taken to enhance the development of the private economy, which is the centre-piece of the reform strategy, the resultant rate of increase of investment and output has been less than what is required to absorb the reduction in public employment. The expectations have been that growth of the private economy should go beyond absorbing the unemployment created by the public sector reform measures²². But the rate of unemployment is rising in the economy: a grave school-leaver problem is developing, steep drops in agricultural production and law and order problems in rural areas are causing migrations to the towns, it is already shown that public sector reform had resulted in large-scale dismissals and there is a large increase in labour supply induced by population growth. These create, once again, labour market conditions which are characterized by a continuing right-ward shift of the labour supply curve and a sharp drop in the reservation wage. Two issues require elaboration: the problems of the "private sector development strategy", and the issue of employment adjustment to labour market conditions of increasing labour supply and flexible wage rates.

4.3.1 The Problems of the Private Sector Development Strategy

Recently, inspite of increased imports of fertilizer and other inputs, (private sector) agricultural production has not increased over previous levels. Adverse weather conditions, failure to introduce land reform, continuous abuse of the physical environment and political instability are among the factors contributing to a decline in agricultural production. During 1989-1991, excess capacity was developing and there were steep falls in the level of industrial production. In the succeeding years it was possible to increase industrial production and reduce excess capacity by direct financing of raw material and other input purchases from abroad. Since the major sources of this finance are foreign loans and grants provided under SAP its sustainability over the longer-term is in doubt. But, the GDP share and structure of private industrial production remain unchanged (still accounting for only about 4 percent of GDP, as it was in 1974/75, and dominated by food and textile production). There are many reasons explaining the lack of growth in private industry.

One does not see any long-term planning in the present design of private industry development. There is also no observed priority setting or strategic consideration in investment selection. In a state driven economy where twenty years of active "discouragement" of private initiatives and the market system have virtually eradicated the embryonic entrepreneurial class (or promoted its concentration in the public economy), it is difficult to change the relative GDP share of the private economy in the short term. The entrepreneurial class is not well formed in the society and foreign businesses have not made their inroads in the Ethiopian economy.

The situation is not helped by closing public institutions such as Development Projects Study Authority (DEPSA) because, as is shown later in this section, a major problem is the failure to make good investment decisions (which relate to the investment evaluation, selection and implementation processes) and these public institutions could have provided invaluable service and guidance to prospective investors in the private economy.

Sometimes government reform measures lack coherence and appear to send conflicting signals to prospective investors. Under Article 10(1,2) of the Regional Government Establishment Proclamation (No. 7/1992), the regional self-governments exercise "legislative, executive and judicial powers in respect of all matters within their geographical areas..." and have responsibilities in such matters as planning, directing and supervising social and economic development programmes. Proclamation No. 7/1992 clearly conflicts with the law which defines the functions and responsibilities of the Ministry of Industry (i.e. Proclamation No. 8/1987). The organizational problem introduced by this proclamation is further complicated by the Investment Proclamation (No. 15/1992), which assigns the role of land and water allocations for industrial activities to Regional Self-Administrations (Articles 9 and 10), the role of determining the investment incentives to prospective investors to the "Investment Office of Ethiopia" (Part II), and the role of licensing industrial enterprises to the "appropriate authority" (Article 18). But, the "appropriate authority" is not properly defined, and the regional self-governments are not established in all regions. Is it the Ministry of Industry or the Regional Self-Governments that constitute the appropriate authority? Two proclamations were later issued supposedly to mend the anomaly: the Investment Amendment Proclamation (No. 31/1992), which reassigns the tasks of the "Investment Office" to the Regional Self-Administrations, and makes them also the "appropriate authority"; and the Definition of the Powers of Regional Governments Proclamation (No. 41/1993), which establishes "industry bureaus" in the self-governments replicating the functions of the Ministry of Industry. In the light of these changes, the functions and responsibilities, if any, of the Ministry of Industry and of the Investment Office of Ethiopia are unclear²³. Since there are no more than 8000 industrial enterprises in the country, it is difficult to provide economic justifications for their management by an enlarged and hierarchical bureaucracy. Furthermore, with "critical skills" unavailable or in short supply in the economy generally, it is difficult to show how the regional offices would be able to staff them and where the financial resources for the purpose would come from. This bureaucratization process also counters the precepts of "public sector reform".

Prospective investors are also responding with caution to the system of industrial licensing (Regulation No. 8/1990) and to the investment incentives (provided in the Investment Proclamation No. 15/1992). According to the Industrial Licensing Regulation, industrialists are required to obtain from the Ministry of Industry various types of licenses and permits to function in the economy: temporary license (to facilitate industrial establishment), permanent license (given upon satisfactory completion of formalities and fulfilment of obligations to various government bodies), expansion and renewal permits, etc. as the case may be.

Table 3
Response to the System of Industrial Licensing
and the Investment Incentives

Year	"Temporary License" Issued (TL _t)	"Permanent License" Issued (PL _t)	Ratio PL _t /TL _{t-1} (percent)
1989/90	1111	339	-
1990/91	2355	312	28.1
1991/92	4076	643	27.3
1992/93	2711	464	11.4

Source: Ministry of Industry, *Private Industry and Handicrafts - Annual Report* (in Amharic), Various years.

Assuming that permanent licenses are issued to applicants that are holders of temporary licenses during a previous period, the performance indexes (shown in Table 3) can be computed for the system of industrial licensing and the system of investment incentives. Undeterred by the small fees to pay²⁴ and in order to get the benefits provided by the Investment Proclamation No. 15/1992 (which includes land allocations, fiscal incentives, duty free import privileges, etc) Prospective investors apply for "temporary license" in large numbers. But, they soon get discouraged when faced with the stringent requirements for "permanent license": The only course open to them is to withdraw (if by doing so losses can be minimized), stay on temporary license for another period (if the requirements for permanent license can be met in due time), or operate as an underground or informal business. The decision to go underground is often made by small firms, which lack visibility and which have a relatively large labour cost component, and estimate to break even or minimize cost by using own labour and withholding tax and other payments to the government. In all cases the trend is to reduce participation (see last column of Table 3). The failure on the part of prospective investors to establish legitimate businesses is discouraging to new investors. Even fewer numbers than before apply for license, and if the discouraging situation persists, the rate of participation in the informal sector drops.

Lack of progress in other areas also adversely affects the development of private industry. So far the development of suitable land policy has eluded policy makers. Although the Urban Lands Lease Proclamation (No. 80/1993) has been issued, there is no indication yet that it is implemented in any urban area. No changes have been made to the ownership and management practice of rural lands. The civil administration is in a state of flux, bureaucratic obstacles frustrate the search for legitimate activity, all contributing

to an increase in the real interest rate on risk capital and adversely affecting the "investment climate".

4.3.2 The New Conditions in the Labour Market and Employment Adjustment

Excessive and increasing levels of unemployment, low wages and the absence of wage regulation are favourable to the growth of private industry. Under 4.3.1 some of the major obstacles to the growth of the private economy are indicated. There are also other factors relating to employment adjustment difficulties.

The redeployment of retrenched public employees in private industry is not progressing as well as expected, mainly because of lack of growth in the private economy²⁵. Public employees are better educated, skilled and more experienced than workers in private industry [58]. Unfortunately, the private economy is incapable of generating sufficient demand for school leavers and the workers "released" from the public sector system.

Even if it is to be argued that lack of skills may constrain employment expansion in private industry, the current skills development programmes appear to be defective. The number of trainees from the private sector and the duration of skill training at the Ethiopian Handicraft Centre of the Ministry of Industry, the major industrial skill training facility in the country, are decreasing. The content of training is also changing from that of "skill development" to "management and orientation lectures".

Free mobility of labour is essential in terms of resolving problems of market disequilibria (supply shortages or surpluses) in specific labour markets. The implementation of the 1975 land proclamation (Proclamation No. 31/1975), and the government sponsored resettlement programmes of the mid-1980s were, to some extent, aimed at stabilizing peasant households. Peasants needed "official letters" from their peasant association, cooperative or local administrative office to travel in the country. Because of these constraints on the geographical mobility of labour, labour surpluses may be observed in some areas and shortages in others. Under conditions of free competition and free labour mobility the workers themselves paid for the cost of travel and the duration of resolving any labour market disequilibria was relatively short. But under the "socialist management of the economy" such labour movements became outcomes of a planning process with high social cost and prolonged "impact duration". The system of regional self-government (Proclamation No. 7/1992, and No. 41/1993) adopted by the Transitional Government introduces additional constraints on the free mobility of labour. The placement of public sector workers in the various bureaus of regional self-governments is based on the dictates of the "regional policy of the Transitional Government" and not that of the "impersonal competitive market" [61, pp. 9-12]. The controversial "principles" of the regional system (which, in the eyes of government critics, tends to strengthen regional tendencies), the inefficiencies of the placement machineries, and the denial of free choice and fair treatment to all job seekers are some of the major objections to the on-going government programme of public sector reorganization and employment retrenchment²⁶.

Past empirical studies of the manufacturing industries in Ethiopia show that downward adjustment of wages and the removal of various forms of capital subsidy may not yield a significant expansion in employment in industry due to low coefficients of elasticities of factor substitution [55, p.60]. This notwithstanding, recent capital/labour ratios (calculated in real terms and adjusted for variations in the number of enterprises) in private industry show large increases over previous levels, and may be wrongly interpreted as indicating slow employment adjustment to investment growth. In a few cases, new capital intensive enterprises are established, which tend to increase employment gradually and slowly, i.e. as revenues from sales are increased and stabilized. But these few cases cannot change the overall picture in such a short time. The plausible explanation for the rise of the capital-labour ratio is perhaps over-invoicing, on the part of reporting enterprise owners/managers of assets because they are no longer bound by the law which sets "capital ceilings" for private investments²⁷. They may also do so to benefit from the investment incentives (provided in the Investment Proclamation No. 15/1992) which increase with the size of investment.

Working conditions continue to deteriorate, mainly caused by high levels and rates of unemployment growth and the continued right-ward shift of the labour supply curve, on the one hand, and stagnation or relative low growth of the demand for labour, on the other. These circumstances force wage levels down which, in the absence of wage regulation and non-wage incomes, can decline to the minimum value of the reservation wage, $y_0(h)$. It is this continued relocation of the worker on still lower indifference curves that is confirmed by the data in Table 4 below.

Table 4
Declining Real Wages in Industry
(in Birr per Annum)

Year	Real Wages in SSIs	Real Wages in LSIs
1984/85	2341	-
1986/87	1771	3649
1987/88	-	3586
1988/89	-	3354
1990/91	1423	-

Notes: LSIs refer to large-scale industries, and SSIs to small-scale industries. The deflator is the "Addis Ababa Retail Price - General Index (excluding rent)" series. Two modifications are introduced: (1) the index series is recast according to Ethiopian calendar to correspond to the data on nominal wage rates, and (2) The base year for the price index which was 1963 = 100 is now changed to 1984/85 = 100.

Sources: The LSI computations are based on data in Central Statistical Office (now, Authority) (1990). The data for the SSIs are drawn from the Ministry of Industry (1991), (1993), HASIDA (1988). The "General Index" series are obtained from the National Bank of Ethiopia, *Annual Report*, various years.

The deteriorating conditions of the working class, which are reflected in declining real wage levels, are also brought about by *the absence or low levels of non-wage incomes*. The Land Reform of 1975 forbids any person or a business organization from holding rural

land in private ownership (Proclamation No. 31/1975, Article 3(2)). The Urban Land and Extra-Houses Nationalization Proclamation (No. 47/1975) denies any individual or organization the right to hold urban land in private ownership, forbids urban land transfers in any form and limits family or individual ownership of urban property to a "single dwelling house" (Articles 3(2), 4(1), 5 and 11(1)). According to Proclamation No. 76/1975, no industrial or business license would be given to any person who has a permanent job. Individuals without permanent jobs and seeking a licence can obtain it under highly limiting conditions: "No person shall obtain more than one licence nor possess more than one business or establish a branch" (Article 4(2)), and "a commercial activity shall be carried on only by an individual entrepreneur" (Article 4(3)). Although the law permits ownership of an "industrial enterprise" by an organization, the number of individuals participating in the organization is restricted to five (Art. 8(3)). Proclamation No. 76/1975 also sets "capital ceilings" for private investment in private business or industry (Articles 5,6, and 8). In addition, the civil service regulations forbid any public servant from seeking "outside" employment without authorization from the highest official in the organization where he/she works (Proclamation No. 28/1962, Article 81(1,2,3)). Such an authorization would be given, if at all, only after ascertaining that the worker's participation on the basis of his/her request would not in any way compromise with the satisfactory work performance in his full-time/primary job. With the aid of directives and circulars, the previous government made the most rigid interpretation of these provisions in Proclamation No. 28/1962, with the result that secondary employment even "outside working hours" are practically barred for public employees, while job transfers, even within government, required authorization from the highest authority in the civil service system.

Although some of the restrictions on non-wage income formation were eased in later years (for example, "capital ceilings" on investment were gradually increased and subsequently dropped, an individual can now hold simultaneously any number of business interests, etc.), even to-day public employees depend totally on their wage incomes. Thus, non-wage incomes for a public employee are virtually non-existent. The application of the land reform (Proclamation No. 31/1975) also restricted labour mobility in the rural areas and prevented (wherever it was possible to enforce government directives²⁸) the peasantry from moonlighting for complementary jobs and incomes (as traders, cobblers, wage-workers, carpenters, self-employed service workers and manufacturers) during periods of recess in agricultural activities. That these restrictions on the geographical and occupational mobility of the peasantry contributed to the accentuation of poverty in the rural areas is widely reported, e.g [46], [56]. The series of highly restrictive laws outlined above also explain why non-wage incomes are low in general, and why great significance is to be attached to public employment. Public employment is perhaps the major source for relatively high and stable incomes, and the private cost of "dismissals" is too heavy to bear²⁹. With zero levels of non-wage incomes, a public employee has nothing to fall back on if dismissed from work. In other words, in situations where wage levels are low and falling and where non-wage incomes are either non-existent³⁰ or very low, a prospective job applicant in public employment lacks bargaining power and becomes a wage or "price-taker".

In depressed economic conditions characterised by high unemployment rates in the economy (excessive labour supply), and lack of non-wage incomes (the public economy was dominant in Ethiopia), even a wage rate marginally greater than the minimum reservation wage level, i.e. $y_0(h)$, will induce employment expansion. In other words, there could be enough labour supply to meet demand at such a low wage. But workers in employment under such conditions exhibit rent seeking behaviour. To increase the economic rent for their labour, they commit for personal use a portion of their produce, become involved in graft and corruption, increase the rate of absenteeism from work, and attempt to extract concessions from the employer by union action. Thus, the social cost of public sector reform includes not only the relative decline of public employment and the economic hardships resulting from job loss, but also the deterioration of the "quality of employment".

The employers in the private economy also respond to the labour market situation of increasing labour supply and falling real wages in ways that exacerbate the already depressed economic situation. They tend to use own-labour intensively in supervision and monitoring activities, employ extensively family labour and apprentices (to reduce labour cost), informalize their businesses (to break-even by with-holding taxes and other payments to the government), and even reduce the scale of operation (to minimize use of wage-labour).

Notes

1. These are a set of curves each showing various combinations of work (income or wage rate) and leisure which yield equal utility. The equation of each curve can be written as $y(h)$, where wage rate or income (y) is a function of work or hours of work, h , the derivative $y_s(h)$ or dy/dh , (where the subscript, s , defines the specific indifference curve) is a measure of the wage rate or of the opportunity cost of leisure.

2. It is conceivable that the indifference curve may be so shaped as not to be tangent to the vertical line (which indicates zero participation rate) at any point on the latter, in which case the maximum slope of the tangent line to the indifference curve on the vertical line (i.e. the reservation wage) may be less than infinity.

3. Urban households and the informal economy generally are major sources of wage-employment. It is also widely reported that wage levels in these systems are very low and unstable.

4. There has not been another public employment survey since.

5. Of these 36,846 "persons engaged", 13,212 are proprietors and family workers, 397 are apprentices, and 2216 are temporary workers.

6. See, [4].

7. Two such ideas are discussed in [4], pp.220-221].

8. In fact the only measures introduced in this regard relate to a specific provision of the Public Enterprise Proclamation (No. 25/1992). The "provision" concerns the "dissolution of public enterprises" (Art. 47(1)(c)) and other options to deal with the transfer of assets from the public to the private sector.

9. These relate to institutional reform measures taken by the TGE including the reorganization of public institutions such as the ministries, public enterprises, regional administrations and the system of industrial relations.

10. Among the laws repealed by the Labour Proclamation No. 42/1992 are [13,14,15,16,19,21,22].

11. Many recent reports indicate that "qualified and experienced" workers are being replaced by "political cadres" and supporters of government in the civil service and public enterprises. Numbers change all the time and official estimates are not provided.

12. This Proclamation may be read in conjunction with the new economic policy document [62], which identifies and defines the select group of enterprises to remain in Government hands, the rest being targeted for liquidation, or transfer to the private economy.

13. Some modes of retrenching and redeploying public employees are elaborated by government officials in a recent meeting of representatives, [7].

14. This estimate is provided in many public documents. See, for example, [44, pp.22-23].

15. This particular clause in the policy document is perhaps "futuristic" since Ethiopia to-day does not have such an industrial base.

16. Among the government enterprises that were closed (even before the issue of these proclamations) are the Ethiopian Import Export Corporation (ETMEX), Marine Transport Authority, Ethiopian Building Construction Authority (EBCA), and Development Projects Studies Authority (DEPSA). However some of these enterprises have reappeared in a new form, after some lapse of time, perhaps with reduced staff and under a new management. The Awash Construction Company was such a recreation from the demise of EBCA.

17. For example, government employees reported "dismissed" during one period are "redeployed" in another.

18. See, for example, the Interest Rate Proclamation (No. 29/1992) and the Monetary and Banking Proclamation (No. 83/1994).

19. The increase in the wages of low-income workers was first announced in the Ethiopian Herald (2 October 1992). The downward adjustment of the income tax over previous levels is also reflected in the amended income tax proclamation (No. 29/1992).

20. Reductions in the rates of sales and excise taxes are reflected in cost of production decreases [e.g. 37]. Raw material import difficulties were eased by allowing "franco-valuta imports" [24, 26, and 27]. Foreign exchange made available through the "auction system" and counterpart funds under the Economic Rehabilitation and Reconstruction Programme (ERRP) have also been used to finance the import of raw materials and industrial spare parts.

21. The export tax and duties cancellation proclamation (No. 38/1993), and the export incentive proclamation (No. 69/1993) were introduced to encourage export-gearred production.

22. Very few former public employees found accommodation in self-employment when retrenched.

23. A reinterpretation of the law (by default or elimination) suggests that the Ministry of Industry and the Investment Office of Ethiopia are to be concerned only with "large-scale" industries and "foreign investments" (Proclamation No. 41/1993, Art. 17). Even with this redefinition, the conflict with the regional bureaus over the right to issue licences is unresolved, since "large-scale" is not defined in the law.

24. "Temporary license" fees are in the range of 100 Birr (for an investment of upto 50,000 Birr) to 350 Birr (for an investment of 5 million Birr or more). See, Schedule III of the Industrial License Regulations (No. 8/1990).
25. Other constraints include malfunctioning labour exchange or placement machinery, generation of wrong labour market signals (e.g. the payment of high, above shadow, wages for political positions, use of non-economic criteria in labour selections, etc.
26. These perceptions of government employment policy and practice are widely reported in the private dailies and weeklies and in the monthly magazines. See, also [65]. For the position of government in this debate see, [47] [61, pp. 30-33]. There is a wide rift of opinion on the matter between government and various sections of the public.
27. (Proclamation No. 76/1975) sets the capital ceiling (excluding buildings and land improvements) at 200,000 Birr, although later this has been revised upwards.
28. Some reports indicate that some geographical mobility (especially rural to urban) as well as cyclical occupational mobility (especially from farming to self-employment) took place inspite of the restrictions [2,3].
29. The entire household membership faces economic hardships as a result of job losses by the household head.
30. The only social security scheme available for most public employees is the pension fund. According to present rules (Proclamation No. 199/1963), public employees contribute 4 percent of their gross income toward the scheme and on the basis of the Civil Service Commission Regulations become eligible after the age of 55.

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THE PERFORMANCE OF MAIZE AND *teff*^{*} MARKETING IN SOUTHERN ETHIOPIA

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Abstract: *The paper analyses the functioning of teff and maize marketing system in southern Ethiopia. The methodology follows the industrial organization paradigm: structure, conduct and performance (S-C-P). The results reveal high market concentration, high barriers to entry in terms of capital and credit, evidence of collusion in the rural market, low market integration, high marketing margin, and high seasonal price variation which indicate the inefficiency of the maize and teff marketing system. There are basic constraints such as poor market infrastructure and lack of capital, credit and clear property right law to increase private investment in the food grain marketing sub-sector. In spite of the complex problems after the March 1990 reform, the maize and teff marketing system appears to be improving and working better by market structure standards (S-C-P).*

I. INTRODUCTION

The marketing system in Ethiopia has undergone a series of far-reaching changes in the last 20 years [29, pp.25-65]. Food grain marketing during the era of Derg (or Provisional Military Administrative Council) involved a complex set of institutional arrangements, quotas, and price control which were further complicated by regional disparity in the application of the rules and its stringency [17, p.16]. This resulted in the development of black marketing; lowered competition among traders for non-quota grain, limited the inter-regional trade, and reduced the prices of food grain [9, p. 332], [5, p. 140]. AMC's quota system, fixed AMC prices and the roadblock (*Kella*) reduced farmers' incomes and incentives to use improved inputs [11, pp.351-352], changed the cropping patterns of farmers and distorted the entire organizational system of private marketing. There were vociferous complaints on the marketing policy, particularly from the small farmers [16, p.142]. The institutions of the past, prior to March 1990 market liberalization, did not provide the necessary support to improve the efficiency of the private food grain marketing system. As a result, state efforts to improve food distribution through control of marketing has served neither equity nor efficiency [19, p. 160].

Donors criticized the price policy and quota regulation and provided conditions in order to offer loans [9, p.336-339]. The conditions mainly included narrowing the importance of the Agricultural Marketing Corporation (AMC), expanding the role of the private sector in agriculture, and allowing the market to determine prices. The government was not in a position to accept the conditionalities because (a) it was against the principles of socialist ideology and (b) it reduces the role of the government in controlling the resources in rural areas.

* *Teff* (*Eragrostis tef*) is the most important staple grain only in Ethiopia.

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The ideological and economic policy change in the former U.S.S.R. and East European countries at the beginning of the 1990 coupled with the internal and external pressure in Ethiopia resulted in the introduction of the market liberalization in March 1990. The food grain marketing policy reform basically included: (a) abolishing the fixed price and AMC's quota system on farmers and food grain wholesalers, (b) abolishing the roadblocks "Kella", (c) retaining AMC's purchase in the market by competing with the food grain traders and consumers, and (d) providing incentive to food grain traders [22, p.9-10].

The policy reform of Derg in March 1990 and the economic policy reform of the Transitional Government in November 1991 have attempted to restructure and reorganize the production and distribution system in a market oriented-manner. Trade was left to the private sector; and AMC/ETGE is involved in price stabilization, re-privatization of state farms has already been embarked upon, producers cooperatives were dissolved, bank interest rates increased, the Birr devalued, the political system decentralized, and private investment (domestic and foreign) is encouraged under the new liberalization policy. The policy changes have improved the growth of the economy, and the balance of payment; and increased private-sector investment [29, p.56-65].

The objective of this paper is to analyze the performance of *teff* and maize marketing system using the methodology of industrial market organization paradigm [6]. For the purpose of the study, primary data were gathered through structured (and pre-tested) questionnaire. A total of 33 food traders were sampled by combining purposive sampling with random sampling. Among the 33 traders: 25 were wholesalers, 4 retailers and 4 farmer-traders. The data set for the spatial pricing efficiency (weekly prices of *teff* and maize) were collected for 43 weeks in 12 markets. The time series retail and wholesale prices (free market prices) of *teff* and maize collected by AMC are used to analyze the inter-temporal price efficiency. Moreover, secondary information, both published and unpublished are extensively used in the study (see the details in [29, p.96-112]).

The article begins with brief discussion of how the marketing participants are linked to the complex network of marketing channels of food grain in Southern Ethiopia. This is followed by an examination of the structure and conduct of food grain trade. Finally, an attempt is made to assess the efficiency of *teff* and maize marketing. Concluding remarks are contained in the last section.

II. *Teff* AND MAIZE TRANSACTIONS IN SOUTHERN ETHIOPIA

In this section, an attempt is made to describe the transactions which are taking place in the food grain marketing chain among different agents or participants from the time food grain leaves the villages to the final consumers through a variety of traders. The food grain flow begins with the farmer who, after harvest, decides how much he wants to store for household consumption, seed, and payment in kind and sells the remaining food grain (market supply) to a trader or consumer in order to settle debts and contributions, taxes, and make purchases of consumer goods. The hierarchy of the food grain marketing system from the small rural markets at the top to the terminal urban markets at the bottom consists of

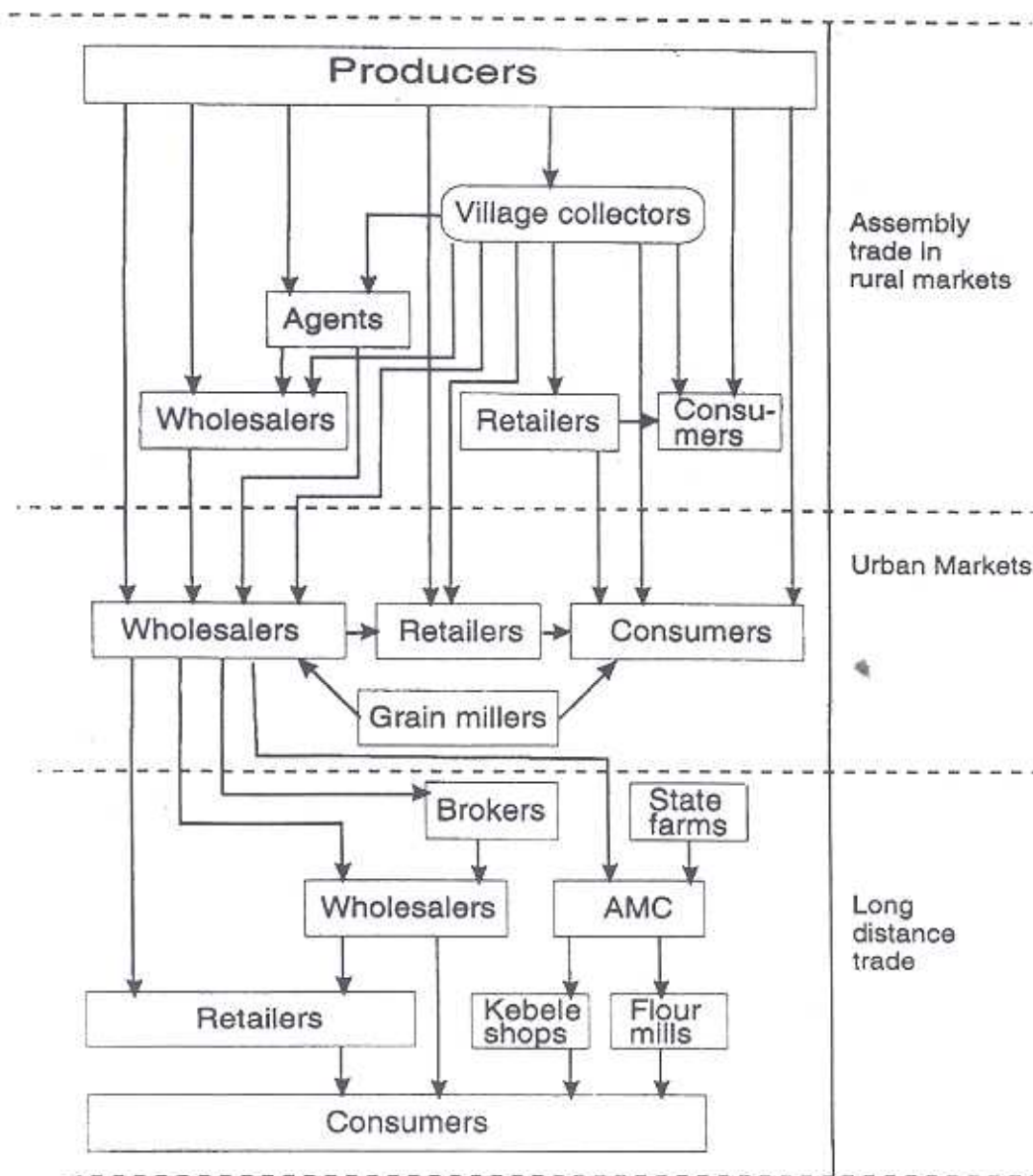
a number of different types of grain traders. Figure 1 illustrates how the various marketing participants were linked to the complex network of marketing channels of food grain in Shashemene market.

Shashemene (250 Km south of Addis Ababa) is the largest town which dominates the food grain trade in southern Ethiopia. The town is connected by all-weather roads with all the administrative regions in the south namely, Sidamo, Bale, Gamugofa, Arsi, and Shoa. Shashemene has become a booming town starting the early 1970s with a widespread expansion of economic activities in commercial farming. The radial model seems to suit well to this study area and Shashemene is selected purposively for this reason as the central market. It must be made clear that there is inter-local market food grain trade but it is the trade with Shashemene which dominates local market price formation.

Although we did not estimate the quantity of food grain flow in each channel, we observed that a smaller portion of the food grain is supplied to the market centres in the region by the village collectors, who themselves are farmers. The village collectors purchase food grain from the inaccessible villages and transport it using pack animals. The village collectors are not involved in trans-shipping the food grain from the rural market to Shashemene. The wholesalers in Shashemene are also involved in long-distance trade to the deficit towns such as Yirgalem, Dilla, Kebremengist, Moyale, Arbaminch, Addis Ababa, Jijiga, Elidar, etc.

In the study area, there were significant number of wholesalers, brokers and retailers involved in food grain marketing indicating the revival of private food grain trading. For example, in Shashemene market alone, there were 40 unlicensed food grain traders [8, p.3] and about 30 licensed food grain trader at the beginning of 1991. The wholesalers vary in the quantity of food grain they purchase in the market (market share) which is mainly determined by the size of working capital they own. Although classifying the food grain wholesalers in the study area is difficult, the traders are grouped into three categories: (a) those who are involved in long-distance trade, (b) those who transport food grain from nearby markets (100 Km radius) to Shashemene, and (c) those who purchased food grain in the rural markets and in town markets and sell the food grain to a larger wholesaler in the same market. It must be noted that the above classification are not mutually exclusive.

Figure 1: Food grain marketing channels in Ethiopia, 1992



The well-off food grain traders collect the food grain purchased by primary wholesalers in small quantities on market-day. Some of the well-off food grain traders disburse working capital to trusted traders and agents early in the morning before the market begins to purchase food grain so that at the end of the market day, the wholesaler collects the food grain at a negotiated price. The wholesaler either negotiates with the agent on the purchasing price of food grain before hand or they would negotiate later after observing the price of the marketplace. The well-off food grain traders employ their agents to purchase food grain from the rural markets. They transport the grain on hired trucks to the terminal markets where they usually find a regular customer (wholesalers or grain millers). There is also a possibility that the wholesalers could sell to another wholesaler at the marketplace and he transports the food grain to Shashemene. They also transport the food grain to the deficit markets and sell it through a broker. Often, the well-off wholesalers sell the food grain after storing it for a short time (2-4 months) and the wholesale and retail function is combined in the study area. The millers are also involved in selling whole grain to consumers and the consumers clean the grain and pay the price of milling.

Some of the middle-level wholesalers in Shashemene operate inside a permanent stall which they rent from the town council. They combine both wholesale and retailing of all types of food grain (including pulses) in their stall. Some use their homes to store and sell food grain. In Shashemene, the chains are short, that is, the number of intermediaries between producers and consumers is small. The chain tends to be longer as food grain moves longer distances. In Shashemene, there appears hardly sales from retailer to retailer and no more than two middlemen existed between producers and consumers. The study reveals that there were not trade barriers that would prevent the producers from bypassing the intermediaries in selling the food grain directly to producers. The food grain retailers in Shashemene sell the food grain in small quantities to consumers in the open market. The retailers purchase the food grain mainly from producers and wholesalers who supply them regularly. Moreover, although the share of AMC at national level declined from 40 percent in 1980 - 1989 to 8 percent in 1990 - 1992 [4, p.124], it was actively involved in purchasing food grain from wholesalers particularly during the harvesting season.

No rigorous traffic survey was undertaken to estimate the net flow of food grain. The description of the outflow of food grain represent a composite of information collected during the field survey through questionnaire. The food grain traders were asked to indicate the origin and destination of shipments of the food grain. We observed during the field work that the food grain which originates from the scattered farmers is transported to the rural markets by pack animals and human portage. Traders in the rural markets transport the food grain using the small-scale trucks (0.5-5 ton capacity) to urban markets. With respect to the long-distance food grain trade, the destination of the flow to the deficit markets varied significantly. The pattern of the flow of food grain in the study area indicates that maize flows to the low lands of Ethiopia while *teff* flows to the towns in Southern Ethiopia. The traders interviewed in the survey area revealed that maize was exported to the deficit towns such as Addis Ababa, Nazret, Jigiga, Awassa, Elidar, Arbaminch, Kebremengist, Moyale, Negele Borena etc. *Teff* was mainly exported to Awassa, Shashemene, Yirgalem, Kebremengist, Borena, Dilla, Moyale, etc.

III. STRUCTURE OF FOOD GRAIN MARKETING

In this section, those characteristics of the organization of the food grain market that seem to exercise a strategic influence on the structure of competition and pricing [7: 7] are systematically examined. The structure of the food grain marketing system is studied in terms of the degree of concentration, barriers to entry (licensing procedure, lack of capital and know-how, and policy barriers), and the degree of market transparency.

In Shashemene market, about 20 percent of the licensed food grain traders (6 traders) controlled about 48 percent of the total quantity of food grain sold in 1990. From the total volume purchased by the licensed traders, four of the first big food grain traders had about a 35 percent market share which is closer to Marion's CR (4) 0.4, a level indicated as the critical point for collusion [18, p.213]. The Gini coefficient for Shashemene was found to be 0.463. Bulbula Tulie [8,p.3] indicated that there were about 40 unlicensed food grain traders in Shashemene with a market share of about 25 percent. These findings imply that a few traders in the town market influence the volume of food grain trade, and food grain trade concentration was significant. This reveals a lopsided market condition where food grain traders may likely influence price formation.

Barriers to market entry reduce the threat of potential competition and therefore impede marketing efficiency. Barriers can result from limited know-how, capital requirement, institutional restrictions and non-competitive reactions of established traders. Retailers and brokers in the study area had no barriers to entry in the food grain trade particularly after the policy reform of March 1990. The main requirement was the possession of a small amount of working capital usually less than 1,000 Birr, availability of a stall to sell food grain (if he is permanent), and some training in pricing and grading food grain. But the easy licensing process in the food grain trade alone does not guarantee any success. In the field survey, the licensed food grain wholesalers complained that there were too many middlemen between the primary producers and the final consumers. According to our discussions with the licensed wholesalers, they reported that these host of unlicensed middlemen perform no useful functions and are the main contributing factor to the increase of food grain prices after the March 1990 reform. Since the licensed traders pay taxes and other fees to the government and increase their fixed cost (compared with the unlicensed traders), they insisted on strict government control of the food grain trade. On the other hand, the new entrants are facing a problem of establishing trade contacts with traders and consumers. The traders complained about the high purchasing prices of the weighing machines (flat scale), high per market day fees for renting the weighing machine, and its inconvenience to transport them to the rural markets every market day.

During the era of Derg, one of the major impediments to enter in the food grain trade was the licensing procedure. Based on the economic policy and the Proclamation No. 76 of 1975 [21], wholesale and retail food grain traders were allowed to trade under strict government control. A licence was issued to a wholesaler and a retailer with a capital not exceeding 300,000 Birr and 200,000 Birr respectively. The Ministry of Domestic Trade changed the licensing procedure and requirements five times between March 1974 and 1990. The three licensing directives were issued by the Ministry of Domestic Trade in

1977, 1978, and 1980. The aim of these directives was to restrict the private trading activities. The fourth directive was issued in 1988 and provided the right of issuing a licence to the administrative and district offices of the Ministry of Domestic Trade which was previously issued by the head office of the Ministry of Domestic Trade in Addis Ababa. The directive removed the prohibition of issuing licences to private food grain traders particularly in the major surplus food grain producing regions of Arsie and Gojam Administrative Regions. As a result, 464 licence applications were received by the government. However, food grain traders were required to deliver a fixed percentage of their purchase to AMC at the fixed price until March 1990.

The fifth directive was issued immediately after the March 1990 reform. The directive removed the capital ceiling and the prohibitions of conducting a business through an agent. The directive also assures the right of selling and transferring a business to another person and to any part of the country. Only very few business activities were reserved for state trading. Thereafter, licences of retail and wholesale food grain trades have been issued without any restriction. Traders have been only required to pay 202 Birr and 51 Birr to the Ministry of Domestic Trade for wholesale and retail trade respectively in order to get a licence. The delivery of food grain to AMC at fixed price was entirely lifted immediately after the March 1990 reform. Although unlicensed food grain trade is illegal at present, we encountered many unlicensed food grain traders during the field survey. All the licensed food grain traders bitterly complained about the new developments. The unlicensed small traders were involved in marketing all types of food grain. The survey reveals that, from the point of view of competition, the licensing procedures at present are not an impediment to market entry. Moreover, licensing should be intended essentially to ensure the existence of certain norms in the marketing system rather than restrict or expand entry into the market.

One of the major impediments of market entry in the food grain trade is obtaining the initial capital. According to our survey, the starting capital of the food grain wholesalers varied from 900 Birr to 40,000 Birr and the average starting capital was estimated as 7,000 Birr. Although the initial capital requirement in the retail trade is relatively low, the retailers in Shashemene who rented permanent stalls from the town council required relatively higher starting capital.

In the survey, the food grain traders were asked about the main problems in purchasing food grain. About 49 percent indicated lack of capital and credit, 36 percent revealed inadequate market supply, 3 percent reported high prices and 9 percent answered that there were too many traders in the market. Moreover, the credit policy of the government in pre-reform (March 1990) disfavoured the private sector as a whole. The interest rate for short-term commercial investment charged by the commercial banks was about 9.5 percent for the private sector and 8 percent for the state and co-operative sectors. Food grain traders were required by the Commercial Bank of Ethiopia (CBE) to bring collateral to prove their credit worthiness through a person owning a property 50 percent higher than the principal credit and who would sign an agreement to pay the principal and the interest, if the trader fails to repay the loan. This mainly affected the small traders who own little real property to mortgage. Improving the accessibility of bank credit even to the

small traders is expected in order to improve the efficiency of the food grain marketing. The Agricultural and Industrial Development Bank (AIDB) has been mainly involved in extending credit to the co-operative and state sector giving less emphasis for the private sector as a whole. The credit policy of the banks remained intact during the era of the transitional government until October 1992 where bank interest rates were adjusted by the national bank of Ethiopia. The interest rate in the non-institutional credit is estimated to be very high varying between 60 and 200 percent per annum [16, p.84]. Moreover, Ekub or rotating savings were reported to be important source of informal credit.

The information from the field survey indicates that about 23 percent of the interviewed food grain traders took credit from banks, 46 percent from relatives and friends, 15 percent from individual money lenders, 15 percent from food grain traders, and 4 percent from other sources. Although many traders had access to the short-term loans of commercial banks, they showed reluctance to take bank credit. They did not intend to take loans from the banks because they have seen the unfortunate experience of their colleagues who took credit and became bankrupt and finally, the traders were forced to sell their property to repay the loan. Such tragic experiences of traders were the results of the legal monopoly of food grain trade by AMC which forced many of the food grain traders to close down their business and shift to other types of activities where state monopoly does not exist (example, red pepper trade in Alaba Siraro district). About 46 percent of the interviewed traders reported that they provided credit to producers and traders. Out of these traders, 6 traders advanced credit to producers while 3 supplied credit to food grain traders and 6 disbursed credit to traders and producers.

Although no special training is required to enter into the food grain trade, experience and level of education play an important role in the food grain marketing practice. Many of the traders indicated that they learned food grain trading by doing it. The average age of the food grain traders was 41 years and the range is 22 to 60 years. About 64 percent of the food grain traders were over 40 years of age. Food grain trade in the study area has not been dominated by self-perpetuating family businesses. The family background of the 82 percent of the sample food grain traders was farming. About 15 percent inherited the business from their parents. Entry into the occupation usually started as an assistant of a food grain trader. The average age to enter food grain trade is about 29 years with a range of age from 17 to 49 years. If we take the experience variable, the food grain traders could be clearly classified into two groups, the highly experienced (above 11 years of experience) which accounted for about 58 percent and the less experienced (below 5 years of experience) which accounted for about 33 percent. This shows the gap of experience in between, which is a result of the prohibition of private trade during this time.

The sample traders revealed that they were involved in trading all types of food grain. Most traders trade on a full-time basis except for the village collectors who trade only during the off-season and return to farming with the onset of rain (planting). About 76 percent of the food grain traders operate alone without partners. The rest reported that they had one or more partners who were based on close friendship or kinship. Women were involved in the unlicensed retailing by selling small quantities of food grain in the weekly markets and in the daily petty markets of towns know as 'Gulit'. In our frequent visits of

the open markets in the study area, we encountered only one woman unlicensed food grain wholesaler. With this exception, all the licensed food grain wholesalers in the study area were men.

Inquiries during the survey revealed that the food grain traders consisted of migrants (about 55 percent) and non-migrants (about 45 percent). About 48 percent of the sample traders originated from the Oromo tribe. This was followed by the Amhara tribe which accounted for about 21 percent. The Gurage tribe (believed to dominate the commercial activities particularly in Addis Ababa) accounted for about 12 percent in the sample. The food grain traders of Alaba tribe were only involved in rural assembly trade. The survey results indicate no tendency for members of one tribal group dominating the food grain trade. The multi-tribal characteristics of food grain trade is found as a barrier to collusion. The traders were almost divided into two important religions i.e., the Christians (orthodox) traders who accounted for about 52 percent and the Muslims accounted for 48 percent. Only about 6 percent were illiterate, about 85 percent attended elementary school and the remainder, about 9 percent, had reached secondary education. The food grain traders had not received any education or training on how to improve their marketing activities neither from the Ministry of Domestic Trade nor Chamber of Commerce.

The social barriers such as religion and ethnic origin were not strong barriers to entry into the food grain trade. The traders practicing different religions, both migrants and non-migrants, did not accentuate the social barrier between them and the rural people with whom they interact. Unlike in the food grain trade, the social factors mainly ethnic origin was an important barrier in the red pepper trade in the rural markets of Alaba Siraro district. In the food grain trade, the social barrier did not reduce the entry to the food grain trade and there was no evidence to prove the accumulation of wealth by a specific ethnic minority which hinder other ethnic groups from entering the market.

Although the time required to acquire the skill of food grain trade is relatively short, many of the traders revealed that they had started the job together with someone who had the experience. The interviewed traders indicated that they were trained by their employers and some were sons, relatives, or friends of food grain traders and they did the apprenticeship by working as assistants and/or labourers. Experience is needed to learn pricing food grain, predicting price fluctuations and assessing its quality (grading) and to establish contacts. The food grain traders were involved in activities such as farming, coffee trading, honey marketing, driving a car, renting bicycle, teaching, selling chicken, selling kerosene, bookkeeping, etc. before they enter in the food grain trade.

Traders were accused of hoarding, speculation, and unfair trading practices during the Derg era (1974-1990) [1, p.107]. The food grain traders indicated that they were dissatisfied with the pre-March 1990 agricultural marketing policy, particularly with AMC's legal monopoly. Some also reported that they had abandoned food grain trade and switched to other types of trade, like red pepper trade, where there was not any marketing institution which had a legal monopoly. Some even returned their licences to the Ministry of Domestic Trade due to the non-profitability of food grain trade. The licences of some food grain traders were taken by the government in order to reduce their number. Some food grain

traders were also suspended for failing to fulfil AMC quota.

In March 1990, the policy assumed that private food grain traders would respond quickly to the reform and fill the vacuum left by AMC after the reform. Traders reported a lack of capital and credit and the deregulation of the freight transport as important areas where the government should intervene to improve food grain marketing efficiency. The food grain traders also indicated that urban land proclamation which prohibited buying and selling land restricted the building of warehouses. During our survey, all the well-off and long distance wholesale traders stored large quantity of food grain in their residences in open air (covered with canvas and plastic sheet) during the harvesting season. The grain was exposed to rain, weevils, rodents, moisture, fungi, and bacteria which increased the losses and reduced the quality of food grain. They indicated that they intend to sell it within the coming four months before it is seriously damaged by weevils.

In order to estimate the degree of market information flow from the remote markets, traders were asked if they were informed about the price of food grain in Addis Ababa market. About 46 percent indicated that they knew the prices at Addis Ababa market. About 36 percent of the traders revealed that they were not informed and the remaining, 18 percent reported that they were not interested in the price information of Addis Ababa market. Traders were also questioned about the method of obtaining price information. Many traders reported that personal communication and observation were the main source of information, the former being more important than the latter. Moreover, equally important means of collecting long-distance price information, particularly for the well-off wholesalers, is through telephone. Although market information flowing to the markets of remote regions is limited, the degree of market information exchange among the food grain traders for adjacent markets is relatively higher. From the field survey, wholesalers are better informed about the prices in the remote markets. Most wholesalers in the rural markets manage to minimise the lack of market information by creating a permanent symbiotic relationship with a distant wholesaler at Shashemene.

IV. MARKET CONDUCT OF THE FOOD GRAIN TRADE

Market conduct generally refers to the act, practices, and policies pursued by firms in markets as they strive for profit [7, p.7]. Market conduct influences the market structure and performance of the food grain marketing system but getting information on market conduct is difficult.

The traders in the study area are interested in making sales so that they repurchase and purchase enough food grain depending on the size of their working capital. The price at which they purchase and sale is the focus of competition. The small farmers who bring their food grain to the market have no firm ideas about the expected market price. Even the relatively well-informed food grain traders have difficulty in setting the purchasing price when they start buying food grain early in the morning in the open air markets. According to our sample survey, the starting point to determine the price of food grain in a given market is the closing price on the preceding market day, and make changes during the rest

of the day based on supply and demand. Here various factors such as the number of food grain traders arriving at the market, the quantity of grain in the market at the time when serious bidding starts, and the price information of adjacent markets play an important role in deciding the purchasing and selling price of food grain. The food grain traders revealed that they also observed and checked the price at which other traders were offering through indirect methods. Usually, the assistant of the trader approaches the farmer (who already sold his food grain at the marketplace) to ask him the price at which he sold his food grain. Once an individual trader has approached the producer and started bidding, it is considered as indecent for another food grain trader to enter the discussion until the final bids have been made. However, minor disputes exist among the traders, assistants, and brokers claiming a producer who was intending to come and bid with them was forcefully taken by another trader or assistant.

If food grain traders attempt to manipulate prices for mutual benefit, they could store their food grain in a co-ordinated manner (collusive behaviour). From our discussion with the food grain wholesalers, they openly argued that it would be better for the food grain traders and consumers if they agree on the purchasing price of the food grain in the open markets. When we asked them whether they practiced it or not, they replied yes. "Few of us who were friends (relatives) attempted to fix the purchasing price, but, because of the heterogeneous nature of the food grain traders, we failed. Moreover, it is too difficult to implement such a fixed price particularly after the reform when the number of unlicensed food grain traders has increased significantly".

Although it was difficult to systematically prove the collusive action of the traders, we observed a higher level of collusion in the rural markets. In some of the rural markets, particularly in the remote ones, where limited wholesalers visited the weekly markets, there were occasions where traders agreed on the purchasing price when they were sure that they were the only food grain buyers in the market. On the other hand, we observed a well-off wholesaler offering a higher price in a rural market while the rest of the food grain traders failed to purchase food grain because of the high price offered in the marketplace. Unlike in the rural markets, there were sufficient numbers of traders in town markets which improved the level of competition in the food grain trade.

The farmers usually demand cash payments from the market intermediaries or the consumers when they sell their food grain, but, the village collectors or farmer-traders provided cash before harvest and received grain in repayment of loans or from forward purchases. The condition of the loan (interest rate and the duration of the loan) or forward grain purchase and the price of the food grain varies from one producer to another [2: 138]. The capital of the farmer-traders has been built up from previous trading activities or borrowed from friends or relatives.

The food grain traders had considerable economic and social relations among themselves. These mainly included credit relationships (providing working capital) and exchanging information. The food grain traders exchange price information among themselves. According to our discussion with the sample traders, about 50 percent of the sample food grain traders indicated that they had close contact with other food grain traders

based on kinship and constant trade relationships (regular customer) established over a long period of time. The objective of such a relationship is to obtain credit usually during the market day, share market information, and arrange transport means together.

V. THE EFFICIENCY OF *Teff* AND MAIZE MARKETING

Although marketing efficiency in the study is measured in terms of operational and pricing efficiency, these measures do not provide an absolute measure of marketing efficiency [23, p.1]. The institutional or organizational efficiency dimension of the marketing system needs to be incorporated in order to provide the whole picture of efficiency. Gross margins, marketing costs, storage costs are estimated in order to provide the level of operational efficiency. The relationships between prices in different markets and seasonal movement of prices are measured to indicate the level of spatial and inter-temporal pricing efficiency.

5.1. Marketing margin

The difference between the price received by producers and that paid by consumers or the price of the collection of marketing services which is the outcome of the demand for and supply of such services is the marketing margin [28, p.120]. If we assume competitive markets, the marketing margin should include the cost of hired assistants, rent, transportation, interest on capital, transaction costs, and normal profit. In the assumption of the neo-classical model, an efficient marketing system is where the marketing costs are expected to be closer to transfer costs and the net margins are near to normal or reasonable profits. High marketing costs and excessive profits are signs of marketing inefficiencies. Analysing the price spreads in this study starts by the simple computations of the share of consumer's price obtained by the producer and the traders at each stage in the marketing process.

Marketing margins are affected by a number of factors: distance to be covered, adequacy of transport, effectiveness with which the various separate activities (weighing, grading, bulking, etc.) are carried out and services are provided [10, p.100]. The transaction costs which include cost of evading government prohibitions or laws, permits at the check points and arbitrary assessment of product quality [2, p.114] are also part of the margin which requires due consideration. When production is more scattered, supply is confined to one major crop season, distances are much longer and the whole marketing infrastructure is less developed; the marketing margin is then likely to be high.

In this study, the producer prices are collected every week from the rural market where the food grain traders or their agents weekly visit these markets. The prices of the producers from the rural markets minus the corresponding retail prices of the central market (Shashemene) is the retail-farm gate margin or gross marketing margin of traders. The difference between the producer prices from the rural markets and the wholesale price of the central market is the wholesale-producer price margin.

Table 1
The marketing margins/qt of food grain trade between Bonosha and Shashemene
(1991/92)

Item	Margin (Birr/Qt)	% of the retail price
(a) <i>Teff</i>		
Retail-farm gate margin	37.05	19.28
Wholesale-farm gate margin	29.26	15.22
Retail-wholesale margin	7.81	4.06
(b) Maize		
Retail-farm gate margin	21.19	22.31
Wholesale-farm gate margin	15.19	15.99
Retail-wholesale margin	5.97	6.27

Table 1 shows that, in absolute terms, the marketing margin of *teff* is higher than maize. The cost of production and consumer preference reflected higher prices of *teff* than maize which required higher working capital for *teff* compared with maize. Although the transfer cost structures are similar, traders who were involved in *teff* trade received a higher net margin (profit) than those who trade maize. The net margin per unit of capital, which is the percentage share of the margins with respect to the average prices of both crops (*teff* and maize) in Shashemene, is found to be almost similar, i.e., for the white *teff* 37.07 Birr (margin) divided by 192.50 Birr (average price) is about 19 percent, while for maize 19.28 Birr (margin) divided by 90.90 Birr (average price) is about 21 percent. This indicates that there is equal profit for an equivalent amount of capital invested in different enterprises (maize and *teff*).

5.2. Marketing cost

Data on various marketing costs such as cost of transport, labour, twine, sacks, and taxes and licence fees were collected from the sample traders in order to examine whether the marketing margins between the local markets and the central markets appear to be excessive in relation to the costs of performing the associated marketing services. It was difficult to collect information on costs and profits of food grain traders through a cross-sectional questionnaire. The costs and profits vary from month to month. Some sample household heads who had received credit before harvest receive prices lower than the producer prices collected from the rural markets. Therefore, estimating a uniform marketing cost structure for all traders is found to be difficult. The cost varies with type of traders and level of marketing channels. The major marketing costs that we incorporated include:

transport cost, labour cost to fill and stitch the bags at the marketplace, cost of brokers (when buying the grain), loading cost, marketing fee per month when purchasing grain in the open market, municipality tax when selling the food grain, rent of weighing machine (flat scale) per market day and transporting it to the market and back home, cost of brokers when selling the food grain, payments for the assistants who bring the farmer to the trader during the market day, licence fees, government taxes (annual), municipality taxes (annual), unloading cost when selling the food grain, and spillage cost when transporting the food grain.

The magnitude of marketing cost by individual traders varies with the distance of the markets. For example, a secondary wholesaler may purchase all the food grain of a primary wholesaler at the market or the primary wholesaler may himself transport the food grain to the central market such as Shashemene or store it until he accumulates enough food grain for a full load of truck. Moreover, it was difficult to estimate overhead cost of taxes and fees, monthly municipality and weekly labour and weighing machine rent in the absence of sales record of traders for a year. In spite of the above difficulties, an attempt was made to estimate the average marketing margin of wholesalers/qt (Table 2).

The study of Price Studies and Policy Institute (PSPI) in 1989/90, showed that the transport cost of the private traders is higher than that of AMC. This is due to the fact that private food grain traders purchased food grain from the remote rural markets and paid higher transport costs. AMC, on the other hand, purchased food grain from the collecting centres which were relatively accessible and near to Shashemene. If the transport cost of the private traders is subtracted, the remaining marketing cost of the private traders 4.46 Birr was much lower than the marketing cost of AMC, which was 9.3 Birr. The same study conducted by PSPI indicated that the marketing cost of AMC in Addis Ababa was 17.05 Birr (including transport cost). The estimated marketing cost of the private food grain traders in Addis Ababa was 15.00 Birr [20, pp.37-38].

5.3. Food grain transportation cost

The freight transport regulation of 1976 (amended Legal Notice No. 48 of 1976) established pan-territorial tariffs for asphalt roads, that is, 0.02049 Birr/qt/Km for trucks without trailers, 0.0125 Birr/qt/Km for trucks with trailers and 35 percent of the above rates for empty haulage. The tariffs for the gravel and dirt roads were not fixed at a central level. It was the *Ketena* (Zone) offices who estimate and set the tariffs for such types of roads. After the market oriented economic policy was announced by the transitional government, new road transport tariffs were introduced by the Council of Ministers (Regulation No. 2/1992). The tariff for trucks without trailers is 0.03483 Birr/qt/ Km for flat area (0.03688 Birr/qt/Km for hilly area). For trucks with trailers, the tariff is 0.02125 Birr/qt/Km for flat area (0.02250 Birr/qt/Km for hilly areas) [20, p.60].

Table 2
Average marketing cost of food grain marketing (Bonosha to Shashemene), 1991

Item	Birr/qt	Percentage
Transport charge from bonsha to Shashemene ^d	8.00	65.74
Cost of brokers	1.19	9.78
Labour cost to fill and stitch the bags	0.62	5.09
Twiners	0.10	0.82
Unloading	0.61	5.01
Municipality tax for selling at Shashemene	0.50	4.11
Spillage ^a	1.00	8.22
Government taxes and licence fees ^b	0.05	0.41
Municipality tax (annual) ^c	0.10	0.82
Total transfer cost	12.17	100

Notes:

^aEstimates of spillage were based on the traders estimates and AMC. AMC estimated 0.50 Birr before the reform and since prices of food grain doubled after the reform, the previous value was multiplied by the price increase. Traders also reported one kilogram of food grain spillage in transporting grain from Bonosha (rural market) to Shashemene.

^bPer quintal taxes were estimated from the records in the Ministry of Finance office at Shashemene. The annual taxes and licence fees of the wholesalers were divided by the estimated yearly sales of food grain.

^cEstimates of AMC were used

^dthe transport cost of one quintal of grain from Bonosha to Alaba was 4.00 Birr and from Alaba to Shashemene was 4.00 Birr.

Given the estimated average marketing cost 12.17 Birr/qt in Table 2, the net margin of wholesalers i.e., retail-wholesale price margin (Table 1) minus marketing cost (Table 2) for one quintal of *teff* and maize is 24.90 (37.07 the margin minus 12.17 the marketing cost) and 7.11 (19.28 the margin minus 12.17 the marketing cost), respectively. This net margin with respect to the average price of *teff* (192.50) and maize (90.90) in percentage terms is 12.98 and 7.80 percent, respectively. The high retail farm-gate margins of food grain were partly the result of the poor feeder road network between Bonosha (rural market) and Alaba (town market). This reduced the frequency and efficiency of transport services and flow of market information which resulted in high transport cost between the rural market and the central market.

The Ethiopian Freight Transport Corporation (EFTC) is a transport parastatal which runs state-owned freight vehicles and coordinates the private transport by assigning them routes and scheduling their movements. EFTC was entitled to a five percent commission from the total freight charges of the private truck owners. The *Ketena (Zone)* system was implemented in 1976 to assign privately owned trucks to the diverse destinations. According to EFTC (1990), the whole country was divided into 5 zones and a total of 6,435 trucks were assigned in these Zones (88 percent private and 12 percent public). *Ketena 3*, with its head office at Shashemene, co-ordinates the freight transport of 1,459 trucks operating only within this zone. The implementation of this freight transport regulation was enforced by the check points (*Kella*) established by EFTC along the roads of the major towns.

In our sample survey, 14 traders transported food grain using hired trucks with a capacity of above 5 tons. One trader transported with his own truck and also hired trucks to ship the food grain. Seven traders indicated that they used smaller trucks with a capacity of 0.5-5 tones to move their food grain. The farmer-traders used mainly pack animals to transport food grain from the village to the rural and town markets. Ten of the 33 sample traders revealed that they faced problems of transporting the food grain to the market centre.

The wholesale food grain traders reported that the regulation and control of the movement of large trucks (with a capacity of above 5 tons) by the *Ketena (Zone)* offices of Ethiopian Freight Transport Corporation (EFTC) impedes the supply of transport at the disposal of the private truck owners. Priority of hiring a truck from the *Ketena* office was given to AMCs food grain, Ethiopian Domestic Distribution Corporation (EDDC), Relief and Rehabilitation Commission (RRC), Service Co-operatives, and goods of mass organization such as Youth Association, Women Association, etc. The sample wholesale food grain traders indicated that the office of *Ketena 3* is corrupt. In our informal discussions with the wholesalers, they reported that they have to wait a longer time, sometimes four weeks, unless they bribe the officials in the *Ketena*. Despite the high transport charges, traders preferred to use the medium size and smaller trucks since they were more readily available in the market. The smaller trucks (0.5-5 tons) were the only vehicles which were used to transport food grain from the rural markets to urban markets. These small trucks were also the only means of passenger transport from Alaba town to the rural markets during the market days.

To examine the relationship between distance and transfer cost, we fitted linear functions for both small-scale trucks (0.5-5 tons), where assigning their trips were not strictly controlled by the *Ketena (Zone)*, the medium-scale trucks (5-9 tons), and large-scale trucks with a capacity of above 9 tons which handle long-distance freight registered by the *Ketena (Zone)* office.

$$STC = a + b_1D$$

$$LTC = a + b_2D$$

Where STC = charges of transfer per quintal for medium size trucks

LTC = charges of transfer per quintal for large trucks

D = distance in Km.

The estimated transfer cost functions are as follows:

$$\begin{aligned} \text{STC} &= 0.5383 + 0.04762 D \\ &\quad (2,1078) \quad (0.00255) \\ R^2 &= 0.92 \quad N = 32 \end{aligned}$$

$$\begin{aligned} \text{LTC} &= -0.3838 + 0.035873D \\ &\quad (2.8107) \quad (0.00379) \\ R^2 &= 0.86 \quad N = 17 \end{aligned}$$

In both functions, distance is found to be significant at a one percent level. If distance increases by one Km for the small-scale trucks, the transport cost per quintal will increase by about 0.0476 Birr. One Km increase for the large-scale trucks resulted in 0.0359 Birr/qt increase in transport cost. Distance explains about 92 percent of the variation in transport cost for the small-scale trucks. It also explains about 86 percent of the variation in the transport cost of the large trucks. The long hauls over all-weather roads for large trucks have lower per kilometre cost compared with the smaller ones but not as low as the freight tariff fixed by the government.

The cost of transporting food grain is one factor which determines the flow of food grain from the rural markets to the market centre. In the field survey, the average transport charge per Km of moving food grain from the rural markets to urban markets 0.1835 Birr/Km/qt is far higher than the transport charge of the all-weather roads which is 0.0585 Birr/Km/ qt for medium scale trucks and 0.0328 Birr/Km/qt for large trucks. The high freight rates of the rural roads is transferred to the producers in the form of low producer prices. Moreover, it is difficult to transport food grain from the rural markets to town markets particularly during the rainy season. Hence, the construction of all-weather roads to the rural markets would significantly decrease the transport charge and improve the level of competition and marketing efficiency.

When the large truck owners were assigned to transport food grain of AMC or goods of EDDC, they received the centrally set tariffs (0.0205 Birr/Km/quintal for trucks without trailers and 0.0125 Birr/Km/quintal for trucks with trailers for asphalt roads). This factor has discouraged owning larger trucks while the profits for the non-regulated small- and medium-size trucks were significantly higher. Moreover, the medium- and large-size trucks were frequently assigned by the government to the war zones (North) in order to fulfil "the national obligation of the truck owners". This has aggravated the corruption and bribery in *Ketena* (Zone) offices. During the field survey, although the war in north Ethiopia was over, the medium- and large-size truck owners who offered bribes were assigned to transport the goods of private traders where the tariffs were decided through negotiation between the owner of the trucks and the private traders alone.

The truck owners had high costs for maintaining vehicles because of the relatively poor roads which increased the frequency of breakdown, lack of spare parts in the shops, and old age of the vehicles (new trucks were not imported and sold to the private sector). The fuel rationing system which was introduced in 1983/84 to minimise the need for scarce foreign exchange affected the efficiency of food grain transport. Before the reform, the

truck owners receive fuel when the *Ketena* offices provide the permit which mainly depended on the length of the trip and the type of vehicle. Those who need additional fuel should give bribe to the officials who authorize the fuel permits or the workers or owners of the fuel station. After the March 1990 reform, we observed a high degree of competitiveness in the transport sector, reflecting relatively higher level of efficiency among the small-scale truck owners in the region in order to attract the traders through fair prices and non-price variables such as social relationship.

5.4. Inter-temporal price efficiency

To adequately describe the variations in the price series, detailed price decomposing techniques are used subsequently. The monthly *teff* and maize retail prices at Shashemene (central market) are first plotted for an overview of the data. Figures 2 illustrates the simple plot of the 59 average monthly nominal retail prices of *teff* (mixed) and maize at Shashemene market.

Teff is the most expensive food grain in the market. The differentiation of *teff* is mainly with the colours. The higher prices of *teff* is a result of high consumer preference particularly in urban areas where a light "*Injera*" is made. Three sets of regression equations are estimated to observe the trends during (a) the whole period (pooled data), (b) pre-March 1990 reform, and (c) after the reform. The Chow test method [12, pp.443-446] is used to test the differences between the pre-reform and after the reform trend regressions. The Chow test results show that the computed F's are significant for all food grains in the study, which means that the two separate regressions (pre-and post-reform) for each food grain are different at a one percent level.

Figure 2: Monthly retail prices of teff and maize at Shashemene market (1987-1992)

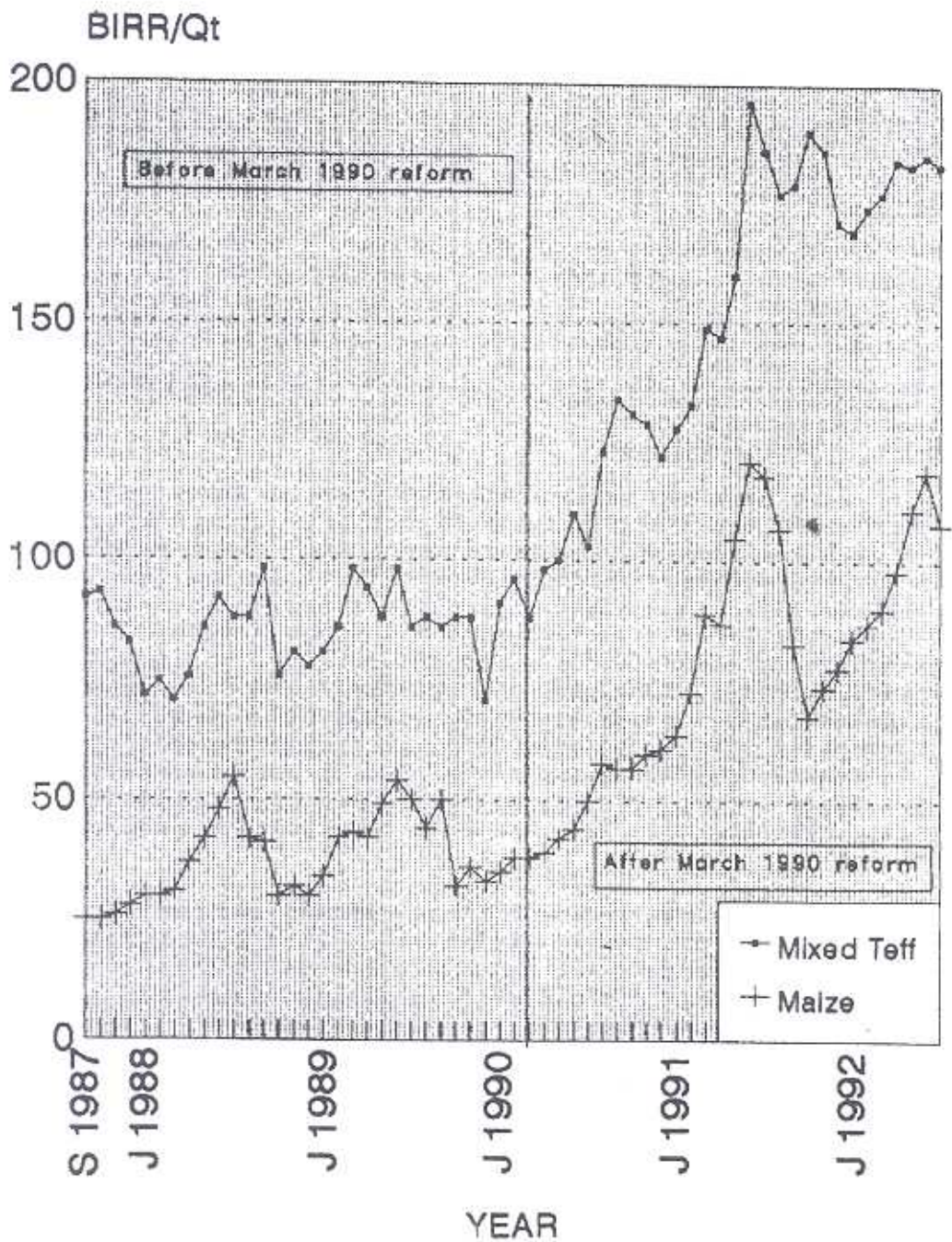


Table 3
Results of the linear trend model of Teff and Maize prices at Shashemene
before and after the March 1990 reform (September 1987-July 1992)

Type of grain	Pooled			Before reform			After the reform		
	Constant	Coeffi-	R ²	Constant	Coeffi -	R ²	Constant	Coeffi	R ²
White teff	63.617 ^a (5.44)	2.237 ^a (14.19)	0.78	92.276 ^a (3.49)	0.376 ^c (0.19)	0.11	-25.160 (15.22)	4.214 ^a (12.67)	0.86
Mixed teff	54.542 ^a (4.88)	2.119 ^a (0.14)	0.80	84.441 ^a (27.85)	0.217 (0.17)	0.06	-7411 (14.44) ^c	3.533 (0.32) ^c	0.82
Red teff	41.554 ^a (4.80)	2.069 ^a (0.14)	0.80	68.533 ^a (2.12)	0.258 ^a (0.12)	0.14	-26.251 ^a (14.89)	3.601 (0.33) ^a	0.82
Maize	16.587 ^b (3.92)	1.372 ^a (0.11)	0.72	31.193 ^a (3.00)	0.426 (0.17)	0.18	-29.443 ^a (15.99)	2.396 ^a (0.35)	0.63

Figures in parentheses are standard errors

Note: a = Significant at 1 percent

c = Significant at 10 percent

Table 3 presents the coefficients of the trend variable, the constant, and the R² of the pooled, pre-March 1990 reform, and after the reform for the nominal price data. Since we proved, using the Chow test, that the pre- and post-reform regressions are different, it is not worth interpreting the pooled regression results. The results in Table 3, show that the coefficient of determination in all regressions after the reform are significantly higher than the pre-reform. The t-values are also higher for the coefficient of time variable after the reform compared with the t-values in pre-March 1990 reform. The coefficients for the trend variable (time) show positive values in all regressions. Moreover, the coefficients of independent variable time in the equations after the March 1990 reform are much higher compared with pre-reform. This implies that prices of food grain increased significantly after the March 1990 reform compared to the pre-reform. The results also reveal that there is a consistent increasing trend in the prices of the food grain after the market liberalization of March 1990. In pre-March 1990 reform, the free market prices were inconsistent with no trend.

The price variability in the nominal series is higher in maize compared with all varieties of *teff*. The relative stability of the trend series of *teff* may be due to (a) the lower susceptibility of *teff* to weevils which makes it easier to be stored for a longer period and farmers tend to sell maize immediately after harvest due to fears of high storage loss; and (b) the stable demand of *teff* by relatively well-off urban dwellers throughout the year. The principal factor for the price variability is a change in domestic supply and demand which is influenced by a change in the production system (erratic and unreliable rainfall), import and food aid. Moreover, non-economic factors such as the civil war resulted in high price variability.

5.5. Seasonality

Seasonal price behaviour is a regularly repeated price pattern that is completed once every twelve months. Such a regular pattern arises from seasonality in demand, supply, and marketing or a combination of the two. Most agricultural products are characterised by some seasonality in production and marketing pattern [28, p.170]. Although the current supply and demand forces bring an equilibrium price, expectation concerning supply and demand conditions in the future also resulted in the seasonal price fluctuation. The seasonality in food grain prices in the study area arises from climatic factors and the biological growth process of plants (supply seasonality).

The seasonal variabilities in the price series are lower in *teff* compared with maize. The seasonality effect is higher in maize which is consumed by the lower income group compared with *teff*. The relative stability of the seasonal series of *teff* is that it can be stored without fumigation for a long period of time compared with other food grains.

The seasonal curves of Figure 3 show that the month of highest prices is June for *teff* and July for maize. The seasonal lows for white *teff*, red *teff* was January which is the immediate post-harvest period. However, the seasonality curves of maize and mixed *teff* show the lowest price in December. The lowest average monthly prices of maize and *teff* in Shashemene (December and January) are consistent with the end of the peak harvest which occur between October and December when the farmers' sales are particularly heavy. After harvest, the supply of food grain decreases steadily while prices moved in the opposite direction. The slight variations in the timing of high and low monthly prices between maize and *teff* are also a result of the difference in harvesting time (e.g. *teff* being harvested relatively earlier than maize). The high average monthly food grain prices in June tend to fall in the three months interval preceding harvest (October). Some of the reasons for a significant seasonal price variations are poor inter-market integration, lack of long-term investment to build storage facilities by private traders, and farmers sales of food grain to pay taxes and debt being concentrated immediately after harvest.

Figure 3 : Seasonality pattern of maize and Teff prices in Shashemene 1988 - 1991

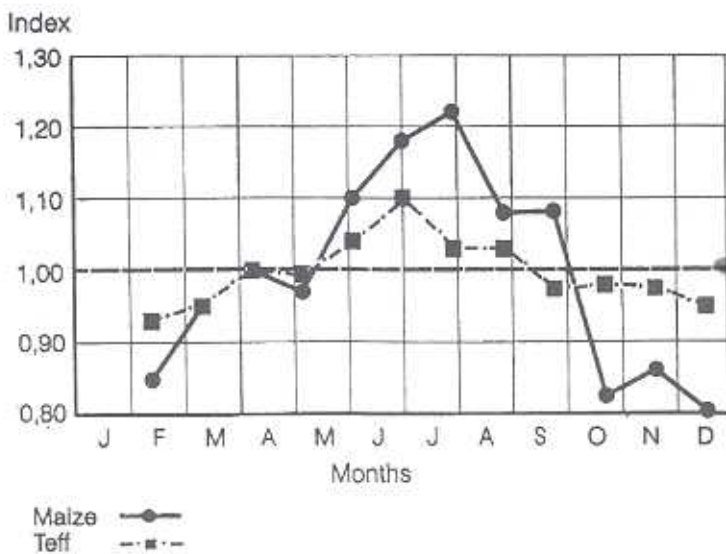


Table 4
Seasonal price increase of food grain at Shashemene market, 1991

Item	White <i>Teff</i>	Mixed <i>Teff</i>	Red <i>Teff</i>	Maize
Price of low month (Birr/qt)	142	128	96	94
Price of high month (Birr/qt)	208	196	178	121
Range of price increase (Birr/qt)	66	68	82	57
Range as % of the low	44.5	53.1	85.4	89.1
Month in range	4	4	5	4

Table 4 shows the estimated magnitude of seasonal price spreads in the retail prices of food grain. Prices of white *teff*, mixed *teff*, red *teff*, and maize increased by 45%, 53%, 85%, and 89% respectively between January and June 1991. The seasonal price increases were far higher compared with the study of Thodey by 1969 which was 21.7 percent for grain in five of the major towns including Addis Ababa [26, p.232]. The estimates of the lowest price as percentage of highest price for Nigeria, Malawi, Tanzania, and Kenya (1975-1980) was 70, 55, 51, and 49 percent, respectively, which were lower than the result of this study in Table 4. The seasonal price increase of wheat in the Sudan (71 percent) [3, p.73] was also lower than the result of this study (97 percent).

5.6. Storage efficiency of maize and *teff*

The storage cost is mainly divided into those which do not change with storage time (fixed) and those which vary with storage time (variable). The fixed costs include overhead expenses associated with the physical facilities plus certain handling costs such as placing and removing the product. The variable costs include continuing items such as protection expenses, handling expenses related to storage time, fuel and power expenses. In addition to the direct costs of storage, changes in product characteristic during storage must be considered as a cost in terms of depreciated product values. The items of food grain storage cost included in this study are as follows:

(a) weight and quality loss: The traders in the study area indicated high dry weight losses for maize and lower losses for *teff*. Traders were asked to estimate the average food grain loss during storing the food grain. According to the reports of the sample food grain traders, the average storage loss for maize which includes dry weight loss, damage by rodents and insects, and spillage was 2.44 Kg per quintal in 1992. This does not include quality deterioration.

(b) godown rent: It is very difficult to obtain a correct assessment of either the opportunity cost of godown in the study area or costs on repairs and maintenance. We asked the grain traders for the cost of building their store or how much they pay for a monthly rent of their store. The sum of the monthly rents were divided by the amount of grain stored by traders.

In our survey, this was estimated to be 0.45 Birr per quintal in 5 months time (0.10 Birr/month/qt).

(c) depreciation of sacks: This was estimated by AMC, 0.90 Birr for one season.

(d) interest rate on investment: Since the interest rate varied from 9 percent in the Commercial Bank of Ethiopia to 60-200 percent in the informal credit market [16: 84], we preferred to estimate the storage cost of maize and *teff* using four scenarios i.e.,

Scenario I = 9 percent interest rate per year for the bank credit system

Scenario II = 60 percent interest rate per year in the informal credit market

Scenario III = 100 percent interest rate per year in the informal credit market

Scenario IV = 200 percent interest rate per year in the informal credit market. The major labour component of storing food grain in the study area is guarding. Since traders used family labour to guard the stored food grain, detailed estimates of labour cost were not included in the model.

Table 5 indicates the estimates of storage cost using Hays and McCoy approach [14, p.182] i.e.

$$P_s = P_h + t(R+I+L+D)$$

where P_s = expected price of stored grain; P_h = price of grain stored at harvest; R = rent per month per quintal of grain; I = interest on capital per quintal; L = amount of losses over time;

D = depreciation of sacks in the time of storing one quintal; and t = number of months.

Table 5
Estimates of storage cost of maize and teff at Shashemene Market, 1991

	Ph	R	I	L	D	t	Ps	Ph-Ps
Scenario I								
Maize	64.0	0.10	0.64	1.56	0.90	4	76.80	12.80
<i>teff</i>	142.0	0.10	1.42	3.46	0.90	4	165.52	23.52
Scenario II								
Maize	64.0	0.10	3.20	1.56	0.90	4	84.04	23.04
<i>teff</i>	142.0	0.10	7.10	3.46	0.90	4	174.54	32.54
Scenario III								
Maize	64.00	0.10	5.33	1.56	0.90	4	94.00	30.36
<i>teff</i>	142.0	0.10	11.83	3.46	0.90	4	207.16	65.16
Scenario IV								
Maize	64.0	0.10	10.67	1.56	0.90	4	116.92	52.92
<i>teff</i>	142.0	0.10	23.67	1.46	0.90	4	254.52	112.52

Table 5 shows that the storage cost of maize in Shashemene was 12.80, 23.04, 30.36, and 52.92 Birr for Scenario I, II, III and IV, respectively. The price increase of maize in Shashemene market 57 Birr (Table 4) from January to June is higher than the estimated storage cost 12.80, 23.03, 30.36, and 52.92 in Scenario I, II, III and IV, respectively. The storage costs for *teff* were 23.52, 32.54, 65.16, and 112.52 Birr in Scenario I, II, III and IV, respectively. In the case of *teff*, the storage cost is lower than the seasonal price increase (66.0 Birr between January and June 1991) only in the first three scenarios (I, II, and III). This indicates that if the interest rate in the informal credit market is higher than 100 percent; storing *teff* is thus unprofitable in the short-run.

The findings reveal that the seasonal price increases that arise from seasonality in supply and marketing exceeds the cost of storing food grain (namely storage loss, interest on inventory, depreciation of sack, and rent of godown) significantly implying high profit margin for the traders, particularly when the interest rate is less than 100 percent. The high margin of difference between the seasonal price spread and costs of storage partly reflects the fact that the food grain traders exploit the weak bargaining power of farmers by purchasing the food grain during the harvesting period when the prices were low. Farmers are forced to sell their food grain immediately after harvest because they are in need of hard cash which they can not postpone in order to pay debts and taxes, purchase consumer goods, and cover the cost of social commitments.

Avoiding the risk of the losses and storage cost by farmers, particularly for maize, increases the arrival of food grain after harvest which directly increases the seasonal price spread. The non-competitive market structure has also allowed the food grain traders to extract large inter-temporal storage profits. Such a high profit margin attracts even well-to-do individuals, who were not directly involved in food grain trading activities in the study area, to be involved in seasonal food grain storage. It is not surprising to observe such high seasonal price spread when there is a relatively high rate of returns to a scarce capital in a subsistence economy like Ethiopia.

5.7. Spatial price efficiency

Spatial market integration is the extent to which changes in prices in one market lead to changes in price in the other markets. Spatial market integration is measured in this study using the correlation coefficients among markets and Timmer's Index of Market Connection (IMC) [26, pp.113-123] which is based on the Ravallion's dynamic model [24, p.103]. Despite the limitations [13, pp.204-206], the correlation coefficients provide a good initial measure of market integration when quick results are required [30, p.27]. In this study, the correlation coefficients of maize and *teff* prices are computed only for markets which have direct trade link with the central market. Timmer's Index of Market Connection indicates the degree to which local markets are connected to the reference market (Shashemene) in the short and long-run [26, pp.220-223]. The results of the Timmer's Index of Market Connection (IMC) and the correlation coefficients are presented in Tables 6 and 7.

Table 6
Timmer's Index of market connection (IMC) and R² for maize

Markets	b ²	IMC	R ²	Test of b ₁ and b ₂
Alaba	0.534*	2.534	0.85	b ₁ , b ₂ *
Alemgebeya	0.788*	2.324	0.87	b ₁ *
Adelo	0.055	7.645	0.72	b ₁ ***, b ₂ ***
Bonosha	-0.027	1.509	0.78	b ₂ , b ₂ *
Goba	0.008	35.975	0.76	
Zeway	0.638*	0.358	0.90	b ₁ *
Mekie	0.550***	-0.096	0.85	b ₁ *
Ajie	-0.236	-29.917	0.68	b ₂ *
Wolaita Sodo	0.040	-10.676	0.45	b ₂ **
Arsie Negele	0.476*	1.259	0.94	b ₁ *
Addis Ababa	0.28***	0.737	0.87	b ₁ *, b ₂ *

Table 7
Timmer's index of market connection (IMC), and R₁ for teff

Markets	b ₂	IMC	R ²	Test of b ₁ and b ₃
Alaba	-0.086	-1.089	0.12	b ₁ *, b ₃ *
Alemgebeya	0.154	1.397	0.26	b ₁ *, b ₃ *
Adelo	-0.194	1.809	0.42	b ₁ *
Bonosha	0.033	5.523	0.22	b ₁ *, b ₃ *
Zeway	0.055	1.704	0.58	b ₁ *
Mekie	-0.202	9.692	0.42	b ₁ *
Ajie	0.272	4.235	0.07	b ₁ *
Wolaita Sodo	0.239	4.235	0.22	b ₁ ***
Arsie Negele	-0.278	-3.777	0.21	
Addis Ababa	-0.065	1.198	0.10	b ₁ *

Notes: * = significant at 1% level
 ** = significant at 5% level
 *** = significant at 10% level

The following general comments are required to interpret the results: (a) the data used in this section are 43 weekly retail prices for different markets. The price data was mainly collected by the author during the field research. Relatively the recording process was reliable but there can be a recording error particularly in *teff* where different varieties may be recorded as if they were of the same variety. It must be noted that weekly data are more appropriate to the model than monthly data [15, p.39] and the analysis of market integration which is restricted to 43 weeks and about 12 markets is sufficient to suggest certain imperfections in the marketing system. (b) since initially it was planned to study the market integration of the central markets with the rural markets, the data set does not include all the major consuming centres of the food grain. (c) during the survey, there was no government intervention at any level which hinders the flow of food grain but there were civil unrest or fear of unrest in May 1991 (when Mengistus' regime collapsed) where producers withhold their stocks only for a short period. (d) the difference in modelling

obviously resulted in a difference in the empirical results, i.e. R^2 correlates the untrended weekly food grain prices between markets, and Timmer's index relates the price of the local market with the lagged prices of the local market itself, the price of the central market, and the lagged prices of the central market.

The b_2 coefficients in Timmer's index, indicate whether the changes in prices of Shashemene are fully reflected in the rest of the local markets or not and they are used as an alternative to measure market integration if IMC fails to show any indication. These coefficients are used to test long-run market integration. According to Heytens [15, p.31], the b_2 coefficient measures much of the same thing as the simple bivariate coefficient. This is true in the maize market (Table 6) where the b_2 coefficients are found to be significant for Alaba, Alemgebeya, Arsie Negele (at one percent level), Mekie and Addis Ababa (at 10 percent level) and the bivariate correlation's are also high. While on the other hand, the b_2 coefficients are found to be insignificant for *teff* (Table 7). The b_2 coefficients indicate that the spatial prices of maize are integrated in the long-run while the rest of the markets are rarely integrated with the central market.

The hypothesis of market segmentation is rejected, i.e., the changes of prices in Shashemene market (the immediate or lagged) influences the prices in all the local markets for all types of food grain in our study. As a result of computing IMC to test for spatial short-run market connection, we found Bonosha and Addis Ababa relatively integrated with the central market in the maize market. In the *teff* markets (Table 7), only Alaba and Alemgebeya are integrated with Shashemene market. The *teff* markets in the study area are not integrated with the central market in the short-run.

We found poor spatial price integration in the study area except with Addis Ababa market which is connected to the central market by tarmac road. The central market is not integrated with closer markets such as Ajje, Alaba, Zeway, etc. Therefore, the village markets and town markets were thinly integrated with the Shashemene market (central market). This appear to be largely a result of poor transport facilities and information flow.

Although the *teff* markets under study were not integrated with the central market using correlation coefficient and b_2 coefficient, some markets such as Alemgebeya, Adelo, and Zeway are found to be integrated using IMC test. This indicates that the IMC and b_2 provide broader results than the correlation coefficients. Moreover, the model is not susceptible to trend factors and other common factors between markets which distort the real picture of market integration.

In spite of the limitations of the coefficient of variation approach, it produced useful results which approximate the market integration with the real marketing situation in the study area. One of the main problems of correlation coefficient and index of market connection is the cut-off point to decide whether markets are integrated or not. The challenge of interpreting the empirical results is that the *teff* markets are poorly integrated compared with the maize markets using the correlation coefficient and b_2 coefficient. The low price variability and seasonality index and a small upward secular trend behaviour of price of *teff* influence the size of the coefficients. The weekly price fluctuations are smaller

in *teff* compared with maize since the demand of high income group for *teff* is relatively insensitive to price change. Heytens [15, p.34] also reported that the empirical results of Ravallions' model for Gari (processed cassava) in Nigeria were in sharp contrast to those shown by the correlation coefficients.

It is not surprising that the central market is found to be more integrated with remote markets compared with the nearby markets since traders always set the base of their price setting in the central market (Shashemene) on the price of the final markets. The main reason for the poor integration between the central and the nearby markets in the study area is the poor transport facilities which limited the size of the competition. Moreover, from our observation of the rural markets, the price of food grain in a rural market is determined by the number of wholesalers visiting the weekly rural markets from the central market. As indicated earlier collusion and barriers to entry are the main features of the market conduct of food grain traders in the rural markets. This imperfect correspondence of price changes among markets is also a consequence of defective market information which reduced the flexibility of price changes and permit the traders to make appropriate adjustments in prices and in their buying and selling practices. Although there is no trade between the rural markets, we expected that the higher inter-rural market integration via the price and trading relationship of the central market (joint destination market). Again, the same reason of weak competition in the rural markets is one of the main factors for the poor integration among the markets in the study area.

VI. CONCLUSION

The results show that market concentration for the licensed food grain traders is high but the size of the unlicensed food grain traders has increased significantly which, on the other hand, improved competition among the food grain traders. The licensing procedure has improved after the March 1990 reform. It appears that licensing is no more a barrier to entry into the food grain wholesaling and retailing. After the reform, although the number of private traders has increased, the high concentration ratio indicates the beginning of a process to replace the state monopoly of food grain trade by private monopoly. The field survey revealed that there was a lack of working capital and credit to improve the efficiency of food grain marketing. The social variables such as religion, ethnic origin and education and experience were not important barriers to enter in the food grain trade. Institutional variables such as the urban land nationalization and lack of long-term and soft credit affected the investment on godown by food grain traders.

The behaviour of most of the food grain traders in Shashemene and Alaba markets appears to be competitive. But, in the rural market, the wholesalers colluded and this resulted in a decline in producer prices. On the other hand, there were occasions in the rural markets where a well-off wholesaler offered a relatively higher price in a market day and the rest of the traders failed to buy food grain at that price. Non-price inducements such as credit before harvest were offered to farmers mainly by farmer-traders.

Improving the licensing procedure alone cannot remove the problems and imperfections in the food grain marketing system. This is partially explained by the findings on the operational and pricing efficiencies. The transport charges of the small-scale trucks transporting food grain from the rural markets to the town markets are found to be very high. The food grain marketing margin is also found to be higher compared to the estimated transfer costs. The seasonal price spread of maize and *teff* in Shashemene market is higher than the estimated storage cost implying inter-temporal price inefficiency. The dynamic spatial integration models and the coefficient of variations among the markets showed mixed results. The maize markets are more integrated than the *teff*. There is also a high seasonal price variability particularly in the maize market.

The high market concentration, barriers to entry in terms of capital and credit, evidence of collusion in the rural market, low market integration, high marketing margin, and high seasonal price variation in the study area reveal the inefficiency of the food grain marketing after the reform. But, there were positive improvement in developing new marketing institutions, removing the licensing barriers and the elimination of AMC's trade monopoly which resulted in an increase in the number of food grain traders after the March 1990 market liberalization.

The reorganization of AMC as a private trading institution to stabilize the food grain price and macroeconomic stabilization after the March 1990 are important steps in the restructuring process. New institutions such as a new co-operative system, land market, wholesale market development and rules governing contracts between buyers and sellers, new trading arrangements and new information systems need to be developed which uniquely suit the situation in Ethiopia. In spite of the complex problems after the reform, the food grain marketing system appears to be improving and working better by market structure standards (S-C-P).

Finally, given the brief period after the reform, I do not attempt to address the issue of the impact of market reform on the performance of the marketing system and draw strong conclusions for the results. Much more (and more rigorous) empirical evidence is required to guide policy effectively in this area. This case study provides a starting point for further detailed study of food grain marketing in Ethiopia.

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