

AGRICULTURAL POLICIES

**in Emerging
and
Transition Economies**

MONITORING AND EVALUATION 1998



AGRICULTURAL POLICIES IN EMERGING AND TRANSITION ECONOMIES

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FOREWORD

This report is the sixth in a series of annual evaluations of agricultural policies and output trends in non-OECD countries.* Many of these countries are major players in world agriculture, and agricultural policies are a key element in the transformations underway in their economies. In this regard, readers' attention is drawn to two related OECD publications: *The Agricultural Outlook 1998-2003* (1998) and *Agricultural Policies in OECD Countries: Monitoring and Evaluation 1998* (1998).

The non-OECD countries covered in this report are dialogue partners of the OECD in the agricultural policy area, and comprise **Central and Eastern European Countries** (CEECs), major **New Independent States** (NIS), **China**, **Brazil** and **India**, with the chapters on the latter two being new features. This report discusses the diversity of agricultural policy developments among the CEECs, as some countries have been adopting more liberal policies, while others increased their budgetary expenditures on agriculture. In the NIS, there was no significant progress in farm restructuring during 1997.

A number of important developments are highlighted on China, Brazil and India. In China, further progress was made in the liberalisation of agricultural markets, and there is a new programme of agricultural policy reforms for 1998. In Brazil, domestic reform, growing regional integration and the implementation of the Uruguay Round Agreement have created a new, more market-oriented policy environment for its food and agricultural sector. In India, where poverty and food security remain critical issues, it is hoped that the recently elected government will speed up the pace of privatisation and encourage greater integration into the global economy.

A critical look is also taken at three key policy elements to structural reform in the agro-food sector.

- **Agricultural credit and finance**, for which problems can arise from a number of factors, including high inflation, uncertain property rights and non-functioning land markets;
- **Impediments to efficiency** in the downstream sector; and
- **Foreign direct investment**, which can be a crucial element in assisting the transition to functioning, internationally competitive market economies.

This report was prepared by the OECD Directorate for Food, Agriculture and Fisheries within the framework of the programme of the OECD Centre for Co-operation with Non-Members. The authors were Alexandra Trzeciak-Duval (team leader), Andrzej Kwiecinski, Natacha Pescatore, Michael Ryan, Josef Schmidhuber, Vaclav Vojtech and Peter Walkenhorst of the Division for Agricultural Policies in Non-Member Economies. The statistical information was compiled by Claude Nenert.

The Committee for Agriculture and the Trade Committee agreed to the declassification of this report in August 1998. It is published under the responsibility of the Secretary-General.

Kumiharu Shigehara
Deputy Secretary-General

* The countries covered in this publication are: Albania, Belarus, Brazil, Bulgaria, China, Croatia, Estonia, India, Kazakhstan, Latvia, Lithuania, Romania, Russia, the Slovak Republic, Slovenia, and Ukraine.

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EXECUTIVE SUMMARY

This report presents an evaluation of recent agricultural policy developments in Central and Eastern European Countries,* Belarus, Kazakhstan, Russia and Ukraine, as well as China and, for the first time, Brazil and India. Brazil is the world's fifth largest exporter of agricultural products and the agro-food sector accounts for about 35 per cent of GDP and total exports. While India is one of the largest producers and consumers of agricultural products, its integration into world markets is still relatively low. In addition, this report examines three policy issues in some depth: agricultural credit and finance policies, impediments to efficiency in the agro-food chain and foreign direct investment in the food sector.

Economic performance in the transition economies was rather mixed in 1997 with **GDP growth**, on balance, significantly better in the CEECs than in the NIS. While most of the CEECs had robust economic growth, the fragility of the recovery is highlighted by the sharp contraction in output in Albania, Bulgaria and Romania due to the continuation of the severe economic crises which started in these countries in 1996. The decline in economic activity was mainly due to delays in implementing structural reforms and price liberalisation. Strong growth in most CEECs in 1997 can be attributed primarily to vigorous domestic and, to a lesser extent, export demand. Economic growth in 1998 is expected to strengthen and become more balanced across the region. Some recovery in output is expected in Bulgaria and Romania, while moderate growth is likely to continue in the central European and Baltic countries. Economic growth continued to diverge widely in the four NIS, with GDP growth officially recorded at about 10 per cent in Belarus. Growth in Russia and Kazakhstan was slightly positive. However, the Ukrainian economy continued to contract, albeit at a slower rate. Overall, the general downward trend in output would appear to have bottomed out in the NIS and some progress has been made in macroeconomic stabilisation as well as in implementing structural reforms.

In China, real GDP growth remained strong but slowed marginally to 8.8 per cent in 1997, compared with 9.6 per cent in 1996, although there are growing fears of deflationary pressures emerging in the economy. The slowdown in economic growth was mainly due to lower capital spending and sluggish private consumption. In Brazil, real GDP growth stabilised at about 3 per cent in 1997, much the same as in 1996. The slowdown was chiefly brought about by slower growth in domestic consumption following the rapid growth in demand driven by increased purchasing power and enhanced credit availability at the beginning of the reform programme. In India, despite a slowdown in economic activity in 1997, the government is pursuing its GDP growth target of 7 per cent per annum and single digit inflation rate.

Inflation rates continued to fall in most CEECs and NIS in 1997, but political instability and delays in implementing stabilisation programmes, as well as real structural reforms, resulted in a surge in inflation in several countries, notably Albania, Bulgaria and Romania. However, the economic situation in these three countries is expected to improve in 1998, helped by the implementation of tighter monetary and fiscal policies. Although **privatisation and structural reforms** are continuing in CEECs, the process is much slower in the NIS. As large scale privatisation is nearing completion in the CEECs, increasing emphasis is now being given to improving the legal and economic regulations on monopolies and consumer protection.

* For the purpose of this report, the term Central and Eastern European Countries (CEECs) is taken to include Albania, Bulgaria, Croatia, Estonia, Latvia, Lithuania, Romania, Slovakia and Slovenia. It should be noted that the Czech Republic, Hungary and Poland are Members of OECD. The assessment of agricultural policies in these countries is contained in *Agricultural Policies in OECD Countries: Monitoring and Evaluation 1998*. Nonetheless, analysis of certain agricultural policy issues in Central and Eastern Europe includes information on these three OECD Member countries in order to provide comprehensive coverage of developments in the region.

Agriculture continues to play an important role as a **buffer to rising unemployment** and to maintaining social stability in many CEECs and NIS. One of the main reasons for the high share of agriculture in total employment has been the significant fall in non-agricultural employment opportunities, especially in rural areas, as well as the slow process of farm restructuring, particularly in the NIS, Lithuania and Romania. This has led to rising levels of hidden unemployment in rural areas, falling output per farm worker, low incomes and a worsening financial situation on many large farms. In 1997, the share of agriculture in total employment ranged from about 4 per cent in the Czech Republic to over 50 per cent in Albania. Moreover, the high share of total employment in agriculture relative to its share of GDP in several CEECs, in particular Romania, Poland, Latvia and Lithuania, is indicative of the sector's low labour productivity in these countries.

Agricultural output in the NIS region showed some signs of stabilisation in 1997 for the first time since the beginning of the transition; Belarus, Kazakhstan and Ukraine recorded a modest decline in GAO, while output in Russia remained largely unchanged compared with 1996. **Crop production** increased in all countries, except Belarus, due to favourable weather conditions together with an increase in the area sown to grains. Total grain production in the four countries amounted to 143 million tonnes, *i.e.* 28 per cent above the 1996 level but still well below the 1990 level. In the CEECs, agricultural output rose in about half of the countries due to a good grain harvest, but fell in the others, primarily due to falling livestock production. Overall grain production in the region, which had increased steadily between 1992 and 1995, fell sharply in 1996 due to adverse weather conditions but recovered in 1997 with an 18 per cent rise in output over 1996. In 1997, total grain production amounted to 85 million tonnes, or just 5 per cent lower than the 1986-1989 average. This increase was mainly due to good harvests in Bulgaria, Romania and Hungary. Wheat production, in the former two countries more than doubled, while it increased by about one-third in Hungary. As regards the **livestock sector**, the downward trend in livestock numbers has continued in all CEECs and NIS since 1990, albeit at a slower rate since 1995. High feed grain prices in 1995 and 1996 combined with low and declining output prices have contributed to the overall decline. While the fall in the production of the main livestock products would appear to have bottomed out in most CEECs in 1995/96, there is little evidence that the decline has stopped in the NIS.

The sharp rise in grain output in the CEECs and NIS in 1997, combined with falling domestic demand for feed grains, has resulted in an **exportable surplus** of about 5 million tonnes and 4 million tonnes respectively in 1997/1998. However, the relatively low quality of the grains, due to heavy rains during the harvest period, the oversupply of feed grains on the world market, as well as the severe bottlenecks in the grain handling, storage and transportation system, make it unlikely that these levels of exports will be realised. In the NIS, most of the surplus production in 1997 was used to rebuild stocks which had been depleted following poor harvests in 1995 and 1996. Moreover, feed grain surpluses in Russia, a traditional grain importer, reduced export possibilities from Ukraine and Kazakhstan. The 1997/98 grain surpluses in the four NIS confirm the longer term shift in their trade patterns in grains, *i.e.* from large net imports of 27 million tonnes at the beginning of the 1990s to net exports of about 4 million tonnes in 1997/98.

Most CEECs experienced a growing **agro-food trade deficit** during the 1990s, with the exception of Bulgaria and Hungary which have managed to maintain a surplus of their food trade balances. However, the deficits fell in several CEECs in 1997 for the first time, helped by a reduction in both export restrictions on agro-food products and import restrictions in the EU. Further improvements are expected in 1998 with the implementation of various bilateral and regional trade agreements as well as improvements in marketing and information infrastructures and product quality. In the Baltic region, trade in agro-food products increased substantially in 1997 due largely to the implementation of the Baltic free trade agreement on agricultural and food products. Increased trade between the three Baltic countries has also resulted in further convergence in retail and farm gate prices across the region.

As regards **land reform and privatisation**, there was no significant progress in farm restructuring in the four NIS during 1997. While large farms have been re-registered in Kazakhstan, Russia and Ukraine, this process has had little impact on the institutional structure or management and operating practices. In most cases, the new "joint stock companies", or collective agricultural enterprises, are organised in

the form of “sharebased” ownership where land and non-land assets are owned collectively by shareholders who are generally either current or former employees. In the CEECs, privatisation of state farms is almost complete although most countries continue to retain a small amount of agricultural land in state ownership, mainly for research purposes. Greater diversity in the scale of farming operations is appearing across the region, ranging from a highly fragmented farming structure in Albania to large scale farming in the Czech Republic, Estonia and Slovakia. However, in most CEECs a bimodal land ownership structure is emerging with a large number of small scale farms as well as a significant number of large farming operations. Many of the small scale farms are non-viable as full time units and further restructuring is likely to take place in the medium term. It would appear that the lack of profitability in the sector, as well as the lack of off-farm employment opportunities in rural areas, continue to hinder the development of a land market in most of these countries.

Agricultural **policy developments** were rather mixed across the CEECs in 1997, with some countries, notably Bulgaria, Lithuania and Romania, adopting more liberal policies, while others increased their budgetary expenditures on agriculture. The most radical policy reforms took place in Bulgaria and Romania where all quotas and bans on agricultural exports were removed, administered prices and controls on profit margins were abolished, controls on inputs were reduced and direct subsidies introduced. Moreover, several CEECs have increased or are in the process of increasing expenditure on agriculture, notably Croatia, Latvia, Slovakia and Slovenia. Policy developments in the CEECs, in particular those which have association agreements with the EU, are moving closer to those being implemented in the EU. The Czech Republic, Estonia, Hungary, Poland and Slovenia have been selected to begin full membership negotiations with the EU in 1998. As a result, these countries have started to harmonise their agricultural, rural and regional policies with those of the EU. At this juncture, the discussions are focused on the implementation of veterinary and phytosanitary measures and on improving quality standards to those of the EU. Additional harmonisation efforts include the introduction and implementation of measures such as price regulation, intervention and custom tariffs.

Since the beginning of the 1990s, the agro-food sector in **Brazil** has undergone fundamental reforms driven by three major factors: the “Real Plan”, regional integration into Mercosur and greater international trade integration. The “Real Plan” affected agriculture through tighter monetary and fiscal policies, the de-indexation of prices and a reduction of border measures. Agricultural producers benefited from lower tariffs for machinery and other inputs, as well as from an increase in purchasing power. All export-oriented agricultural activities gained from the removal of export-taxes and improved access to export credit facilities. However, the “Real Plan” also brought about new challenges and problems for the farm sector. For instance, tight monetary policies caused an appreciation of the real exchange rate and thus a bias against the export-oriented farm sector, while rising real interest rates caused severe difficulties for producers with large debts. Moreover, reductions in credit subsidies made it increasingly difficult for indebted producers to re-schedule debt or roll it over into the next crop year. At this juncture, the net effect on agriculture is difficult to gauge over the longer term; agriculture, however, is likely to benefit from an environment of low inflation, freer trade and rising purchasing power.

Regional integration through the Mercosur and the removal of trade barriers has resulted in a reallocation of production according to its comparative advantage. The enlarged regional market has also meant that some domestic policy measures, such as the market price programmes (MPPs), have become unsustainable. The abolition of these policies has resulted in new challenges to find alternative price and income stabilisation measures. Apart from growing regional integration, Brazil’s agriculture has become increasingly integrated into the global market for food and agricultural products. The protection given through the Common External Tariff (CET) of the Mercosur agreement is limited and is scheduled to decline. Greater exposure to competition in the international market is likely to speed-up the domestic reform process which is underway.

In **China**, the ongoing Asian financial crisis has given further impetus to implement fundamental reforms in state-owned enterprises, the financial system and the government administrative system. The main challenge facing China is its ability to introduce rather ambitious structural reforms, while at the same time maintaining high economic growth and employment creation. Registered unemployment has been rising rapidly and the prospect of massive layoffs from state-owned enterprises has become a

cause of great concern. The agricultural sector as a whole experienced another year of robust output growth. With the exception of maize and oil crops, production of all major agricultural commodities increased. Total grain production in 1997 exceeded 490 million tonnes, or about 12 million tonnes short of the 1996 record harvest. Three consecutive good grain harvests have resulted in sufficient grain supplies to replenish private and public grain stocks and are likely to create a small exportable surplus in 1997/98. However, increased self-sufficiency in grains has been partly at the expense of lower oilseed production. Urbanisation and vigorous income growth have resulted in a fall in demand for grain and grain products, while at the same time raised demand for vegetable oils and livestock products.

While further progress has been made in the liberalisation of agricultural markets, policy measures to attain higher self-sufficiency in grains continue to dominate China's grain economy. Grain output continues to increase mainly due to the "governors' grain responsibility programme". However, the success of the "grain bag" policies has had substantial costs in the form of an increased administrative burden, grain expansion onto marginal land, higher applications of chemical fertilisers and pesticides, as well as a growing reliance on irrigation which has added to environmental problems and the unsustainable use of limited natural resources. Growing awareness of administrative, economic and ecological problems are likely to free the grain sector from some of the remaining regulations. In 1998, a new programme of economic reforms is expected to be implemented and its main focus would be to re-emphasise the importance of functioning agricultural markets. This is to be achieved by encouraging private agents to enter the grain marketing system and by reducing overall state intervention in the grain economy. The movement towards freer internal agricultural markets has been accompanied by a reduction in border measures; in 1998, both tariff and non-tariff measures have been lowered for a wide range of products. Despite these liberalisation efforts, tariffs for many farm commodities remain prohibitively high and, more importantly, the state continues to exercise control over imports for many products, both through quantitative restrictions (quotas) and import licenses.

In **India**, the post "Green Revolution" and associated policies have continued to underpin agricultural policy developments, even in recent years. The outstanding success of this policy has resulted in India becoming self sufficient in food production, although the steadily rising population continues to be a cause of concern. The Indian economy is still quite insulated from world markets, with high tariff barriers and state intervention in all sectors, but there are increasing signs that structural reforms are starting to be implemented in the industrial and agricultural sectors. While the reform efforts have slackened somewhat in recent years, it is hoped that the recently elected government will speed up the pace of privatisation and encourage greater integration into the global economy. The incidence of poverty, while still relatively high is falling steadily as a growing share of the population is engaged in disguised and seasonal employment activities.

Food security continues to be a critical issue in the light of a projected population of over one billion people by 2000. The agricultural sector has made impressive productivity gains in recent decades, especially as regards crop production. Food grain production has increased by about 2.5 per cent per year and a record food grain harvest of more than 199 million tonnes was attained in 1996/97, almost a fourfold increase on the level of output recorded at the time of independence. Spectacular gains have been achieved in wheat production which increased by more than 11 fold since the 1950s. In the medium term, agricultural output is expected to increase by about 4-5 per cent per annum and India is likely to become a small net exporter of agricultural products. Further diversification of agricultural production and processing may help in the gradual integration into global markets. India is the world's largest producer of fruits and vegetables and the second largest producer of milk. The agricultural sector continues to be central to the socio-economic fabric of economic development in India, as almost two-thirds of the population depend on agriculture for their livelihood. However, the agricultural sector faces many challenges, including increasing food production in a sustainable manner and improve farmers' incomes, while at the same time conserving the natural resource base.

The first of the three special issues that receive in-depth coverage in this report is **credit and finance policies in the CEECs and NIS**. During the transition period, many CEECs and NIS provided support to agriculture through subsidised credits and by setting up credit guarantee programmes.

So far, the overall result of these programmes has been rather ambiguous. One of the major difficulties with many credit programmes is that they focus on the symptoms rather than on solving the causes of the problem. In general, agricultural credit problems result from a combination of factors: high inflation, uncertain property rights, non-functioning land markets, low profitability in farming and high transaction costs in financial intermediation. The finance situation remains most problematic in those countries that have postponed reforms and have continued to channel subsidised credits and loans to the unstructured farms with heavy government discretion in loan allocation and widespread use of state guarantees. The result has been low repayment rates, reduced incentives for farm restructuring, an accumulation of bad debts and increasing government budget deficits. Not only are there important differences between countries, but profitability and financial problems differ considerably between different farm structures. Furthermore, the emergence of widely varying farm structures within each country requires quite different financial institutions for intermediation. While agricultural finance policies must keep in perspective the long-term situation of the sector, governments have an important role to play in providing a stable economic environment to facilitate the development of long-run sustainable institutions and infrastructures rather than implementing short-run measures focusing on credit subsidies.

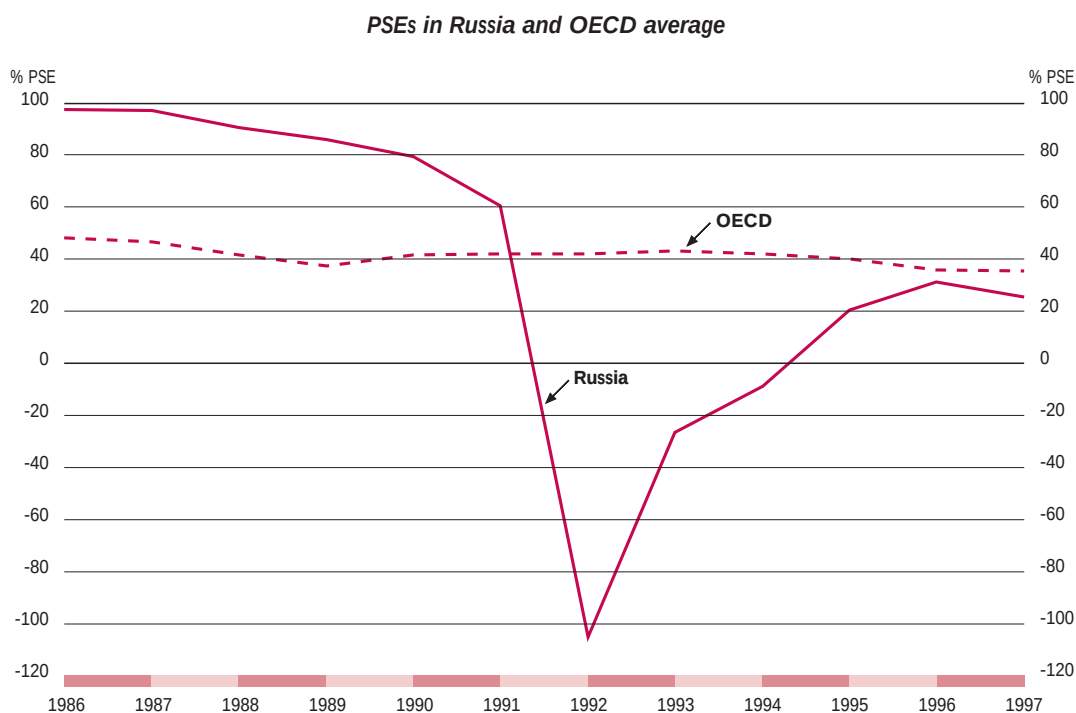
The second issue deals with **impediments to efficiency in the agro-food chain**. In the CEECs and NIS inefficiencies exist at all stages of the agro-food chain, although the extent of the problem varies from country to country. Most of the impediments in the downstream sector result from a lack of market transparency and market institutions, poor transport infrastructures, inadequate storage facilities, technological and managerial shortcomings at processing enterprises, as well as poor enforcement of contracts. Many of these impediments can be directly linked to the distortions and shortcomings which were inherited from the pre-reform agro-food system. Most CEECs and NIS have started to address these problems in their agricultural marketing and processing sectors, but policy reforms and investment programmes have so far not been successful in resolving the underlying problems. For example, price information systems have been established, but have not always succeeded in disseminating information to farmers, traders and processors in a fast and reliable manner. While transport and storage facilities are generally available in sufficient quantities, shortages often occur for handling equipment in particular sub-sectors, such as fruit and vegetables. The break-up of public monopolies in the downstream sector has almost been completed, yet private enterprises often hold dominant positions, especially in regional markets. Furthermore, weak enforcement of existing legislation often turns contractual relationships between farmers, traders and processors into risky ventures. Resolving the remaining problems and improving agricultural marketing and processing efficiency requires a continuation of sector-specific policies to restructure agricultural downstream enterprises as well as a reinforcement of economy-wide policies to ensure competition and compliance with existing legislation.

Finally, the third issue examines the role of **Foreign Direct Investment (FDI) in the agro-food sector of CEECs and NIS**. Transition countries have attracted a substantial share of overall FDI inflows in recent years, most of which has gone into the agro-industry rather than into primary agriculture. Expectations of future protection in those CEECs in-line for EU membership and low agricultural producer prices seem to have motivated some agro-industrial FDI. The majority of foreign investments, however, have apparently aimed to position investors on CEEC and NIS markets to enable them to satisfy growing local demand for high value-added food products, such as confectionery, ice cream and beverages. Acquiring local brand names as well as establishing Western brands in transition countries seem to have been additional considerations. Foreign direct investment not only provides much needed capital for the restructuring and modernisation of agro-industries in transition countries, but it also brings managerial and technological skills, which are in short supply, to the region. The dynamic benefits of FDI with the introduction of new business practices, the entry of new competitors and the increase in consumer goods generally outweigh the short-run, static costs of industrial restructuring and factory closure. Those countries that impose restrictions on the activities of foreign investors should, therefore, reconsider their policy approach since without FDI, the transition to functioning, internationally competitive market economies in CEECs and NIS could take a long time.

Box 1. Watch on support: producer and consumer subsidy equivalents (PSEs/CSEs) in Russia and selected CEECs

Macroeconomic factors dominate farm support in Russia

The development of support to Russian agriculture can be divided into three phases. The Soviet era, between 1986 and 1990, was characterised by high market price support and high budgetary subsidies resulting in a net percentage PSE of about 90 per cent, significantly above the OECD average. The second period of 1992 and 1993 was the time of major macroeconomic reforms and dramatic, sometimes chaotic, adjustments which resulted in a substantial implicit taxation of agriculture with PSEs at minus 105 per cent in 1992 and minus 26 per cent in 1993. The taxation was exacerbated by inefficiencies in the food chain and by restrictions imposed on agricultural exports that kept producer prices much lower than they would have been otherwise. Since 1994, the appreciation of the rouble, combined with the introduction of border protection against imports of most agro-food products, contributed to the increase in the level of support and domestic prices for most commodities moved closer to world reference prices or even exceeded them. As a result, the level of support to Russian agriculture turned positive and was 21 per cent in 1995. In 1996, it increased to 32 per cent, only to fall, according to preliminary data, to 26 per cent in 1997, which is lower than the OECD average of 35 per cent (Annex Table III.11).



Source: OECD.

Support to Slovak farmers rose in 1997

The aggregate PSE for the Slovak Republic steadily declined from 57 per cent in 1990 to 19 per cent in 1996. This downward trend came to a halt and the overall PSE rose to 25 per cent in 1997. Higher market

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price support (MPS) and rising budgetary transfers were main contributors to this increase in the aggregate PSE. The MPS increase reflects a combination of continued increases in domestic prices and the decline in world reference prices. The increased MPS element contributed 25 per cent to the total PSE, while direct payments accounted for 30 per cent and other budgetary transfers for 45 per cent of total support. Recent changes of support across sub-sectors were strongly affected by the pronounced swings in international grain prices; high external grain prices in 1995 and 1996 translated into an implicit tax on crop producers, but rising support for the livestock sector via the “feed-adjustment” factor. Falling international grain prices in 1997 reversed this trend resulting in positive support for crop producers and declining PSEs for the livestock sector (Annex Table III.8).

Low, but rising PSEs in the Baltic states

The overall level of support to Estonian agriculture has fluctuated strongly over the past decade. Starting from a level of 79 per cent in 1986, the aggregate PSE declined to minus 91 per cent in 1992, but gradually increased thereafter to reach, in 1997, a positive level of 9 per cent. The reform process towards a market economy and pronounced swings in the exchange rate determined much of the fluctuations in the PSEs. The 1997 gap between domestic and international prices accounted for the largest part of the current PSE, but budgetary support is becoming more important. In OECD countries, the gap between domestic and international prices typically reflects support provided through price support and border measures. In Estonia, the price gap largely results from inefficiencies in the downstream sector, or deficiencies in the transportation and communication infrastructure. These factors impeded the transmission of world market prices to Estonian agriculture and kept domestic prices above international ones. The resulting price differential accounted for the lion's share of the country's 1997 PSE.

As in other Baltic states, the transition process towards a market economy strongly affected the evolution of measured support for Latvia. The overall level of support fell from 87 per cent in 1986 to minus 93 per cent in 1992, but increased gradually over the 1990s and, based on preliminary estimates, reached a positive level of 8 per cent in 1997. While the price gap to international prices traditionally reflected the major element in the aggregate PSE, other budgetary support in the form of direct payments has gradually increased.

The development of PSE and CSE estimates in Lithuania largely followed the same pattern as in Estonia and Latvia. Overall support fell from 94 per cent in 1986 to minus 113 per cent in 1992, gradually increased since 1993 and reached an estimated level of 18 per cent in 1997. The 1997 rise in measured support in Lithuania can be attributed to several factors: an increasing price gap with international prices, an increase in budgetary expenditures, in particular direct payments, sub-national measures, general services and, to a lesser extent, input subsidies. Preliminary estimates indicate that the 1997 PSE level for Lithuania is significantly above those for Latvia and Estonia.

Overall economic developments and changes in farm policies also affected consumption. The implicit tax on consumers as measured by the aggregate CSE declined from minus 21 per cent in 1986 to minus 76 per cent in 1991 in Estonia, even though it was partly offset by consumer subsidies. With the abolition of consumer subsidies in 1992, the CSE became the mirror image of the market price support element of the PSE. Similar developments characterise changes in CSEs for Latvia and Lithuania.

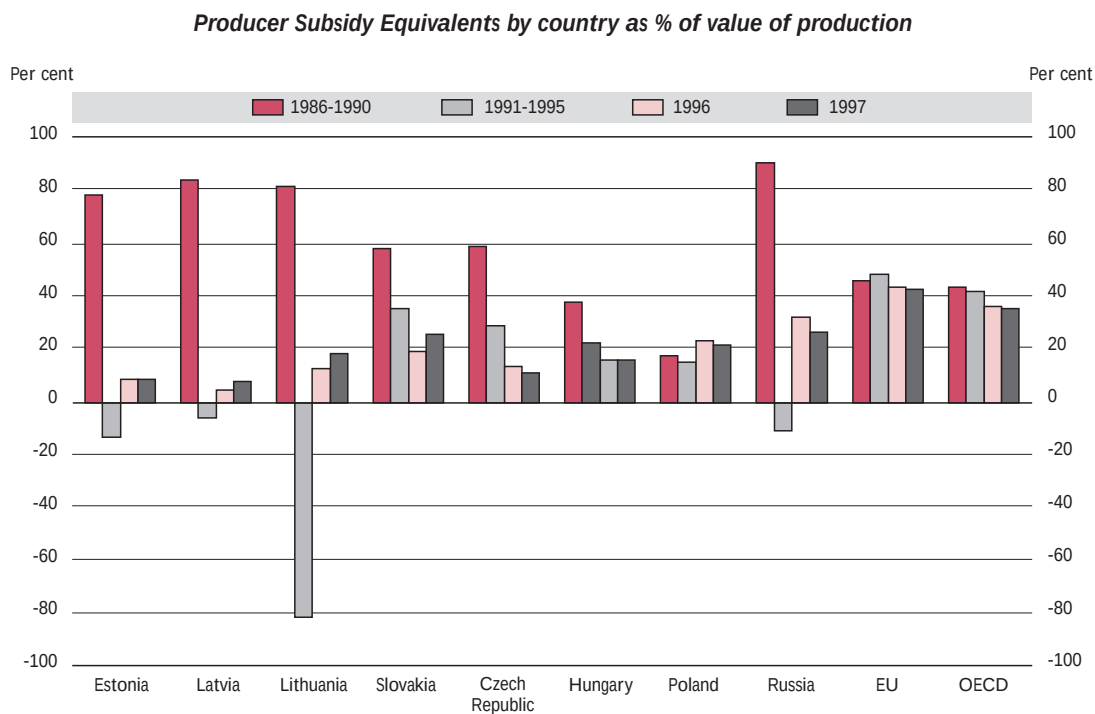
The distribution of support across sub-sectors and commodities for all three Baltic states is summarised in Annex Tables III.2, III.4 and III.6. The main features include: a strong focus on support of the crop sector in Estonia, however at low overall PSE levels; support to Latvian farmers was concentrated in the livestock economy, except for high support to crop producers in 1997; and support to agriculture in Lithuania followed the trends described for Latvia, however at a generally higher level of overall support.

A comparison across countries reveals that support in all CEECs and Russia declined faster than in OECD countries (after pronounced fluctuations) and remained below the OECD average in 1997.

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The importance of support differs across countries and sectors



Note: EU-12 for 1986-94 and EU-15 for 1995-97.

Source: OECD Secretariat.

AGRICULTURAL POLICIES IN CENTRAL AND EASTERN EUROPEAN COUNTRIES (CEECs)

1. OVERVIEW OF DEVELOPMENTS IN CEECs¹

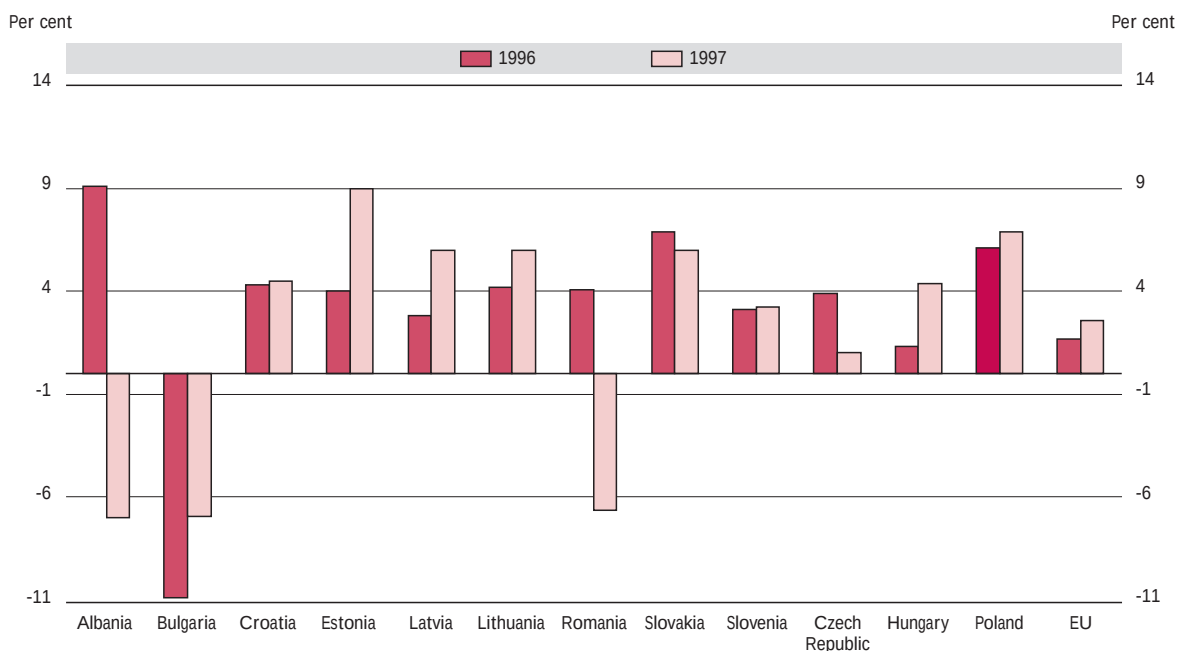
With a total population of 113 million people, the group of 12 CEECs represent not only a large market for agricultural and food products, but also a major producer and trader of agricultural products. In many CEECs, the agricultural sector has played an important economic and social role in the transition to a market economy. In 1997 the region produced almost 85 million tonnes of grain and about 7.5 million tonnes of meat. This section provides an overview of macroeconomic, production, trade and policy developments, with a special focus on developments during 1997. In particular, this section attempts to provide an overall evaluation of the progress made in the privatisation and restructuring of the agro-food sector, the implementation of agricultural and trade policy reforms and the movement towards market-based economies.

Macroeconomic situation

The CEECs experienced quite divergent economic growth in 1997, with strong GDP growth recorded in the three Baltic countries and Poland, strong to moderate growth in the Central European countries (including Slovenia and Croatia) and negative growth in Albania, Bulgaria and Romania (Graph I.1.1). More specifically, GDP growth in the first group accelerated by 6 per cent or more due to strong demand on both the domestic and export markets. An increase in economic activity was recorded in all the major sectors of the economy, including primary industries, manufacturing and services. Croatia, the Czech Republic, Hungary, Slovakia and Slovenia had GDP growth of 1 to 6 per cent, with Slovakia, followed by Croatia, recording the highest growth rate in this group. Growth in domestic consumer demand was the main factor contributing to the growth rates recorded in these countries. In the third group, however, the economic crisis that began in Albania, Bulgaria and Romania in 1996 had a dampening effect on economic activity in 1997, with GDP falling by about 6-7 per cent in each country. The downturn in economic activity in these countries was mainly due to delays in implementing structural reforms as well as in the liberalisation of prices and trade. In 1997, both Bulgaria and Romania introduced new macroeconomic stabilisation programmes aimed at accelerating structural reforms, privatisation and price liberalisation. Economic growth for 1998 is expected to rise and become more balanced across the region as recovery in output is expected in Bulgaria and Romania, while stable growth is likely to continue in the Central European and Baltic countries.

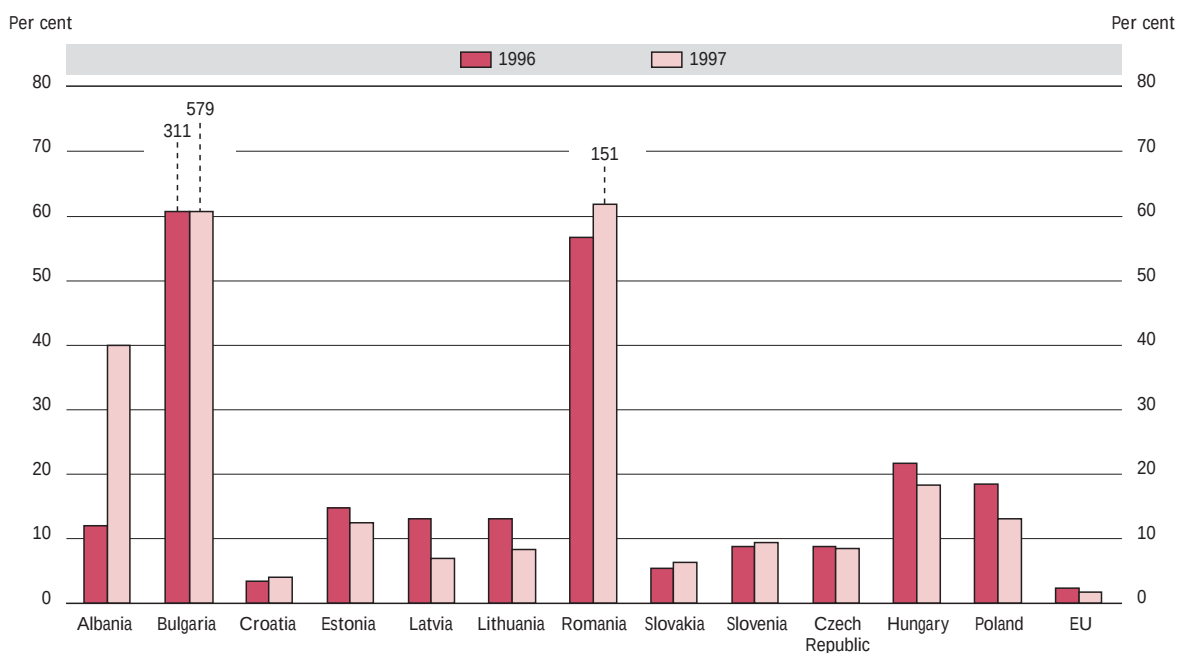
After slowing appreciably in 1996, the inflation rate in 1997 surged in several CEECs, particularly in Albania, Bulgaria and Romania (Graph I.1.2). The rise in inflation can be largely attributed to sharp price increases for energy, food and utilities associated with the removal of government subsidies, although price rises in Albania were caused by factors related to the political and economic turmoil in the first half of 1997. During the second half of 1997, Bulgaria introduced a currency board and pegged the Bulgarian leva to the Deutschemark, reducing monthly inflation significantly. The economic situation in all three Balkan countries is expected to improve substantially in 1998, helped by the implementation of tighter monetary and fiscal policies. The downward trend in the inflation rate continued in the Baltic countries due to the continued tight monetary policies and lower public expenditures, but rates remain stubbornly high in Hungary and Poland.

◆ Graph 1.1.1. **Real GDP growth in CEECs and EU**
Annual percentage change



Source: Annex Table I.1.

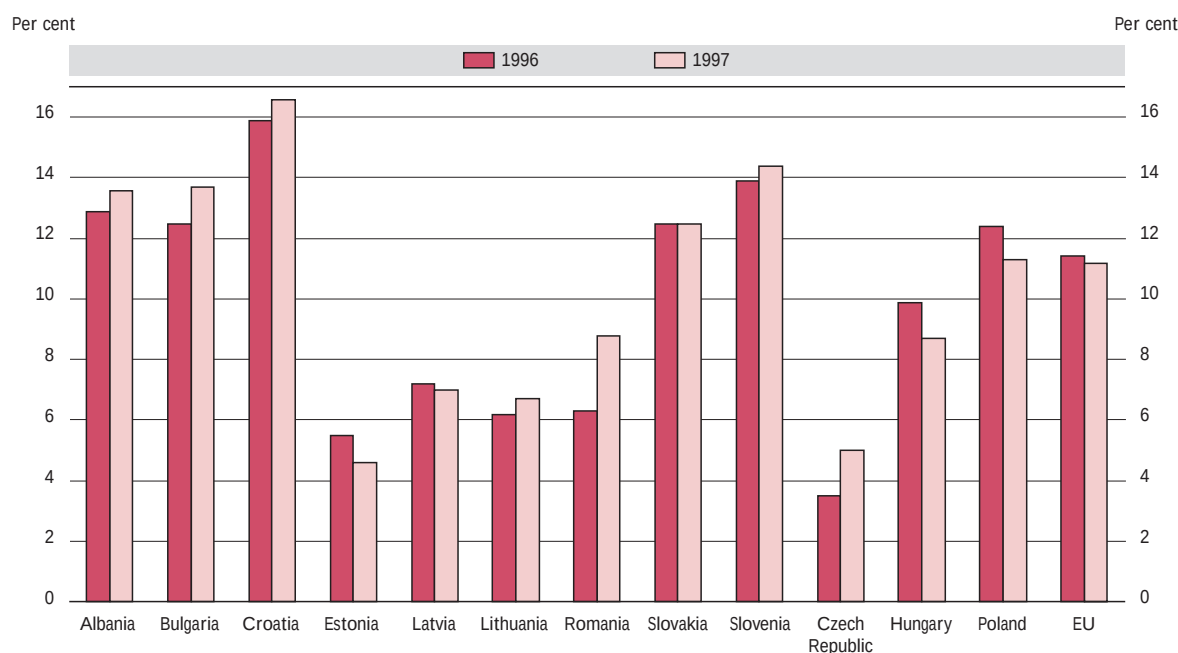
◆ Graph 1.1.2. **Inflation rate in CEECs and EU**
Annual percentage change



Source: Annex Table I.3.

Registered unemployment varies substantially across the CEECs, with a general upward trend recorded in 1997 for Albania, Bulgaria, Croatia, Romania and Slovenia and a slight fall in the unemployment rates in the Czech Republic, Estonia, Hungary, Latvia and Poland (Graph I.1.3). However, it should be noted that the official unemployment rate tends to underestimate the real rate due to a high and increasing level of hidden unemployment in several of these countries. In Bulgaria and Romania, the growth in the unemployment rate is closely related to the economic crisis which emerged during 1996 and continued during the first part of 1997.

◆ Graph I.1.3. *Unemployment rate in CEECs and EU*
Annual percentage change



Source: Annex Table I.2.

While privatisation and structural reforms are continuing in most CEECs, real comprehensive reforms were introduced in Bulgaria and Romania only in 1997. In all CEECs, large state enterprises with a heavy debt overhang have proved to be difficult to privatise. Privatisation was achieved in several CEECs only after the government had assumed outstanding debts, while in others many of these enterprises became bankrupt and were liquidated. As large scale privatisation is nearing completion in all CEECs, increasing emphasis is now being given to improving the legal and economic regulations on monopolies and consumer protection.

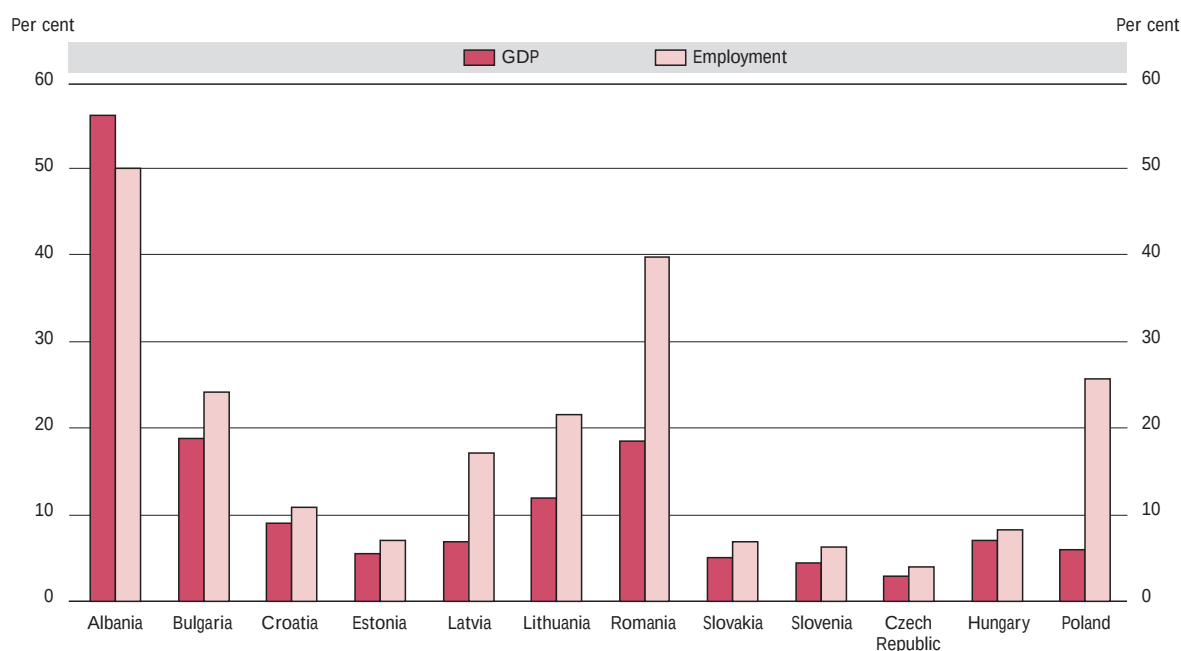
Another cause for concern is the moderate to high current account deficits in most CEECs, in particular the Baltic countries, Croatia, Slovakia and Romania. In 1997, total merchandise exports from the CEECs increased in line with the economic recovery in Western Europe. However, the foreign trade deficits of several countries, especially the Czech Republic, Estonia and Poland, widened further as imports continued to grow at a faster pace than exports. With an anticipated acceleration in economic growth in most West European countries in 1998, conditions are expected to be more favourable for CEEC exports.

Foreign direct investment (FDI) inflows to the CEECs have increased rapidly during the 1990s and rose by a further 20 per cent in 1997 compared with 1996. These inflows contribute to the modernisation and rebuilding of a sound productive base in many CEECs, as well as bringing much needed management and technical know-how to the region. At this juncture, almost 80 per cent of all inflows to the region have been to the three OECD Member countries, the Czech Republic, Hungary and Poland, although inflows to the Baltic countries, Bulgaria and Romania picked up in 1997. On a per capita basis, Hungary, the Czech Republic and Estonia have received the most FDI. Much of FDI inflows are closely related to the pace and complexity of privatisation in the CEECs, as well as to general price and trade liberalisation. A further rise in FDI inflows to the region is expected in 1998 as restrictions and barriers to foreign investments are reduced or eliminated, bureaucratic and other regulations are reduced, and new efforts are made to speed up the pace of privatisation, particularly in Romania, Bulgaria and Lithuania. FDI inflows are also expected to rise for those five CEECs (Estonia, Czech Republic, Hungary, Poland and Slovenia) which are in the first wave for negotiating EU membership.

Agricultural situation

In 1997, agriculture's share of GDP declined in all CEECs except for Albania, Bulgaria and Lithuania. In Bulgaria, for example, the share of agriculture in GDP rose to almost 19 per cent, while the overall economy shrank. During the 1995-1997 period, the share of agriculture in total employment decreased in all CEECs, except for Bulgaria, Poland and Romania. In the three Balkan countries, the agricultural sector continues to play an important role as a buffer to rising unemployment and maintaining social stability under particularly difficult economic circumstances. In 1997, the share of agriculture in total employment ranged from 4 per cent in the Czech Republic to over 50 per cent in Albania (Graph I.1.4). The high share of total employment in agriculture relative to its share of GDP in several CEECs, in particular Latvia, Lithuania, Romania and Poland, is indicative of the sector's low labour productivity.

◆ Graph I.1.4. *Share of agriculture in GDP and employment in the CEECs in 1997*



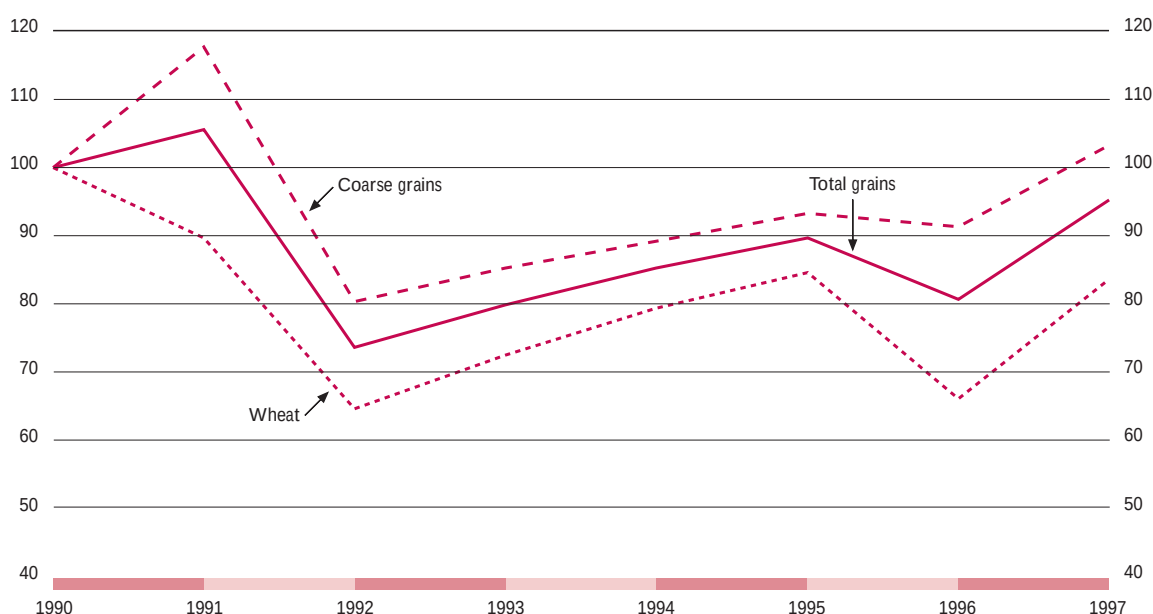
Note: For Hungary and Poland, 1996 data. For Bulgaria share of agriculture in employment is 1996 data.
Source: Annex Table I.9.

Gross Agricultural Output (GAO) has tended to vary widely across the CEECs over the 1989-1997 period. For example, in Bulgaria, the Czech Republic, Hungary, Slovakia and Poland, GAO fell sharply between 1989 and 1992, reflecting rapid adjustment to the new market conditions and the restructuring process in agriculture, as well as the deteriorating terms of trade in the sector. Since 1993, output has tended to be somewhat volatile but in an upward direction. In 1997, total output was still significantly below its pre-transition level. In the Baltic countries, the drop in output was steeper than at the beginning of the reform period and by 1994 it was approximately 50 per cent lower than in 1989 as a consequence of a sharp fall in domestic consumption, severe cost price squeeze and loss of markets in the former Soviet Union. Since 1994, agricultural output has tended upwards in both Latvia and Lithuania, while the downward trend in Estonia has slowed. Trends in Albania, Slovenia and Romania have been quite different from the other CEECs as agricultural output has been either stable or has increased over the 1989-1997 period. While agricultural output in Slovenia has risen in response to high support since the break-up of the former Yugoslavia, the rise in output in Romania has been due to a reduction in taxes and other restrictions in this sector.

Preliminary estimates indicate that agricultural output in 1997 increased in Albania, Bulgaria, Croatia, Lithuania, Romania and Slovenia due to good grain harvests, a combination of higher yields and, to a lesser extent in some countries, an increase in sown areas. On the other hand, output fell in Estonia, Latvia, Slovakia and the three OECD Members, the Czech Republic, Hungary and Poland, primarily due to falling livestock production. Crop production in Estonia and Latvia declined slightly.

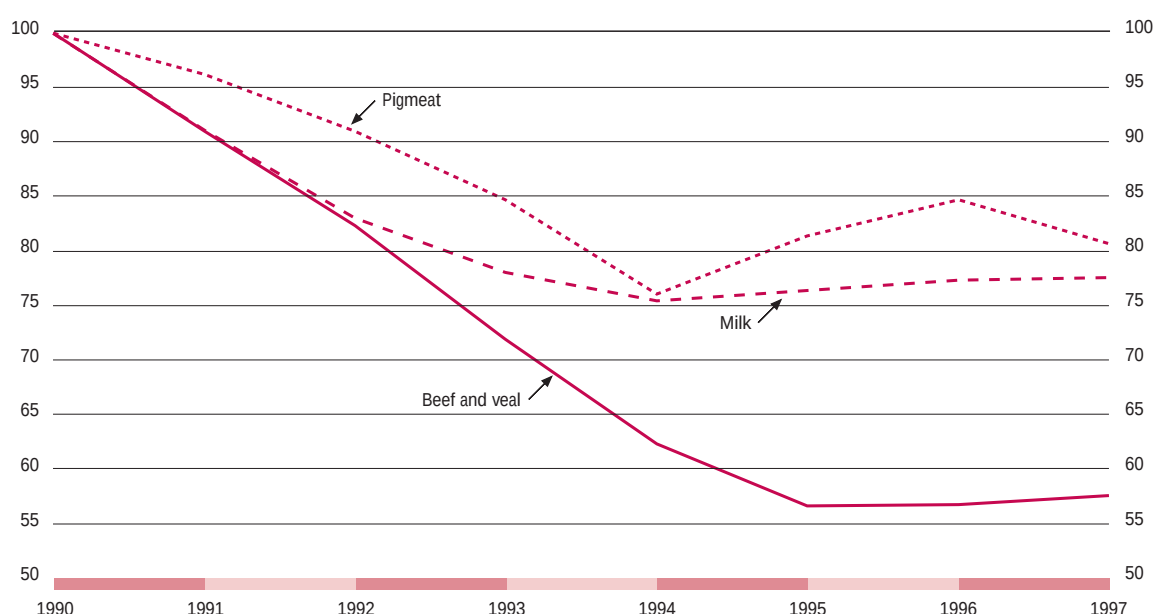
Overall grain production in the region, which had increased steadily between 1992 and 1995, fell sharply in 1996 due to adverse weather conditions, but recovered in 1997 with a rise in output of about 18 per cent in 1996. Total grain production in 1997 amounted to 85 million tonnes, only 5 per cent lower than the 1986-1989 average. The 1997 increase in grain production was mainly due to good crop harvests in Bulgaria, Hungary and Romania. For example, wheat production in Bulgaria and Romania more than doubled to 3.5 and 6.6 million tonnes respectively, while it increased by 35 per cent in Hungary (Graph I.1.5).

◆ Graph I.1.5. *Total grain production in the CEECs, 1990-1997*
Index 1990 = 100



The downward trend in livestock numbers has continued in all CEECs since 1990, albeit at a slower rate since 1995. High grain prices in 1996 and at the beginning of 1997 have had an adverse effect on the livestock sector, particularly on pig numbers. As a result, pigmeat production fell by about 5 per cent in 1997, while beef and veal production increased by 2 per cent. Since 1994, milk output has more or less stabilised as the continuing fall in cow numbers has been more than offset by rising yields. The overall trend in milk, beef and pigmeat production in the CEECs over the 1990s is shown in Graph I.1.6. It can be noted from this graph that the downward trend in the production of the main livestock products bottomed out in 1994/95 and has stabilised or increased marginally in recent years.

◆ Graph I.1.6. *Production of livestock products in the CEECs, 1990-1997*
Index 1990 = 100



Source: Annex Tables I.16., I.17., I.18.

During 1997 agricultural prices fell in Latvia and Slovenia in part due to the opening of their markets following the implementation of various trade agreements. In Bulgaria, price and trade liberalisation led to an increase in domestic prices, which moved closer to world prices, for the main agricultural products. Increases in administered prices in the Czech Republic, Hungary, Poland and Slovakia were more or less in line with the inflation rates of these countries (except administered prices for milk in Slovakia which increased in real terms). The worsening macroeconomic situation in 1997 resulted in a sharp rise in retail food prices and led to a fall in demand for the major food products especially in Bulgaria and Romania. More specifically, there was a large decline in the consumption of meat and milk products, while the demand for potatoes increased. In 1997, the share of household expenditure allocated to food in Bulgaria and Romania rose to 54 and 59 per cent respectively, while estimates indicate that almost 75 per cent of household expenditures in Albania were allocated to food.

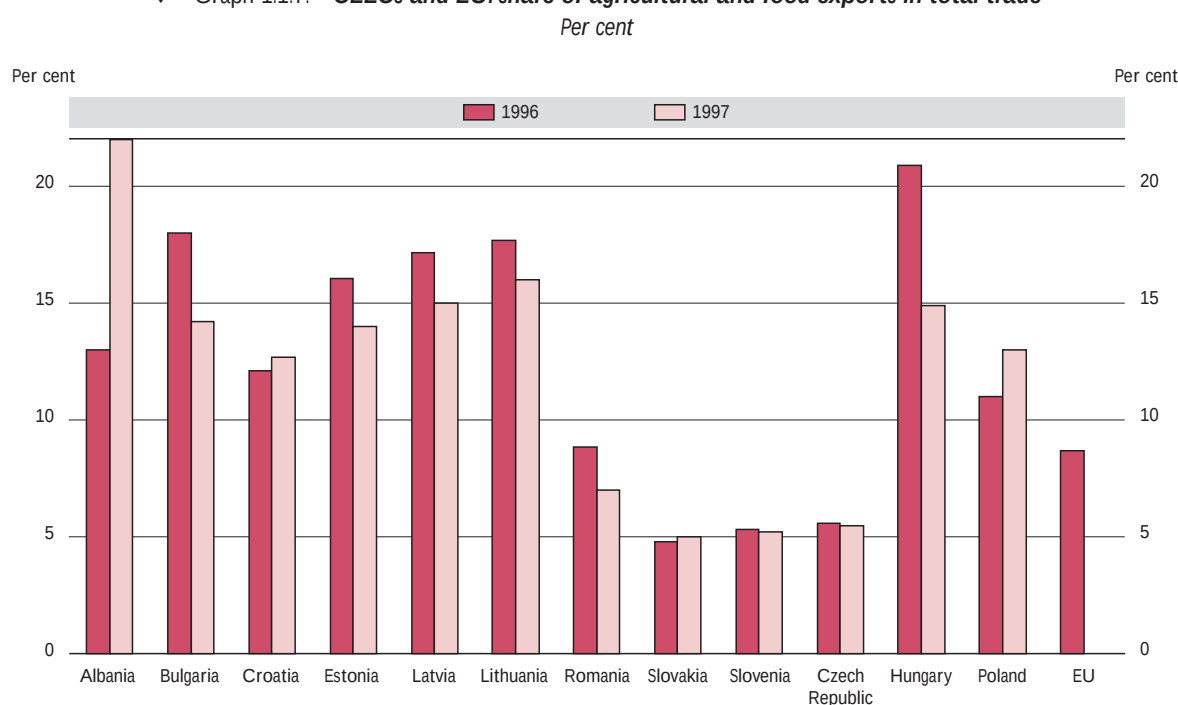
One of the most serious problems facing agricultural producers in many CEECs is delayed payments by processors for products delivered, contributing to the deterioration of the financial position of many farmers. In an attempt to overcome this problem, several countries have introduced new

legislation establishing stricter conditions for the payment of overdue debts by processors. For example, Lithuania introduced legislation in 1997 making processors liable for the payment of interest on overdue payments to producers, in addition to other financial penalties. As a result, there has been a substantial reduction in the amount of outstanding debt owed to agricultural producers.

Agricultural trade flows

While agricultural and food products continue to represent an important share of total exports, their relative importance has been declining in recent years in almost all CEECs, with the exception of Albania, Croatia and Slovakia. This can be partly attributed to the sharp fall in agricultural output during the transition period and the more rapid upturn in the non-agricultural sectors in most countries in the region. More specifically, agro-food exports in 1997 accounted for less than 10 per cent of total exports in Bulgaria, the Czech Republic, Romania, Slovakia and Slovenia and between 10-22 per cent in Albania, Croatia, Estonia, Hungary, Latvia and Lithuania (Graph I.1.7).

◆ Graph I.1.7. *CEECs and EU: share of agricultural and food exports in total trade*

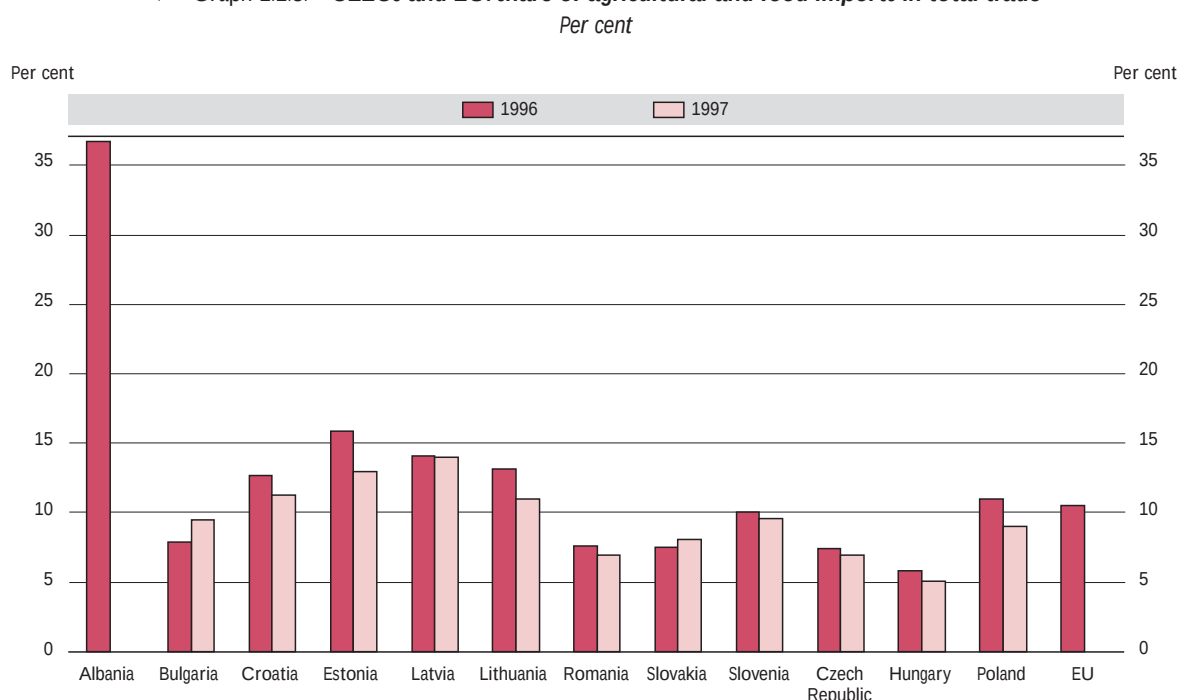


Source: Annex Table I.6.

As regards imports, the share of agro-food products in total imports has also fallen in recent years, except in the case of Latvia and Poland where it has increased marginally. In 1997, the share of agro-food imports in total imports ranged from slightly over 5 per cent in Hungary to about 14 per cent in Latvia (Graph I.1.8). While the share of agricultural and food products in total exports is likely to continue to fall in most CEECs, the share in imports is likely to remain fairly stable due to growing demand in most CEECs for a wider range of high value-added food products.

The overall agro-food trade deficits fell in most CEECs compared with 1996, but with some exceptions, notably Croatia, Estonia, Latvia and Romania. This was due to imports rising at a slower rate than exports or falling, while exports remained either stable or increased. However, Bulgaria and

◆ Graph 1.1.8. *CEECs and EU: share of agricultural and food imports in total trade*



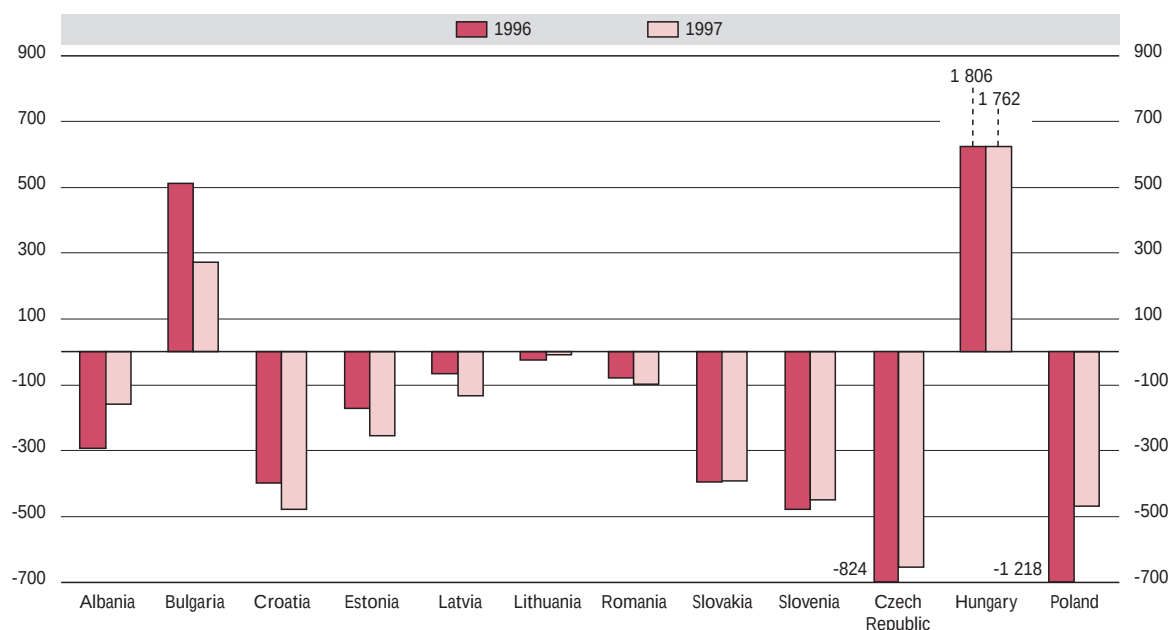
Source: Annex Table I.6.

Hungary, the only two countries in the region to have had consistently a surplus on their agricultural and food trade balances during the 1990s, experienced a decline in 1997 (Graph I.1.9). In Hungary, this was due to imports rising faster than exports, while in Bulgaria exports fell more sharply than imports. The fall in the agro-food deficits in several CEECs in 1997 is partly attributed to a depreciation of the exchange rates, which in turn increased the cost of imported food products. Other factors which have contributed to a reduction in the agro-food trade deficits for many CEECs include a reduction in export restrictions on agro-food products linked to the implementation of various bilateral and regional trade agreements, as well as improvements in marketing and information infrastructures, and product quality.

The geographic pattern of trade in agricultural and food products continues to evolve in the region. In the early 1990s exports were redirected from the NIS to the EU and other OECD countries; however, in more recent years there has been a growing tendency for many countries in the region to re-establish export links with the NIS. This is particularly true for the three Baltic countries, Bulgaria and Poland which in 1997 exported 40-70 per cent of their agro-food products to the NIS. Trade between countries in the region is also growing steadily, especially amongst those countries which are members of regional trading agreements such as CEFTA and BAFTA. Of the 12 countries in the region, the share of agricultural products in total trade is highest between the Czech Republic and Slovakia due to the Customs Union between the two countries and well established trade links.

Although the share of CEECs agro-food exports to the EU declined in 1997, the EU continues to be a significant export market for most CEEC, in particular for Albania, the Czech Republic, Hungary and Poland. As regards imports, the EU has maintained its importance as the main source of agricultural and food products for all CEECs, except Slovakia. In 1997, for example, the EU's share in total agro-food imports ranged from about 40-80 per cent of total food imports in CEECs. A high proportion of imports from the EU consists of highly processed food products, especially dairy and meat products, and fruits and vegetables. The high and increasing intensity of trade between the EU and the CEECs is partly due to the operation of Association Agreements with ten of these countries.

◆ Graph 1.1.9. *Agricultural and food trade balance in the CEECs*
US\$ million



Source: Annex Table I.5.

Trade relations

Estonia and Latvia made substantial progress on accession negotiations to the WTO during 1997 and a final agreement is expected to be concluded in 1998. While membership is unlikely to result in major changes in agricultural trade policies in the Baltic countries, some changes may occur in institutional arrangements. Negotiations for WTO membership are less advanced for Albania, Croatia and Lithuania and negotiations are ongoing concerning Croatia's initial offer on tariff bindings and domestic support to agriculture. Although Bulgaria became a member of the WTO in 1996, a new system of custom tariffs was not introduced until the beginning of 1997 and, in conformity with WTO regulations, the ban on grain and oilseed exports was removed in mid-1997. All other CEECs are members of the WTO and are subject to the commitments related to market access, domestic support measures and export subsidies under the Uruguay Round Agreement on agriculture.

In January 1997, the Baltic Free Trade Agreement on agricultural and food products came into force. This Agreement allows for comprehensive free trade between the Baltic countries of agricultural products of domestic origin. During the first year of implementation of the Agreement, trade in agro-food products amongst the Baltic countries increased substantially, albeit from a low level. Implementation of the BAFTA has resulted in some convergence in farm gate and retail prices across the Baltic region and a further convergence in prices is expected during 1998 as some of the initial difficulties in implementing the agreement are overcome. A bilateral free trade Agreement was signed between Croatia and Slovenia in November 1997 and came into force at the beginning of 1998. This Agreement represents an important step in normalising relations between the two countries following the break-up of the former Yugoslavia and it also represents the first bilateral Agreement between Croatia and a CEFTA member.

Box I.1.1. The Central European Free Trade Agreement

One of the most important regional trading agreements in agricultural products is CEFTA, founded by **Hungary, Poland, and the Czech and Slovak Republics** in 1994. While the original goal of the agreement (free trade for all agricultural products by January 1998) was not achieved, the new goal is for free trade in all products, with a gradual reduction in impediments to trade in agro-food products leading to free trade by 2000. **Romania** became a full member of CEFTA in 1997 and reduced its import duties on a range of agricultural and food products from other CEFTA countries. Although **Slovenia** acceded to CEFTA in 1996, trade in agricultural and food products was covered by bilateral agreements in 1997 and higher import tariffs have been retained on some sensitive agricultural products. While the three Baltic countries have bilateral trade agreements with most of CEFTA members, only **Lithuania** is at an advanced stage of negotiating full membership. **Bulgaria** started negotiations for CEFTA accession in the latter part of 1997 and is expected to join during the second half of 1998.

Integration into the EU has been a key objective of trade policies in many CEECs and to-date ten of the CEECs have signed Association Agreements, with the exception of Albania and Croatia. While the Association Agreements with Bulgaria, Romania and the Slovak Republic came into force in 1995, those with the Baltic countries were only ratified in February 1998. The Czech Republic, Estonia, Hungary, Poland and Slovenia have been selected to begin full membership negotiations with the EU in 1998. As a result, these countries have started to harmonise their agricultural, rural and regional policies with those of the EU. Much effort is presently focused on the implementation of veterinary and phytosanitary measures and on improving quality standards to meet those of the EU. Moreover, discussions are ongoing regarding the introduction and implementation of measures such as price regulation, intervention and higher customs tariffs.

Agricultural policy developments

Price, market and trade policies

Agricultural policy developments were rather mixed in 1997 with some CEECs, namely Albania, Bulgaria, Lithuania and Romania, adopting more liberal policies while others, such as Croatia, Poland Slovakia and Slovenia, increased their budgetary expenditures on agriculture. In the former countries, heavy government intervention up to 1996 led to significant economic distortions, but during 1997 all remaining quotas and bans on agricultural exports were removed and, in some cases, replaced by export taxes. As far as import tariffs are concerned, Bulgaria abolished import tariffs on wheat, maize and sunflower oil, while other countries in the region lowered theirs. In Albania, tariffs for imported agricultural products now range from 10 to 40 per cent depending on the degree of self-sufficiency of the product. Trade measures in Lithuania, Bulgaria and Romania have been *ad hoc* and have been changed several times in the course of one year, thus hampering the development of the agricultural and food sectors. During the latter half of 1997, however, trade policies in these countries achieved greater stability.

In addition to the liberalisation of trade policies, several countries in the region took steps to reduce distortions induced by domestic policies, for example Romania and Bulgaria (Box I.1.2).

Policy developments in several CEECs are moving closer to those being implemented in the EU. In most CEECs, expenditures supporting the agricultural sector are set to rise significantly in 1998 as compared to 1997. For example, in Croatia the share of agriculture in the total government budget will increase to 3.7 per cent in 1998 from 2.5 per cent in 1997; in Slovenia, the agricultural budget increased by 20 per cent, while a further 10 per cent increase is set for 1998; in Latvia, the agricultural budget is set to increase by over 50 per cent to 17 million lats in 1998. Moreover, the Slovak government increased direct payments to farmers by over 20 per cent in 1997 compared with 1996. Several countries

Box I.1.2. Radical domestic policy reforms were introduced in Romania and Bulgaria during 1997**Romania**

The main elements of these reforms were to:

- abolish administered prices for wheat, milk, pork and poultry;
- eliminate government control over margins on all foodstuffs;
- cease direct controls on input prices and the free distribution of fertilisers; and,
- introduce input vouchers as a temporary measure to cushion reforms.

Bulgaria

The main elements of these reforms were to:

- abolish government control over profit margins and reduce the list of monitored goods with ceiling prices;
- replace ceiling prices on products by prices negotiated directly between producers and processors/traders;
- introduce direct subsidies for maize and sunflower producers who signed contracts to sell part of their production to licensed agricultural traders; and,
- introduce direct subsidies to animal producers to offset higher feed prices.

in the region are also in the process of implementing policies which are fundamentally similar to those of the EU. Croatia, for example, introduced a new sugar regime at the beginning of 1998 based on the EU sugar regime. The introduction of direct payments for dairy and cereal producers are also under discussion in Croatia and Estonia, while the structural policies being implemented in Latvia in 1998 are similar to the corresponding policies of the EU.

Structural policies and privatisation

The process of farm restructuring and privatisation continued in 1997, albeit at a relatively slow pace. While privatisation of state farms and decollectivisation are almost complete in all CEECs, some outstanding problems remain, in particular on issues concerning the establishment of ownership rights and legal disputes over land plots. Moreover, while most CEECs privatised state land via the restitution process to former owners or their heirs, some countries, namely Albania and Romania, privatised state land by distributing it to agricultural workers. All countries in the region, except Albania and Poland, opted for the restitution of land and other assets to those with historic claims. While most countries in the region continue to retain a small proportion of agricultural land in state ownership, mainly for research and training purposes, almost 20 per cent of agricultural land in the Czech Republic is still owned by the State.

There is a wide diversity in the scale of farming, ranging from a highly fragmented farming structure in Albania to more large-scale farming in the Czech and Slovak Republics and Estonia. In Albania, almost all agricultural land is occupied by farms of less than 4 hectares, while in the Czech Republic about 90 per cent of the land is farmed in units over 100 hectares. Apart from these two extremes, most CEECs have a bimodal farm structure with small-scale farming dominant, but with a significant (25-50 per cent) amount of land farmed in large units. For example, 75 per cent of agricultural land in Croatia and Romania is farmed as small scale units, while 25 per cent is operated as large scale farms. In Croatia, Poland and Slovenia individual family farming is still dominant, just as it was during the communist period. In Lithuania and Latvia, farms of 4-24 hectares are emerging, partly due to the privatisation policies in these countries that set clear objectives of recreating a structure similar to that which existed in the inter-war period. During 1997, several countries introduced new measures or amended existing policies so as to speed up the process of land reform. For example, Lithuania and

Romania introduced additional legislation aimed at finalising the privatisation of state-owned farms and the implementation of land reforms, in particular broadening the eligibility criteria for land restitution, increasing the size of restituted plots and promoting the functioning of a land and land lease market.

While a dual land ownership structure is emerging in most countries in the region, most of the small-scale farms are non-viable as full-time units and further restructuring is likely to occur in the medium term. The development of a functioning land market should help to resolve many of the structural problems in the sector and lead to a more efficient and viable farm sector. While most CEECs do not have a functioning land market, greater emphasis on creating such a market for sale or lease will aid the process of developing competitive agricultural structures. Delays in the restitution process, lack of profitability in the sector and low employment opportunities in rural areas outside agriculture continue to hinder the development of a land market in most CEECs.

Upstream and downstream privatisation

Privatisation of upstream and downstream agro-food industries is complete in almost all CEECs, except for Bulgaria and Romania. In Latvia and Lithuania, privatisation policies strongly encouraged closer co-ordination and integration of the farming sector with the food processing sector. As a result, a large number of processing enterprises have been taken over by producers' associations or processing co-operatives which in the short run may mean there is little pressure for further restructuring of these enterprises. In Bulgaria, after substantial delays in privatisation between 1993-1996, the pace of privatisation accelerated in 1997 and by the end of the year State ownership in the food industry was reduced to less than 60 per cent. A further acceleration in privatisation is expected during 1998 and by the end of the year over 85 per cent of the assets of the food industry could be in private hands. In Romania, the pace of privatisation increased in 1997 based on the package of reforms introduced during the early part of the year. Although the upstream and downstream sectors are still largely dominated by state-owned enterprises, privatisation of this sector is expected to be completed by the end of 1999. One of the most important steps in the privatisation process was the break-up of Romcereal in 1996 (the national grain trading organisation) which resulted in the formation of regional grain monopsonies. In both Croatia and Slovenia, the privatisation legislation has favoured managers and workers through preferential share allocations.

While there has been a relatively rapid change in the ownership of food processing enterprises, the restructuring of their management and the modernisation of their plant and equipment have progressed much more slowly due in large part to lack of investment in the sector. The level of investment in the food sector is rather mixed across the region, with the overall level of FDI low due to various impediments. These include special preferences given to domestic producers which has tended to crowd out both domestic and foreign investment (e.g. Lithuania and Latvia), lack of profitability, severe over-capacity, as well as labour and other social restrictions placed on investors and management.² Furthermore, expectations of future protection in those CEECs in line for EU membership and low agricultural producer prices have also been important factors influencing FDI inflows to the sector. In general, processing enterprises which have high value-added, such as confectionery, vegetable oils, tobacco and beverages, were privatised quickly, while others such as meat and dairy processing have proven more difficult, often due to their heavy accumulated debt burden.

Another development in the downstream sector in recent years has been the establishment of many small meat processing plants, for example in Lithuania. While these new plants have resulted in more competition and lower consumer prices in the short-run, they are unlikely to survive in the longer term because of their small size and the resulting inability to exploit economies of scale. There is some anecdotal evidence to suggest that the economic performance of the food processing sector showed little improvement during 1997, largely due to a low level of efficiency and significant over-capacity in the sector. Moreover, the continued downward trend in livestock numbers has further exacerbated the problem of over-capacity in the meat processing sector and the general lack of management and marketing expertise will continue to inhibit the development of a more efficient and market-oriented

agro-food processing sector. In the medium term, the lack of capital for modernising and improving production technology, as well as the lack of management and marketing skills, will act as a catalyst for further restructuring and rationalisation in both the upstream and downstream sectors.

Credit and investment policies³

The lack of credit, high interest rates and weak financial institutions continue to hinder development of the agricultural sector in most CEECs. In order to overcome the credit constraint, most countries in the region have introduced credit subsidies and loan guarantees to help adjustment in the sector. However, the results of these policies so far have been rather mixed. In addition to domestic credit programmes for agriculture, several external programmes financed by the World Bank or the EU provide long-term capital for the development of the agricultural and food sectors in many CEECs.

In most CEECs, much of the subsidised credit has been channelled to agricultural producers through special state agricultural banks, although there has been some movement away from this approach following the banking crises in several countries over the period 1995-1997. In the Baltic region, confidence in the banking sector has recovered after the severe banking crisis of 1995/96 which resulted in a dramatic decline in the number of commercial banks. In Bulgaria, the lack of rural credit facilities is still a key impediment to the development of the agricultural sector, with the banking crisis of 1996 further limiting farmers' access to credit. In Romania, the system of providing directed credits to agriculture through the *Banca Agricole* was phased out in 1997 as most of these credits went to unprofitable state farms and created strong inflationary pressures. However, a temporary scheme has been introduced to channel special credits to agriculture for the purchase of essential inputs and is administered through commercial banks. Overall, the provision of directed credits through the State Bank has inhibited the development of a rural financial sector in Romania. Preferential credits are also widely used in the Czech Republic, Hungary and Poland to facilitate the purchase of inputs and to encourage structural adjustment in the sector.

The high degree of outstanding indebtedness, low farm profitability, high risk and uncertainty over property rights, as well as the lack of collateral, continue to be important impediments to the development of a sound rural credit system in many CEECs. In particular, the lack of a functioning land market inhibits the use of land as collateral in most of these countries. In an attempt to overcome the lack of credit in rural areas, many countries have established credit co-operatives and credit unions with the assistance of external funding such as the EU Phare Programme. In general, these credit co-operatives tend to be small and have very limited financial resources with which to fund farmers and other projects in rural areas. For example, Romania has, in addition to *Banca Agricole* and the Commercial Banks, a network of about 600 credit co-operatives which play a small, but significant role in the provision of finance to private farms.

Environment and rural development policies

While environmental policies have had a rather low priority in most CEECs, there is nevertheless a growing awareness in the region of the importance of agro-environmental policies in developing sustainable agriculture (Box I.1.3).

Rural development policies are becoming a high priority in most countries of the region and several CEECs have started to introduce special programmes aimed at developing rural areas. In Estonia, for example, a new Law on Rural Development is under discussion and is expected to be passed by Parliament in 1998. This new Law is intended to clearly outline measures which will enhance the development of rural areas and provide support to small cottage enterprises, rural tourism and the development of the farm food sector. In Latvia, a new programme on disadvantaged regions was implemented in 1997 to deal with specific problems such as high unemployment and low income levels in rural areas, while in Lithuania part of the funding of the Rural Support Fund is used to provide assistance for the development of off-farm employment activities and agro-tourism. The

Box I.1.3. Environmental programmes in selected CEECs

Lithuania: The main goals of the environmental schemes are to encourage the development of environmentally friendly agriculture by substituting alternative ecological means for pesticide control and artificial fertilisers; to certify, purchase and process ecoproducts and develop appropriate market infrastructures; to encourage environmental practices that eliminate pollution on household farms in the Karst region; and, to encourage environmental practices that reduce pollution in rural settlements.

Slovakia: Agro-environmental policies are aimed at protecting special farming regimes in protected natural areas, the planting of trees and grasses on hills to prevent the erosion of endangered soils and the promotion of organic farming. Moreover, in an attempt to harmonise the Slovak legislation with that of the EU's, the government has prepared and submitted to Parliament a draft of the Ecological Farming Act.

Albania: The Agricultural Development Strategy (The Green Strategy) which is currently under discussion has important environmental aspects, in particular a reduction in deforestation and overgrazing in mountainous areas.

Czech Republic, Hungary, Poland and Slovenia also implement programmes aimed at developing rural infrastructures. Overall, most of the CEECs are moving away from programmes specific to agriculture toward the implementation of programmes which specifically target rural and regional development.

Conclusions

The upturn in economic activity strengthened in most of the CEECs in 1997, except for Albania, Bulgaria and Romania which had a sharp fall in GDP due to economic crises. With the implementation of further structural reforms in conjunction with prudent monetary and fiscal policies and a recovery on export markets, GDP growth in these three countries is expected to become slightly positive in 1998. Despite the large debt burden in many state enterprises, privatisation of the agro-food sector is complete in most countries, although further rationalisation and restructuring is likely to occur due to increased competition on both the domestic and foreign markets. In many CEECs there is growing awareness of the urgent need for the implementation of competition policy and consumer protection measures.

The overarching policy goal of all countries in the region is to design and implement policies similar to those in operation in the EU. This is particularly the case for the five CEECs which are in the first wave of negotiations for future membership. Many countries in the region are in the process of harmonising their agricultural, rural and regional policies with the EU and are introducing measures such as direct payments and custom tariffs. In addition, a high priority is being given to the harmonisation of veterinary and phytosanitary standards and to improving product quality. For many CEECs, public expenditures on agricultural support are set to increase in the future, with greater support being given through credit and other types of input subsidies, and direct payments and expenditures on general services. The lack of a functioning agricultural land market is likely to impede further restructuring of the agricultural sector and, in a number of cases, the emergence of an economically viable farm sector. Moreover, in many CEECs inadequate market infrastructures and price information systems have had a dampening effect on the transmission of world prices to farm level. Finally, there is growing interest in environmental and rural development policies and several CEECs have started to implement policies in these areas.

2. ALBANIA

Macroeconomic situation

During the first half of 1997 Albania was crippled by a political, social and economic crisis following the collapse of the pyramid investment schemes in late 1996 and early 1997. The first signs of economic recovery appeared in the third quarter following the election of a new government, which acted

decisively to restore public order and macroeconomic stabilisation. Renewed financial and technical assistance from the international community was rapidly organised in support of the recovery. Nonetheless, GDP declined by about 7 per cent in 1997, after a period of strong economic growth from 1993 to 1996 (Annex Table I.1).

The annualised rate of inflation for 1997 was estimated at 40 per cent (Annex Table I.3), below the 51-55 per cent set under the IMF programme. While this result sets back progress toward price stability made since 1994, the threat of hyperinflation has been contained. By the end of 1997, the lek had recovered some of the depreciation experienced during the first six months of the year, although its depreciation against the US dollar was some 46 per cent compared with the end of 1996. Albania's external trade is primarily with neighbouring European countries, especially Italy, Greece and Turkey, with OECD countries accounting for 90 per cent of imports. In the chaotic period of 1997 during which all harbours and other customs border points were closed down for more than three months and road travel was endangered by brigandry, trade flows were severely limited. Preliminary results indicate a trade deficit of US\$518 million in 1997, compared with US\$630 million in 1996. Foreign remittances, which in 1996 were estimated at US\$425 million and acted as a buffer to reduce the current account deficit, are estimated to have fallen to US\$250 million. The current account deficit rose from 9 per cent of GDP in 1996 to 12 per cent in 1997 (Annex Table I.4).

The unemployment situation appears to have worsened with an increase from 12.9 per cent in 1996 to 13.6 per cent unemployed in 1997. As with a number of statistics provided in this section, there is room for doubt over the reliability of these figures in particular. Estimates of the number of jobless who have withdrawn from the labour force have been as much as two and a half times higher, but figures on employment in the informal sector may have an offsetting effect. Given the chaotic conditions of 1997, the estimate of 13.6 per cent unemployed is likely on the low side. Unemployment benefits reach less than one-fifth of the officially unemployed. This situation should be seen in the context of Albania's position as the poorest country in Europe, whose per capita GDP reached only US\$728 in 1997. With the high incidence of poverty, particularly among retirees, aggravated by the disturbances of 1996-97, as well as the ongoing reduction of public sector employment, the pressures on Albania's social assistance resources will be severe.

A series of international meetings organised in the second half of 1997 to mobilise financial and technical assistance for Albania imposed a set of strict requirements, *inter alia*, a prohibition on the use of public funds to reimburse Albanians whose savings have been wiped out by the failed pyramid schemes and the implementation of an auditing procedure to close down the schemes in an orderly fashion. On 7 November 1997, the IMF Board approved a six-month Emergency Assistance Programme to support the government's initial measures to reduce the fiscal deficit. To complement the macroeconomic conditions of the Emergency Assistance Programme, the World Bank, EU and other donors lifted all the restrictions on loans that had been suspended and offered a package of US\$640 million of assistance as an injection to help the recovery. A more comprehensive three-year IMF Enhanced Structural Adjustment Facility (ESAF) programme was approved on 13 May 1998, indicating that the reform programme was on-track.

The Government's macroeconomic priorities for 1998 are to ensure a steady recovery of output and GDP growth of 10 per cent, reduce inflation to around 10 per cent and maintain official reserves at their current levels. In order to reach these goals, the government has tightened monetary policy by imposing credit ceilings and increasing interest rates. Banking sector and other structural and institutional reforms have been launched. Reforms include a 15 per cent downsizing of the public sector, with a wage increase for those remaining as a means of curbing corruption. Disorder and criminality, together with persistent regional tensions, especially in Kosovo, continue nonetheless to cloud the prospects for sustainable economic and political stability and for building investor confidence in the country.

Situation of the agricultural sector

Agriculture's share of the economy was estimated at 56 per cent in 1997 (Annex Table I.9), up from 52.3 per cent in 1996 and from 32 per cent in 1989. Until other sectors of the economy regain their

pre-1990 levels, further economic recovery will continue to be highly dependent on developments in the agricultural sector. While the annual growth in the volume of gross agricultural output (GAO – Annex Table I.10) averaged 12.1 per cent over the five year period 1992-1996, the rate of growth had slowed to 3 per cent in 1996, indicating that initial gains from privatisation and liberalisation are diminishing. Despite the widespread unrest, 1997 GAO increased by about 1 per cent. During 1992-1996 there has been a gradual increase in agro-food exports, although volumes remain low due largely to limited supply. In 1997 agro-food exports declined by 5.9 per cent from an already small base.

During 1997 prices increased rapidly because of the depreciation of the lek in relation to all major foreign currencies. For traded goods, prices continue to reflect world market price levels. The use of inputs is low because of their relatively high cost and the subsistence⁴ orientation of many farms. The availability of high quality seeds continues to be a problem, although there is an increased supply of imported seeds, said to be at times of low quality. Investment in agro-processing has been stagnant due to the unstable situation. Nonetheless, the processing and distribution of agricultural products, though limited, continued through the network of small dairies and meat processing plants.

Over 50 per cent of the economically active population is engaged in agriculture, which continues to have a significant subsistence component, in part because of the small average size of farms, as well as because of the low incomes of the rural population. The small farm size of approximately 1.1-1.4 hectares and fragmentation of holdings result from the methods used to distribute the land. Rural families derive about 70 per cent of their disposable cash income from livestock production, which has been favoured over crop production, a reversal of pre-transition collectivised, agricultural strategy that put the priority on food self-sufficiency. This trend toward livestock production has been supported by the evolution of cropping patterns for selected fodder crops since 1990. The difficult economic conditions faced by farm operators, especially in the mountainous areas, poses risks of significant migration in search of more viable economic opportunities in Tirana and other urban areas and abroad and highlights the need for a viable rural development strategy that includes the development of off-farm employment.

Agricultural production and food consumption

Crop and livestock production

Given the importance of agriculture in the economy, Albania has a relatively low ratio of arable (25 per cent or 0.7 million hectares) to total land (about 2.9 million hectares), with the amount of arable land decreasing due to urbanisation. Forests (36 per cent or 1.05 million hectares) and pastures (14 per cent or 0.43 million hectares) cover half the total surface. Production of industrial crops has ceased due to the collapse of the agroindustrial sector for processing such crops. The total crop area has declined from 466 000 hectares in 1990 to 440 000 in 1997. There has been a sharp downward trend in the areas sown to wheat from 203 000 hectares in 1990 to 125 000 hectares in 1997. Conversely, over this same period there have been upward trends in the areas planted with alfalfa and maize to provide fodder for livestock operations. In parallel, areas devoted to white beans have increased, while those of both vegetables and other field crops have decreased. The increase in areas held fallow in 1996 and 1997 could indicate a reduction of the cropping intensity due, perhaps, to extraneous factors related to the pyramid schemes and the subsequent political and social unrest. Yield levels of the major crops are well below western European levels, leaving much room for improvement.

The overall volume of crop production increased by 2 per cent in 1997. Because of good weather the wheat crop in 1997, estimated at 310 000 tonnes, recovered its 1995 level. Nominal wheat, flour and bread prices increased rapidly during the year due to inflation but remained at parity with world price levels. Fall wheat plantings appear to be about the same as the previous year's levels. The production of wheat and coarse grains increased by about 24 per cent over 1996 output.

The upward trend in the numbers of livestock held from 1990 through 1995 was reversed in 1996, when there was a significant reduction in the numbers of animals held for all major categories of livestock, most likely to enable farm operators to buy into the pyramid schemes. While this downsizing could have a detrimental effect on short-term on-farm incomes, derived primarily from the sale of

livestock and livestock products, indications are that restocking is taking place. In 1997 the volume of livestock production decreased by 2 per cent, with meat production increasing by 2 per cent and milk production declining by 4.2 per cent. It is possible that the increased meat and decreased milk production results could be attributed to the selling-off of livestock.

The family farm, which has an average of 2-5 head of cattle and 10-20 sheep and goats, is the primary animal producer. Milk yields are currently about 1 700 litres per capita per year, up from 1 400 litres around 1992. Under improved management and feeding conditions, potential higher yields of 2 500 to 3 000 litres could be reached. One of the main reasons for the low animal productivity is that forage feed is often of low quality and not always available on time. Most on-farm feed produced comes from alfalfa, followed by maize and some vegetable waste. Protein insufficiencies continue to be a problem.

Food consumption

According to consumption surveys carried out by the Ministry of Agriculture and Food, the caloric content of the average Albanian diet is adequate, but is still heavily based on cereals (over 50 per cent). Per capita consumption of bread is approximately 200 kg per year. While the rural areas are more self sufficient because they produce much of their own food, the urban areas are more dependent upon imported food supplies, particularly cereals, fruits, vegetables and sugar. Family expenditure for food in urban areas is approximately US\$150 per month, almost equally divided among the four major categories of cereals, meat products, dairy products, and vegetables and fruits. Since incomes are still low, the proportion of income spent on food is high at more than 75 per cent. At present, domestic agricultural production meets approximately 70 per cent of Albania's total food requirements, the cost of imported processed food remaining extremely high for many Albanians.

Agricultural trade

Albania's persistently high agro-food trade deficit is estimated at US\$156 million for 1997, with imports of US\$190 million and exports, including fisheries, of US\$32 million. Grains (wheat and wheat flour) constitute the main food import, amounting to more than 200 000 tonnes valued at US\$65 million, and meet about half the country's requirements. All of Albania's requirements for sugar and sugar containing products are met through imports, which, valued at US\$16.5 million, constitute the second largest category of commodity imports. All vegetable oil (excluding olive oil) requirements are also met by imports at a value of US\$18 million. Beef for salami processing and chicken meat for direct consumption valued at US\$16 million constitute an additional group of imported products. During 1996-97 imports of eggs, butter, cheese, salami and products of animal origin, as well as of beverages such as beer, fresh drinks and mineral water, declined due to an increase in domestic production of these products.

The growth in agricultural exports is developing at a slow pace. In 1997, agricultural products made up about 22 per cent of total Albanian exports. Medical plants, spices and herbs intended for kitchen use constitute the largest category of agricultural exports (35 per cent), valued at US\$12 million. The other two main export categories are unprocessed tobacco (US\$7 million) and fish and snail products (US\$3.1 million). Olive oil and fresh vegetables, particularly white beans, continue to show favourable export trends.

Albania's observer status in the WTO dates back to 1992. Following submission of its Memorandum on the Foreign Trade Regime, a number of working party and bilateral meetings with contracting parties have been held. Albania has presented its offer for levels of bound customs duties on imports from WTO country members, to be discussed in future bilateral negotiations. (While Albania does not apply agriculture or export subsidies, differentiated tariffs ranging from 10-40 per cent are applied on selected food imports.) After a promising beginning, with many countries supporting Albanian participation in the WTO, negotiations have stalled. Although bilateral meetings continue, there have been no official meetings between the WTO and Albania since October 1996 and no further developments are foreseen in the next few months.

Albania has no bilateral trade agreements. With respect to relations with the European Union, a second meeting of the Joint Committee under the Trade and Co-operation Agreement between Albania and the European Community took place in Tirana on 23-24 March 1998. It was agreed that further strengthening of bilateral relations is desirable, as a first step, within the existing framework of the Trade and Co-operation Agreement, *inter alia* through a more active use of the existing working parties on customs and approximation of laws. The operational conclusions for agriculture were that a Commission expert mission would be organised to examine the applications of the current trade regime to improve exports and to explain the SPG regime and rules of origin. It has been decided that it would be useful, in view of the EU's regional approach, to offer a preferential regime. In this context, the Commission has introduced a "waiver" to the WTO for this region. In the short term no steps are foreseen towards a new agreement, it being more logical to offer an extended preferential regime. One of the main problems in the agricultural sector is to identify the products and quantities which can be taken into consideration under such a regime.

Agricultural policy developments

Structural policies and privatisation

The structure of the agricultural economy of Albania has been completely transformed, with 97 per cent of former collective farms divided and distributed through mass distribution, free of charge, to former members (no physical restitution to former owners). Legally, new owners have full rights to lease, sell, buy or inherit agricultural land, but the security of land titles has not yet been assured. Fifteen per cent of owners lack any proper ownership documents, while the titles (*tapia*) held by most other owners are provisional and have not yet been registered. Formal titling is a time-consuming process. The situation is further complicated by disputes over boundaries identified in the titles. The registration process has been further delayed in 1997: some areas lack registration offices and a number of existing offices were damaged during the period of unrest. State farms having been liquidated, the most recent legislation drafted during 1997 authorises the long-term lease of all types of state land (agriculture, pasture and range land, and forest land). Regulations facilitating the process of land sales have also been prepared. A market for agricultural land would contribute to the consolidation of land holdings and to the establishment of a viable, market based agricultural sector in the long run. But the land market is still not working, despite its priority for the development of Albania's most important economic sector.

As of September 1997 around 89 per cent (3 735 entities) of all agro-processing and agricultural marketing industries were fully privatised, while the remaining 459, or 11 per cent, are at various stages in the privatisation process. (The original 288 enterprises listed for privatisation were divided into 4 194 more or less self-contained entities to ease the privatisation process by making the investments more accessible to Albanian investors.) For the eight remaining large, majority state-owned enterprises, in October 1997, the Albanian government provided the World Bank with a privatisation schedule which states that by the end of 1998 all eight companies would be privatised, with procedures to start in early 1998. As of 30 December 1997, there were approximately 2 000 private agro-industrial firms, mainly in milling, baking, dairy products, meat processing and beverage production activities, representing no change from the previous year. As the privatisation process advances, attention will need to be devoted to adequate competition in the processing sector.

Credit and investment policies

Demand for agricultural credit by the new private farming sectors continues to be strong and rising. International donors have made available an important share of credit for agricultural development, much of which had been channelled through the Rural Commercial Bank (RCB) and other intermediaries, but repayment disciplines were poor. The resulting insolvency of the RCB has aggravated the difficulties created by the lack of access to credit. Investment needs in the agricultural sector are supported mainly through multilateral and bilateral donors largely at concessional rates and this support will be indispensable over the medium term.

Agricultural support policies

All agricultural prices have been liberalised and no support is being provided except through differentiated tariffs for imported agricultural products which range from 10-40 per cent depending on the level of self sufficiency. There are no subsidies for inputs other than those furnished by foreign donors. Some, but not all, imported agricultural inputs are subject to the lowest tariff level (see below), but unlike domestic produce, all imports are subject to the 20 per cent value-added tax. There is little difference between border and market prices, other than ordinary marketing margins. Programmes are in place for the rehabilitation of the irrigation and drainage systems, some of which were further damaged during the turmoil, and for the provision of support services (e.g. research and extension, veterinary, credit). Occasional *ad hoc* assistance is provided for disaster relief, such as flooding.

Agricultural trade policies

Albania has defined and implemented a liberal commercial system with no restrictions on imports or exports. Its customs code is currently being harmonised with the International Code. Of four import tariff categories adopted in 1996, investment commodities, raw materials and basic foodstuffs generally fall under the lowest. There are a number of problems with imported products concerning quality and food safety such as mislabelling, goods exceeding their expiry date, etc. Programmes to improve quality assurance and food safety in order to meet European Union standards continue to be developed.

In the area of agro-food imports, in addition to customs tariffs, excise taxes have been applied on tobacco, cigars and alcoholic beverages. As regards agro-food exports, no export duties are applied and no licensing or quotas are used. Export restrictions on raw wood materials exports continue to apply, as a temporary measure for the protection of national property and the environment. There are no import or export limits on food products. Imports of live, high quality breeding animals, pesticides, seeds and seedlings are subject to licensing rules.

Environmental and rural development policies

The draft Agricultural Development Strategy ("The Green Strategy"), currently under discussion in Albania, identifies "uncontrolled deforestation, overgrazing in mountainous areas, the rapid urbanisation of scarce and productive arable land, flooding and the degradation of marine and fresh water fishing resources" as the principal long term concerns for natural resource management. Similarly, the Strategy draws attention to the need for rural development policies to stimulate and rehabilitate economic activity and create off-farm incomes, *inter alia* to curb massive rural exodus, especially from the mountainous zones. The fact that an awareness of these problems and a consensus around the necessary actions are being built constitutes an important initiative.

Summary and outlook

The disruptive political and social unrest in Albania in late 1996 and the first half of 1997 dramatised the fragility of the rapid economic recovery recorded over the period 1993-1996. Agriculture, which remains a critical sector of the Albanian economy, managed to show some growth and farming remained relatively shielded from destruction and looting that damaged other economic sectors. The selling off of farm assets like livestock may jeopardise short-term growth, but there are already signs of restocking taking place. Development of production is, however, hampered by land fragmentation, the poorly developed land market, lack of credit, lack of land ownership security and the scarcity of technological improvements. The agro-processing industry's development is stalled by lack of credit, working capital and investment; inadequate supplies of agricultural products; and competition from low priced imported goods. In addition, the whole economy has been adversely affected by the collapse of the pyramid schemes at the end of 1996 and the turmoil that followed in first half of 1997.

In part due to the impact of the unrest, the outlook for the near term is that agricultural growth will not immediately regain its pre-1996 growth rates. More fundamentally, increases in agricultural output are seriously constrained by the small size of farms, which limits increases in productivity by the

continuing use of traditional technology. Improved and increased inputs for crop and livestock production require investment and access to credit. The development of a modern agricultural system will also depend on improved financial markets, land markets, transportation and communications. The need to provide a rational framework to promote efficiency in production and marketing of agricultural produce and welfare for the farming community has stimulated an internal debate, resulting in the preparation of a draft Strategy of Agricultural Development in Albania. Its aim is to promote a harmonious development of the agricultural sector by improving overall economic conditions and farmers' welfare; setting up the necessary structures to support increased production; stabilising and improving the domestic market for agricultural products and their marketing, while increasing exports and reducing imports; protecting the environment and improving natural resource management; and preparing integration into the European Union. The draft Strategy reviews four options to achieve these aims and recommends that the government pursue a so-called "composite strategy" based on a dynamic balance between targeted market policies (*i.e.* market intervention and import protection), on the one hand, and an adequate liberal trade regime, on the other, within the framework set by multilateral trade agreements.

The fact that a process of analysis and reflection has taken place in Albania to identify the priorities and aims of an integrated, multifaceted agricultural development strategy is a positive step forward. Nonetheless, the recommended compromise that features interventionist and protectionist policies as a key element of the strategy may delay Albania's efforts to create a market-based economy.

3. BULGARIA

Macroeconomic situation

The continued delay in the implementation of crucial reform measures and economic restructuring contributed to a sharp deterioration of the macroeconomic situation in 1996. In early 1997, a comprehensive structural reform programme was announced. The main objectives of the programme were macroeconomic stabilisation, an acceleration of the privatisation process, reform of the banking sector, enterprise reform, and price and trade liberalisation. The Bulgarian government negotiated agreements with the IMF and World Bank for financial support. The centrepiece of the recovery programme was the introduction of a currency board as from 1 July 1997 which pegged the exchange rate at 1 000 Bulgarian leva to the Deutschemark.

Gross Domestic Product (GDP) is estimated to have declined by 6.9 per cent in 1997, with industrial production falling by 13.1 per cent. Much of this decline can be associated with the peak of the economic crisis during the first half of the year. During the second half of the year, export sectors showed signs of recovery as did retail sales, which following a drop of 50 per cent during the first nine months of 1997, grew marginally in the fourth quarter.

The monthly inflation rate, which had been in double digits for almost every month since mid-1996, accelerated to triple-digit hyperinflation in early 1997, but slowed down to around 10 per cent in March. After the introduction of the currency board on 1 July 1997, monthly inflation averaged 4.3 and 0.8 per cent in the third and fourth quarters of the year respectively. The year-end inflation rate reached 579 per cent. Price increases in foodstuffs and services were the highest with indexes of 611 and 632 per cent respectively. The basic interest rates, which stood at 400-450 per cent in early 1997, fell rapidly with the introduction of the currency board to around 5-7 per cent during the second half of the year.

The consolidated budget deficit decreased from 10.4 per cent of GDP in 1996 to 2.9 per cent of GDP in 1997, less than half of its projected level. Two factors had an impact on lowering the budget deficit: the rapid decline in interest rates, which reduced the debt service cost; and higher-than-expected tax revenue. Total tax receipts represented 28 per cent of GDP for 1997, compared to roughly 25 per cent for 1996. The trade surplus increased from US\$187 million in 1996 to US\$396 million in 1997, mainly due to the devaluation of the lev and depressed domestic demand. While the dollar value of exports increased only slightly by 0.5 per cent to US\$4.9 billion, imports contracted by almost 4 per cent to US\$4.5 billion. The current account surplus increased from US\$82 million to US\$446 million (7.2 per cent of GDP).

There was substantial progress in privatisation and in attracting foreign direct investment in 1997. Cash payments contracted in 1997 for privatised enterprises amounted to US\$574 million, compared to US\$185 million in 1996. By the end of November 1997, the proportion of privatised assets had reached 19 per cent, of which 9 per cent was cash privatisation and 10 per cent was mass privatisation. FDI inflows increased to US\$498 million in 1997, compared to US\$109 million in 1996. Of the 17 banks for which the Bulgarian National Bank had been seeking insolvency since mid-1996, the courts declared 15 banks insolvent as of the beginning of January 1998. Most of the remaining state banks are slated for privatisation, although bank privatisation has been proceeding more slowly than envisaged.

The high inflation during the last months of 1996 and beginning of 1997 resulted in a sharp drop in both real income and consumption. Although wages and incomes recovered somewhat in 1997, they remained low in absolute terms with average monthly state-sector wages stabilising at close to US\$100 in late 1997 and early 1998. It is estimated that the number of employees in the state sector declined by over 25 per cent in 1997 as a result of rapid privatisation and structural reforms. The registered unemployment rate has remained in the range of 13 to 15 per cent.

Situation of the agricultural sector

The contribution of agriculture to GDP increased substantially from 11.1 per cent in 1996 to 18.8 per cent in 1997, due to a sharp drop in the performance of other sectors in the economy. While Gross Agricultural Output (GAO) fell by 13.1 per cent in 1996, it increased by 30.2 per cent during the first nine months of 1997, almost entirely the result of a good grain harvest (Annex Table I.10). The share of agriculture in total employment increased steadily from 18.1 per cent in 1989 to 24.2 per cent in 1996 as many older people returned to cultivate their land holdings (Annex Table I.9). The average size of most small private farms is under one hectare and in many parts of Bulgaria subsistence farms have become the rule with a large part of agricultural production used for self-consumption, animal feed or as rent. It is estimated that only around 30-35 per cent of total agricultural production was marketed in recent years. In 1997, the share of marketed production decreased to less than 10 per cent for a number of agricultural products, standing, for example, at 7 per cent for vegetables and 1 per cent for potatoes. Data on sales by farmers during the first nine months show that in comparison with the same period for 1996, sales of meat decreased by 63 per cent, yoghurt by 22 per cent, fresh milk by 10.5 per cent and fruit by 50 per cent.

Producer prices increased by 918 per cent in 1997, compared to an inflation rate of 579 per cent, partly due to price and trade liberalisation. There was a higher rate of increase for livestock products (1 187 per cent) than for crops (757 per cent) as a result of the huge drop in animal numbers during the previous years and the resulting shortages of milk and meat on the domestic market. Domestic producer prices increased close to world price levels or even higher.

Agricultural production and consumption

Crop production

The area sown to grains increased by 14 per cent to 2.1 million hectares, accounting for 45 per cent of total arable land. Grain output totalled 6.2 million tonnes, 74 per cent higher than in 1996 when Bulgaria encountered acute grain shortages due to uncontrolled wheat exports in 1995 and a bad harvest in 1996 (Annex Table I.12). Despite low wheat prices for the 1996 harvest, the area sown to wheat increased by 26 per cent to 1.2 million hectares and accounted for 26 per cent of total arable land. The main reason for this increase was the announcement of two support programmes which enabled farmers to buy fertiliser: futures contracts with payments made in several stages to cover the costs of seeds, fertilisers and other inputs; and interest subsidies for working capital to wheat producers who concluded contracts with the State Agriculture Fund. As a result, wheat yields increased by 57 per cent and output increased by an impressive 100 per cent to 3.5 million tonnes compared to 1996. This covers Bulgaria's entire domestic consumption needs, which are estimated at 1.6 million tonnes for bread production and 800 000 tonnes for feed wheat. Output of maize, the second most important grain, increased by 42 per cent due entirely to higher yields. Barley output increased by 76 per cent due to increases in both area sown and yields.

Output of potatoes also increased substantially by 53 per cent, while output of oilseeds and sugar beet decreased by 16 and 7 per cent respectively, due to a fall in sown areas (as well as in yields for oilseeds). The area under vineyards continued to decrease, declining by 4 per cent in 1997, due to aged plants, while output fell by 7 per cent. Output of oriental tobacco, a traditionally profitable export-oriented product, has increased steadily since 1995 and reached 61 000 tonnes in 1997, 53 per cent higher than in 1996.

Livestock production

Cattle numbers fell by 64 per cent between 1989 and 1997, but registered a 5 per cent increase to 611 700 head at the beginning of 1998. Cow numbers increased by 9 per cent to 388 900 head, which was still 40 per cent lower than in 1989. On the other hand, pig herds and sheep flocks continued to decline by 1 and 6 per cent respectively in 1997 (Graph I.3.1). Most of the large pig breeding complexes have been liquidated, while production on small-scale farms is essentially for self-consumption. Total meat production decreased by 11 per cent, with beef decreasing by 17 per cent, pigmeat by 16 per cent and sheepmeat by 32 per cent (Annex Tables I.15, I.16 and I.17). Only poultry meat registered a slight increase of 2 per cent. In 1997, the private sector accounted for 94 per cent of beef and 83 per cent of pork production. Milk production is estimated to have increased slightly by 4 per cent to 1.43 million litres in 1997 (Annex Table I.18).

◆ Graph I.3.1. **Bulgaria: animal numbers,¹ 1989-1998**



1. On 1 January.

p: provisional.

Source: National Statistics Institute of Bulgaria.

Food consumption

The share of food expenditures in total expenditures (including food produced in households) increased from 48.2 per cent in 1996 to 54.3 per cent during the first nine months of 1997.

Consumption of major food products fell considerably in 1997 due to the fall in incomes, particularly during the first half of the year. Consumption data for the April-June 1997 period shows that the fall in fruit and meat consumption was the highest (minus 55 and 40 per cent respectively), followed by decreases in consumption of milk (minus 30 per cent) and vegetables (minus 27 per cent). Although this fall subsequently stabilised, consumption per capita of meat was only 17.3 kg, milk 31.3 litres, bread and pasta 141.7 kg and potatoes 24.4 kg (Annex Table I.19).

Agricultural trade

Trade flows

In 1997, exports of agricultural and food products amounted to US\$699 million, about 21 per cent lower than in 1996. The share of agro-food exports in Bulgaria's total exports also decreased from 18 per cent in 1996 to 14 per cent in 1997. Exports for nearly all groups of products decreased, with substantial falls registered in the value of exports of live animals (minus 90 per cent during the first nine months of 1997 compared to the same period in 1996), dairy products (minus 53 per cent), oilseeds (minus 38 per cent), and tobacco and tobacco products (minus 37 per cent). This was due to the shortages of these agricultural products on the domestic market (in particular dairy products) and the trade policy applied during the first half of 1997. In effect, high export taxes were imposed on exports of live cattle (US\$500 per tonne), and sheep and goats (US\$30 per tonne) while exports of oilseeds were banned. As in previous years, the largest export products were tobacco and tobacco products, as well as wine and spirits accounting for 23 and 21 per cent respectively of total agro-food products. Other important export products were processed fruits and vegetables (9.6 per cent of total agro-food exports), and meat and offal (7.1 per cent of total agro-food exports).

During the first nine months of 1997 agro-food imports decreased by 20 per cent to US\$276 million compared to the same period in 1996. The decrease in imports can be linked to the large currency devaluation and reduced domestic demand due to lower real incomes. For 1997 as a whole, however, agro-food inputs amounted to US\$428 million, 15 per cent higher than in 1996. Bulgaria's main agro-food imports in 1997 were sugar, grains, tobacco and tobacco products, meat, residues from food processing industries, preparations of fruits and vegetables, oils and fresh fruits, which jointly accounted for nearly 80 per cent of total agro-food imports. The share of grains imports was 21 per cent as a result of the very low 1996 harvest. To ensure an adequate supply of bread for the domestic market, 292 000 tonnes of wheat were imported duty-free. The share of meat in agro-food imports increased from 2.7 per cent in 1996 to 9.1 per cent in 1997, mainly due to lower import duties for beef and veal as of beginning of 1997 and of pigmeat as of June.

During the first nine months of 1997, OECD countries and the NIS remained the principal markets for Bulgarian agro-food exports (Annex Table I.7.iii). However, the share of Bulgarian exports to OECD countries increased from 32 per cent in 1996 to 41 per cent in 1997, while that of the NIS remained stable at 46 per cent. The share of CEECs (excluding the three new OECD Member countries) remained low at 5 per cent. The main change in the geographical structure of agro-food imports in 1997 was a recovery in the share of OECD countries from 36 per cent in 1996 to 64 per cent in 1997 (between 1992 and 1995 the share of OECD countries in Bulgarian agro-food imports varied between 50 and 70 per cent). EU countries supplied 30 per cent of Bulgaria's imports. The share of NIS countries decreased slightly from 9 to 6 per cent.

Trade relations

Bulgaria became a member of the GATT/WTO in October 1996. A new system of custom tariffs was negotiated and took effect at the beginning of 1997. The ban on exports was removed in July 1997 to conform with WTO requirements.

The first round of negotiations for Bulgaria's CEFTA membership began in October 1997. Bulgaria had already concluded bilateral free trade agreements with the Czech and Slovak Republics at the end of 1995 and with Slovenia in 1996. It is expected that Bulgaria will join CEFTA during the second half of

1998, provided membership conditions of clearing bilateral debts (Bulgaria had outstanding debts with Poland and Hungary in 1997) and setting up bilateral free trade agreements with each individual CEFTA member are met.

The Europe Agreement between Bulgaria and the EU came into force in February 1995, with adjustments to this agreement discussed in 1997. There were also discussions concerning trade concessions for fish and fish products and the Wine Agreement. In 1998, the preferential quota for exports of Bulgarian quality wine to the EU increased by 10 per cent. The process of harmonising legislation on animal nutrition, as well as veterinary and phytosanitary legislation, with that of EU advanced.

Agricultural policy developments

Structural policies

The process of land restitution progressed in 1997, albeit at a slow pace. While in 1996, 58 per cent of the 5.1 million hectares claimed for restitution (82 per cent of Bulgaria's total agricultural land area) had been returned to former owners; by the end of 1997 this share increased to 68 per cent, of which 18.9 per cent was within historic boundaries and 48.1 per cent were re-allocated. However, only 11.9 per cent of owners have obtained title deeds to restituted land. Although there are no legal impediments to acquiring final deeds, owners who do not intend to lease their land and can not use it as collateral have little incentive to bear the costs of obtaining final deeds. The construction of a proper cadaster has been a long and difficult process due to the high fragmentation of land ownership which resulted from previous inheritance laws inherited from the socialist era.

Several amendments to the Land Law were voted in October 1997. One of the amendments grants owners the right to appeal against decisions made by the Municipal Land Commissions, even after plans for re-allocation have been approved. This amendment will contribute to a further slowing down of the restitution process. For example, the number of claims lodged against decisions on plans for re-allocation made by the Land Commissions increased by 11.3 per cent between end-1996 and end-1997. Another important amendment enables joint ventures with foreign participation and foreigners employed by registered companies in Bulgaria to purchase land. A separate law voted in October 1997 established the legal framework for the restitution of forest land. Forests cover 33 per cent of the country's territory and 15 per cent of forest land will be returned to former owners. New owners will be able to sell forest land, although not to foreigners. As of the beginning of 1998, regulations for the enforcement of this law had not yet been established.

In September 1996, the Land Tenure Law was passed, defining the general conditions for land leasing, improving prospects for long-term leases and allowing for land to be leased from four to 50 years. However, the agricultural land market is still not well developed in Bulgaria due to delays in the restitution process, the low profitability of the sector and the difficult economic conditions. In general, farmers are not willing to sell their plots which provide them with a large proportion of their food consumption.

There is a dual land structure in Bulgaria. In 1997, about 55 per cent of the land was farmed by small-scale private subsistence farms, including household plots, and 45 per cent by producer co-operatives. Less than 1 per cent of agricultural land was cultivated by the few remaining state farms. There were 3 152 producer co-operatives in 1997 (a decrease of 10 per cent over 1996) occupying an average of 621 hectares (569 hectares in 1996). The number of small-scale farms remained more or less the same at 1.8 million, with an average size of 1.5 hectares. These small-scale farms, which produce a large number of products, mainly produce for self-sufficiency. Only excess quantities are bartered or sold on the market.

Upstream and downstream privatisation

After substantial delays in privatisation between 1993 and 1996, the pace picked up in 1997. In 1997, the Ministry of Agriculture was responsible for overseeing the privatisation of 584 enterprises in the agro-food sector (including state farms). Bankruptcy procedures were opened for 10 per cent of

them. By the end of 1997, 119 enterprises and 19 sub-units were privatised, the majority in the field of mechanisation services (40 transactions) and pig breeding (18 transactions). The Agency for Privatisation (which deals with larger enterprises) privatised 10 enterprises, including eight pig breeding complexes.

Under mass privatisation, launched at the end of 1996, 72 agricultural and 90 food processing enterprises were privatised by the end of 1997. As a result, the share of state ownership in the agro-food sector (for those farms, food industries and input suppliers whose privatisation is the responsibility of the Ministry of Agriculture) fell to 59 per cent at the end of 1997.

Price and income support

Price policy in 1997 was governed by two laws enacted in 1995: the Law on Protection of Agricultural Producers and the Law on Prices, as well as by several decrees of the Council of Ministers. Under the Law on Protection of Agricultural Producers, the government may announce "protective" prices at which the State Agriculture Fund will purchase pre-determined quantities of the products covered by the Law. If the average market price falls below 95 per cent of the protective price, intervention purchases are extended to quantities outside the pre-determined and contracted levels. If the average market price rises by more than 20 per cent of the protective price, the Fund will sell intervention stocks. In practice, however, these guaranteed prices were not announced in 1997. In fact, they have never been used since the Law came into force due to lack of funds to operate the intervention scheme and the fact that "protective" prices were not updated to take into account increasing inflation and therefore were too low.

The Law on Prices instituted ceiling for prices and profit margins, as well as for minimum prices in all sectors of the economy. During the first half of 1997, ceiling prices and controls on profit margins remained in force, although the number of goods with ceiling prices was reduced in May from 28 to nine, of which seven were food products (bread, wheat flour, milk and yoghurt, cow's cheese, meat products and vegetable oil). As of June 1997, controls over profit margins were abolished, ceiling prices were replaced by prices negotiated directly between producers and traders and the list of commodities with negotiated prices was limited to 15 basic food products. The list of commodities for which ceiling prices were previously applied was supplemented by cheese, butter, eggs, sugar and four kinds of meat.

In contrast to 1996, minimum prices for the 1997 harvest were not announced at the beginning of the year. However, with a view to increasing the area sown to wheat, the State Agriculture Fund contracted a small amount of wheat (76 000 tonnes) at future prices, which had to be adjusted several times due to the depreciation of the lev. Payment on these contracts were made in advance and in three stages in an effort to ease farmers' cash flow problems, as well as to cover the costs of seeds, fuel and mechanisation services, fertilisers and chemicals. By June, payments of 4.8 billion leva (approximately US\$3 million) had been made. At the end of June, a minimum price of 230 000 leva (US\$130) per tonne was finally introduced. Since the minimum prices were about 2.5 times higher than the future prices at that time, it was decided to pay the difference between the lower future prices and the minimum prices. However, moisture problems caused quality problems and led to the introduction, at the end of August, of minimum prices for three basic groups of wheat at 230 000, 210 000 and 190 000 leva per tonne.

The State Agriculture Fund also granted several direct subsidies and credit concessions to producers of grains, sunflower, sugar beet, pigs and hens. Direct subsidies, worth 16 billion leva (US\$10 million), were granted to maize and sunflower producers who concluded contracts with the Fund and agreed to deliver a fixed amount of their production per hectare at contracted prices to traders licensed by the Ministry of Agriculture. These subsidies were given on a hectare basis and were intended to cover around 20 per cent of variable costs for maize and 30 per cent of variable costs for sunflower. Producers of sows and hens received direct subsidies (on a headage basis) to compensate for feed price increases. These subsidies amounted to 147.6 million leva (US\$92 250), most of which went to large complexes. Direct subsidies were also granted to livestock producers for the preservation and development of animal breeding. These subsidies, worth 318 million leva (US\$198 750), were granted on a headage payment basis: 11 000 leva for heifers, 8 100 leva for sows and 300 leva for hens.

Interest subsidies for working capital, which covered 50 per cent of the official interest rate, were granted to producers of wheat, maize, sunflower and sugar. In order to receive these credit subsidies, wheat producers were obliged to sell one tonne per hectare to state licensed traders at fixed prices. Producers of maize, sunflower and sugar beet were not subject to these conditions. However, due to the high collateral required by banks (120-150 per cent of the amount of the loan), the entire amount of credit was not used: no credit subsidies were extended to sugar beet producers and only 50 per cent of the approved credit subsidies were granted to producers of wheat, maize and sunflower. In total, credit subsidies amounted to 498 million leva (US\$311 250), of which 346 million leva for wheat and 148 million leva for sunflowers. Other credit schemes included subsidies for investment loans, in particular for agricultural machinery, breeding animals and the creation of permanent crops. These subsidies were given for a maximum period of 30 months (with a grace period of no longer than 18 months) and subsidised 80 per cent of the official interest rate. Due to the lack of collateral, bank credits received amounted to only 20 per cent of credits approved by the State Agriculture Fund. The total amount of credit disbursed was 1.08 billion leva.

At the end of 1996, a Law on Special Pledges was passed providing for the use of future output (backed by insurance) as collateral. At the beginning of 1998, a new draft law on agricultural support envisaged that in future, farmers would be able to pledge their land to the State Agriculture Fund, which would act as guarantor for farm loans.

Financial infrastructure

The lack of rural credit facilities remains one of the major impediments to the development of the agricultural sector in Bulgaria. In addition to transition-specific problems (such as the low profitability of the agricultural sector, the lack of a land market and the high level of collateral requirements), the 1996 banking crisis, the large fluctuations in interest rates, and the current restructuring and privatisation of the banking sector have severely limited opportunities for farmers to receive credits from commercial banks. This situation has resulted in increased impetus to implement the EU PHARE programme for the creation of credit co-operatives initiated in 1995. Farmers are to contribute an initial capital of 5 000 leva, receive subsidies of up to twice the deposit and may borrow up to 15 times the deposited amount. The first 900 credits provided by 33 regional credit co-operatives were used to buy agricultural machinery and animals.

Tax policy

As in 1996, producers benefited from tax exemptions in 1997 on income from agricultural activities; farming structures constituted as legal entities were exempt from profit taxes.

In 1997, the minimum turnover size for firms eligible for VAT refunds was increased. As a result, small-scale farms (dominant in Bulgaria) are not refunded for VAT paid on inputs.

Agricultural trade policy

During the first half of 1997, trade continued to be restricted and frequent changes were made to the trade regime. As part of the package of reforms agreed by Bulgaria through its funding agreement with the IMF, export policy was partially liberalised as of June and the 1995 ban on exports of grains and processed grain products, sunflower and vegetable oil (introduced at the end of 1995) was replaced by export taxes of 15 per cent of the world price for grains, US\$30 per tonne for processed grain products, US\$90 per tonne for sunflower and US\$320 per thousand litres for vegetable oil. In October 1997, export taxes on grains and grain products, sunflower and vegetable oil were further reduced in line with IMF requirements for an end to such taxes by the end of 1997. At the beginning of 1998, exports of grains and sunflower were liberalised and the non-automatic licensing regime was removed. Export taxes remain in force for some primary commodities, including live animals and hide. Liberalised exports of agricultural products, grains in particular, are expected to have a favourable impact on agricultural production by providing further incentives to growers. Previously, the policy-induced drop in grain prices, together with export impediments, created a strong incentive for unregistered grain exports and eventually resulted in shortages on the domestic market.

During the first half of 1997, imports of wheat (for bread and feed), maize for feed, wheat flour, certified maize seeds, breeding sheep and goats were subject to duty-free import quotas. The import quotas for wheat and maize were removed in June and made duty-free. As of June, imports of sunflower and sunflower oil were also made duty-free and import duties on meat (beef and veal, pork and chicken) were reduced. As of August, duty-free import quotas were introduced for dairy products. For 1997 as a whole, the average import-weighted border protection for agricultural and food products was 27 per cent, or 24 per cent for primary products, 36 per cent for processed products and 22 per cent for non-competing products.

Summary and outlook

In mid-1997, stabilisation and structural adjustment programmes were put in place to halt the worsening macroeconomic situation. While GDP and industrial production fell by 6.9 and 13.1 per cent respectively, there have been some signs of recovery in export-oriented sectors. Since the introduction of the currency board in July 1997, the monthly inflation rate has decreased, falling below 1 per cent by the end of 1997. The consolidated budget deficit decreased significantly from 10.4 per cent of GDP in 1996 to 2.9 per cent in 1997, mainly as a result of lower interest payments on the domestic debt and improved tax collection. Progress has been made in privatisation and foreign direct investment. The continuation of structural reforms, including the successful restructuring of the banking system and the industrial sector, as well as greater inflows of foreign direct investment will be crucial for the economy's growth. The 1998 State budget forecasts a consolidated budget deficit of 2.6 per cent, an annual inflation rate of 16 per cent, down from 579 per cent in 1997, and economic growth of 4 per cent.

Following a disastrous crop output in 1996, agricultural production recovered in 1997. Gross agricultural output increased by 30.2 per cent in 1997, with agriculture's contribution to GDP increasing from 11.1 per cent in 1996 to 18.8 per cent in 1997. Consumption of major food products fell considerably in 1997 largely as a result of a fall in incomes and the share of food expenditures in total household expenditures increased to 54.3 per cent.

The average size of most small-scale farms is less than one hectare and production is limited primarily to personal consumption. Some progress was made in land restitution and by the end of 1997, 68 per cent of the 5.1 million hectares claimed for restitution had been returned to former owners or their heirs; the share of owners, however, with final title deeds remained low at 11.9 per cent. The lack of legal titles and rural credit facilities, as well as the low profitability of the agricultural sector have impeded development of an active land market in Bulgaria despite the establishment of a legal framework in 1996.

Price intervention and trade policies for agricultural products were substantially liberalised in 1997. Controls on profit margins for a wide range of food products were abolished and for a limited number of commodities ceiling prices were replaced by prices negotiated directly between producers and traders. Bans on agricultural exports were removed, exports of grains and sunflower were liberalised (at the beginning of 1998) and import tariffs were substantially reduced or removed. This contributed to bringing producer prices closer to world prices. Further price and trade liberalisation are expected to provide incentives to producers and to have a positive impact on farmers' income.

4. CROATIA

Macroeconomic situation

Since 1993, the Croatian government has pursued an effective economic stabilisation programme. Strong economic growth continued in Croatia during 1997 with GDP rising by 6.5 per cent (Annex Table I.1). This represented a further acceleration of GDP increase of 4.3 per cent recorded the previous year, turning Croatia into one of the fastest growing economies in central and eastern Europe. Growth was largely driven by strong consumer demand, a recovering tourist sector and increased construction activity. However, output remains at only about 75 per cent as that of the early 1990s.

Despite solid growth and strong domestic demand, consumer prices increased by only 3.8 per cent in 1997, representing the third consecutive year of relatively low inflation (Annex Table I.3). Costs of services rose faster than the overall consumer price index, while retail prices for industrial products remained relatively stable because of intense competition from imported goods. Imports were helped by a strong and stable currency. The Croatian central bank continued to intervene in foreign exchange markets in order to keep the Kuna stable *vis-à-vis* the Deutschemark. Indeed, the Kuna appreciated by 1.1 per cent relative to the German currency, but lost 13.4 per cent in value against the US dollar, as the latter appreciated *vis-à-vis* the Deutschemark.

In 1997, imports increased by 17.1 per cent to US\$9.12 billion, while exports fell by 3.8 per cent to US\$4.34 billion. As a result, the trade deficit widened by 45.8 per cent to US\$4.78 billion, or about 25 per cent of GDP. The services and transfer balances were in surplus due to receipts from tourism and foreign remittances, but could not offset the large deficit in the trade balance. As a result, the current account balance showed a deficit of US\$1.08 billion in 1997 (Annex Table I.4). The latter has put pressure on the Croatian central bank to devalue the Kuna in order to spur exports and growth. Yet, monetary authorities have defended the exchange rate of the currency so far with the aim of maintaining low inflation and foreign investor confidence.

Fiscal policies remained prudent during 1997 with the budgetary deficit at 1.5 per cent of GDP being smaller than projected. The government introduced a value added tax of 22 per cent in January 1998 to replace the existing turnover tax in order to reign in the black economy and increase tax revenues. However, the high VAT rate, low living standards and the continuing rise in unemployment, up to 16.6 per cent towards the end of 1997 (Annex Table I.2), have sparked strong protests from trade unions. The Croatian government was forced to apply lower VAT rates on basic food products, such as bread, milk, sugar and vegetable oil.

Situation of the agricultural sector

During the early years of transition, the share of the agricultural sector in GDP expanded as the overall economy contracted to a larger extent than agriculture. Since 1992, however, agriculture's contribution to GDP has declined continuously from 14.5 per cent to 9 per cent in 1997 (Annex Table I.9). In parallel, the share of agricultural employment fell from its peak of 16 per cent in 1991 to 10.9 per cent in 1997 in total employment (Annex Table I.9), indicating a fairly stable labour productivity in the sector.

Gross agricultural output increased for the fourth consecutive year. In 1997, there was a 2.1 per cent increase due primarily to a good grain harvest (Annex Table I.10). The shares of crop and livestock production in total GAO are estimated at 57 per cent and 43 per cent, respectively.

Like all other central and eastern European countries, Croatia experienced a dramatic worsening of agricultural output to input prices during the early 1990s, but by the beginning of 1994 the output to input price ratios favoured Croatian agricultural producers. This trend continued in 1997.

Agricultural producers in Croatia generally benefit from relatively high farm gate prices. Prices for livestock products, in particular, often reach European Union levels, although those for crop products are generally below those in the EU. Significant border protection, however, insulates the domestic market from international markets for some commodities. Potato prices in 1997, for example, increased by almost 60 per cent compared to the previous year because domestic production was low, while high import tariffs discouraged supplies from abroad.

The high level of farm debts and limited access to credit remain major problems for Croatian agriculture. Farmers often do not pay their suppliers in time and the resulting payment arrears have created severe difficulties for enterprises in the whole agro-food chain. The only Croatian fertiliser company, for example, has run into severe financial problems and has delayed paying its own suppliers. This in turn prompted the state oil company in March 1998 to threaten discontinuance of its gas deliveries unless the fertiliser producer pays its overdue debts.

Agricultural production and consumption

Crop production

In 1997, total area sown expanded by 4.4 per cent compared to the previous year. Yet 424 000 hectares of arable area remained idle because of the war-related displacement of parts of the rural population. Grains continued to be the most widely cultivated crops in Croatia, occupying more than two-thirds of total area sown. Maize, wheat and other grains were planted on 39.6 per cent, 22.1 per cent and 5.8 per cent of total area sown, respectively. Forage crops occupied 12.9 per cent of arable area, vegetables 12.2 per cent and industrial crops 7.5 per cent. These figures do not include the region of Eastern Slovenia that was reintegrated into Croatia on 15 January 1997.

Grain production increased markedly during 1997. The maize and wheat harvests were 16 per cent and 12 per cent higher than in 1996. Heavy rainfalls in autumn benefited the maize crop, while disrupting the wheat harvest and lowering wheat quality.

Sugar beet production in Croatia expanded for the fifth consecutive year, bringing the beet output in 1997 to a level that was 77 per cent higher than in 1992. Oilseed production also increased despite a reduction in area sown. On the other hand, the potato harvest was 7.1 per cent lower than in 1996 and of poor quality.

Livestock production

The number of farm animals in Croatia continued to decline in 1997, although at a lower rate than during the first years of transition. The government pursued an active policy of stopping the decline, in particular by encouraging imports of cattle and cows and by granting subsidies to milk producers (see below). In part as a result of the policy measures, livestock productivity improved and total milk and meat production rose by about 5 per cent each in 1997. On the other hand, egg production declined by about 6 per cent compared to 1996.

Food consumption

Per capita food consumption in Croatia has remained relatively stable or even increased during transition, as consumer prices in former Yugoslavia were not as highly subsidised as in other transition countries. Price liberalisation, therefore, only resulted in moderate increases of retail prices for food products. The pattern of food consumption has nevertheless undergone some changes since the early 1990s. Consumption of beef and poultrymeat have somewhat decreased, while pigmeat consumption has remained relatively stable. Milk consumption went up substantially, increasing by about 80 per cent between 1990 and 1996 (Annex Table I.19). Also, consumption of sugar and vegetable oil showed a considerable increase.

Agricultural trade

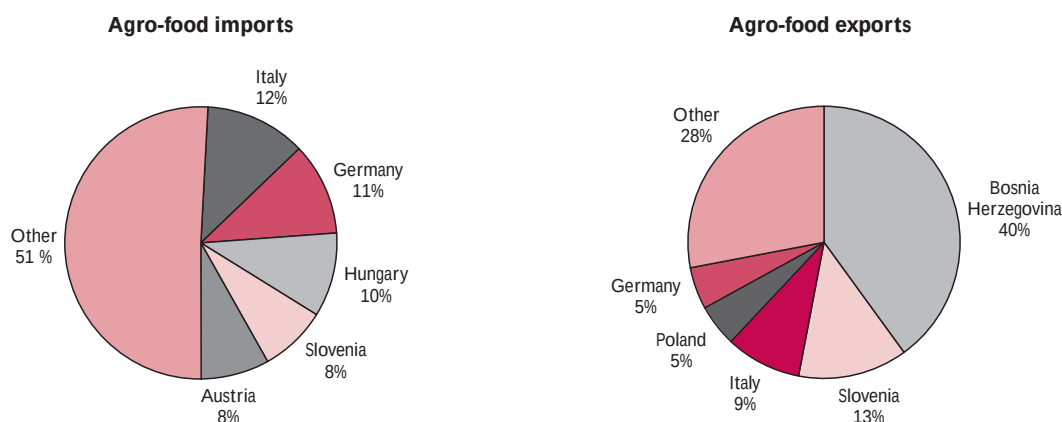
Trade flows

The value of Croatia's agro-food exports increased slightly from US\$547 million in 1996 to US\$552 million in 1997 (Annex Table I.5), representing 12.7 per cent of total exports. The main export products were processed foods, beverages and tobacco. Indeed, exports of tobacco almost tripled during 1997 to US\$48 million. The main destinations for agro-food exports from Croatia were the former Yugoslavia, the European Union and central and eastern European countries.

In 1997, agro-food imports rose by 8.7 per cent over the previous year to US\$1.029 billion (Annex Table I.5). Despite this increase in import value, the share of agro-food imports in total imports fell from 12.7 per cent to 11.3 per cent. The most important commodities imported were meat products, dairy products and fruits. Also, imports of live animals increased markedly as the Croatian government pursued its programme of rebuilding livestock herds. The European Union and other CEECs accounted for 44 and 24 per cent of Croatia's agro-food imports, respectively.

The regional structure of Croatian agro-food trade continues to show an asymmetry between export destinations and sources of imports. More than 50 per cent of Croatian agro-food exports went to countries of former Yugoslavia, with Bosnia and Herzegovina alone absorbing 40 per cent (Graph I.4.1). In contrast, the origins of Croatian agro-food imports is much more diverse. Slovenia with about 8 per cent of total agro-food imports was the only ex-Yugoslav country which supplied substantial quantities of produce to Croatia.

◆ Graph I.4.1. *Regional structure of Croatian agro-food trade*



Source: OECD.

Trade relations

Croatia negotiated two bilateral trade agreements during 1997. A free trade agreement with Macedonia came into force in June 1997 and a similar agreement with Slovenia in January 1998. While neither calls for the immediate liberalisation of agricultural trade, both introduce tariff quotas for agro-food imports at reduced tariff rates.

The trade agreement with Slovenia supported Croatia's ambitions to join the Central European Free Trade Area. Negotiations with other CEFTA members on the terms of accession continued during 1997 and consensus on the industrial parts of an agreement has been reached with Poland. Moreover, negotiations between Croatia and the EU on the conclusion of an association agreement are scheduled to start in the latter part of 1998.

After a first round of multilateral negotiations in April 1996, Croatia had two more rounds of Working Party negotiations for WTO accession in January 1997 and January 1998. In addition, bilateral negotiations with countries that had expressed an interest in such talks, namely Australia, Canada, the Czech Republic, the EU, Hungary, New Zealand, Slovakia, Switzerland and the USA, were held. These bilaterals served mainly to discuss ceiling bindings, tariff concessions and elimination of non-tariff barriers. Another Working Party to negotiate the terms and conditions of accession is planned for autumn 1998. Should the outcome of this round of negotiations be successful, Croatia could join the WTO in 1999.

Agricultural policy developments

Structural policies and privatisation

Croatia was one of the few countries in central and eastern Europe whose agriculture was not collectivised and predominantly organised in private family farms. Three-quarters of arable land were owned by small-scale farmers with less than five hectares of land, while the remaining quarter belonged to large socially-owned enterprises. This bi-modal farm structure has continued to prevail.

The 1991 Agricultural Land Law introduced procedures for the lease and sale of farm land and the Strategy for Agricultural Development, adopted in 1995, established the privatisation of state owned land and the enlargement of small family farms as the two priorities for structural policy. Leasing and privatisation proceeds are divided between the state treasury and local authorities according to a ratio of one-to two and subsequently used to finance agricultural restructuring and development programmes.

However, by February 1998 only 26 per cent of state owned land had been leased to private farmers and merely 0.6 per cent had been sold. Receipts from leasing and sales of state land amounted to only US\$2.7 million in 1997. The slow progress is partly caused by inertia on large-scale state farms and in local administrations, as well as the lack of financial resources of family farmers. In the second half of 1997, the Croatian government amended the Agricultural Land Law to give the central administration greater influence over the use of state land.

Upstream and downstream privatisation

During the first years of transition, state enterprises were transformed into joint stock companies, with managers and workers receiving shares on preferential terms. The remaining shares are held by the Croatian Fund for Privatisation. The latter is charged with allocating a percentage of ownership rights to certain groups within the population, such as war-victims or refugees and selling the remainder in coupon privatisation programmes.

Privatisation in agro-industry has progressed further than in industry in general. At the beginning of 1998, 92 per cent of soft drink production, 83 per cent of meat processing, 81 per cent of the dairy industry, 79 per cent of beer brewing, 72 per cent of baking, 71 per cent of vegetable oil production and 66 per cent of sugar beet processing were privately owned. An additional 82 agro-food companies are scheduled to be privatised in 1998.

Price and income support policies

The Croatian government uses a variety of policy instruments to support farm incomes, including price support, direct payments and input subsidies. In 1997, governmental expenditure on production and input subsidies increased by 13.7 per cent over the previous year and reached US\$95.4 million, or 1.84 per cent of total budgetary expenditure. In addition, border tariffs are of considerable importance for supporting domestic price levels especially for livestock products.

In 1997, intervention prices for selected commodities were maintained and indeed increased from their 1996 level. Guaranteed prices for wheat, sunflower seeds and tobacco were raised by about 22, 11 and 7.5 per cent, respectively. These price increases are well above inflation. Moreover, for the first time since the introduction of the price support system, intervention prices for 1998 were already established one year in advance in order to facilitate the production planning process for farmers. The 1998 guaranteed prices will be 4.4 per cent higher for oilseeds, but remain unchanged for other products.

In addition, the Croatian government grants supplementary payments to farmers and, in particular, to milk producers. The milk payments for producers in disadvantaged regions were doubled during 1997 and amounted to about a third of milk production costs. These subsidies are understandably popular with small-scale farmers, but are likely to impede the consolidation process in the milk sector.

In February 1998, legislation for a new sugar market organisation, modelled on the EU sugar regime, was adopted. A minimum sugar price was established at US\$590 and production quotas were allocated to the three domestic sugar beet processing plants. At the same time, import duties for sugar were increased, while tariff quotas allow Croatian exporters of sugar-based products to import the commodity duty-free. The new regime will become operational in the sugar marketing year 1998/99, which starts in August 1998.

Croatia continued to use input subsidies to reduce the costs of seeds, fertiliser and fuel for agricultural producers. The total amount of input subsidies amounted to US\$18.3 million in 1997, with fertiliser subsidies accounting for 65 per cent of the total. Compared to 1996, governmental expenditure on seeds and fertiliser decreased by 13.9 per cent and 5.0 per cent, respectively, while subsidies for diesel fuel increased by 55.3 per cent.

Credit and investment policies

The main vehicle for agricultural interest subsidies and investment grants in Croatia is the Special Fund for Financing the Development and Restructuring of Agriculture, established in 1996. About US\$15.4 million were disbursed from this fund to subsidise credits for farm investments in 1997, the same amount as in the previous year. Particularly favourable terms were granted for agricultural producers in disadvantaged regions and for livestock farmers that wanted to rebuild their herds. A total of 1 607 projects were approved in 1997.

In addition to financing agriculture from budgetary funds, the Croatian government supported agricultural investments through credit guarantees. This type of support was used in particular to provide farmers with sufficient funds for spring and autumn sowing, livestock breeding and fattening and purchases of agricultural machinery. However, due to high default rates, the government has decided to discontinue the credit guarantee programme in 1998 and has switched to using credit subsidies instead.

Other support policies

In co-operation with the World Bank, the Croatian government set up a market information system for agriculture (MISA) in 1996. The purpose of MISA is to increase market transparency and to supply governmental authorities with accurate data to improve the design and administration of agricultural policies. Reports are distributed to users free of charge and concise information on market trends has appeared in newspapers and magazines.

Since the beginning of 1997, MISA has published and distributed bi-weekly reports on livestock and meat. Weekly publications on fruit and vegetables have been in place since August 1997 and fish markets have been monitored since January 1998. The coverage of agro-food markets is expected to be further extended during 1998 with plans for monthly reports on agricultural inputs, cereals, oilseeds, sugar and poultry, as well as quarterly publications on honey and bee products.

Agricultural trade policies

In July 1996, Croatia initiated a transformation of its trade policy by converting non-tariff barriers into tariffs. Members of the WTO Working Party have pressured Croatia to make binding market access commitments in *ad valorem* terms, rather than in mixed *ad valorem* plus fixed duty terms. All import quotas have meanwhile been abolished with the exception of a ban on sugar imports that was introduced in February 1997. This ban was deemed necessary to protect domestic sugar producers who suffered from a flood of cheap imports that were officially designated for Bosnia and Herzegovina but were sold on the Croatian market. Exporters of sugar-containing products were exempted from the ban and given import quotas.

In 1997, export quotas were in place for several products, namely wheat, maize, bull calves, hides and skins. These export restrictions are expected to be maintained during 1998, but are due to be abolished at a later date. Croatia does not use any export subsidies and Members of the WTO Working Party expect the country to bind its subsidy commitment at zero.

During 1997, the Croatian government started to redesign some of its agricultural support programmes in order to make them compatible with WTO regulations. Subsidies for livestock and wine producers in disadvantaged regions, for example, have been designed in such a way that they conform with Annex 2 of the Uruguay Round Agreement on Agriculture ("green box").

Summary and outlook

The economic stabilisation policy adopted in 1993 continued to yield high economic growth and low inflation rates during 1997. However, the large current account deficit has put pressure on the Croatian central bank to devalue the Kuna, which could lead to increased inflation. High unemployment and low living standards are also likely to intensify calls for state assistance. Nevertheless, government authorities in Croatia seem determined to continue their policy of fiscal and monetary austerity and to further advance the privatisation of state enterprises during 1998.

Crop area and grain production increased during 1997 and the government actively pursued a programme of rebuilding livestock herds. Agricultural output can be expected to increase further during 1998, as the fertile region of eastern Slovenia is fully re-integrated into Croatia and the uncertainties of the civil war period recede. However, taking large areas that had not been farmed for years into cultivation will require substantial investments. Providing the necessary finance will be a major challenge given the high level of indebtedness of the agro-food sector.

During 1997, the Croatian government changed its agricultural policies to some extent in order to provide more targeted support to agricultural producers. It also entered into free trade agreements with Macedonia and Slovenia and advanced its negotiations for accession to CEFTA and the WTO. The trade talks have highlighted the high border protection for some agro-food products in Croatia and accession to multilateral trade agreements will most likely require the Croatian government to liberalise its trade policy.

5. ESTONIA

Macroeconomic situation

Economic growth accelerated in 1997, with GDP growth estimated at 9 per cent, a significant increase over the modest growth rates recorded in 1995 and 1996 (Annex Table I.1). During the first nine months of the year, GDP grew by 10.6 per cent but slowed during the last quarter of 1997 due to some tightening of monetary policy. This increase in economic growth was due to an increase in activity in all sectors of the economy arising from strong domestic and foreign demand. The fastest rate of growth was recorded in the forestry sector which increased by 31 per cent, while the service sector, in particular banking and insurance, increased by about 30 per cent. The inflation rate continued to fall and was estimated at 12.5 per cent at the end of 1997 compared to 14.8 per cent in 1996 (Annex Table I.3). However, the Estonian annual average inflation rate was the highest in the Baltic region. Prices on housing, transport and communications grew faster than average in 1997, while food prices grew at a slower rate. In 1998, the GDP growth is expected to slow to about 5.5 per cent, while the rate of inflation is expected to fall below 8 per cent.

The Estonian Central Bank introduced several measures during 1997 in order to limit credit growth and prevent overheating of the economy. These included raising the banks' capital adequacy ratio from 8 to 10 per cent (October 1997) and raising the minimum capital requirement to EEK 75 million at the beginning of 1998. Following many years of negative interest rates, real interest rates increased and became positive in 1997. Strong consumer demand during the year was reflected in an increase in the share of total credit given to households, which rose from 16 to 21 per cent during the year. The official rate of unemployment, which peaked at 5.5 per cent in 1996, fell to 4.6 per cent in 1997 (Annex Table 1.2). However, regional unemployment continues to be substantially higher than the national average rate, although there is some indication that regional differences are lessening. In 1997, the general government budget deficit fell to 0.2 per cent of GDP from 1.5 per cent in 1996. This was largely due to faster than expected economic growth and improved revenue collection, as well as to cuts in expenditures by the central government. In 1998, it is expected that the government budget will be in surplus (forecast at 1.8 per cent of GDP) for the first time since independence.

Preliminary estimates indicate that the current account deficit increased to US\$610 million or about 13 per cent of GDP (Annex Table 1.4). Total exports rose by 17 per cent while imports rose by 16 per cent over 1996. Despite the growth in capital inflows, the balance of payments remained negative in 1997. Estonia has been one of the most successful countries in central Europe in attracting foreign investment, with total foreign direct investment amounting to almost US\$1 billion since 1992. Between 1993 and 1996, the manufacturing sector accounted for about 43 per cent of FDI, of which one third was invested in the food industry, the trade sector accounted for a further 26 per cent, transport and communications 14 per cent and the financial sector about 7 per cent. In 1997, inflows of FDI increased to US\$160 million, following a sharp decline in 1996. Foreign investment in the agricultural sector has been low and has been closely related to privatisation in the sector. For example, in 1997 only 1.2 per cent of total FDI inflows were in agriculture.

Structural changes continued with increasing emphasis on rationalisation and cutting public sector expenditure. In 1997, the state shipping company was privatised for EEK 700 million which is equal to about 5 per cent of the state budget. As large scale privatisation is nearing completion, increasing attention is being paid to improving the regulation of monopolies and consumer protection. Amendments to the Competition Law are being considered and a new Energy Law was passed in 1997. Changes to the Land Reform Law introduced in 1996 resulted in some increase in land privatisation during 1997.

Situation of the agricultural sector

In 1997, agriculture's share of GDP stabilised at 5.5 per cent, which was similar to its share in 1996 (Annex Table I.9). However, when combined with food and beverages, they account for almost 11 per cent of GDP and about 16 per cent of both exports and imports. Employment in the agricultural sector has remained fairly stable in 1996 and 1997 as state and co-operative enterprises were dissolved and new private farms established. The high level of hidden unemployment and underemployment continue to be a cause of serious concern for the sector. However, the introduction of a new agricultural register in 1998 should help to provide a better understanding of hidden unemployment in the sector. In 1997, full time employment in the agro-food sector was estimated at 10.5 per cent of total employment in Estonia. The share of the rural population in registered employment fell to 54 per cent in 1997 from 57 per cent in 1996, indicating some ageing of the rural population.

The indebtedness of the agricultural sector continues to be a serious problem in Estonia. At the beginning of 1997, the total debts of agricultural producers were estimated at EEK 300 million, of which, EEK 265 million were owed for tax liabilities and insurance premia and EEK 35 million for fuel and energy. Discussions are underway concerning the possible abolition of interest payments on the outstanding debts of this sector. In 1997, higher revenue resulted in an improvement in the financial situation of many producers, in particular milk, pigmeat, poultrymeat and wheat producers. However, the average wage level in agriculture continues to be low and was estimated at about 60 per cent of the national average wage in 1997.

Privatisation of the food processing and beverages sector was completed in 1997, with the exception of the distilling industry. The state monopoly on the distilling industry was abolished in 1997 and the Estonian government has placed all state distilling enterprises on a list for privatisation in 1998. Over-capacity in the food processing industry continues to be a major problem in the sector, especially in the case of dairy and milling enterprises, while some of the large livestock abattoirs are bankrupt and face liquidation. The milk sector has become highly concentrated with two large groups controlling 90 per cent of the market. With the implementation of EU regulations, many agro-food enterprises have found it difficult to satisfy the regulations covering hygiene and quality standards, in particular.

Agricultural production and consumption

Gross agricultural output fell by a further 2 per cent in 1997 following the 3.6 per cent fall in 1996 (Annex Table I.10). This was the eighth consecutive year of falling agricultural output. The composition of GAO continues to be dominated by livestock with a share of 53 per cent. The state grain security

reserves for rye and wheat amounted to 73 000 tonnes at the end of 1997 or about 8.5 per cent of annual production. During 1997, a further 32 000 tonnes of grain were added to the reserve with the aim of reaching 100 000 tonnes by the year 2000. The average state purchase price was EEK 1 871 per tonne for rye and EEK 2 065 per tonne for wheat.

Crop production

The area cultivated in 1997 remained at a level similar to that in 1996 at 864 000 hectares, while there was a slight decline in the amount of arable land left uncultivated to 226 000 hectares. Several factors have contributed to the idling of land in Estonia, including low returns from crop production and lack of working capital, as well as difficulties associated with the ongoing process of land reform. In 1997, the areas sown to wheat and coarse grains increased by about 1 per cent over the sown area in 1996, while there was some reduction in the areas sown to crops such as sugar beet, rapeseed, flax and fruits and vegetables. The area sown to potatoes increased by 48 per cent in 1997, the first increase since 1991.

Following a strong harvest in 1996, total grain output fell by almost 9 per cent in 1997 to 543 000 tonnes (Annex Table I.12). This decline in production was largely due to adverse weather conditions during the growing season which resulted in a large fall in the production of grains, especially barley and oats. Wheat and rye production remained at the same level as in 1996 (Annex Table I.13 and 14). Production of potatoes fell by over 7 per cent, while sugar beet and rapeseed showed little change from 1996 and output of fruits and vegetables rose substantially in 1997. Graph I.5.1 shows the changes in production for the main livestock and cereal products over the period 1992-1997.

Total annual domestic demand for grain is estimated at 850 000 tonnes, of which 63 per cent is used for animal feed and 18 per cent for human consumption. In addition to substantial imports of feed grains, up to 30 000 tonnes of hard wheat is imported for bread-making. Preliminary estimates indicate that for 1997 Estonia was 75 per cent and 60 per cent self-sufficient in rye and wheat production respectively.

◆ Graph I.5.1. **Estonia: production of the main agricultural products, 1992-1997**
Percentage change from previous year

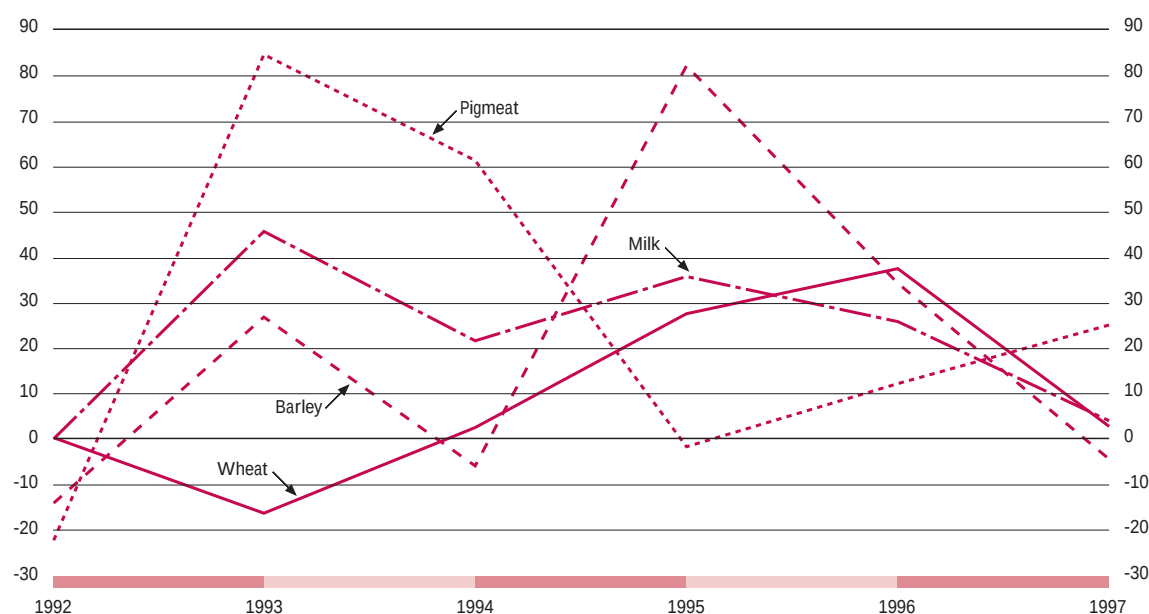


Livestock production

The downward trend in livestock numbers continued, with cattle numbers falling by 7 per cent to 343 000 head. Sheep and pig numbers also declined, albeit by a much larger amount, 22 per cent and 33 per cent respectively. Total meat production fell by 5.6 per cent, with beef and pigmeat production falling by 4.5 per cent and 7.8 per cent respectively (Annex Tables I.15 to I.17). The output of poultrymeat, however, increased by almost 5 per cent, while the production of sheepmeat stabilised at the 1996 level. Milk production, which suffered a 5 per cent drop in 1996, increased by almost 6 per cent in 1997, which resulted in rises in production of 26 per cent for butter and 17 per cent for cheese (Annex Table I.18).

The main problems in the livestock sector continue to be the low level of investment in facilities on many farms for storing winter fodder and lack of incentives for producers to improve the quality of livestock and livestock products. In 1997, there was a substantial price rise of most livestock products: pig prices increased by about 19 per cent and milk prices rose by about 5 per cent. However, farm gate prices for beef cattle fell by almost 3 per cent following the sharp rise in 1996. Graph I.5.2 shows the evolution in farm gate prices for the main livestock and crop products over the period 1992-1997.

◆ Graph I.5.2. *Estonia: farmgate prices for the main agricultural products, 1992-1997*
Percentage change from previous year



Source: OECD.

Food consumption

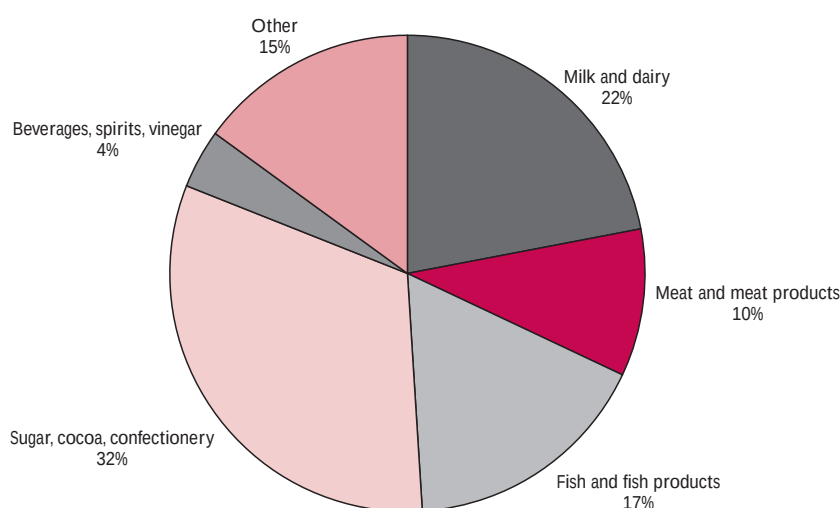
Preliminary estimates of food consumption indicate that while per capita consumption of total meats has remained fairly stable there has been some increase in poultrymeat consumption at the expense of beef and veal. Milk consumption rose by over 4 per cent in 1997 to 280 litres per capita. Moreover, there has been a further increase in the consumption of grain-based products as well as fruits

and vegetables, while consumption of potatoes and sugar has fallen marginally (Annex Table I.19). The average share of household income spent on food was estimated at about 40 per cent. However, this figure is difficult to compare with estimates of earlier years as a new classification system for estimating household expenditure was introduced in 1997 (Annex Table I.9).

Agricultural trade

The agricultural and food trade deficit increased by about 70 per cent to EEK 3.5 billion from EEK 2.1 billion in 1996 (Annex Table I.5). The deterioration in the agro-food trade balance was due to food imports rising faster than exports. More specifically, the value of food exports increased by 45 per cent to US\$475 million, while the value of imports increased by 46 per cent to US\$730 million. Only milk and dairy products, and fish products had a positive trade balance in 1997; together these products accounted for almost 40 per cent of total food exports (Graph I.5.3). Sugar, cocoa and confectionery are the other important export products and these accounted for almost one-third of food exports. On the import side meat and dairy products, cocoa and other beverages are the most important products. In 1997, almost 40 per cent of domestic demand for meats was met by imports.

◆ Graph I.5.3. *Estonia: agricultural and food exports by commodity in 1997*



Source: OECD.

Concerning the geographic structure of agriculture and food exports, Russia remained the main destination and accounted for about 44 per cent of exports in 1997, Ukraine accounted for 12 per cent, Netherlands 9 per cent, Latvia 8 per cent and Lithuania 7 per cent. On the import side, the EU continues to be the main source of food imports and accounted for almost 60 per cent in 1997, compared to 58 per cent the previous year. Of the EU countries, Finland accounted for 10 per cent of imports, followed by Germany and the Netherlands which accounted for 6 per cent each; Sweden and Denmark accounted for about 5 per cent each.

In overall terms, the agricultural and food trade balance is positive with Russia, Latvia, Lithuania and Ukraine, but strongly negative with the EU. At the beginning of 1998, the EU imposed a ban on imports of dairy products from Estonia which is likely to result in a further deterioration of the agro-food trade balance.

Trade relations

The Baltic Free Trade Agreement on agriculture and food products came into force on 1 January 1997 and allowed for free trade of agricultural products of domestic origin. During its first year of implementation, trade in agro-food products between the Baltic countries increased substantially, albeit from a low level. Estonia also concluded several bilateral free trade agreements in 1997, including with Hungary and Poland.

Negotiations on Estonia's membership to the WTO made further progress in 1997. As negotiations are nearing completion, there are some issues covering market access to be finalised with Canada, US and Australia. A final agreement is expected to be concluded during 1998. As a full member, Estonia will be subject to the commitments under the Uruguay Round Agreement on agriculture.

Agricultural policy developments

Estonia was one of the five Central European Countries selected for the first wave of EU membership negotiations. In this respect, Estonia has started to harmonise its agricultural policies with those of the EU. At this juncture, the main emphasis is on the EU White Book and the implementation of veterinary and phytosanitary requirements and on the preparation for implementation of support policies similar to those in the EU. High priority has been given to the introduction of direct payments, while the other measures such as price regulation, intervention measures and custom tariffs may be introduced at a later stage closer to the time of actual accession.

Structural policies and privatisation

The restructuring of former state and collective farms continued in 1997 and was completed on the 322 state and collective farms that had been listed for reform in 1997. Reform is underway in a further 39 enterprises, of which 19 enterprises are in the final stages. Reform has been just initiated in a further 13 enterprises and the remaining seven are subject to bankruptcy proceedings. The process of land restitution is also nearing completion. During the reform process only 25 per cent of agricultural land was restituted in-kind, of which 70 per cent, or 300 000 hectares, is registered in the Land Registry. For the remainder, restitution took the form of privatisation vouchers which allowed for the privatisation of land in urban areas as well as the assets of state farms. Despite the rather difficult economic conditions, the number of family farms continued to increase and was estimated at 22 700 by the end of 1997 compared to 19 700 in 1996.⁵

Despite the fact that land restitution has been ongoing for several years, almost 75 per cent of agricultural land remains under state control. A functioning land market does not yet operate in Estonia and most of state land is leased on the basis of 1-3 year contracts. However, the Ministry of Agriculture has indicated that it intends to develop new legislation to facilitate the leasing of state land based on long term contractual arrangements. This development should help encourage greater interest in private land ownership as well as stability in the sector.

Agricultural support policies

While no market price support policies are applied in Estonia, there are several policies which aim to improve production efficiency and the structure of the industry. The most important support measures are input supports; in particular, a fuel subsidy which attempts to compensate for fuel excise taxes (EEK 60 million in 1997) and credit subsidies (EEK 20 million in 1997). Also, investment grants were introduced in 1997 with a total of EEK 20 million given to producers. Participation in this scheme is

subject to certain criteria: farmers should have performance records covering the previous three years; the amount of the grant should not exceed 30 per cent of the cost of the planned investment; and, the proposed investment must be approved by an agricultural advisor. EEK 52 million has been set aside in 1998 for allocation under this scheme. One additional measure which applies only to small farmers with an annual income of less than EEK 35 000 relates to exemption from income tax.

The share of the state budget allocated to agriculture has been relatively low in Estonia and was estimated at EEK 312 million, or 2.5 per cent of the total budget in 1997. In 1998, expenditure on agriculture is expected to increase to 3.7 per cent or EEK 558 million. However, total state spending on agriculture is considerably higher as these figures do not include expenditures on agricultural education, research or credit subsidies. The total expenditure of the Rural Life Credit Fund was EEK 190 million in 1997, of which EEK 150 million was in the form of credit subsidies, EEK 20 million for interest support and EEK 20 million for investment grants.

Legislation for the introduction of direct payments was passed in 1997, with EEK 190 million earmarked for direct per capita and hectare payments in 1998. The products covered include dairy cows, cereals, oilseeds and flax. In order to qualify for these payments certain efficiency criteria should be met. In the case of dairy farmers, for example, milk production should be recorded, annual milk yield be at least 3 000 kg per cow and the minimum herd size not be less than five cows. For cereals, a minimum of 10 hectares per applicant is required and certain husbandry practices should also be adopted.

Agricultural trade policies

Estonia has maintained an open trading system with free trade for agricultural and food products. However, there has been increasing concern over the growing deficit in agricultural trade, which increased to EEK 3.5 billion in 1997. In October 1997, following substantial debate, the Estonian Parliament passed the Law on Custom Tariffs. Under this Law the rules for the application of tariffs are set out, as well as tariff ceilings for all products. For agricultural products, the ceiling has been set at 50 per cent. Although there has been much discussion of the possibility of imposing tariffs on selected agricultural products, in particular pigmeat, as of mid-1998 no tariffs have been applied under this new Law. The Government can apply tariffs for a period up to six months, but approval must be given by the Parliament for a longer time period. Imports of agricultural and food products from the EU (which account for over 60 per cent of Estonia's imports) are exempt from the new Law.

Rural development and other measures

Policies aimed at developing rural areas are of high priority in Estonia and a new law on rural development under discussion is expected to be passed by Parliament in 1998. This new Law is intended to clearly outline the role of the State and measures that will enhance the development of rural areas. In essence, the policy on rural development has been centred on two programmes: the hinterland development programme and the programme on village development. The core of the first programme relates to the development of general infrastructures, while the latter programme focuses on providing support to small cottage enterprises, rural tourism and the development of the farm food sector. In 1997, EEK 28 million was allocated to the six approved regional development programmes, while EEK 84 million has been approved for allocation in 1998.

In 1997, the Agriculture and Rural Life Guarantee Fund was established in order to encourage commercial banks to lend to agricultural and small rural enterprises. Under this scheme, the Government acts as a guarantor for part of the loans provided by commercial banks to rural enterprises provided they meet certain criteria. Almost EEK 60 million was distributed under this Fund in 1997.

Concerning the advisory service, almost EEK 4.5 million was allocated from the state budget (supplemented by funding from the PHARE programme) to provide each full time farmer with a subsidy of EEK 3 000 in order to purchase services from the advisory service. Farmers who participate in this programme must provide at least 10 per cent of the total cost of the service. During 1997, about 1 500 farmers benefited from this scheme.

Producer and Consumer Subsidy Equivalents

The PSE estimate increased marginally for 1997 to 9 per cent due largely to inertia or inefficiency in the transmission of world prices to farm level (Annex Table III.1). While the PSE estimate for Estonia was similar to that for Latvia in 1997, it is substantially below the estimates for Lithuania and for the EU (42 per cent) and OECD average (35 per cent) (Box 1). More specifically, while support to crops and livestock is low in Estonia, support levels vary amongst other products with poultry and milk showing the highest estimates (Annex Table III.2). Overall, beef has been the least supported product followed by pigmeat. As regards crops, coarse grains and wheat have had the highest estimated PSEs.

Summary and outlook

Further tightening of monetary policy is expected during 1998 in order to prevent the economy from overheating, and this is likely to result in a decline in economic growth to a more moderate rate of about 5 per cent following the 9 per cent surge in growth recorded in 1997. The inflation rate is expected to continue to fall, while the rate of unemployment is expected to show little change from 1997. Increased economic activity in 1997 resulted in a substantial decrease in the government budget deficit. However, in 1998 the budget is expected to be in surplus largely due to higher revenues expected from privatisation, in particular, the sale of Estonia Energy. While the current account deficit continued to increase in 1997, it is expected to stabilise in 1998. Inflows of foreign direct investment rose significantly in 1997 and are expected to remain strong due to substantial foreign interest in the privatisation of utility companies.

Although agricultural output fell slightly in 1997, there are some signs that the downward trend has stabilised and output is expected to rise in 1998 for the first time since 1989. The modest decline in livestock output in 1997 tends to conceal the small but important increase in milk and poultrymeat output. The fall in crop output was largely due to a decline in barley and oats, while wheat and rye production stabilised. As regards trade in agro-food products, the implementation of the BAFTA resulted in an increase in trade of agricultural and food products with Latvia and Lithuania during 1997. Further growth in trade of agro-food products between the Baltic countries is envisaged in 1998, as some of the initial difficulties arising from the implementation of the agreement are resolved.

Estonia has been selected as one of the five CEECs to start full membership negotiations with the EU in 1998. As a result, Estonia has started to harmonise its agricultural, rural and regional policies with those of the EU. At this juncture, much effort is focused on the implementation of veterinary and phytosanitary measures and in bringing quality standards in line with those of the EU. Moreover, legislation for the introduction of direct payments in 1998 on a headage and hectare basis was passed and discussions regarding the introduction of measures such as price regulation, intervention and customs tariffs are continuing. Concerning developments in land markets, new legislation aimed at increasing stability in the sector by encouraging the long term leasing of state land is forthcoming.

6. LATVIA

Macroeconomic situation

Strong economic activity in 1997 culminated in GDP growth of 6 per cent, a significant increase over the 2.8 per cent recorded in 1996 (Annex Table I.1). Growth was mainly driven by an acceleration of industrial production which increased by 6.1 per cent in 1997 due to strong demand in both domestic and export markets. Economic activity is expected to remain strong during 1998, with GDP growth forecast to remain at about 6 per cent. The rate of unemployment remained stable at around 7 per cent in 1997, although there were some signs of a small decline during the second half of the year (Annex Table I.2). Long term unemployment, however, continues to be a serious problem in Latvia accounting for over 40 per cent of registered unemployed. Differences in regional unemployment rates vary widely and have been estimated at about four times the national average in some eastern industrial towns.

The tight monetary and fiscal policies pursued in Latvia have succeeded in further lowering the inflation rate from 13 per cent in 1996 to about 7 per cent in 1997 (Annex Table I.3). The reduction in the rate of inflation was achieved despite increases in administrative prices, in particular on electricity tariffs, apartment rents and land tax. The annual average inflation rate in Latvia is the lowest in the Baltic region and the downward trend is expected to continue in 1998. Following the crisis in the banking sector in 1995, the implementation of stricter rules and legal regulations has restored public confidence as reflected in the 74 per cent growth in credit and the 55 per cent growth in deposits in 1997. The downward trend in interest rates continued and at the end of 1997 the average annual interest rates on short-term and long-term bank credits were 12.1 and 12.5 per cent respectively.

Despite the strong growth in merchandise exports in 1997, the trade deficit continued to grow in absolute terms but fell marginally relative to GDP. More specifically exports grew by 16 per cent while imports increased by 17 per cent. Preliminary estimates indicate that the current account deficit remained at about 7 per cent of GDP in 1997 (Annex Table I.4). Latvia's exports are dominated by commodity products such as timber, timber products and food. As regards export markets, Russia, Germany and the UK accounted for over 50 per cent of total exports in 1997. The rapid growth in economic activity, the increase in tax revenues and the tight expenditure policy resulted in a balanced government budget in 1997.

Inflows of foreign investment increased substantially in 1997, with preliminary estimates indicating that FDI rose by almost 60 per cent to 8 per cent of GDP. The higher FDI inflows during 1997 were closely related to the increased level of privatisation, accompanied by strong investor interest in the financial, manufacturing and energy sectors especially. The process of privatisation is close to completion in Latvia and almost all enterprises in the agro-food sector have been privatised. However, a number of large state companies, such as the Latvian Shipping Company and the Latvian Savings Bank, have been transferred to the Latvian Privatisation Agency. Further progress has been made on structural reforms and the number of regulations concerning business licensing have been reduced. One of the main areas for concern is the enforcement of the anti-corruption law approved by Parliament in 1997 and an anti-corruption programme is being implemented with the assistance of the World Bank. A new programme on modernising and strengthening border controls is being implemented as low efficiency and insufficient resources in this area are a major impediment to trade.

Situation of the agricultural sector

Agriculture's share of GDP fell to 6.9 per cent in 1997 compared with 7.6 per cent in 1996 (Annex Table I.9). However, agriculture's share of total employment has remained high and relatively stable over recent years at about 17 per cent. The large share of employment in the sector relative to its share of GDP is indicative of the sector's low labour productivity. In 1997, agricultural output was estimated to have declined by 2.3 per cent (in current prices) largely due to a fall in livestock production (Annex Table I.10), although in constant prices it was the fourth year of growth. Livestock still holds the dominant share of agricultural output and accounted for 53 per cent of GAO in 1997.

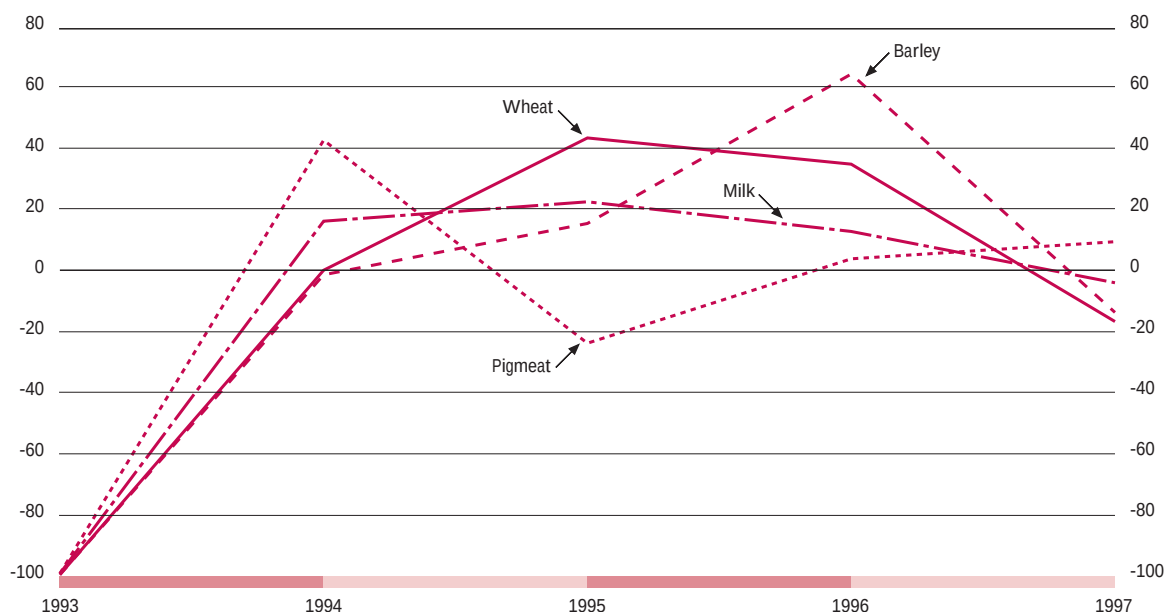
There was some convergence in farm gate prices across the Baltic countries in 1997 due to the implementation of the Baltic Free Trade Agreement on agriculture. In Latvia, this resulted in a decline in farm gate prices for all products with the exception of pigmeat, poultrymeat and sugar beet. Graph I.6.1 shows the evolution in farm gate prices for the main livestock and crop products over the period 1993-1997.

Agricultural production and consumption

Crop production

The area sown to crops increased for the second consecutive year to about one million hectare in 1997, following a 6 per cent rise in 1996. Grain crops accounted for almost half of the sown area following a 9 per cent rise in 1997. More specifically, the area sown to wheat increased by about 5 per cent, while the coarse grain area rose by 12 per cent. The barley area, which accounts for almost two-thirds of the

◆ Graph 1.6.1. **Latvia: farmgate prices for the main agricultural products, 1993-1997**
Percentage change from previous year



Source: OECD.

coarse grain area, increased by 8 per cent, while the areas sown to rye and oats also increased significantly. The rise in wheat and rye areas was due to higher domestic demand for bread flour, while the increase in barley acreage largely reflects stronger demand from the livestock sector. The structure of grain production also continues to evolve with a further increase in the average grain farm size. As regards other crops, the sugar beet and oilseed areas changed little between 1995 and 1996, but the areas sown to potatoes and vegetables fell by about 10 per cent.

Total grain production amounted to 1.043 million tonnes, the largest crop since 1993. The higher output can be attributed to a rise in the sown areas, higher yields, as well as favourable weather conditions during the growing season. Wheat production increased by 11 per cent to 395 000 tonnes, while coarse grain production increased by about 4 per cent (Annex Tables I.13 and I.14). Rye and oat production rose by 18 and 16 per cent respectively, while barley production fell by about 3 per cent. As regards the other major crops, sugar beet production rose by 50 per cent, potato production declined by about 22 per cent, while vegetable and fruit production also fell. Further increases in sugar production are likely to be constrained by the limited capacity of domestic processing facilities. Graph 1.6.2 shows the changes in production of the main livestock and grains over the period 1993-1997.

Livestock production

The downward trend in livestock numbers continued in 1997 for the eighth consecutive year. The cattle herd fell by a further 6 per cent to 478 000 head, following the 5 per cent fall in 1996. Cow numbers fell by about 4 per cent to 266 000 head. As for pigs, the herd size declined by a further 7 per cent after the 17 per cent fall in 1996. The fall in poultry numbers also continued in 1997 with the flock size shrinking by about 6 per cent, while the contraction in sheep numbers continued with a fall of about 23 per cent to 49 000 head.

◆ Graph 1.6.2. **Latvia: production of the main agricultural products, 1992-1997**
Percentage change from previous year



Source: OECD.

Total meat production fell by about 7 per cent in 1997 (Annex Table I.15). The largest decline occurred in sheepmeat production (43 per cent), while pigmeat and poultrymeat production fell by 6 and 12 per cent respectively (Annex Tables I.16 and I.17). Beef production fell by a more modest 4 per cent in 1997 following the 45 per cent decline in 1996. Meat production is expected to fall further in 1998 and there is no sign that the downward trend in livestock numbers is bottoming out. After falling by 2.6 per cent in 1996, milk production rose by about 7 per cent in 1997 due entirely to higher yields (Annex Table I.18). However, there is some sign that the fall in cow numbers is stabilising and that an increase may occur in 1998. One of the main problems of the livestock sector is the large number of farms with small average herd size as this tends to hinder the introduction of modern technologies.

Food consumption and supply

Per capita consumption of the major meats stabilised, with a slight fall in pigmeat consumption and an increase in the consumption poultrymeat. However, per capita milk consumption fell by about 6 per cent to 291 litres per capita (Annex Table I.19). As regards non-meat products, consumption of sugar, bread and potatoes continued to fall in 1997, but the consumption of fruits and vegetables increased. Food prices rose by only 3.6 per cent compared to 7.3 per cent for non-food products and 18 per cent for services. The proportion of household expenditure allocated to food fell slightly from 51 per cent in 1996 to 49 per cent in 1997 (Annex Table I.9). This decline is expected to continue in 1998 as real disposable incomes increase and food prices increase moderately.

Agricultural trade

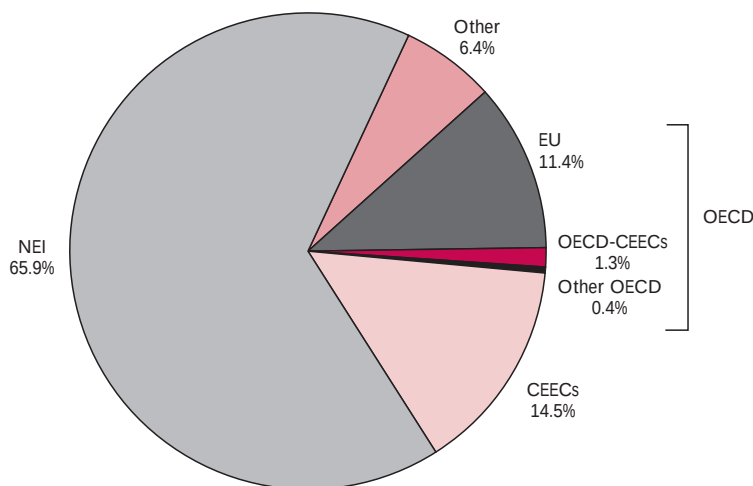
Trade flows

The share of agro-food products in total exports fell from 17 per cent to about 15 per cent between 1996 and 1997, while the share in total imports has remained stable at 14 per cent (Annex Table I.6).

Overall imports of agro-food products appear to be stabilising while exports are declining, resulting in the agro-food trade deficit more than doubling in 1997. More specifically, the value of agro-food exports declined slightly to US\$243 million and that of imports increased to US\$378 million in 1997.

Preliminary estimates indicate that the composition of agro-food exports has changed significantly with the share of dairy and meat products falling from over 50 per cent of the total to about 17 per cent in 1997. This is largely attributed to the huge fall in the production of livestock products in Latvia during the transition period. As a result, the domestic meat processing industry is now largely dependent on imported unprocessed meats. On the other hand, exports of fish, fish products and confectionery have increased substantially and accounted for 48 per cent of total food exports in 1997. In relation to agro-food imports, the most important product group is alcoholic and other beverages which accounted for almost one-fifth of total imports in 1997. Fish products, sugar, fruits and vegetables were also imported in significant quantities in 1997. With the decline in livestock numbers, the share of feed grains in total food imports has fallen from 14 per cent to about 4 per cent between 1996 and 1997, while imports of meat and milk products have steadily increased, albeit from a low base. Graph I.6.3 shows the destination of agricultural and food exports in 1997.

◆ Graph I.6.3. *Latvia: agricultural and food exports by destination in 1997*



Source: OECD.

In geographical terms, the structure of agro-food trade remained fairly stable in 1997 with the NIS, in particular Russia, absorbing 66 per cent of Latvia's total food exports. Exports to the EU declined to about 11 per cent of total food exports while exports to other CEECs rose to about 14 per cent, mainly due to greater exports to Lithuania and Estonia. The EU supplied about 52 per cent of Latvia's agro-food imports, a significant increase over its 43 per cent share recorded in 1996. The CEECs share of Latvian imports also increased in 1997 to about 18 per cent (Annex Tables I.7 and I.8).

Trade relations

The Baltic Free Trade Agreement (BAFTA) on trade in agro-food products, which was signed in June 1996 came into force on 1 January 1997.⁶ This agreement allows free trade in agricultural and food products of domestic origin between the three Baltic countries. However, existing restrictions on trade with third countries remain in force. Negotiations for accession to the WTO continued, although despite expectations membership was not concluded in 1997. As Latvia has relatively liberal trade policies and a low level of domestic support, membership in the WTO is unlikely to result in major changes in agricultural trade policies; however, some changes in institutional arrangements (quality standards, etc.) are likely.

Agricultural policy developments

Structural policies and privatisation

Restructuring and privatisation of the agricultural sector has led to fundamental changes in ownership and land use pattern in Latvia during the 1990s. In 1990 state and collective farms accounted for about 31 and 61 per cent of agricultural land use respectively. In 1997, however, almost 59 per cent of land was operated by family farms and state farms represented less than 1 per cent of agricultural land. With the on-going restructuring of the agricultural sector, the average size of family farms has been steadily increasing. For example, at the beginning of 1997 the number of family farms was estimated at 94 905, with an average size of 13.7 hectares of agricultural land (23.6 hectares total area), compared to 12.1 hectares in 1995 (19.9 hectares total area). In addition, there were a large number of subsidiary farms in Latvia in 1997, with an average size of 7.9 hectares. The total area of agricultural land operated as subsidiary farms is estimated at 156 000 hectares.

While the privatisation of the agro-food sector is almost complete, further restructuring and rationalisation of privately-owned enterprises is taking place so as to create more competitive enterprises. The process of privatisation has strongly encouraged closer co-ordination and integration of the farming sector with the food processing sector. As a result, a large number of processing enterprises have been taken over by producers' associations or processing co-operatives, which in the short run may mean there is little pressure for further restructuring of these enterprises. One of the major problems facing agro-food processors is the lack of capital investment for modernising and improving production technology as well as the lack of management and marketing skills for competing in an open, competitive market. Substantial over-capacity in many processing enterprises remains a serious problem and further rationalisation is likely to occur in 1998.

Land privatisation has also been completed and has been distributed either through restitution or through issuing land use rights and were subsequently privatised using the voucher system. In overall terms, about 95 per cent of agricultural land is used by family farms, 3.8 per cent by private companies and less than 1 per cent by the state. Most of the agricultural land still under State ownership is comprised of experimental and training farms, and local government land. Further changes in the legislation governing the functioning of the land market were made in 1997. Under the new legislation, foreigners can purchase agricultural land in Latvia. However, the lack of profitability in the sector and low employment opportunities in rural areas outside agriculture continue to hinder the development of a land market.

Credit and investment policies

The shortage of credit at reasonable interest rates continues to impede development of the agricultural sector in Latvia. Real interest rates have fallen sharply in recent years as inflation rates decline and in 1997 the real rate of interest on short term loans was estimated at about 10 per cent. Much of the credit available to agriculture is channelled through the State credit institution "Lauk-kredits" (Rural credit) established to administer World Bank loans to the agricultural sector. These loans have a fixed interest rate of 18 per cent and all applicants are subject to strict eligibility requirements. In an attempt to overcome the lack of credit in rural areas, several credit and saving co-operatives have

been established with the assistance of the EU. However, the amount of financial resources available from these co-operatives is limited. In 1997, a new programme was introduced with funding of LVL 0.5 million to provide a credit subsidy for capital investments in agriculture.

Agricultural support policies

Implementation of the Law on Agriculture, passed at the end of 1996 and which sets out the long-term policy framework for the development of Latvian agriculture, came into force in 1997. The main objective of the law is to create an efficient and economically viable agricultural sector, while maintaining employment in rural areas. In essence, many of the objectives of the Law relate to the development of rural areas rather than agricultural policies *per se*. The main objectives are:

- to develop an efficient agricultural policy for the transition period or until entry into the EU, to implement structural adjustment measures and to increase agriculture's competitiveness in international markets;
- to create the conditions for the development of an environmentally friendly and socially oriented agriculture, using resources rationally and taking into account regional differences;
- to create conditions for the development of efficient processing enterprises and to increase value added in the sector;
- to maintain employment in rural areas;
- to bring agricultural incomes up to the national average;
- to establish the main principles of market regulation in agriculture; and
- to develop agricultural education and research.

Latvia has no special price support policies for agriculture, except for tariff barriers. Almost LVL 10 million was allocated in 1997 from the state budget to support research on livestock and crop breeding as well as information dissemination. In addition, producers are partially reimbursed for excise tax paid on fuel used for agricultural production. The bulk of farm support is targeted at livestock producers. Approximately 13 200 farmers received state subsidies and this number is expected to increase in 1998 for which a total of LVL 17 million has been allocated from the state budget to support agricultural producers. The minimum guaranteed price programme for grains was abolished in 1997.

Changes in the tax legislation during 1997 have important implications for farmers. Private individual farmers, householders and private auxiliary farmers are now liable for income tax at the standard rate of 25 per cent if their annual income is less than LVL 45 000. However, agricultural enterprises whose profits exceed LVL 45 000 are subject to a much higher rate of corporate tax. Since 1 January 1998, farmers are liable for higher social taxes at the rate of 37 per cent compared to 28 per cent in 1997.

Rural development and environmental policies

There have been no structural, social or environmental policies specifically designed for the development of rural areas in Latvia. However, a new programme on disadvantaged regions was approved in 1996 and was partially implemented in 1997 to deal with the specific problems of less developed regions where unemployment is high and incomes and living standards are substantially below the national average. In addition, a World Bank Rural Development Project is currently being implemented in Latvia and is expected to address problems such as developing off-farm employment opportunities. There are no special agro-environmental policies in Latvia apart from the general environmental protection and planning policies.

Agricultural trade policies

Latvia regained access to the EU market for its dairy products as of 1 January 1998, following the tightening of health and hygiene regulations in 1997 to meet EU standards. The EU has authorised specific dairies in Latvia to export milk and milk products for human consumption. Exports of milk and

dairy products account for almost 20 per cent of annual Latvian milk output. Despite prolonged negotiations during 1997, Latvia and Ukraine have failed to conclude a bilateral trade deal which would have increased access to the Ukrainian market for Latvian fish exports and improved conditions for Ukrainian grain imports to Latvia. Under the proposal, import duties on Ukrainian cereals and flour exports to Latvia would be reduced to 40 per cent from 75 per cent, while Ukraine would reduce the duty on imported fish from Latvia from 20 per cent to zero. Latvian exports of fish to Ukraine are worth about US\$27 million annually.

Producer and Consumer Subsidy Equivalents

In 1997, the PSE increased to about 8 per cent based on preliminary estimates (Annex Table III.3). This increase in support was primarily due to an increase in price support, including general budgetary expenditures on this sector, in particular input subsidies and direct payments. Although, estimated support has risen in Latvia, it continues to be significantly below estimates for Hungary (16 per cent), Poland (22 per cent) and the OECD average (35 per cent) (Box 1). Concerning support to different products since 1993, crops have on average received lower support than livestock, with the exception of 1997 when aggregate support to crops exceeded that for livestock products (Annex Table III.4). Sugar, however, has been the exception with support being the highest for all products between 1993 and 1997, which is consistent with high border tariffs for sugar.

Summary and outlook

Economic growth accelerated in 1997 with GDP growth recorded at a robust 6 per cent, following the moderate growth rate achieved in 1996. In 1998 GDP growth is expected to remain robust at 6-7 per cent. Tight monetary and fiscal policies have resulted in a lowering of the inflation rate to about 7 per cent in 1997, while the rate of unemployment appears to be stabilising at 7 per cent. The current account deficit estimated at 8 per cent of GDP in 1997 continues to be a cause of concern, although the government budget was balanced in 1997 for the first time since independence. Strong growth in trade flows was recorded in 1997 with both exports and imports increasing by 15 and 19 per cent respectively. Privatisation, particularly in the financial sector, manufacturing and energy, culminated in a strong rise in FDI inflows during 1997 and which are expected to increase in 1998 due to strong interest in the privatisation of the state shipping company and the savings bank.

Agriculture's share of GDP fell to less than 7 per cent in 1997, while employment in the sector remained high and relatively stable at about 17 per cent. The downward trend in agricultural output appears to be stabilising in Latvia as GAO recorded its smallest decline since independence, falling by only 2 per cent in 1997. While the decline in livestock production continued, there are some indications that the decline in the dairy and pig sectors is bottoming out. As regards crops, production of the major grains increased, while potato and vegetable output fell sharply. With falling world grain prices, the prospects for further increase in production are limited; however, an upturn in the production of crops such as oilseeds, sugar beet and vegetable is expected in 1998. Exports of agricultural and food products remained at the same level as in 1996, although imports rose substantially resulting in a doubling of the agro-food trade deficit. The rising trade deficit in agro-food products is expected to continue in 1998 as exports stabilise or decline and imports rise.

Implementation of the BAFTA in 1997 resulted in some convergence in farm gate prices across the Baltic region, with a reduction in prices for most products in Latvia. While the level of budgetary support to the agricultural sector was relatively low in 1997, a 70 per cent increase in support has been approved for 1998. Most of the budgetary support has been in the form of direct payments to producers as well as through support for research, education and structural measures. Market support through the implementation of tariffs on agricultural and food imports is on average relatively low. The policy mix in the agricultural sector is expected to continue to evolve driven by the overarching policy goal of EU membership. Some of the major challenges of this sector in Latvia include the need to formulate structural policies facilitating the development of a competitive agriculture, improving food safety and quality standards, and to identifying and implementing appropriate policies for the development of rural areas.

7. LITHUANIA

Macroeconomic situation

Gross domestic product accelerated by 6 per cent in 1997 following the 4.2 per cent GDP growth recorded in 1996 (Annex Table I.1). It was the fourth consecutive year of economic expansion and the increase in activity was driven by strong demand from both domestic and export markets. Retail sales rose by 13 per cent in real terms due to a 10 per cent growth in real wages, while investments grew by about 2 per cent. According to official statistics the manufacturing and mining sectors grew by about 5 per cent in real terms and agricultural production increased by about 6 per cent. The private sector accounted for almost 70 per cent of GDP. Registered unemployment, which had fallen to 6.2 per cent at the end of 1996, started to rise again from mid-1997 and was estimated at 6.7 per cent at the end of the year (Annex Table I.2). However, hidden unemployment continues to be a serious cause for concern in Lithuania, especially in rural areas, and the pace of economic restructuring has been much slower than in Estonia and Latvia, although renewed efforts to restructure state enterprises were underway in 1998.

The downward trend in the inflation rate continued, with the end of year inflation falling to 8.4 per cent compared with 13.1 per cent at the end of 1996 (Annex Table I.3). While prices for housing, communal services and communications rose, food and clothing prices fell by about 5 per cent and more than offset the rise in utility prices. The decline in the rate of inflation is expected to continue in 1998 with the inflation rate expected to fall below 7 per cent. Following the 7 per cent fall in the money supply in 1996 due to the banking crisis of the previous year, it grew by 33 per cent in 1997. Domestic interest rates continued to decline as greater economic stability was achieved. However, the Central Bank has announced it is planning to abolish the currency board following the necessary amendments to the legislation, which are expected to be made during the first half of 1998. Since 1994, the currency board has served as the basis for Lithuania's monetary policy and has maintained the peg between the lita and the dollar.

Preliminary estimates indicate that the trade deficit deteriorated in 1997 as reflected in the 28 per cent surge in imports, while exports rose by about 20 per cent. However, the deficit was partially offset by a surplus on the service account. The rapid increase in imports was attributed to increased imports of oil, machinery and equipment, electric devices and transport vehicles. Despite higher capital inflows, the current account deficit increased to about 10 per cent of GDP, a slight rise on the deficit recorded in 1996 (Annex Table I.1). The rising current account deficit continues to be a major cause of concern in Lithuania. The general government budget deficit fell slightly in 1997 to 1.2 per cent of GDP, compared with 1.9 per cent in 1996. The improved budget situation was mainly attributed to higher revenue collection associated with stronger economic growth as well as higher revenue from excise duties. However, a higher government budget deficit is targeted for 1998 following the its decision to increase expenditures on education, health care and pensions.

While inflows of FDI are low compared to Estonia and Latvia, they increased to US\$258 million, or about 4 per cent of GDP, compared to US\$152 million in 1996. The rise in FDI inflows was largely related to the privatisation of state enterprises during the year. With the pace of privatisation expected to speed up in 1998, a further increase is expected.

Situation of the agricultural sector

Preliminary estimates indicate that agriculture's share of GDP was about 12 per cent in 1997, much the same as in 1996 (Annex Table I.9). However, agriculture and the food industry together account for about 36 per cent of GDP. Employment in the production sector fell slightly to 21.5 per cent of total employment in 1997 from 22.5 per cent in 1996. The slight decline in agricultural employment can be attributed to the fact that the Law on the Procedures and Conditions of Restitution of the Rights of Ownership to the existing property was suspended during the first half of 1997. As a result, while there was no increase in the number of farms, the process of disintegration of agricultural enterprises continued. Nevertheless, the high proportion of labour employed in agriculture relative to its share of GDP is indicative of low labour productivity in the sector. Agricultural output rose by about 6 per cent,

following the 10 per cent rise in 1996 (Annex Table I.10). The rise in output was due to increases in crop and livestock production, which rose by 9 and 2 per cent respectively. The downward trend in the livestock sector would appear to have stabilised as this was the first increase in livestock production since 1989.

The financial position of agricultural producers showed little improvement in 1997 according to preliminary data. One of the serious problems in this sector is the problem of delayed payments by the processing sector to agricultural producers. However, new measures introduced in 1997 set stricter procedures for the payment of overdue debts by processors who are now liable to pay interest on overdue payments to producers and are subject to financial penalties. This has resulted in a reduction of outstanding debts owed to agricultural producers.

As regards the downstream processing sector, poor economic performance is widespread amongst food processors due to poor management and marketing skills as well as low utilisation of existing plants and equipment. Rationalisation and amalgamations in the dairy industry have resulted in a sharp reduction in the number of dairy processing plants. The number of dairies declined to about 48 from over 60 in 1996. However, the level of concentration in the industry is much greater than the above numbers reflect as the 13 largest dairies process over 70 per cent of total milk production in Lithuania.

Farm gate prices for the main agricultural products continued to decline, with the largest price falls occurring for grains, cattle and milk, while farm gate prices for pigs, poultry, potatoes and vegetables increased. Graph I.7.1 shows the evolution in farm gate prices for the main agricultural products over the period 1993-1997.

◆ Graph I.7.1. *Lithuania: farmgate prices for the main agricultural products, 1993-1997*
Percentage change from previous year



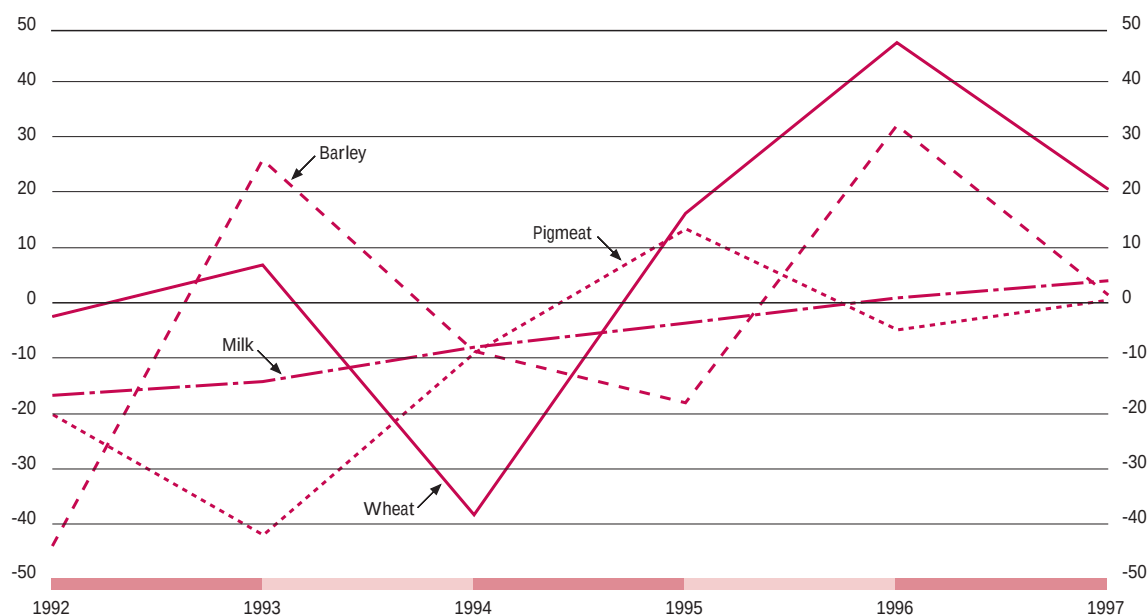
Agricultural production and consumption

Crop production

In 1997, the area sown to crops rose by 4.4 per cent to 2.5 million hectares, while the area devoted to grains increased by 8.8 per cent to 2.6 million hectares (wheat increased by more than 10 per cent, coarse grains 6 per cent). The decrease in the barley acreage is mainly attributed to falling demand from the livestock sector. As regards other crops, the areas sown to sugar beet and rapeseed increased by 13 per cent and 88 per cent respectively, while the areas devoted to potatoes and vegetables fell significantly. The structure of crop production also showed some change between different farm types, with private and household farms increasing their crop area by more than 10 per cent, while the crop area of agricultural partnerships fell by about 4 per cent. Moreover, there is some evidence to suggest that crop productivity, especially for grains, potatoes and sugar beet, is higher and increasing on private and household farms as compared to agricultural partnerships and enterprises. In relation to total production, private and household farms accounted for about 73 per cent of grain output and 99 per cent of potato production in 1997.

The combination of an expansion in the area cultivated, higher yields and favourable weather conditions resulted in a bumper grain harvest of 3.1 million tonnes in 1997, 13 per cent more than in 1996 (Annex Table I.12). Production of all major grains increased substantially – wheat by 20 per cent, rye by 21 per cent, oats by 10 per cent and barley by about 1 per cent (Annex Table I.13 and I.14). Production of the major crops was also substantially higher, with sugar beet output increasing by about 26 per cent, while that of potatoes and vegetables fell by 10 and 4 per cent respectively. Graph I.7.2 shows the changes in production of the main livestock products and grains over the period 1992-1997.

◆ Graph I.7.2. *Lithuania: production of the main agricultural products, 1992-1997*
Percentage change from previous year



Livestock production

Livestock numbers continued to decline in 1997 with the cattle herd declining by a further 13 per cent during the year, after a 1 per cent fall in 1996. Although sheep numbers increased by about 2 per cent, the number of cows and pigs fell by about 1 per cent and 2 per cent respectively. While cattle, pig and poultry numbers on private and household farms increased in 1997, they fell significantly in agricultural partnerships and enterprises. In overall terms, private and household farms accounted for almost 56 per cent of meat output and 85 per cent of milk production.

The downward trend in meat production stopped in 1996 and output increased in 1997 for the first time in more than ten years. Total meat production rose by about 7 per cent, following the 4.5 per cent decline in 1996 (Annex Table I.15). There were some variations among the different meats with beef and pigmeat production increasing slightly, sheepmeat production stabilising and the production of poultrymeat falling slightly (Annex Tables I.16 and I.17). Milk production increased for the second consecutive year with production rising by 3.7 per cent (Annex Table I.18). The rise in milk production can be attributed to higher productivity as the size of the dairy herd continued to decline.

Food consumption

Preliminary estimates indicate that per capita meat consumption remained fairly stable in 1997 at 51 kg per capita. Moreover, the general trend toward substitution of poultry meat for beef and pork would also appear to have stabilised and per capita consumption of poultry meat remained low at about 6 kg per capita, compared with 22 kg per capita for pork and beef respectively (Annex Table I.19). While the consumption of milk, eggs and bread increased in 1997, per capita consumption of sugar remained stable and potato consumption fell. The average share of household income spent on food fell for the fourth consecutive year, from 55 per cent in 1996 to about 52 per cent (Annex Table I.9).

Agricultural trade

Trade flows

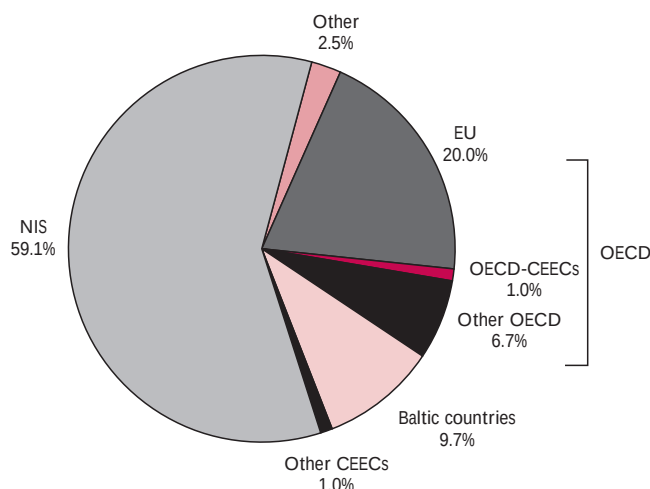
Lithuania's agro-food exports increased by about 7 per cent to US\$613 million, but its share of total exports fell to 16 per cent (Annex Table I.6). Live animals and animal products accounted for 46 per cent of total exports, similar to 1996, but exports of prepared foodstuffs declined. Agro-food imports increased by about 4 per cent in 1997, while their share of total imports declined to about 11 per cent, largely due to a fall in imports of animal products. However, imports of beverages and tobacco products increased. The overall agro-food trade deficit fell in 1997 to US\$11 million compared with US\$21 million in 1996.

As regards the geographic structure of agro-food trade, the NIS accounted for a smaller share of Lithuanian food exports and imports in 1997 while the EU's share increased. More specifically, the share of exports shipped to the NIS fell to about 59 per cent, while the NIS supplied only 11 per cent of Lithuanian food imports. However, food exports to the EU rose to about 20 per cent of total food exports, while the EU supplied almost 45 per cent of Lithuania's food imports. The increase in trade can be largely attributed to the operation of the Agreement on Free Trade and Trade Related Matters with the EU. The main agricultural and food products exported were milk and dairy products, beverages, spirits, livestock and meat products, which together accounted for over two-thirds of total agro-food exports. Tobacco, beverages, fruits and vegetables were the most important agro-food imports. Graph I.7.3 shows the composition of agricultural and food exports by destination in 1997.

Trade relations

Free trade agreements with the Czech Republic, Poland, Slovakia and EFTA countries came into force at the beginning of 1997. A free trade agreement was also signed with Slovenia and has been temporarily applied since 1 March 1997; discussions with Hungary are ongoing. The Europe Agreement officially came into effect on 1 February 1998 after it had been ratified by the European Parliament and

◆ Graph 1.7.3. *Lithuania: agricultural and food exports by destination in 1997*



Source: OECD.

the 15 member countries. Negotiations with the WTO are on-going and are expected to be completed during the latter part of 1998, although some issues related to market access and export subsidies still need to be resolved. Negotiations are also continuing with Ukraine on possible changes to existing bilateral trading arrangements.

Agricultural policy developments

Structural policies and privatisation

At the beginning of 1997, the Lithuanian Parliament suspended the enforcement of the Law on Procedures and Conditions of Restitution of the Rights of Ownership to Existing Property and a new law was passed on 2 July 1997. Although the regulations for the enforcement of the new Law are not yet completed, major changes in the implementation of land reform are expected in 1998 and thereafter. For example, the size of restituted plot has been increased from 80 to 150 hectares, the right of ownership to property is restored to all citizens including those who reside abroad and the former owner or his/her heir may receive the property in kind or may voluntarily lease the plot of land. Moreover, the forms of compensation remain unchanged, as former owners may be compensated by cash payments, alternative plots of land in other areas or forest land, or by shares of processing enterprises.

The ongoing land reform and privatisation made little progress during 1997 as major changes were underway in land reform legislation. However, farm structures continued to evolve with some further restructuring of agricultural partnerships, family farms and household plots. In overall terms, individual private farms increased, while the number of household plots and agricultural partnerships declined. In 1997, the distribution of agricultural land use was as follows: individual farms accounted for about 38 per cent; household plots for 24 per cent; and, agricultural partnerships for about 16 per cent, while state farms and garden plots accounted for about 12 per cent. The remaining 10 per cent of land was left unused. The number of private farmers rose to almost 200 000 in 1997 and farmed over 1.5 million hectares of agricultural land. While the average size of these farms remained at 7.6 hectares, the average size of registered plots fell to 5.6 hectares in 1997.

The agricultural land market remained depressed as demand for land was low due to the high degree of uncertainty and low level of profitability in the sector. Preliminary expert estimates indicate that 2.1 per cent of privately owned land was offered for sale in 1997, of which 75 per cent was purchased while the remainder was rented. Most of the demand for agricultural land came from outside the agricultural sector, mainly from entrepreneurs who purchased the land for non-agricultural use. Agricultural land prices ranged from about Lt 400 to over Lt 4 000, depending on the quality of the land and its location.

A small-scale farming structure is emerging in Lithuania with almost three-fifths of farms having less than 10 hectares and a further one-quarter between 10 and 20 hectares; only about one-tenth have more than 20 hectares. Most of these small-scale farms are non-viable as full-time units and further restructuring is likely in the medium term. Nevertheless, the development of a functioning land market should help resolve many of the current structural problems and lead to a more efficient and viable farming sector.

Upstream and downstream privatisation

Privatisation of upstream and downstream agro-food enterprises is almost complete in Lithuania. The extent of privatisation in the different sub-sectors of agriculture ranged from 81 per cent of all enterprises in the dairy sector to over 87 per cent of meat processing enterprises. As regards the crop sector, over 90 per cent of sugar processing plants have been privatised, while about 96 per cent of grain processing enterprises are in private hands. On the input side, over 90 per cent of enterprises which provide services to the agricultural sector have been privatised. In overall terms, about 86 per cent of the assets of privatised agro-food enterprise have been acquired by producers (of the 50 per cent of total capital allocated for this purpose) reflecting the special preferences given to agricultural producers during the privatisation process.

While there has been a relatively rapid change in the ownership of food processing enterprises, the restructuring of their management and the modernisation of their plant and equipment have progressed much more slowly, largely the result of a lack of investment in the sector. Another recent development in the downstream sector has been the establishment of many small meat processing plants, especially in rural areas. While these new plants have resulted in more competition and lower consumer prices in the short-run, they are unlikely to survive in the longer term because of their small size and their inability to exploit economies of scale. Preliminary estimates indicate that the economic performance of the food processing sector was poor due to significant over-capacity and the low level of efficiency. The continued fall in livestock numbers has exacerbated the problem of over-capacity in the meat processing sector and the general lack of management and marketing expertise will continue to inhibit the development of a more efficient and market-oriented agro-food processing sector. Further rationalisation and restructuring is likely to occur in 1998.

Agricultural support policies

The new Rural Support Fund came into force in 1997, replacing the State Funds for the Support of Agriculture and the Fund for the Support of Farmers.⁷ The Fund regulates all support to the agricultural sector and rural areas. The agricultural price support system was significantly changed and a new system was introduced on 1 April 1997. The main objectives of this new system are to:

- change the system of price administration to price regulation for the main agricultural products;
- reduce the number of products for which prices will be regulated;
- encourage the purchase of higher quality inputs through higher farm gate prices or direct subsidies;
- supplement the price support system through State investment in priority projects and through special support schemes; and,
- facilitate the integration of Lithuanian agriculture into the global market by improving the transmission of world market signals back to producers.

Minimum marginal prices and quotas were established in 1997 for food wheat (Lt 630-700 per tonne), rye (Lt 630 per tonne), buckwheat (Lt 1 500 per tonne), leguminous plants (Lt 800-850 per tonne), sugar beet (Lt 145 per tonne) and flax fibre (Lt 750-2 200 per tonne). The procedure for the purchase of milk was also changed. During the milk season, a minimum support price of Lt 550 per tonne was established and, in addition, subsidies would be given based on the quality of the milk. Moreover, in order to improve the quality of milk produced during the winter period, additional winter payments have replaced minimum support prices from 1 November each year. As regards beef cattle, in addition to the market price which producers receive, subsidies have been introduced to encourage the production of higher grade cattle for slaughter. For the pig sector, minimum marginal prices and quality subsidies are also applied.

Almost Lt 397 million, or 5.8 per cent of the state budget, was allocated to the Rural Support Fund in 1997, of which Lt 246 million, or 62 per cent, was allocated in the form of subsidies, 27 per cent was allocated to investment schemes, 6 per cent was allocated to research, training and the advisory service, and 5 per cent to the Agricultural Loans Guarantee Fund. However, the amount of state funding allocated to the Rural Support Fund has been reduced to Lt 375 million for 1998 and is expected to be further reduced in 1999. Thus, grains, livestock and milk prices will be increasingly subject to market forces. However, subsidies paid to improve quality of inputs will continue especially those for the purchase of seeds, seedlings, breeding cattle and poultry.

Credit and investment policies

Confidence in the banking sector increased as memories of the severe banking crisis of 1995 faded. Further structural changes in the sector have resulted in a decline in the number of commercial banks, falling by 50 per cent by the end of 1997. The Agricultural Bank of Lithuania, with about 20 per cent of the Lithuanian market, remains the principle lending institution to agricultural producers. However, other commercial banks have shown more interest in the agricultural sector and an increasing share of the Agricultural Loans Guarantee Fund is now managed by commercial banks. In addition, 11 new Credit Unions were registered in Lithuania last year, bringing the total number to about 23, of which about 12 concentrate on the agricultural sector. The growth in the share of long-term loans in national currency continued in 1997 and increased to 37 per cent of total loans (32 per cent in 1996), while the share in foreign currencies rose to 42 per cent. However, long-term loans to agriculture accounted for only 7 per cent of total long-term lending.

Part of the Rural Support Fund is also used to subsidise working capital loans to agricultural producers. Individual farmers, as well as agricultural partnerships, are eligible to participate in this programme provided certain requirements are met. Since 5 March 1997, the credit subsidy has amounted to 60 per cent of the market interest rate on one-year loans which bank and credit unions have extended to individual farmers and agricultural partnerships for the purchase of fuel, fertilisers and chemicals. However, the amount of the loan must not exceed Lt 50 000 for an individual farmer, or Lt 100 000 for partnerships.

The Agricultural Loans Guarantee Fund was established in 1997 with initial funding of Lt 20 million from the Rural Support Fund. In addition, supplementary funds are expected to be provided from the PHARE programme. The Fund shares the loan risks with the lending bank on loans provided to agricultural producers and in the event of default, guarantees to repay 80 per cent of the loan. Agricultural producers who participate in this programme must meet the following criteria: the farmer must own at least 9 hectares of land; have at least two years farming experience; prepare a viable business plan; provide at least 10 per cent of the total project cost; and, provide adequate security for the loan.

Environmental and other support policies

High priority was given to the new Farm Establishment Programme. In essence, this programme is aimed at helping new farmers enter the industry by providing capital grants. Under this programme farmers are eligible for a capital grant of 25 per cent of the purchase price of new machinery or

equipment for use on the farm. In addition, young farmers are eligible for grants of 40 per cent on new buildings constructed on the farm for livestock or crops. This programme is expected to be extended substantially in 1998. Funding for this programme is also provided by the Rural Support Fund.

Almost Lt 4 million was allocated from the state budget in 1997 for the implementation of environmental schemes. The main objectives of these schemes are to:

- encourage the development of environmentally friendly agriculture by substituting alternative ecological means for pesticide control and artificial fertilisers;
- certify, purchase and process ecoproducts, and develop appropriate market infrastructures;
- encourage environmental practices that eliminate pollution on household farms in the Karst region;
- encourage environmental practices that reduce pollution in rural settlements.

About 20 per cent of the total agricultural land in Lithuania is classified as less favoured or ecologically sensitive areas. The programme for reorganising agricultural enterprises in less favoured areas provides funding for the following activities: the production and processing of traditional and non-traditional plant and livestock products which are in demand; the development of crafts, services and other types of cottage industries; and, the development of agro-tourism. While rural development programmes are at a relatively early stage of development, Lt 1.2 million was nevertheless allocated to the provision of business training for rural residents. In addition, almost Lt 23 million was allocated to agricultural research and training from the Rural Support Fund.

Agricultural trade policies

While temporary export bans were applied to wheat and rye in 1996, due to fears of grain shortages, no export duties or restrictions were imposed in 1997. In addition, the quotas placed on grain exports between 1995 and 1997 by the Ministry of Agriculture were abolished in August 1997. Further changes in export policies are unlikely in 1998 as they are largely subject to international agreements. During 1995 and 1996, export subsidies were applied to selected surplus agricultural products, such as beef and dairy products; however, due to the overall economic situation and a lack of financial resources, export subsidies are unlikely to be reintroduced in the near future.

The main instruments used to regulate food imports are tariffs, with most food tariffs levied on an *ad valorem* basis although special customs duties may also be imposed. Special licences continue to be required for the import of certain commodities under tariff quotas and these are granted on a tender basis. Import regulations became more stable in 1997 when the Government passed a resolution which fixed duties (conventional and autonomous) for imported goods, a list of countries to which conventional and preferential duties are applied, and a list of goods exempted from duties and imported under special government quotas.

Producer and consumer subsidy equivalents

Preliminary estimates indicate that the PSE estimate increased to 18 per cent in 1997 compared to 12 per cent in 1996 (Annex Table III.5). This sharp rise in measured support can be attributed to a rise in market price support in addition to an increase in budgetary expenditures on direct payments and general services. In overall terms, Lithuania had the highest PSE of the three Baltic countries in 1996 and 1997, although still significantly lower than that for the EU and OECD average (Box 1). As regards the specific commodities, support to livestock has been on average higher than for crops since 1994, although the gap has been narrowing (Annex Table III.6). The PSE for crops was estimated at 17 per cent compared with 18 per cent for livestock products. Of the PSE commodities, poultry has had the highest support of all products between 1993 and 1997, followed by sugar and pigmeat.

Summary and outlook

Economic growth accelerated with growth in GDP recorded at 6 per cent, the fourth consecutive year of economic expansion. An increase in domestic demand and higher foreign investment, as well as rising foreign demand for Lithuanian products, contributed to this strong growth. Despite a rise in housing prices, the downward trend in the rate of inflation also continued, with inflation estimated at slightly over 8 per cent. The rate of inflation is expected to fall further in 1998 due to the continued tight monetary and fiscal policies of the government. However, the official rate of unemployment, which had fallen in 1996, rose in 1997 to 6.7 per cent partially as a result of enterprise restructuring.

The government budget situation improved significantly due to higher tax revenues arising from strong economic growth. However, the trade deficit widened further as a result of the surge in imports and continues to be a major cause of concern. The pace of restructuring and privatisation is expected to increase in 1998 driven by increased efforts for EU membership.

Agricultural output increased for the third consecutive year, with GAO rising by 6 per cent. Unlike Estonia and Latvia, the downward trend in agricultural production has been reversed in Lithuania with crop and livestock output increasing by 9 and 2 per cent respectively. As regards livestock, there was wide variation between different products; beef and pigmeat production fell, while poultry meat and milk output increased. On the crop side, production of all major grain and root crops increased. The agro-food trade deficit narrowed in 1997 as exports increased faster than imports, although the share of agricultural and food products in total merchandise trade declined as the non-agricultural export sectors in the economy showed strong growth during the year. Trade with Estonia and Latvia, however, increased due to the implementation of BAFTA and further strong growth is expected during 1998. The high share of the labour force employed in agriculture relative to agriculture's share of GDP is indicative of the low labour productivity in the sector as well as the rather slow pace of agricultural reform and the urgent need for real and fundamental restructuring of the sector.

The overarching goal of the new agricultural policy measures are aimed at improving farm structures and competitiveness for future EU membership. The Rural Support Fund was introduced in 1997 establishing a framework for all agricultural and rural support measures previously implemented under a myriad of programmes. There were significant changes in the agricultural price support system, with greater targeting of subsidies and direct payments in order to improve farm viability and the production of high quality products. In addition, greater emphasis is being placed on improving infrastructures, research and training, as well as increasing payments for environmentally-friendly farming especially in the less favoured regions. While transfers to agriculture rose significantly, with the PSE estimate increasing to 18 per cent, support was increasingly provided in the form of credit subsidies and sub-national measures. The share of the state budget allocated to agriculture was estimated at 5.8 per cent of the total budget; however, the budget has been reduced by about 6 per cent for 1998 with more emphasis on less market distorting forms of support. In overall terms, agricultural policy developments reflect a move toward the development of a more liberal, market oriented sector.

8. ROMANIA

Macroeconomic situation

After four years of economic growth, the macroeconomic situation worsened at the end of 1996 and economic activity in Romania contracted in 1997. After continuous delays in the implementation of structural reforms, the government elected in November 1996 announced in early 1997 a shock therapy programme which emphasised macroeconomic stabilisation and structural reforms.

For 1997 as a whole, GDP fell by 6.6 per cent. Industrial output decreased by 14.3 per cent and the construction sector shrank by 21.8 per cent. The agricultural sector showed a healthy increase of 1.6 per cent and acted as an important social buffer given the large share of the population it employs and the importance of own-consumption of agricultural products. On the demand side, consumption is estimated to have declined by 5 per cent, with private consumption falling by 4.5 per cent and public consumption by 7 per cent. In 1996, strong GDP growth combined with delayed restructuring of

state-run enterprises led to a fall in the official registered unemployment rate to 6.3 per cent at the end of the year. By end 1997, however, unemployment had increased to 8.8 per cent following layoffs in the mining and public sectors during the second half of the year. This rate is expected to rise following further restructuring. Real wages fell by more than 20 per cent in 1997.

Most state-controlled prices were liberalised at the beginning of 1997, resulting in a sharp increase in the price of staple foods, energy and public utilities, and increasing the monthly inflation rate to over 30 per cent in March alone. Under the influence of tight monetary conditions, monthly inflation was reduced to below 1 per cent in July, but rose again during the following months, ending at 4.5 per cent in December. This increase in the monthly inflation rate was due in large part to the relaxation of monetary policy in the last quarter of 1997 when the Central Bank allowed the leu to depreciate in order to stimulate exports. This was done in reaction to the disappointing progress on the trade deficit, lump-sum compensation payments paid to workers leaving the mining industry and wage indexation. The year-end inflation rate reached 151 per cent compared to 57 per cent for 1996.

Romania's new government was committed to trimming the 1997 budget deficit from 6.5 per cent in 1996 to 4.5 per cent of GDP. When a mid-year review of the budget situation revealed slower than projected growth in revenues, deficit targets were preserved by additional spending cuts. Indirect subsidies to the industrial sector were significantly reduced and direct credits in the agricultural sector were phased out. While subsidies to the agricultural sector remain, they are more transparent in the budget. For 1998, the government has set a budget deficit of 3.6 per cent of GDP, a target to be achieved by increasing budget revenues through indirect taxes and prudent salary policies. In line with this policy, the government tripled fuel taxes and increased VAT for food and agricultural products from 9 to 11 per cent and for all other products from 18 to 22 per cent at the beginning of 1998.

Exports amounted to US\$8 429 million, while imports were worth \$10 407 million, resulting in a trade deficit of US\$1 978 million, or 20 per cent lower than in 1996. The trade deficit was the main component of the current account deficit which was about US\$2.5 billion (or 7.25 per cent of GDP) for 1997.

Under the new ambitious privatisation programme, a total of about 2 700 companies were expected to be privatised by the end of 1997. However, the programme ran behind schedule and only about half of the target was reached. This can be explained by difficulties in selling large companies with a heavy burden of financial arrears as well as the strong resistance towards the liquidation of non-viable enterprises. The government also sought foreign investment as a way to restructure the economy and facilitate technology transfers. A new Foreign Investment Law has been adopted which eliminates restrictions on repatriation of earnings, guarantees free transfers of foreign currency for the purchase and sale of assets, and removes bureaucratic barriers and other regulations.

Situation of the agricultural sector

Gross Agricultural Output increased by 1.6 per cent in 1997, almost entirely due to a large increase in wheat and maize production. Agriculture's contribution to GDP remained stable at 18.5 per cent. The agricultural sector has traditionally accounted for a large share of total employment with its contribution increasing steadily from 28 per cent in 1990 to 36 per cent in 1994. Farm employment decreased in 1995, but according to labour force surveys the share of agriculture in total employment rose from 37 per cent in 1996 to 40 per cent in 1997. Less than 60 per cent are employed full-time in agriculture, principally on small-scale family farms. In a difficult economic environment, agriculture plays an important social buffer role by providing households with a large proportion of their food consumption. In February 1998, the average monthly net wage of people employed in socialised agriculture was Lei 604 834 (US\$72), or 69 per cent of the economy's average.

In contrast with agricultural production, Romanian food production fell sharply. The livestock industry was the worst hit, with a fall of 27 per cent in meat product. Output of fresh milk declined by 22 per cent, while that of fresh dairy products fell by 32 per cent. Sugar output from sugar beet processing decreased by 16 per cent leaving the sugar industry with severe financial problems and

supply shortages, working at around 50 per cent of its capacity. Only the vegetable oil industry recorded a 5 per cent rise in output. The food industry accounts for 9 per cent of the total number of people employed in industry and for 17 per cent of Romania's total industrial output.

Agricultural production and consumption

Crop production

Romania had a bumper grain harvest of 20 million tonnes in 1997, due to favourable weather conditions and significant improvement in yields. More specifically, wheat production rose by an impressive 111 per cent to 6.6 million tonnes, more than double the low 1996 output of 3.1 million tonnes. Maize, Romania's most important grain, registered a record output of 11.1 million tonnes due entirely to higher yields as areas sown decreased by 7 per cent over 1996. Barley output rose by 67 per cent to 1.8 million tonnes, close to its 1995 level. Total grain production was 41 per cent higher than in 1996 and even 10 per cent higher than in 1989 (Annex Tables I.12 and I.13). The good harvest raised expectations that Romania could be a net exporter of grain in 1997. However, Romania's grain export potential is limited by its port infrastructure. Moreover, due to heavy summer rains, much of the wheat will be of feed quality only.

By contrast, the output of crops other than grains decreased in 1997. Oilseed fell by 27 per cent, potatoes by 11 per cent and production of sugar beet by 4 per cent due to reductions in both areas sown and yields. After having registered a steady increase since 1990, production of wine grapes decreased by 18 per cent in 1996 due to unfavourable weather conditions and a fall in yields. In 1997, the private sector accounted for around 75 per cent of wheat and sunflower production, 85 per cent of sugar beet production, 90 per cent of maize production and over 95 per cent of potato and vegetable output.

Livestock production

The downward trend in livestock numbers continued with the largest fall occurring in the state sector. Cattle numbers stood at 3.2 million head at the end of 1996, 4 per cent lower than the previous year. Pig and poultry numbers decreased by 13 and 12 per cent respectively, but while the private sector registered a slight decrease of 4 per cent for pig numbers and an increase of 5 per cent for poultry numbers, the state sector recorded decreases of 26 and 51 per cent respectively, following the liquidation of many state-owned pig and poultry farms (around one-quarter of the total number). At the end of 1997, the private sector held 93 per cent of cattle, 95 per cent of sheep, 64 per cent of pigs (as against 58 per cent in 1996) and 83 per cent of poultry (as against 69 per cent in 1996).

Total meat production decreased by 8 per cent. While beef and pigmeat production increased by 12 and 1 per cent respectively, poultry meat dropped by almost 40 per cent. Egg production fell by 12 per cent and milk output remained at about the same level as in 1996. The private sector accounted for 74 per cent of total meat production, 95 per cent of total milk output and 79 per cent of egg output.

Food consumption

The share of household expenditures for food during the July 1996-July 1997 period was high at 58.6 per cent, even higher than the 57.6 per cent share registered during the same period the previous year. This share varies according to the type of household. While it decreased to below 50 per cent in employers' households, it stood at 58.4 per cent in peasant households, 59.2 per cent for pensioners and 65.2 per cent in households of unemployed workers. Consumption of milk and milk products (excluding butter) decreased significantly by 18 per cent to 158 litres per capita, while increases were registered for potato (up by 7 per cent to 53 kg per capita) and fruit (up by 6 per cent to 41 kg per capita) consumption. In contrast to 1996, consumption per capita remained stable for meat (47 kg), eggs (168 pieces) and sugar (25 kg) (Annex Table I.19).

Agricultural trade

Trade flows

Romania's agro-food exports decreased by 12 per cent to US\$595 million and agro-food imports by 8 per cent to US\$694 million. The share of agro-food trade was 7 per cent for both imports and exports. The main products exported by Romania were meat and meat preparations, live animals (sheep and goats), wine, edible oils and grains. In order to dispose of domestic surpluses, export subsidies were granted for maize under a government emergency order. Exporters received payments of Lei 150 000 (approximately US\$18) per tonne for up to one million tonnes of maize. Veterinary and plant-health legislation is in the process of being upgraded to EU quality standards and EU veterinary and phytosanitary requirements. The main agro-food imports were sugar (which accounted for 11 per cent of all food and agricultural imports compared to 18 per cent the previous year), tobacco, oil cakes, food preparations, bananas and animal feedstuffs.

The main change in the structure of agricultural exports was a significant increase in the share going to OECD countries, from 40 per cent in 1996 to 50 per cent in 1997, with the EU share increasing from 21 to 27 per cent. The share of NIS countries in Romania's agro-food exports increased slightly from 18 to 21 per cent, while the share of other countries decreased substantially from 37 to 26 per cent. Exports to other CEECs (including the three OECD countries) accounted for 9 per cent of total agro-food exports. On the import side, the share of OECD countries also increased from 59 to 65 per cent. In particular, the share of Poland, Hungary and the Czech Republic increased significantly from 5 to 12 per cent. Imports from NIS countries accounted for 7 per cent of Romania's agro-food imports.

Trade relations

Romania signed the Central European Free Trade Agreement (CEFTA) in April 1997 which came into effect as of the beginning of July. Import duties on many farm and food products have been reduced and imports of live sheep, animal fats, various types of fresh and processed vegetables, and non-refined sunflower oil are duty-free for products originating from CEFTA countries. In June 1997, Romania also signed a free trade agreement with Turkey.

Agricultural policy developments

Structural policies

The 1991 Law on Land Resources established the legal framework for the return of over 8 million hectares of land to private farmers. Land was distributed in part to former owners and their heirs and in part to workers in the former co-operatives who had accumulated a certain number of working years. As a result, 72 per cent of total agricultural land and 84 per cent of arable land were cultivated in 1997 by private farmers (mainly household plots). At the beginning of 1998, around 78 per cent of the total number of land owners had received land titles compared to 68 per cent in 1996. However, a very restrictive legal framework on land transactions has prevented the development of a land market and has put a freeze on the farm structure since the land reform of 1991. Under the provisions of the 1991 Land Law, land transactions are legal only if a Rural Development and Planning Agency (RDPA) is informed about the transaction and given the opportunity to make use of its pre-emption right; as the Rural Development Agency was never established, land sales remain *de facto* illegal. Moreover, until 1997 the Land Lease Law restricted leasing and sub-leasing transactions.

Amendments passed in 1997 to the Land Law and the Land Lease Law, as well as the new Land Circulation Law, were important steps in the establishment of a market framework for buying, selling and leasing land. Amendments to the 1991 Land Law allow for greater scope in recovering land confiscated during the communist era, as former landowners or their heirs can apply for up to 50 hectares of land, compared to 10 hectares previously. Former state employees and tenants are also eligible. Another Law regulating the physical restitution of land is expected to be passed in 1998. The status of land remaining under state farms has yet to be clarified as there are many claims on land held by state farms from which claimants have been receiving dividends rather than the title to the land itself. A draft

law has been initiated to establish a National Agency of State Farms which will start pre-privatisation procedures of commercial agricultural companies (former state farms) and will include land selling and leasing. The amendments to the Land Lease Law make leasing and subleasing transactions easier and in particular allows state-owned land to be leased. The new Land Circulation Law ensures that the state has no pre-emption rights on land transactions, guarantees free land sales by individuals and raises the maximum area of land which may be purchased by an individual from 100 to 200 hectares.

There were no major changes in the structure of the private farm sector, which in Romania consists of individual farms, agricultural companies (group of individuals who own property rights on the parcels of land operated by the association and who are allowed to keep small parcels of land for their own private use) and family associations (with no legal status). About 60 per cent of the land was cultivated by 3.97 million smallholders farming, on average, 2.2 hectares. The number of family associations decreased from 15 107 in 1996 to 9 489 in 1997 and their average size increased from 95 to 105 hectares. Agricultural companies numbered 3 913 against 3 759 in 1996 and their average size decreased from 466 to 438 hectares. While family associations appear to be fragile, most are only established at harvest-time, agricultural companies are more stable with their own means of production (tractors, ploughs, sowing machines and storage facilities). The main reasons behind the development of these two types of producer associations are the lack of a legal framework establishing a real land market, the lack of working capital and the lack of a macroeconomic framework providing capital investments. In previous years, these producer associations were characterised by a certain variability in their numbers and the amount of land under cultivation.

In 1997, the state-owned agricultural sector consisted of 490 state crop farms operating on 1.6 million hectares of agricultural land. State farms still produced 32 per cent of pork output and 44 per cent of poultry output in 1997. These farms have persistently been heavy loss-makers and have accumulated large debts to suppliers and banks. Out of 109 state pig and poultry farms, 26 were liquidated and 20 privatised in 1997.

Upstream and downstream privatisation

Despite the fact that 72 per cent of total agricultural land was in private hands, markets for agricultural products, inputs and services have been dominated by state-owned enterprises. The pace of privatisation in the upstream and downstream sectors was stepped up in 1997, within the framework of the package of reforms announced in early 1997.

Almost two-thirds of agricultural service providers, including mechanisation, transport, wholesale input traders and irrigation system maintenance companies had been privatised by March 1998. Privatisation of the remaining enterprises is expected to be concluded by the end of the year. The two public commercial companies specialised in seed production and distribution, SEMROM and UNISEM, have been scheduled for privatisation. SEMROM has been broken up into 5 regional sub-units in order to speed up the process.

Romania's monopsonistic grain trading organisation Romcereal, which held the total storage capacity for grains in Romania (10.5 million tonnes) and provided farmers with inputs, services and funds, was broken up in early 1996 and replaced by the National Agency for Agricultural Products (NAAP) and 41 regional grain trading companies, the so-called "Comcereals", operating as local monopsonies. The NAAP owned 30 per cent of the storage capacity of the former Romcereal and Comcereals owned the remaining 70 per cent. While Comcereals were scheduled for privatisation in 1996, the NAAP was considered a state agency ensuring food security and holding strategic reserves. However, at the beginning of 1997 it was decided to privatise the NAAP which was initially reorganised into 29 commercial companies, named Cerealcoms. The privatisation process has been delayed, however, due to difficulties in transferring NAAP debts to the public debt and the privatisation of Cerealcoms has been frozen. In 1997, only nine Comcereals moved into majority private ownership. There is substantial demand from the private sector for storage facilities owned by the state in both Comcereal and Cerealcom commercial storage companies and their privatisation will play an important role in fostering competition in local markets.

Privatisation of the food industry continued in 1997, but at a slower pace than expected. Of the 424 state-owned food processing industries, 184 (43 per cent) were privatised by the end of the year, with the remaining 240 companies scheduled for privatisation, or liquidation, by the State Ownership Fund by the end of 1999. By the end of 1997, around three-quarters of edible oil, alcoholic beverages, milling and baking enterprises had been privatised as had one-half of the dairy industry and over one-quarter of the meat processing, soft drinks and sugar industries (Table I.8.1).

Table I.8.1. **Romania: progress in the privatisation of agro-food enterprises, 1997**

Sub-sector	Number of companies	Number of privatised enterprises	Share of privatised enterprises %
Meat processing	56	15	27
Dairy industry	48	24	50
Fisheries	37	2	5
Milling and baking	75	56	75
Sugar	41	11	27
Edible oil	17	13	76
Wine and soft drinks	46	13	28
Beer and alcoholic beverages	54	38	70
Canned vegetables and fruits	35	1	3
Other food industries	15	11	73
Total	424	184	43

Source: CEECs database.

Price and income support policies

Until the beginning of 1997, direct price controls and administered prices were applied to four “sensitive commodities”: wheat, milk, pork and poultry. Controls over margins were applied throughout the different stages of the food chain (storage, processing, wholesale and retail). Producers who sold their output at state administered prices to the mandated state processors were eligible for additional premium payments. The state administered prices significantly reduced producer prices as they were set well below world prices. In February 1997, all administered prices and controls on margins were discontinued and premia, previously paid out from the budget, were eliminated.

Direct controls on input prices were also eliminated and the free distribution of fertilisers was phased out. However, in order to ease the impact of these reforms, temporary seed price subsidies worth Lei 149 billion were maintained and input subsidies amounting to Lei 1.3 trillion were distributed to producers in the form of vouchers. These vouchers enabled farmers to pay for inputs and services, and finance autumn sowing operations. Eligible inputs included fertilisers, seed, plant protection, fuel and lubricants, and new machinery. Each voucher was worth Lei 130 000 (US\$18) and granted on a per hectare basis – but all businesses with over 5 hectares received a maximum of six vouchers. Agricultural co-operatives and state-owned farms were not eligible to apply for vouchers. While the previous recipients of state supplied credit were state farms and “integrators”,⁸ the voucher input scheme will ensure that farmers receive subsidies directly. Moreover, as farmers may use the vouchers with all input suppliers, this system should help stimulate the development of private input supply companies. Other budget expenditures included a (budgeted) short-term revolving credit for wheat purchase and agricultural works (Lei 1 050 billion), interest subsidies (Lei 435 billion), subsidies for land reclamation (Lei 274 billion), subsidies for chemical fertilisers (Lei 200 billion) and environmental damage compensation (Lei 130 billion).

Finance and investment policies

All direct credits to the agricultural sector, *i.e.* credits refinanced by the National Bank of Romania (NBR) and previously channelled through the Banca Agricola, were phased out. As the NBR was directly engaged in financing the agricultural sector, this had led to an increase in the money supply creating strong inflationary pressures and a higher budget deficit. Moreover, most of the credit was directed to unprofitable state farms unable to service these loans.

However, a temporary scheme with smaller amounts of preferential credits was introduced in order to guarantee the provision of credit to the agricultural sector, with emphasis on borrower discipline. These directed credits were transparently budgeted in the state budget. While the provision of directed credit was previously channelled through one bank, the preferential credit scheme will involve several commercial banks. A fund for the spring campaign, established in February 1997, allocated an Lei 550 billion for planting in the fall. A fund for the purchase of wheat, established in June 1997, allocated an additional Lei 500 billion for that purpose. Both funds will work on a revolving basis, with new projects financed from the repayment of earlier loans. Banks have to assume the credit risk, with no government guarantees being provided.

Credits from the fund for the spring campaign were disbursed through seven commercial banks. The money was lent to the commercial banks at a 60 per cent interest rate and the bank margin was fixed at 20 per cent. The borrowers' interest rate was 80 per cent compared with the prevailing commercial rate of 160 per cent. A 5 per cent bonus was given to commercial banks if the credit was collected at maturity and to provide incentives for repayment; a bonus equal to 20 per cent of the principal was granted at maturity. Credits from the fund for the purchase of wheat were extended to borrowers at a 30 per cent interest rate (of which 10 per cent covered the commercial bank margin). Eligible clients were millers and bakers who purchased wheat to supply domestic bread.

In addition to Banca Agricola and commercial banks, since 1990 Romania has developed a network of 600 credit co-operatives which play an important role in the provision of small loans to private farms.

Agricultural trade policies

Trade policies were substantially liberalised in 1997. All export bans (except timber) and quotas (except for those included in international agreements) were removed. Export licenses were also eliminated, with the exception of cattle and sheep meat under the preferential quota agreed with the EU. The high import tariffs that have isolated Romanian agricultural producers from world markets were significantly lowered for most agricultural products. This will create a competitive environment conducive to a higher efficiency of Romanian agricultural products both in terms of cost and quality. The production weighted average tariff for agriculture and food was reduced from 67 per cent in 1996 to 27 per cent in 1997. The highest import tariff rates were set at 60 per cent for sensitive products, such as meat and meat products, dairy products, selected vegetables, sugar products and fruit juices. Exceptions are alcoholic drinks and cigarettes for which tariff rates are higher. Import licenses were also removed, except for those commodities subject to preferential quotas under international agreements. A second phase of import tariff liberalisation is expected to take place in 1998, with the production weighted average tariff expected to be reduced to 22 per cent. The maximum tariff rate will be set at 45 per cent for sensitive products.

Summary and outlook

Economic activity in Romania contracted sharply in 1997 under the impact of the stabilisation and structural adjustment programmes adopted at the beginning of the year. Financial discipline was strengthened. In particular there were large reductions in indirect subsidies to the industrial sector and a phasing out of directed credits to the agricultural sector. As a result, the budget deficit was cut back to 4.5 per cent of GDP, from 6.5 per cent in 1996. For 1998, the government has announced a target of 3.6 per cent of GDP. This would be achieved by increasing budget revenues from indirect taxes, as well as prudent salary policies. Inflation remained volatile on a monthly basis and increased at the end of

1997. Year-end inflation in 1998 is forecast to fall to around 40-45 per cent from 151 per cent in 1997. While foreign investment conditions have improved, restructuring of large state-owned enterprises, including through privatisation or liquidation, has been slower than originally foreseen. Therefore, the fall in the output of sectors undergoing restructuring is far from over and unemployment is expected to rise.

The agricultural sector was a prime target for economic reforms. All price and margin controls were discontinued. Trade policies were also substantially liberalised as quotas and bans on agricultural exports and export and import licenses were removed. Import tariffs on agro-food products were lowered from an average of 67 per cent in 1996 to 27 per cent in 1997 and are expected to fall to around 22 per cent in 1998.

The system of directed credits was dismantled and replaced by a transparent system of preferential credits with the interest rates subsidised from the state budget. These short-term credits were for wheat purchase and agricultural works and will operate on a three-year revolving basis. Small farmers' liquidity constraints were addressed through a voucher system to enable them purchase inputs. This scheme has been successful and will continue in 1998.

New land reform legislation adopted in 1997 freed up land transactions between individuals (including removing the state's pre-emptive purchase rights), allowed subleasing arrangements, raised the maximum area of land which may be purchased from 100 to 200 hectares and gave former landowners the right to demand more land (the Law establishing the physical restitution of land is expected to pass in 1998). However, the status of land remaining under state farms has not yet been clarified as there are many claims on land held by state farms from which claimants have been receiving dividends rather than the title to the land itself. Privatisation or liquidation procedures were initiated for food processing industries, poultry and pig state farms, grain storage companies, and input and service companies. While there has been some progress in the privatisation of food processing industries (which is expected to be completed by 1999), some large farms, notably pig and poultry, remained under state control as did the key input suppliers and output distributors. The privatisation of state farms appears to be the most critical component of the privatisation process, but it will depend to a large extent on the progress made in the implementation of land legislation.

9. THE SLOVAK REPUBLIC

Macroeconomic situation

GDP in Slovakia continued to grow at around 6 per cent, only slightly below the rates attained in 1995 and 1996. Growth was underpinned by increasing private consumption as well as robust public investment. Consumer inflation was 6.4 per cent in December, up slightly from the end-1996 level, and rose to 7.2 per cent in January driven by higher indirect tax and other administrative measures. Unemployment remained at around 13 per cent. Of particular note is the decline in the current account deficit from 11 per cent of GDP in 1996 to around 7 per cent in 1997, a result of improved export growth and a sharp slowdown in imports, the latter induced by the re-introduction of an import surcharge and quality certification requirements for imported products.

While the improvement in the trade deficit helped reduce the overall current account deficit, it could not fully remove the pressure on the Slovak crown. But the additional tightening of monetary policy in 1997 helped to stabilise the Slovak crown against the Deutschemark and brought about a strong appreciation against the Czech crown (the Czech Republic is Slovakia's main trading partner, accounting for about one-quarter of total trade). Limited exposure to international capital markets and the tight monetary policy of the Central Bank helped keep the currency out of the financial turmoil that engulfed many emerging markets in the second half of 1997. In this environment of potential exogenous risks, fiscal restraint and further improvements in the current account will be needed before the Central Bank can reduce interest rates in 1998. The proposed budget for 1998 projects a consolidated deficit (including public infrastructure projects) of around 2.5 per cent of GDP, slightly lower than in 1997, but possibly higher than warranted given the concerns about the external balance and the associated strength of domestic activity.

High real domestic interest rates are adding to the costs of much needed restructuring. In this regard, uncertainties about the stability of the banking sector were heightened near the end of 1997 when one of the major banks, with majority private ownership, was placed under the direct supervision of the central bank. The prospects of substantial reforms and privatisation in the banking sector and other parts of the economy may be even more uncertain in the context of the 1998 election period.

The Law on Revitalisation of Firms came into effect in July 1997 and the first applications reached the Revitalisation Committee (comprised of the Finance Minister, other key Ministers, Governor of the NBS and presidents of the big state-owned commercial banks) at the end of 1997. There were over 1 000 applications, but only ten have survived the screening procedures and forwarded to the Committee. Details of this scheme, as well as their financial implications, remain unclear even within the Ministries most directly concerned. According to the Ministry of Finance, the 1998 budget contains no funds dedicated to this revitalisation process. Instead, what seems to be envisaged is for "successful" applicants to have their debts rescheduled (and/or cancelled), including overdue payments of taxes and social security charges, and debts to the state-owned banks. The latter would then be allowed to draw on reserves and provisions they have built up against bad debts. It is notable that while undergoing revitalisation, firms are immune to bankruptcy proceedings and the exercise of lien rights. Hence, smaller creditors to these firms that are not party to revitalisation decisions, could find themselves shut out of the "normal" processes for having claims settled.

Situation of the agricultural sector

The share of agriculture in GDP in 1997 stabilised at around 5 per cent after the downward trend in previous years. Employment in agriculture continued to decline from 133 000 in 1996 to an estimated 128 000 in 1997, but at a more moderate pace than in the period from 1989 to 1995 (when employment in agriculture plunged from 360 000 to 145 000). The share in total employment remained stable in 1997 at around 7 per cent (Annex Table I.9), suggesting a higher labour productivity than in many transition countries.

Gross agricultural output (GAO) declined by 0.8 per cent in 1997, with crop production rising by 0.4 per cent and livestock production declining by 1.8 per cent (Annex Tables I.10 and I.11). After a slight improvement in 1996, the terms of trade for agriculture worsened in 1997. However, the overall financial situation in agriculture improved considerably due to the increased amount of direct subsidies, higher refunds of excise tax on diesel oil and a rise in the fixed price of milk. Wages in agriculture also increased both in nominal (12.8 per cent) and real terms (6 per cent).

Agricultural production and consumption

Crops

Total agricultural land continues to diminish at a moderate pace (from 1990 to 1997 agricultural land area was reduced by 5 200 hectares, i.e. by 0.2 per cent) and the percentage of crop land slipped from 61.5 per cent in 1990 to 60.3 per cent in 1997. However, structural changes in the use of arable land continued. Oilseeds and sugar beet acreage continued to expand. After a decline in 1995 and 1996, the area sown to grains increased by 3.8 per cent in 1997, largely reflecting an increase in barley and maize area. After record production in 1996, the potato area dropped by 20 per cent in 1997.

Crop production accounted for 43 per cent of GAO. Total grain output increased by 12.6 per cent to 3.3 million tonnes. Wheat production, which accounts for almost half of total grain output, increased by 11 per cent, as well as the production of the other main grains (barley 14 per cent and maize 15.5 per cent). As regards other major crops, potato production dropped by 45 per cent, while oilseed output increased moderately (6 per cent) and sugar beet output remained close to its 1996 record level.

Livestock

Livestock accounted for 57 per cent of GAO, 12 per cent below the level attained in 1989. After a sharp fall between 1989 and 1994, the evolution of livestock numbers had stabilised (with the exception

of cows) in 1995 and 1996. However, the evolution in 1997 did not confirm that tendency. By the end of year, the cattle herd was about 10 per cent below its 1997 level, while cow inventories fell by another 8 per cent over the same period. The pig herd fell by 9 per cent and the poultry stock increased slightly.

After a moderate increase in 1996 (the first since 1989), total meat production increased by 9 per cent in 1997, with a 17.7 per cent increase for poultry, 9.1 per cent for beef and 6.6 per cent for pork production. Milk production remained at the 1996 level, as the decline in number of cows was compensated by a slight increase in milk yields (Annex Tables I.15 to I.18).

Food consumption

After a substantial fall between 1990 and 1994, per capita food consumption stabilised in 1995 and increased slightly in 1996. In 1997, the per capita consumption of meat (including poultry) increased, similar to the consumption of fish, sugar, vegetal oils and fats, potatoes, fruits and vegetables. After an increase in 1996, the consumption of milk and dairy products declined again. The consumption of eggs and grains (flour) also slightly declined. Overall, however, consumption patterns have remained stable since 1995.

Contrary to developments in most other economies in transition, the average income share spent on food⁹ remained relatively stable after the first years of the reform (1989-1993), ranging from 34 to 36.5 per cent. In 1994, the share increased to 38.1 per cent and has stabilised slightly above 37 per cent between 1995 and 1997 (Annex Table I.9).

Agricultural trade

Trade flows

In 1997, agricultural and food products accounted for 8.1 per cent of total imports and 5 per cent of total exports (Annex Table I.6). Agro-food imports increased by 5 per cent (compared with 16.5 per cent in 1996 and totalled SKK 28 billion (US\$835 million), while exports increased by 10 per cent (compared with a decline of 16.7 per cent in 1996) and amounted to SKK 14.9 billion (US\$443 million). After a sharp increase in 1996 (86 per cent), the 1997 agro-food trade deficit remained close to the 1996 level (Annex Table I.5).

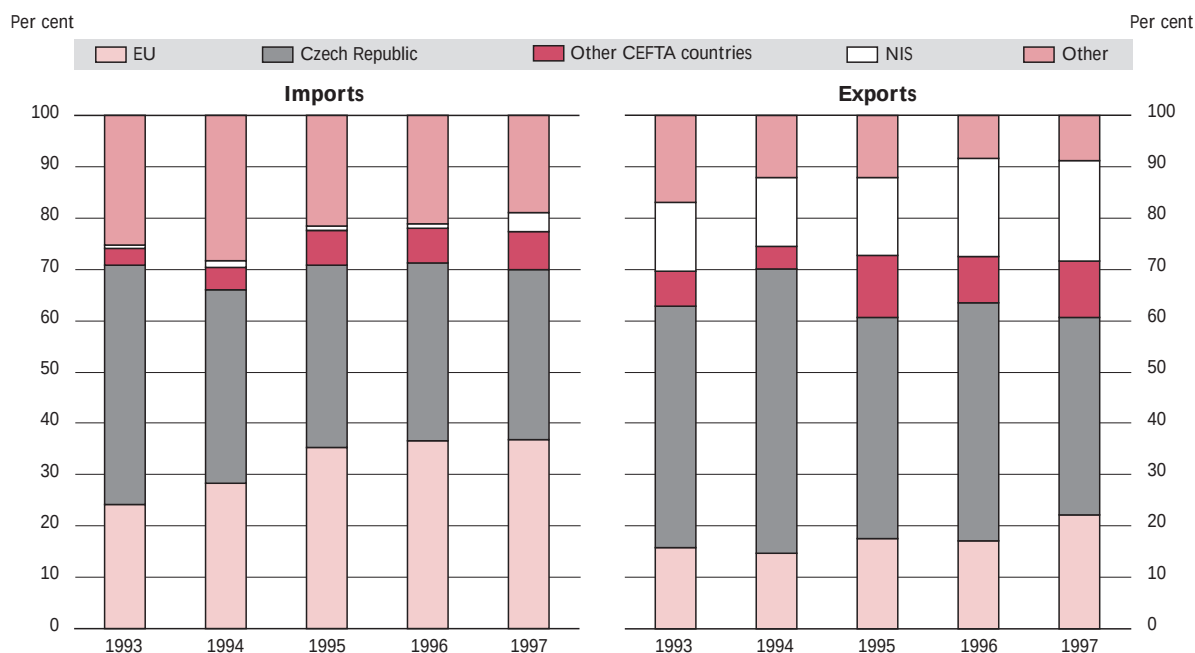
As far as the structure of agro-food imports is concerned, the position of tropical products remained fairly stable around 22 per cent. However, for temperate zone products significant shifts occurred in 1997. Imports of milk and dairy products, sugar, potatoes and beverages (alcoholic and non-alcoholic) fell due to the sufficient level of domestic supply and the application of import-control measures. On the other hand, imports of pork and poultrymeat increased, reflecting consumer preferences and the lower competitiveness of domestic producers after a poor feed grain crop in 1996.

The main products exported in 1997 were milk and dairy products, beverages, tobacco and cigarettes and oilseeds. Exports of oilseeds, sugar and live animals increased considerably. However, sugar exports (70 per cent) were heavily subsidised. Exports of dairy products increased by 23 per cent compared with 1996 levels and strongly benefited from export refunds. The strong export position of flour and grain products weakened and export of wheat flour reached only a third of the value exported in 1996.

The Czech Republic remained (although with declining shares) Slovakia's main trading partner in agro-food products with a 39 per cent share of Slovak agro-food exports (47 per cent in 1996) and 33 per cent of imports (35 per cent in 1996). Other CEFTA countries (Hungary, Poland, Slovenia, Romania) account for relatively small shares of Slovak agro-food trade (Graph I.9.1). The limited liberalisation in agro-food trade among CEFTA countries has so far failed to intensify trade with the Slovak Republic, as agro-food trade with the Czech Republic is far more liberalised under the rules of the Customs Union.

Imports from the European Union have been steadily increasing in both relative and absolute terms and attained 36.7 per cent of total Slovak agro-food imports in 1996, remaining at the same level in 1997 (36.9 per cent). Exports to the European Union, which stagnated in 1995 and 1996 at around

◆ Graph 1.9.1. *Slovakia: territorial structure of trade in agro-food commodities*



Source: Custom Office Statistics.

17 per cent, increased to 22 per cent in 1997. Exports to the NIS remained high at around 20 per cent, while the share of imports from the NIS increased from 0.7 per cent in 1996 to 3.7 per cent in 1997 (Annex Table I.8).

Trade relations

The agricultural part of the Final Agreement of the Accession of Slovakia to the European Union was finalised in 1997. The Agreement provides for additional tariff concessions for selected agricultural exports from Slovakia, notably cattle, malt, cheese and apple juice. As regards imports from European Union, the Agreement brought no substantial changes to existing arrangements. As in previous years, the actual exports remained below the quota limits. Of 39 quotas, only seven were fully utilised (skim milk powder, natural honey, flowering plants, nuts, apples, apple juice, small fruit), three (butter, cheese, nuts) at a rate 80 per cent and the rest at even lower rates or not at all.

The Customs Union Agreement with the Czech Republic has had a major impact on the regional structure of Slovak agro-food trade (see above). However, due to an increasing Slovak agro-food trade deficit with the Czech Republic in 1996, the Slovak authorities initiated negotiations within the Board of the Customs Union (CU) regarding possible regulatory measures and agreed to conduct a continuous monitoring of eight “sensitive” items. The Slovak authorities also unilaterally introduced an import quota on beer and non-alcoholic beverages.

In addition to gradually liberalised trade within the CEFTA countries (joined by Romania on 1 July 1997), Slovakia concluded a number of bilateral free-trade agreements in 1996 and 1997 (mostly with countries considering CEFTA membership, such as Bulgaria and the three Baltic countries).

Agricultural policy developments

Structural policies and privatisation

Co-operative farms remained dominant in Slovak agriculture (operating on 57 per cent of total agricultural land). Their structural transformation continued and should be considered as a long term process. In 1996, two important events affected the restructuring and privatisation process of the co-operatives. An amendment of the Transformation Act (governing the transformation of collective farms), voted in November 1995, came into effect in 1996. According to the amendment, the transformed enterprises had to deliver property certificates before 30 June 1996 to entitled persons in the form of negotiable securities, so-called "co-operative farm participation certificates". At the same time the amendment abolished the option for entitled persons to withdraw their property in 1999 and replaced it with negotiable securities. This legislation might also have the effect of creating a structure with more flexible management and encourage a shift from production type co-operatives towards other types of corporate farms not based on co-operative principles. The transformation process, however, remained sluggish and by the end of 1997 only about 50 per cent of co-operatives had completed the issuance of certificates and share certificates of only 5 per cent of co-operatives were traded as of that date.

The privatisation of state farms advanced less spectacularly than in 1996 as at the end of 1996 the ruling of the Constitutional Court (No. 352/1996, effective from 11 December 1996) put an end to direct sales by the State Property Fund without public tenders. By end 1997, however, 86 per cent of state farm assets were privatised and the privatisation process in the food industry is nearly complete with 97.8 per cent of the assets privatised.

Price support policies

As in previous years, price support concentrated on the dairy sector with administered prices for milk, a production quota and complementary payments (for milk quality). The administered price was raised in 1997 by 7 per cent to SKK 7.30 per litre and for 1998 the administered price was increased by another 6 per cent (to SKK 7.75 per litre). The complementary (quality) payments also remained unchanged compared with 1996. The national production quota remained fixed at 0.9 billion litres. Milk price was supported by subsidised exports of milk and dairy products by the State Fund for Market Regulation (SFMR). After a steady decline from 1991 to 1995, the value of the export subsidies granted to milk and dairy products increased by 8 per cent in 1996 and by 46 per cent in 1997.

For other key agricultural products (grains, beef and pigmeat and most recently sugar) price support is provided by intervention purchases of the SFMR. In 1997, the SFMR intervened on a wider range of products, including all types of grains, sugar, beef and pigmeat, poultry (Table I.9.1). For some products the quantities bought by the SFMR represented shares of around 10 per cent of marketed

Table I.9.1. **SFMR interventions and subsidised exports in 1997**

Commodity	Intervention volumes 000 tonnes	Intervention price SKK/ tonne	Subsidised exports 000 tonnes	Export refunds Million SKK
Beef for slaughtering	11.4	42 100	1.5	13.3
Pigs for slaughtering	2.2	35 500	—	—
Canned meat (beef and pork)	—	—	1.1	57.9
Chicken for slaughtering	1.5	28 100	—	—
Ducks for slaughtering	0.2	40 000	—	—
Fresh eggs	1.7	29 500	—	—
Dairy products	—	—	—	308.9
Sugar	—	—	13.9	47.9
Malt	—	—	30.5	25.9
Total export refunds				453.9

Source: State Fund for Market Regulation.

production (wheat, maize, sugar and beef) thus giving SFMR a strong influence on market prices. Export refunds also increased in 1997 (dairy products, beef) and were applied to a wider range of products (sugar, pigmeat, poultry).

Direct payments to agriculture

As in previous years, 1997 budget subsidies were allocated mostly in the form of direct payments. The government allocated SKK 6.6 billion (US\$196 million) in the form of direct payments to less favoured areas (LFAs), 22 per cent more than in 1996, input subsidies and milk quality premiums (Table I.9.2). Direct payments to LFAs amounted to SKK 3.6 billion and followed the same rules as in 1996, i.e. direct payments on a per hectare basis with the rate varying according to the quality of land. Another increasingly important part of direct payments was targeted to cover 30 to 40 per cent of the price of compound feed components, as well as seeds, fertilisers, pesticides and irrigation water. This support increased in 1997 by 46 per cent (around 40 per cent in real terms). Moreover, the refunds of the fuel excise tax granted to agriculture increased by 43 per cent (from SKK 841 million in 1996 to SKK 1200 million in 1997). The milk quality premiums paid from the state budget to milk producers also increased by 35 per cent, to SKK 1 billion.

Table I.9.2. **Budgetary payments to agricultural producers**

SKK million

	1995	1996	1997	1997/96
Direct payments to LFAs (per hectare)	3 318	3 306	3 570	108
Suckler cow (sheep) premium	196	187	275	147
Direct payments to compensate inputs costs	1 193	1 170	1 750	150
Milk quality premiums	777	742	1 000	135
Total Direct payments	5 484	5 405	6 595	122
Investment grants	935	1 110	1 190	107
Subsidised interest rates	217	46	235	514
Total payments	6 636	6 561	8 020	122

Source: Ministry of Agriculture and Food Industry.

Credit and investment policies

The main support for farm credit and investment was provided by the State Support Fund for Agriculture and the Food Industry (SSFAF), which has been in operation since September 1994. The role of the Fund is to support investment in agriculture and the food industry, as well as to stimulate development of the land market. The SSFAF operates two schemes: loans at low interest rates and financial guarantees (up to 70 per cent of investments) for credits extended by commercial banks at commercial rates. However, due to a lack of commercial credits to agriculture, the financial guarantees of the Fund are of very limited use. The main support to agriculture (although through a less transparent mechanism) is channelled to agriculture by direct loans from the Fund at low interest rates.

Farmers also have access to investment grants from the state budget to support investments in modern farm technologies. These investment grants increased by 7 per cent (Table I.9.2). In addition to providing (mainly short-term) loans to farmers, some commercial banks apply specific debt instruments (e.g. green bills discounted by NBS) or accept guarantees of the Slovak Guarantee Bank for the so-called green credits.

Agricultural Trade Policies

In 1997, under pressure of an increasing trade deficit in the second half of 1996 and first half of 1997, Slovakia reintroduced¹⁰ anti-import measures of a non-tariff nature. These include the introduction of import deposits from 1 May 1997. These deposits were cancelled in July 1997 and replaced by the reintroduction of an import surcharge of 7 per cent. Moreover, the import surcharge covers more products than that applied from 1994 to end 1996 and includes a wide range of agro-food products. The import surcharge was reduced to 5 per cent between January and March 1998, then to 3 per cent between April and September, and, finally, to zero as of 1 October 1998.

Specific measures were also taken to limit agro-food imports. Some of these non-tariff measures were applied to trade with the Czech Republic within the Customs Union (see above). Others were applied more generally in the form of additional veterinary and phyto-quarantine measures and requirements for certification of imported goods. Agro-food export enhancing policies (export refunds) were applied on a larger scale.

Agro-Environmental Policies

The goals of the government's agro-environmental policies are specified in the Principles of Agricultural Policy of the Slovak Republic. They include the declaration of special farming regimes in protected natural areas and groundwater protection zones, grassing of slanted and erosion-endangered soils and introduction of organic farming. The land area used for organic farming increased from 19 000 hectares in 1996 to 28 000 hectares in 1997. In an attempt to harmonise the Slovak legislation with the legislation of the European Union, in 1997 the government prepared and submitted to the Parliament a draft of the Ecological Farming Act. This legislation includes the methodology for farming in areas at risk of erosion and the Code of Good Farming Practice. Moreover, a Code for Farming in Groundwater Protection Zones and a new Code on Plant Nutrition are being prepared for submission to Parliament in 1998.

Producer and Consumer Subsidy Equivalents

The percentage PSE for all commodities showed a continuous downward trend from 57 per cent in 1990 to 19 per cent in 1996. However, the trend reversed in 1997 and the overall PSE increased to 25 per cent (in nominal terms from US\$304 million in 1996 to US\$403 million in 1997). The 1997 increase in the PSE was a combination of a rise in market price support (MPS) and increasing budgetary transfers. While transfers from the budget have been increasing since 1994, the increase in MPS is a new element. From 1990 to 1996, the MPS decreased sharply and became slightly negative in 1996. The MPS increased again in 1997 and reached 25 per cent of the total PSE, while direct payments represented 30 per cent and other budgetary support 45 per cent (Annex Table III.7). The MPS increase is a combination of continued rises in domestic prices, reflecting various price support policies (rising administered and intervention prices, further import restrictions, growing export refunds) and the decline in world reference prices. With the abolition of consumer subsidies in August 1990, the CSE became the mirror image of the market price support component of the PSE and has been evolving in line with it.

The very high percentage of support to the livestock sector in 1995 and 1996 can be attributed to the sharp increase in reference prices for grains. This in turn resulted in aggregate negative support for crops and translated into positive support for livestock producers via the feed adjustment. As the MPS and overall support for grains became positive, the high level of support to the livestock sector declined. However, the support measured by PSE declined for pigmeat and poultry (sectors using large inputs of grain) while increasing for milk and beef (where the effect of feed adjustment is lower). As far as non grain crops are concerned, the support measured by PSE increased for potatoes and sugar. These two products together with milk are traditionally the commodities with the highest level of support expressed in terms of percentage PSE. The product breakdown of PSEs is shown in Annex Table III.8.

Summary and outlook

Slovakia continued to record positive macroeconomic developments in 1997 and the overall macroeconomic framework was stable. The main area of concern is the still significant, although reduced, current account deficit. The National Bank has continued to tighten monetary conditions to curb domestic demand and has substantially contributed to a more stable macroeconomic environment.

The share of agriculture in GDP and employment has not changed substantially compared with 1996 following the downward trend of previous years. Gross agricultural output (GAO) declined by 0.8 per cent reflecting a decline in livestock output and a moderate increase in crop output. After a slight improvement in 1996, the terms of trade for agriculture worsened again in 1997. However, the overall financial situation in agriculture improved considerably due to an increase in direct subsidies.

Agricultural policy continued to be focused on the four main policy objectives set out in a five-year programme approved by the government in July 1993: providing food security; providing economic stability and a satisfactory level of income for the farming sector; preserving the countryside and the environmental function of agriculture; and, sustaining agriculture and the rural population in less favoured areas. Total budgetary resources allocated to agriculture increased by 23 per cent (in nominal terms) over 1996. The main support to agriculture was channelled by direct payments to less favoured areas, direct payment to agricultural producers to compensate for high input prices, investment grants, subsidised credits and credit guarantees. Market interventions and guarantee prices also increased, as did export refunds. Moreover, in order to overcome the deterioration of its agro-food trade balance Slovakia introduced some non-tariff measures to limit imports.

In PSE terms, total support increased from 19 per cent in 1996 to 25 per cent in 1997 due to a combination of further market price support (MPS) and increasing budgetary transfers. The major increase in budgetary spending was for input subsidies and direct payments to products (milk). The MPS increase was influenced by domestic price support, a combination of direct interventions on the domestic market and increasing border protection (mainly through non-tariff measures). Thus, the potential of market distortion and resource misallocation enhanced by implemented policies is increasing and, in the longer term, may hinder progress towards a competitive agricultural sector. Although current agricultural policy measures are implemented under a programme set for the period 1993 to 1998, there are no clear signals whether the current mix of policies will be maintained beyond that period or whether a reform of agricultural policy is envisaged.

10. SLOVENIA

Macroeconomic situation

Slovenia's officially registered GDP grew by 3.2 per cent, although the actual rate could be higher and range between 3.5 and 3.7 per cent. Growth was mainly driven by rising foreign demand, since exports increased by 7.5 per cent, contrary to 1996 when growth decelerated slightly partly due to slower growth in Western Europe and reduced demand for Slovenian goods. Real wage growth was slower compared to previous years and resulted in moderate growth of 2.3 per cent of household consumption, while public consumption increased by 5 per cent. On the supply side, the growth of industrial output was more stable than in 1996 and the year-on-year growth rate reached 6.2 per cent in December 1997.

Official estimates reported a slight increase in the unemployment rate to 14.4 per cent at the end of 1997 compared to 13.9 per cent for the previous year, largely a result of ongoing restructuring in the manufacturing industry and low labour mobility. According to the annual labour force survey which follows ILO standards, however, the unemployment level slightly declined from 7.3 per cent in 1996 to 7.1 per cent in 1997.¹¹

Slovenia made broad adjustments to prices of several goods and services (mainly energy) which had been previously administered as part of a comprehensive effort to restrain inflation. Consequently, the inflation rate increased steadily from April to September 1997 and thereafter stabilised in the range

of 8-9 per cent. The year-end inflation rate for 1997 was 9.4 per cent compared to 8.8 per cent for 1996. The fear of inflationary pressures from rising capital inflows led the central bank to tighten monetary policies and real interest rates remained high at more than 10 per cent. In nominal terms, the tolar depreciated by over 18 per cent against the dollar (from 135.4 tolar per US\$ in 1996 to 160 tolar per US\$ in 1997), while the depreciation against the Deutschmark was relatively moderate. The trade deficit decreased by 13 per cent to US\$767 million in 1997 and the current account recorded a small surplus of US\$70 million (0.4 per cent of GDP) thanks to a surplus on services. Inflows of FDI to Slovenia soared to US\$321 million, compared to inflows of US\$186 million in 1996. The largest foreign investment flows into Slovenia are from Croatia (due to previous economic ties), Germany, Austria, Italy and France. Levels of foreign investment are still low compared to other transition economies, but the trend in growing FDI inflows is expected to continue as the EU accession process proceeds. The few remaining restrictions on foreign investment, such as the ban on foreign land holding, will be lifted once the EU Association Agreement comes into effect in the first half of 1998.

Slovenia's government loosened fiscal policy in 1997. Pressure from wage rises in the public sector and the pension system led to a budget deficit of 1.2 per cent of GDP from a roughly balanced position in previous years. The budget deficit is expected to fall below 1 per cent of GDP in 1998 as the government plans to reduce expenditures linked to wages in the public sector and social transfers and to raise taxes in several areas. Reforms for the introduction of private pensions are expected to begin by the end of 1999. Currently, almost all pensions are paid out of a state fund.

Situation of the agricultural sector

Agriculture accounted for 4.4 per cent of GDP in 1997, remaining relatively stable since 1993. GAO increased slightly by 0.3 per cent due to a 3.6 per cent increase in livestock production, which since 1994 has continued its recovery, while crop production decreased by 2.9 per cent (Annex Tables I.10 and I.11.i and ii).

The share of the active population employed in the agro-food sector was 9.2 per cent, with primary agriculture accounting for 6.2 per cent. Employment in primary agriculture decreased from 7.8 per cent in 1992 to 6.2 per cent in 1997, but this share is expected to decline only slightly in 1998. The majority of those engaged in agriculture are employed on small-scale, mostly part-time, private family farms. Only about 20 per cent of individual farms derive their income exclusively from agricultural activities. Rural households have multiple sources of income that include farming, forestry, tourism, activities in the building sector, off-farm employment and small businesses. The average income of full-time farmers is below the average wage for non-agricultural activities.

Agricultural producer prices increased at a slower rate than inflation for the first time since 1993. While retail food prices increased by 9.1 per cent, agricultural producer prices increased by 6.7 per cent. In particular, producer prices for crops and fruits decreased respectively by 0.5 and 7.2 per cent in nominal terms. On the contrary, milk and pork prices increased by around 15 per cent, while nominal increases in beef, poultry and egg prices were lower than the inflation rate.

The food processing sector contributed 4.6 per cent to GDP while its share in total employment was 3 per cent. The food industry accounted for 10.4 per cent of the output of the entire manufacturing sector. There are wide disparities between the different sub-sectors. The most profitable sectors are the industries of non-alcoholic beverages, while milling, milk, sugar, fish and meat processing industries have low or negative rates of return. Capacity utilisation in many branches of the industry is very low, partly because part of the food industry was meant to process agricultural products from all of the former Yugoslavia. Since Slovenia's independence, these capacities have not been fully used. For example, in 1994 capacity utilisation rates were 63.5 per cent on average in the manufacturing sector but only 48.7 per cent in the food processing industry. The increased trade liberalisation resulting from regional trade agreements (for instance CEFTA and EU trade agreements) are likely to lower prices for raw materials and to accelerate the adjustment process in the food industry through increased competition.

Agricultural production and consumption¹²

Crop production

Crop production accounted for 48 per cent of GAO, a drop of nearly 3 per cent due to a decline in areas sown and adverse weather conditions (spring frost and drought, followed by a severe summer hailstorm) causing significant damage to crops.

Total grain output also fell by 3 per cent due to a fall in sown areas as yields of main grains increased over 1996. Maize is the most important grain crop, accounting for half of the grain area and 65 per cent of total grain production. Maize output increased only marginally by 1 per cent, while production of wheat, the second most widely produced grain, decreased slightly by 1 per cent due to a 6 per cent fall in sown areas (Annex Tables I.12 and I.13).

Beet areas sown and output of sugar beet decreased respectively by 8 and 5.5 per cent after having registered a steady increase during the 1990-1996 period. The most significant change concerned potatoes which suffered unfavourable price conditions leading to a cut of 60 per cent in the areas sown. As a result, the output for potatoes decreased by 13 per cent to 173 000 tonnes, a level similar to that of 1994.¹³ Wine grape production decreased by 4 per cent to 130 000 tonnes and that of hops, a traditional export-oriented product, increased by 11 per cent to 4 100 tonnes, which is 25 per cent higher than in 1989.

Livestock production

Cattle and pig numbers started to fall again in 1997 after some rebuilding of animal herds in 1996. On 1 January 1997, the number of cattle was estimated at 484 000, 2.4 per cent lower than a year earlier and close to the 1992 level. Cow numbers decreased similarly by 2.5 per cent. Pig numbers were rather variable over the previous years and fell by 5.6 per cent in 1997. Sheep numbers, however, continued to rise significantly by 22 per cent to 73 000 head in response to favourable price conditions. Total meat production increased by 3.2 per cent, with beef and veal production increasing by 2.4 per cent and sheep meat output by 22 per cent, while pigmeat production decreased slightly by 1.1 per cent. The production of poultry meat dropped in the early 1990s due to the loss of markets in the former Yugoslavia, but recovered steadily as of 1995 and, in 1997, the output of 61 000 tonnes was higher than the 1992 level (Annex Tables I.15 to I.17). Milk production increased by 4 per cent due to rising yields per cow and relatively high prices (Annex Table I.18). Milk yields per cow amounted to about 3 500 kg, which is still low compared to countries in Western Europe but there are specialised dairy farms in Slovenia producing about 10 000 kg per cow. Much of the milk is produced by suckling cows and is therefore not sold on the market. Cheese is the most important dairy product and its production increased by 1.3 per cent.

Food consumption

The share of household spending devoted to food, beverages and tobacco remained fairly stable at 26.4 per cent, which is one of the lowest shares in the CEECs. Consumption patterns in Slovenia followed similar trends as in OECD countries, with increased consumption of fruits and vegetables and a switch from red to white meats (demand for certain products, such as olive oil and lamb, is increasing). Consumption per capita of meat was 98 kg (as against 87.5 kg in 1992), with beef at 28.7 kg (28.5 in 1992), pigmeat at 43.9 kg (41.5 in 1992) and poultrymeat at 23 kg (15 kg in 1992). Consumption per capita of cereal products and sugar increased by 18 and 53 per cent respectively between 1992 and 1997 (Annex Table I.19).

Agricultural trade

Trade flows

The share of agro-food products in total trade remained stable, with agricultural and food products accounting for about 5.2 per cent of Slovenia's exports and 9.6 per cent of its total imports. Agro-food

imports amounted to US\$885 million, 4 per cent lower than in 1996 while agro-food exports totalled US\$436 million, a decrease of 2 per cent over 1996. The traditional agro-food trade deficit which began to decline as of 1996 by 8 per cent was further reduced in 1997 by 14 per cent (Annex Tables I.5 and I.6).

The commodity structure of agro-food imports remained fairly stable, with no major changes in general trends. The main imports (in value terms) were grains, fruits, vegetables, animal feed, meat and meat products, and food preparations, which accounted for 40 per cent of the total value of Slovenia's agro-food imports. In volume terms, imports of wine, vegetables, sugar and eggs decreased while imports of fruits, vegetable oil and pigmeat increased. As in previous years, the main agricultural and food products exported by Slovenia consisted of meat and meat products, food preparations, alcoholic and non-alcoholic beverages, milk and milk products, fresh fruits, hops and vegetables. Exports of processed products increased to some extent in 1997 at the expense of raw materials. For example, food preparations increased by 14 per cent, while the decrease in meat and milk products in value terms was 25 and 14 per cent respectively.

Slovenia's principal agricultural trading partners remained countries of the former Yugoslavia, which accounted for 52 per cent of Slovenia's agro-food exports and 12 per cent of its imports, and the EU, representing 35 per cent of its exports and 46 per cent of its imports. After having decreased in 1996, exports to the European Union rose by 7 per cent, while exports to the former Yugoslavia decreased by 8 per cent due to certain restrictions imposed on selected Slovenian products (mainly higher tariffs imposed by Bosnia and Croatia on Slovenian meat and dairy products). OECD countries supplied 69 per cent of Slovenia's imports, with the EU accounting for two-thirds of these imports. CEFTA country imports expanded, with Hungary the main trading partner with an important share in meat and coarse grain exports to Slovenia. The countries of former Yugoslavia continued to supply only 12 per cent of Slovenia's imports and the NIS share remained low at 2 per cent. The country's only agro-food trade surplus was with the latter two groups of countries.

Trade agreements

Slovenia became a member of GATT in October 1994 and joined the WTO in July 1995. Slovenia also signed several other multilateral trade agreements: with EFTA countries (1995), with CEFTA (1996) and the Association Agreement with the EU (1996). In 1996, Slovenia also concluded bilateral trade agreements with Bulgaria, the Baltic states and the former Yugoslav Republic of Macedonia.

Concerning the agreement with the CEFTA countries, agricultural and food products continued to be covered in 1997 by bilateral agreements with individual CEFTA partners and Slovenia was temporarily allowed to maintain higher import tariffs for a limited number of agricultural commodities. However, after three years of negotiations, Slovenia finally agreed in September 1997 to the conditions of the multilateral trade regime. In December 1997, Slovenia signed the Protocol 6 which includes all regulations for agro-food trade in the CEFTA agreement. Table I.10.1 below shows the tariff rates which will be applied on Slovenia's main agro-food products as of 1 April 1998.

Under Slovenia's agreement with the EU, which came into force on 1 January 1997, reciprocal preferential tariff quotas were introduced for agricultural and fish products. The European Union lowered custom duties and import levies for agricultural imports from Slovenia by 80 per cent within fixed quotas. Preferential quotas cover products such as beef, poultry and poultry products, skimmed milk, fruit juice, yoghurt, cheese, potatoes, apples, pears, hops, carrots and cauliflower. With regard to imports from EU countries, Slovenia reduced quota tariff rates by 50 per cent. The list of preferential quotas includes the following products: beef for processing, pork, ducks, geese, special yoghurts, some types of cheese, tomatoes, garlic, onions, citrus fruits, apricots, soyabeans, tomato juice and soya meal. A special trade agreement covering wine, which will include provisions for reciprocal tariff quotas and the protection and control of wine names, was still under discussion in 1997.

Slovenia also signed an agricultural free trade agreement with Croatia in November 1997, which came into effect on 1 January 1998. This agreement is expected to increase trade significantly between the two countries. Trade between Slovenia and Croatia accounts for about 10 per cent of total foreign trade for each of the two countries. The agreement covers more than 60 agro-food products and

Table I.10.1. **Tariffs for main agricultural products in the CEFTA agreement**

	Commodities	Tariffs applied
A list Duty-free and quota free commodities, as from 1 April 1998	Breeding animals Horses Durum wheat Oilseeds	0% 0% 0% 0%
A1 list – as from 1 April 1998 and up to 1 January 2000: preferential quotas – as from 1 January 2000: duty-free and quota free	Sheep and goats (meat and live animals)	0%
B list Reciprocal preferential tariffs, as from 1 April 1998	Wheat Barley Flour Pastry Poultrymeat Selected vegetables and fruits	15% 18% 15% 20% 28% 5-10%
B1 list – Reciprocal preferential tariffs, as from 1 January 2000 – for very limited quotas as from 1 April 1998 and up to 1 January 2000	Live animals (cattle, pigs, poultry) Carcass beef and pork Beef and pork meat Canned meat Hops	10-15% 15% 20% 15-18% 5%
C list Bilateral preferences for Slovenian exports, as from 1 April 1998	Potato, cheese, eggs, apples, oils, various meat products, soft drinks, wine, beer	Mainly export quotas with reduced tariffs (and a limited amount of duty-free quotas)
D list Bilateral preferences for imports from other CEFTA countries into Slovenia, as from 1 April 1998	– Potato, cheese, eggs, apples, oils, various meat products, soft drinks, wine, beer – Maize	– Duty-free import quotas or reduced tariffs – Import tariffs of 5 per cent for maize originating from the Czech and Slovak Republics and import quotas of 50 000 tonnes at preferential tariffs for maize originating from Hungary

Source: Protocol 6 to the CEFTA agreement.

provides for a reciprocal lowering of tariffs within mutually agreed quotas. This agreement is expected to have some impact on Slovenia's exports of apples, meat, beverages and dairy products, as well as its imports of grains, meat and edible products.

Agricultural policy developments

Structural policies and privatisation

Restitution and land reform

The 1991 Law on Denationalisation, together with a number of laws enacted between 1991 and 1993, established the legal framework for the return of confiscated agricultural or forest land, whether through restitution within historic boundaries or through compensation. However even under communism, about 90 per cent of land was owned and operated by small-scale family farms. The deadline for restitution was the end of 1997. Restitution claims concerned 136 500 hectares or 18 per cent of Utilised Agricultural Area (UAA) and by 1 February 1998, 20 000 hectares had been restituted (around 15 per cent of the claimed area).

State agricultural land and forests were transferred to the Fund of Agricultural Land and Forests (FALF), established in March 1993 to administer the previous "social" agricultural land and forests and to carry out the restitution process. When the FALF was established, it managed about 550 000 hectares of agricultural areas and forest (about one-quarter of the total area in Slovenia). Since

1993, part of this land has been restituted to the original owners, although at of 1998, it was still managing around 480 000 hectares, of which 320 000 hectares of forests and 160 000 hectares of agricultural land. Part of the agricultural land managed by the FALF was leased to the transformed state farms called “agricultural enterprises”, a small share was leased to private farmers and the remainder (meadows, pastures or mountainous areas) remained fallow. The seven-year moratorium on the restitution of agricultural land cultivated by agricultural enterprises will expire by the end of 1998 and the FALF should then immediately return land back to the original owners, although some opposition from agricultural enterprises and delays in the restitution process are expected. It is estimated that agricultural enterprises will have to return around 40 per cent of their cultivated agricultural land. As they operate on 7 per cent of the agricultural land, this means that around 4 to 5 per cent of agricultural land is expected to remain in the hands of agricultural enterprises.

In December 1995, a law introducing a three year moratorium on restitution to large landowners (over 200 hectares) was passed. The changes did not apply to agricultural communities (*e.g.*, villages which owned common land used for pasture), but they affected churches and religious institutions. However, at the end of 1996 the constitutional court suspended the act and, in early 1998, the restitution process to religious institutions was still under active debate.

Farm structure and size

No major changes in farm structure and size took place. About 93 per cent of all agricultural land was privately owned or leased by small private family farms. Most family farms are labour intensive and engaged in activities such as cattle and dairy production in hilly and mountainous regions as well as the production of fruits, grapes and potatoes. As in the past, land leasing remains limited and contracts are mostly on a short- or medium-term basis, although long-term leasing agreements may emerge as an important factor in farm concentration. Large-scale agricultural enterprises, located in the best flat areas of the country, operated on 7 per cent of the agricultural land and accounted for one-third of total agricultural output.

A survey of agricultural holdings was carried out in June 1997, which indicated that there are about 91 000 family farms in Slovenia with an average size of 4.75 hectares. Around 28 per cent of these farms cultivate less than 2 hectares, while those which cultivate more than 10 hectares account for 9.4 per cent of private family farms. In comparison with the results of the previous census carried out in 1991, the number of family farms decreased between 1991 and 1997 by almost 20 per cent, while the average farm size increased by about 10 per cent. The number of very small farms operating on less than 1 hectare decreased by 46 per cent between 1991 and 1997. Many small farms are abandoning production and their land is either partly being taken over by larger farms or remains uncultivated. The amount of total agricultural land cultivated by family farms decreased by 11 per cent between 1991 and 1997. The area farmed by agricultural enterprises also decreased by 20 per cent. The number of agricultural enterprises increased from 119 in 1991 to 219 in 1997 and their average size decreased by 31 per cent to 165 hectares (Table I.10.2).

Privatisation in the upstream and downstream sectors

Slovenia has few upstream industries since agricultural inputs had mostly been produced in other republics of the former Yugoslavia. A large part of its requirements for agricultural chemicals, food concentrates and machinery are imported.

The privatisation of food processing enterprises began in 1993 and is continuing. In general, privatisation has been carried out under the Law on Privatisation which provides for 40 per cent of a company's assets (“social capital”) to be transferred free of charge to state funds (pension, compensation and development funds); employees also receive 20 per cent of the company's assets free of charge, while there are several possibilities for privatising the remaining 40 per cent. Internal buy-out by employees and managers has been the most common method. Forty-six food processing enterprises (mainly dairy, meat, sugar and wine enterprises) were privatised under the Law on Co-operatives which introduced a compulsory 45 per cent participation by agricultural co-operatives – 45 per cent of the

Table I.10.2. **Evolution of private farms and agricultural enterprises in Slovenia between 1991 and 1997**

A. Private farms		Census 1991	Farm survey 1997		Change 1997/1991 Per cent
Utilised agricultural area (hectares)		482 010	430 507		-11
Size	Number	Per cent	Number	Per cent	
Total	111 951	100	90 612	100	-19
Under 1 hectare	15 596	13.9	8 482	9.4	-46
1-2 hectares	23 297	20.8	16 891	18.6	-27
2-5 hectares	37 017	33.1	34 222	37.8	-8
5-10 hectares	24 251	21.7	22 469	24.8	-7
10-50 hectares	8 141	7.3	8 513	9.4	5
Over 50 hectares	33	0.03	34	0.04	3
Average size farm	4.31		4.75		10
B. Agricultural enterprises		Census 1991	Farm survey 1997		Change 1997/1991 Per cent
Area farmed (hectares)		45 218	36 201		-20
Number		119	219		84
Average size farmed (hectares)		239.2	165.3		-31

Source: Statistical Office of the Republic of Slovenia.

“social capital” of these enterprises was converted into indivisible co-operative property and farmers’ property. The remaining 55 per cent was then privatised under the Law on Privatisation. The main objective of the Law on Co-operatives was to promote the development of the co-operatives and to strengthen the link between agricultural producers and the downstream sector. The transfer of shares has reached its final stage. At the beginning of 1998, of the 46 food-processing industries privatised, 28 enterprises were privatised, six were in the final stage of privatisation, two were liquidated, five were still under state ownership and five had owners other than co-operatives as they were privatised before the Law came into effect.

Privatisation in the downstream sector advanced in 1997 and is expected to be completed by 1998. By 1 January 1998, three-quarters of the milling enterprises, meat and fish processing industries, and businesses producing bread and pastry were privatised. Two-thirds of the dairy processing and vegetable oil enterprises, one half of beverage industries and one-third of enterprises producing other products were also privatised. All of the breweries, processed fruits and vegetables, sugar and animal feed industries have been privatised.

So far there has been no significant foreign direct investment in the food industry, primarily because the privatisation legislation has favoured management buy-outs and given preference to Slovenian citizens and organisations through the free distribution of shares to employees and investment funds. The few exceptions are Slovenia’s only sugar refinery where two foreign enterprises (a Dutch Co-operative and an Italian enterprise) have acquired over 70 per cent of the shares; one beverage industry is owned by a multinational industry; and several firms owned by companies from the countries of former Yugoslavia.

Price and income support policies

The state monopoly on wheat and sugar, as well as the established basic milk price (a guaranteed minimum purchase price) remained the main elements of the price support policy. In the wheat market, government stocks play an important role. Slovenia produces approximately half the wheat it consumes and imports the rest. The additional volumes are either imported duty-free by the state storage agencies or by other importers who must pay high import duties. The consumer price is then fixed through a pooling system at a level between usually higher producer prices and lower import prices. The state remained the only importer of wheat as the high tariff imposed on other importers was

prohibitive. By the end of 1997, Slovenia agreed to the multilateral trade regime of CEFTA. It is expected that as of 1 April 1998 the state will no longer be the only importer of wheat since the preferential tariff for wheat traded within CEFTA is 15 per cent. Intervention on the sugar market is achieved through the setting of procurement prices for sugar beet and white sugar. This policy is intended to support the only sugar factory in Slovenia which holds monopsony power. For milk, the farm gate price is complemented by payments per cow in mountainous areas and support for suckler cows and small ruminants. The basic milk price was raised by 10 per cent in real terms. Wheat purchase prices and minimum procurement prices for sugar beet decreased respectively by 7 and 2 per cent in real terms.

Budget expenditures on agriculture increased by 20 per cent to US\$106 million. About 60 per cent of the overall agricultural budget was spent on structural policy programmes, especially on general services (research, education, extension, inspection and monitoring schemes) and on payments to producers operating in disadvantaged areas. About 11 per cent was spent on subsidies reducing the costs of inputs and another 11 per cent on investment grants. Since 1992, input subsidies have been reduced and there has been a steady increase in subsidies to reduce the costs of production in less favoured areas and, to some extent, in general services for agriculture. This trend is partly due to the fact that several activities in agriculture which had so far been financed by local communities (e.g., veterinary services, administrative matters, etc.) are now financed through the state budget. New subsidies to support agricultural co-operatives (mainly through investment grants) and farmer organisations were introduced. For the first time, agricultural communities were also granted subsidies for specific structural projects at the local level (through input subsidies or investment grants). This type of measure, however, could lead to inconsistencies in the overall support policy and make it less transparent. In view of Slovenia's accession to the EU, legislation in the veterinary and phytosanitary fields needs to be harmonised with that of the EU. As a consequence, there has been therefore an increase in the 1997 budgetary support for this purpose.

Farm credit and investment policies

Credits to the agricultural sector are provided by the 61 agricultural Saving and Loan Services (SLS), operating within the framework of the Slovene-Co-operative Association, the Co-operative Agricultural Bank, as well as by a variety of commercial banks. The saving banks are accustomed to channelling various governmental subsidies for agriculture, in particular interest subsidies and governmental credits for the development of less populated areas. For farmers, the main advantages of the SLS are quick access to credit (especially short-term credit) and lower commissions than those provided by commercial banks. Interest rates on SLS loans do not, however, differ significantly from those offered by commercial banks (they are about 1 per cent lower than average rates). In 1996, the share of SLS credits in farm investments was 40.5 per cent.

Credit policies in Slovenia include interest rate subsidies on short-term loans for working capital, as well as on long-term investment credits. There is also a special government programme to support investment in land improvement and rural development. The share of interest subsidies on short-term loans in total budgetary support to agriculture decreased from 11.6 per cent in 1992 to 3.7 per cent in 1997, while the share of interest subsidies on long-term loans increased from 0.3 per cent to 1.9 per cent over the same period. Investment loans granted by SLS were mainly used to finance cattle production (31 per cent), agricultural machinery (25 per cent), and fruit and wine production (20 per cent). New investment programmes for the renovation of vineyards, orchards and the modernisation of pig farms were introduced. More than 2 400 applications were submitted for these investment support programmes, indicating a real need for structural adjustment in the agricultural sector. However, due to insufficient budgetary resources, only 30 per cent of the applications were accepted.

Environmental and rural development policies

There were no major changes in environmental and rural development policies. Financial resources allocated in support of the environment are limited. About 70 per cent of agricultural land in Slovenia is

located in disadvantaged areas, such as mountainous and karst regions, and the main support for these regions is provided by agricultural measures. Programmes specifically targeted towards rural development are carried out by three Ministries:

- the Ministry of Trade and Development, responsible for the Rural Development Fund, targets long-term development strategies;
- the Ministry of Environment and Spatial Planning distributes subsidies for protected areas;
- the Ministry of Agriculture, Forestry and Food has two programmes: the programme for the “Overall Development of the Countryside and the Revitalisation of Villages” (CRPOV), launched in 1991 to focus on single development projects at the local level, and the Fund for Regional Development and the Maintenance of a Populated Countryside, established in 1996 to co-finance economically and ecologically acceptable investment projects in regions facing depopulation.

So far the implementation of regional policy measures has not proven successful due mainly to insufficient financial means (funds for the CPROV programme amounted only to 1.6 per cent of agricultural budget expenditures but they are expected to increase in the future), selection of many small projects that do not really promote sustainable and diversified economic development in rural areas, and the overlapping of responsibilities and lack of co-ordination between the various actors dealing with the implementation of these regional policies.

Agricultural trade policies

As a WTO member, Slovenia is subject to GATT/WTO disciplines and commitments agreed to under the Uruguay Round Agreement. Initial tariff bindings were set at a high level, especially for white sugar, butter, beef, wheat and maize. At the beginning of 1998, import duties applied on most major agricultural commodities were below the level of the final bindings allowed by the GATT Uruguay Round agreement.

Slovenia's agreement to the multilateral trade regime of CEFTA at the end of 1997 (see section on trade agreements), which resulted in the lowering of import duties for agricultural products, is expected to have a major impact on the opening of agricultural markets, especially for wheat as from April 1998 and for beef and sheep as from the year 2000 (before 2000, imports of these two products will remain within limited quotas).

Summary and outlook

Slovenia enjoyed continued economic growth, with GDP growth officially estimated at 3.2 per cent. However, public sector wage pressures and social expenditures led to an increase of the budget deficit to 1.2 per cent of GDP from a previous balanced position. Inflation rose to 9.4 per cent due to rises in several administered prices (mainly energy) but is forecast to decline to 8 per cent in 1998. The GDP growth rate is expected to amount to 3.5 per cent and the government envisages reducing the budget deficit to below 1 per cent. The trend in growing FDI inflows is expected to continue in view of the EU accession process.

Gross agricultural output increased only marginally in 1997. Privatisation in the downstream industries has reached the final stage and is expected to be completed in 1998. Rural areas in Slovenia characterise the country and although they are attractive for tourism, they are often economically and socially disadvantaged. The implementation of rural development policies has so far not proven successful due to many small project that are insufficiently co-ordinated and which do not promote sustainable and diversified economic development. Small, mostly part-time farms continue to dominate land ownership and the operational structure of farms. These farms play a significant role in self-consumption and in the development of rural areas. The results of a survey of agricultural holdings carried out in 1997 reveal that, in comparison to 1991, many very small farms are abandoning production. The process of farm restructuring will be influenced by structural policies designed to encourage land concentration and by further economic development, which should offer new employment opportunities in non-agricultural activities.

The state monopoly on wheat and sugar as well as the guaranteed purchase price for milk remained the main elements of price support policy. However, further trade liberalisation arising in particular from the multilateral CEFTA agreement – to which Slovenia finally agreed at the end of 1997 – will contribute to the opening of its agricultural markets and the elimination of the state monopoly. Slovenia is also in the process of reviewing its agricultural policies to prepare its agricultural sector for EU accession. It is envisaged that direct payments, such as income aid for farmers, together with active regional development policies, are gradually to be introduced.

NOTES

1. The CEECs include Albania, Bulgaria, Croatia, Estonia, Latvia, Lithuania, Romania, Slovenia, Slovakia, as well as three OECD Member countries: the Czech Republic, Hungary and Poland. The latter three countries are included in this overview in order to provide comprehensive coverage of developments in the region. The detailed analysis of agricultural policies in these three countries can be found in *Agricultural Policies in OECD Countries: Monitoring and Evaluation 1998*.
2. A more comprehensive examination of this issue is presented in Part III, Foreign Direct Investment in the Agro-food Sector of Transition Economies.
3. A comprehensive analysis of credit and investment policies is presented in Part III, Credit and Finance Policies in the Agro-food Sector of Transition Economies.
4. In Albania, aggregate production is estimated for the calculation of GDP and GAO. The estimates capture both subsistence production and marketable surplus as it is not possible to separate the two, but the latter is considered to be relatively small.
5. For a more detailed explanation see *Agricultural Policies in the Baltic Countries: Proceedings of the Parnu Seminar held in September 1997*, CCNM/OECD, Paris 1998.
6. For a more detailed explanation see *Agricultural Policies in the Baltic Countries: Proceedings of the Parnu Seminar held in September 1997*, CCNM/OECD, Paris 1998.
7. For a more detailed explanation see *Agricultural Policies in the Baltic Countries: Proceedings of the Parnu Seminar held in September 1997*, CCNM/OECD, Paris 1998.
8. "Integrators" is the word used in Romania for intermediaries, i.e. the former grain trading organisation Romcer-eal, the commercial companies specialised in seed production and distribution, the state input and service suppliers, etc.
9. Consumer basket method: share of foodstuffs, including tobacco and beverages without public catering.
10. From 1 January 1997, Slovakia abolished the import surcharge applied since 1994.
11. The discrepancy is due to the fact that the registered unemployment includes many individuals who would not be viewed as unemployed by the ILO definition, mainly because they are either not actively seeking or available for work, or they already have an unregistered temporary or part-time job.
12. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. The closing date for data presented in this report is March 1998.
13. It should be noted that all statistical series for agricultural production were revised in 1997. Therefore, the large decline in the areas sown for potatoes without a comparable decline in output reflects changes in the statistical methodology.

AGRICULTURAL POLICIES IN SELECTED NEW INDEPENDENT STATES (NIS)

1. OVERVIEW OF DEVELOPMENTS IN SELECTED NIS

Russia, Ukraine, Kazakhstan and Belarus are the most important food producers and consumers among the 12 New Independent States (NIS). In 1997, these four countries accounted for about 90 per cent of the grain, meat and milk produced by the 12 NIS. Two tightly linked dimensions of agricultural reforms are covered in this chapter: economic restructuring, whereby shifts in the flow and use of resources are reflected in changing agricultural production, consumption and trade patterns; and agricultural policies, with a particular focus on privatisation and land reform.

Macroeconomic situation

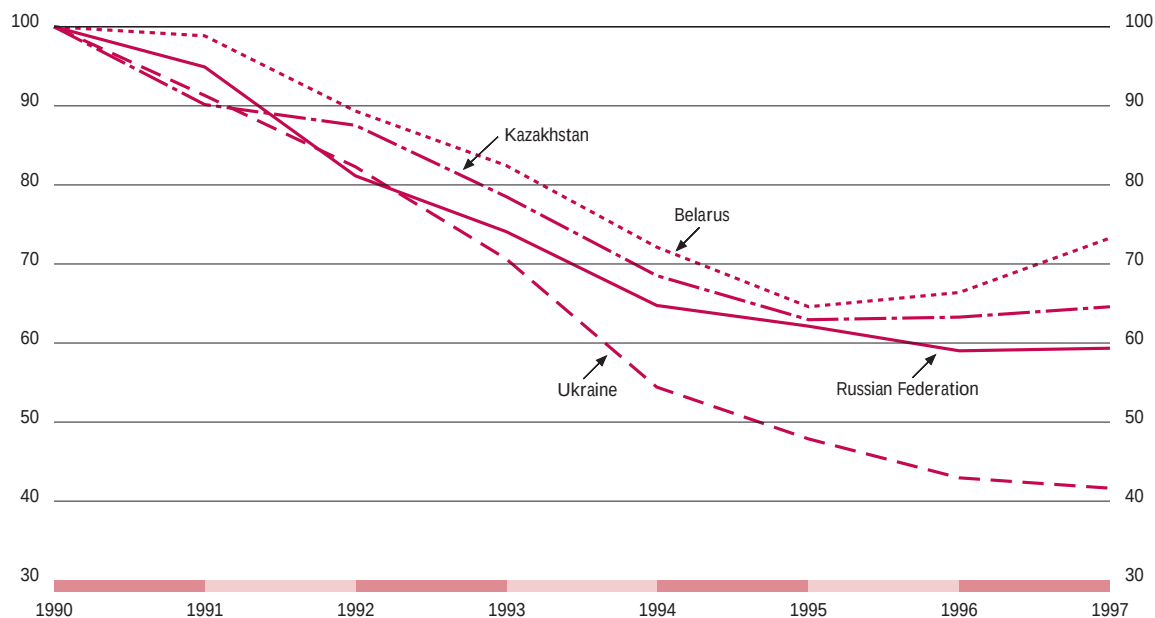
Russia, Ukraine and Kazakhstan are slowly emerging from the prolonged economic contraction that has dominated the transition period so far. GDP growth in Russia appears to have been slightly positive. The Ukrainian economy is still contracting, but at a slower pace than in previous years. In Kazakhstan, moderate growth was registered for the second consecutive year. In Belarus officially recorded growth of more than 10 per cent achieved through Soviet-style administrative measures, including production targets and extensive provision of cheap credit from the central bank, is not sustainable. In 1997, GDP in the four countries ranged between 42 per cent (Ukraine) and 73 per cent (Belarus) of 1990 levels (Graph II.1.1).

The sharp fall in the rates of inflation in Russia, Ukraine and Kazakhstan achieved in 1996 were sustained through tight monetary and fiscal policies. Inflation rates dropped to around 10 per cent in all three countries, a remarkable improvement given the high levels of earlier years (Graph II.1.2). The rate of inflation in Belarus, however, rose to above 60 per cent as a result of the expansionary monetary policies applied in 1997. The administrative methods applied in Belarus to curb the rise in prices in 1997 and early 1998 do not address the core of the problem; when the government decides to tackle inflation, it will have to apply stringent monetary and fiscal policy measures.

The officially recorded unemployment rate was stable or declining in Russia, Kazakhstan and Belarus, and rose slightly in Ukraine. However, the official data need to be viewed with caution as there are differences in national definitions and measurement techniques for unemployment, which can lead to wide discrepancies between reported unemployment rates and the real situation. For example, the 2.3 per cent rate for Ukraine is difficult to reconcile with the large output falls that have occurred. In all, four countries have large hidden unemployment in the form of long, unpaid leaves and forced part-time work remains the major problem.

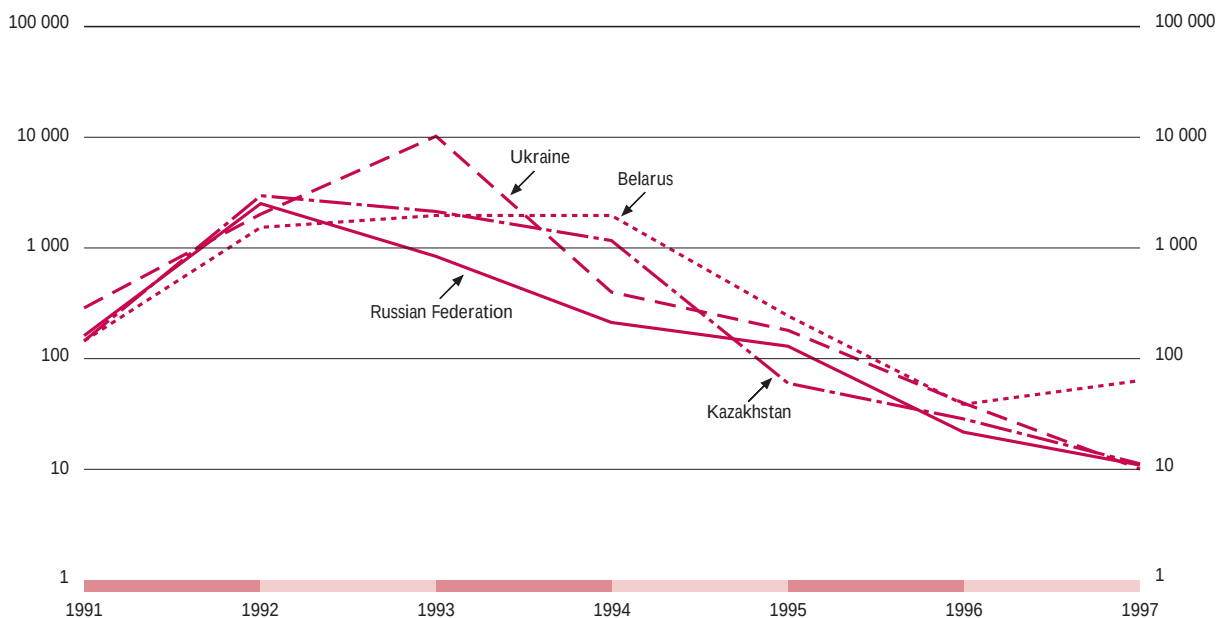
The fiscal position continues to be a cause for concern in all four countries examined. In Russia, Ukraine and Kazakhstan the problems appear to be largely on the revenue side of public finances; various methods have been used to contain public expenditures but, on the revenue side, the combination of complex tax codes, numerous tax exemptions and poor economic performance has led to major difficulties in collecting revenues. The consequences have been substantial revenue shortfalls, persistently high deficits and the build-up of tax arrears to the budget and social security funds. In Belarus, the problems are magnified by the expansionary budget policy, with the government using a large part of budgetary resources to support ailing individual enterprises and entire sectors of the economy.

◆ Graph II.1.1. **Four NIS: GDP growth, 1990-1997**
1990 = 100



Source: Annex Table II.1.

◆ Graph II.1.2. **Four NIS: inflation rates, 1991-1997**
In per cent, logarithmic scale



Source: Annex Table II.2.

Financial markets in all four countries have been hit to some degree by events in Asia, with stock markets generally falling in the second half of 1997. The most dramatic developments have been in Russia, by far the largest of these markets. Up to mid-1997, there was a large increase in foreign investment in Russia: this contributed to significant declines in interest rates and Russian stock prices almost tripled in the first half of the year. However, this situation was completely reversed in the second half of 1997. Due to the Asian crisis, combined with domestic problems, in particular the fiscal deficit, stock prices plummeted, interest rates soared, foreign capital left the country and official reserves fell. Interest payments on domestic debt were close to 5 per cent of GDP in 1997 and appear likely to increase further in 1998, particularly as interest rates remain high. These trends are putting greater pressure on the fiscal situation and raising the costs of overall economic restructuring.

A related area of concern in the NIS countries is the banking sector. The major banks in some countries are affected by high levels of non-performing loans, lack of capital and inadequate skills in risk assessment and management. As the events in Asia have demonstrated, a poorly performing banking sector can have a seriously damaging effect on real economic activity. Conversely, banks which are financially healthy and well managed are a key element in successful economic transformation.

Economic restructuring of agriculture

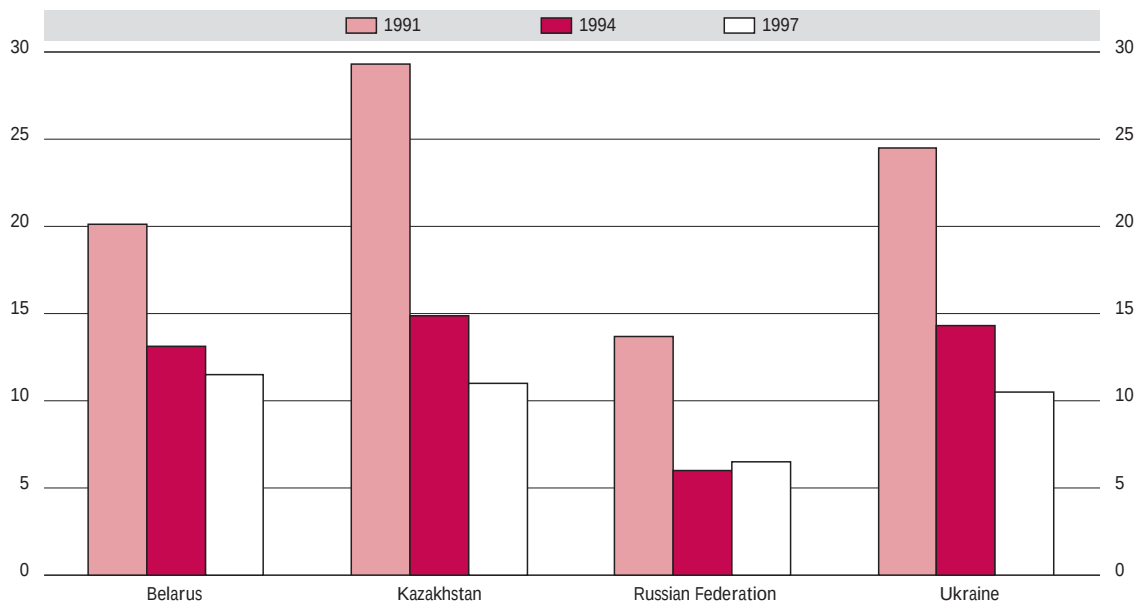
For the first time since the transition started, gross agricultural output showed some signs of stabilisation in the region with moderate declines in Ukraine (2 per cent), Kazakhstan (4 per cent) and Belarus (5 per cent) and a slight recovery in Russia (0.1 per cent). While crop production increased in all countries with the exception of Belarus, animal production continued to decline in Russia, Ukraine and Kazakhstan, albeit at a slower rate than in 1996. In Belarus, where some increase in animal production was reported, agricultural producers are still largely shielded from market forces and thus from the need to restructure.

In all four countries, there is a striking disparity between agriculture's sharply declining contribution to GDP and the stable or even growing (*e.g.* in Ukraine) share of the sector in total employment (Graphs II.1.3 and II.1.4). With respect to the sector's contribution to GDP, the drop, as measured in current prices, was partly due to a fall in the volume of agro-food production, but was more the consequence of a relative decline in agricultural prices compared to the prices of non-agricultural products after price controls were largely removed in 1992. The change in relative prices occurred in all countries in transition at the beginning of the reform process, but its impact was strongest in countries with the highest level of state support for agricultural prices under the previous system, particularly in the NIS (see also PSE calculations for the Baltic countries in Annex Tables III.1 to III.6). As far as agriculture's share in employment is concerned, since the total number of people employed in agriculture has been relatively stable or even declining since 1990, the main reason for the very high or growing share of agriculture in total employment has been the significant fall in non-agricultural employment. This reflects both the slow process of farm restructuring in the NIS and a lack of non-agricultural employment opportunities in rural areas. In fact, large farms along with household plots play a role in labour markets, often acting as employers of last resort. The consequences of such a situation are growing hidden unemployment in rural areas, declining output per farm worker, low wages paid by large farms and a deteriorating financial situation for large farms.

Crop production

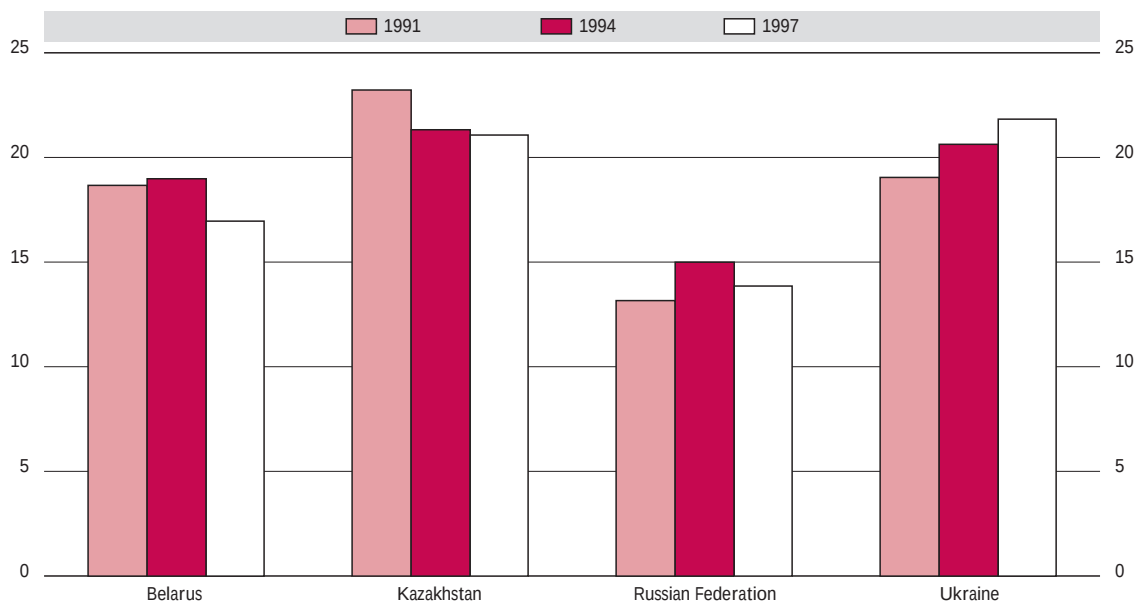
The total area sown in the four countries continued to decline in 1997 and was 4 per cent lower overall than in 1996, cumulating to a 19 per cent fall since 1990. However, the change in 1997 was strongly differentiated across countries with the sown area still declining in Kazakhstan and Russia, but increasing marginally in Ukraine and Belarus (Annex Table II.9 and Graph II.1.5). The overall fall in total area sown is indicative of a more effective use of resources since marginal lands, where production costs are higher than the expected return from the crop, have been left uncultivated. It also reflects the limited financial condition of the majority of large farms, which often do not have sufficient means to cultivate available land.

◆ Graph II.1.3. *Four NIS: per cent share of agriculture in GDP, 1991-1997*



Source: Annex Table II.4.

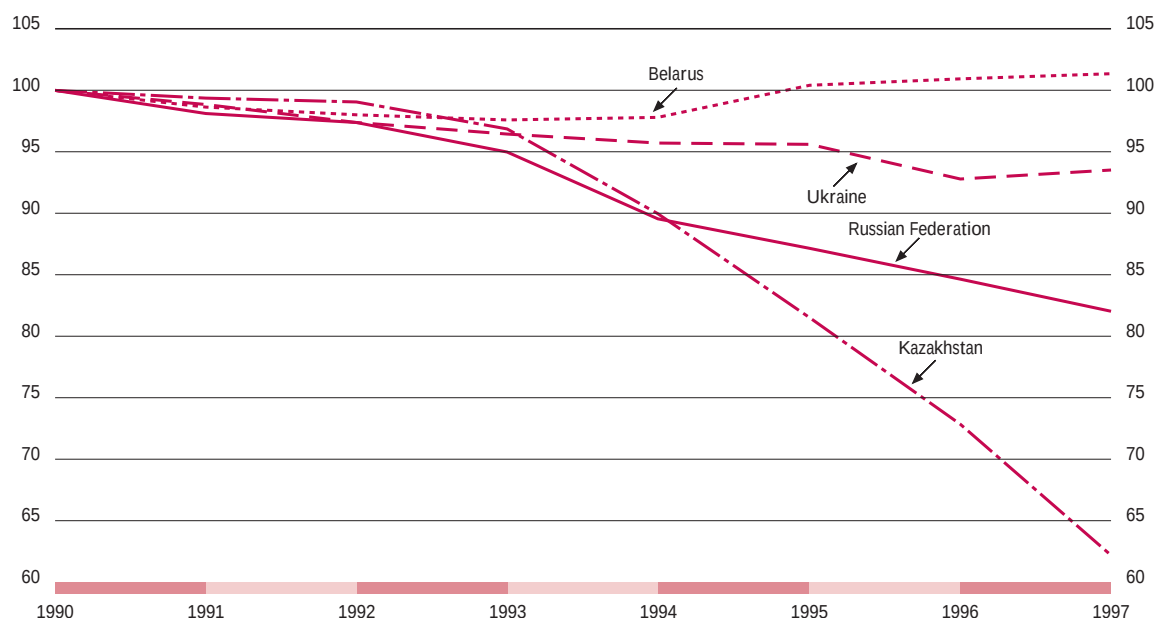
◆ Graph II.1.4. *Four NIS: per cent share of agriculture in total employment, 1991-1997*



Note: For Kazakhstan, the figure is 1996 instead of 1997.

Source: Annex Table II.6.

◆ Graph II.1.5. **Four NIS: total sown area, 1990-1997**
1990 = 100



Source: Annex Table II.9.

The total grain area increased slightly by about 1 per cent and its share in total area sown increased from 54 per cent in 1996 to 56 per cent in 1997 following an improvement in the profitability of grain production *vis-à-vis* other crops. Favourable weather conditions combined with a slight rise in the area sown to grains and, to some extent, an improvement in the farming sector's adjustment to the new commercial environment led to a significant increase in grain production. The rise ranged from 11 per cent in Kazakhstan and Belarus to 44 per cent in Ukraine. In total, grain production in the four countries amounted to 143 million tonnes, *i.e.* 28 per cent above the 1996 level, but was still well below the 1990 level, in particular in Kazakhstan (Graph II.1.6).

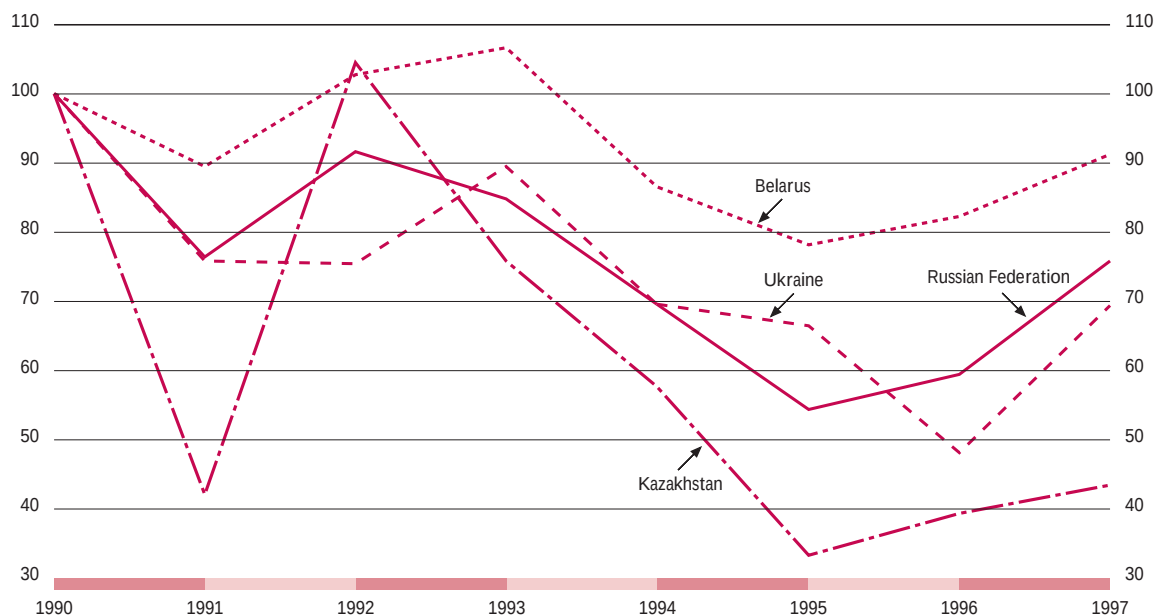
Due to considerable internal and external impediments to grain exports (see below), most of the grain surplus was used to rebuild domestic stocks which had been depleted following poor harvests in 1995 and 1996. This has contributed to lowering grain prices in 1997/1998 and reducing the profitability of grain production. There are some indications that grain losses increased in 1997/1998 as a result of large volumes of grains poorly stored on farms to avoid both official payment channels as well as the high charges levied by privatised elevators, particularly in Russia and Kazakhstan.

Livestock production

Livestock inventories and meat output continued to decline in Kazakhstan, Ukraine and Russia, but increased slightly in Belarus (Graphs II.1.7 and II.1.8). Between 1990 and 1997, cattle and hog inventories as well as meat production were roughly halved in the four NIS, with the sharpest decline in Kazakhstan and the most moderate in Belarus. Over the same period, milk production fell by about 40 per cent, ranging from 44 per cent in Ukraine to 32 per cent in Belarus (Annex Table II.13).

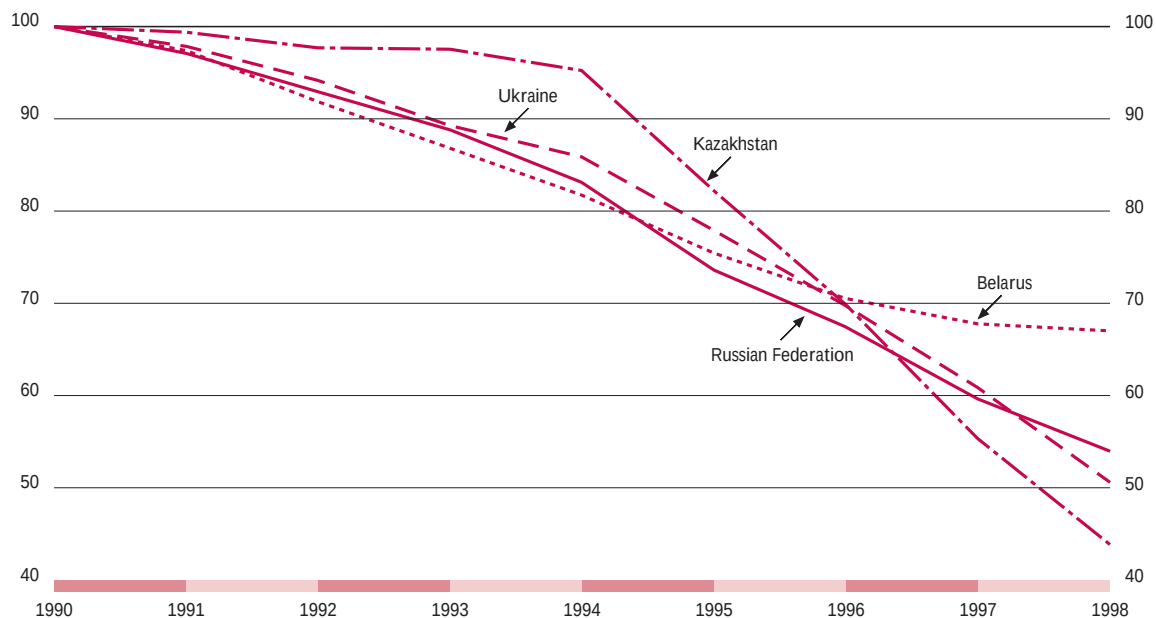
The decline in livestock production has been largely due to the same factors as those affecting overall agricultural production, such as unfavourable macroeconomic conditions, cuts in state subsidies, the cost-price squeeze following price liberalisation, an overall decline in food demand, disrupted

◆ Graph II.1.6. **Four NIS: all grain production, 1990-1997**
1990 = 100



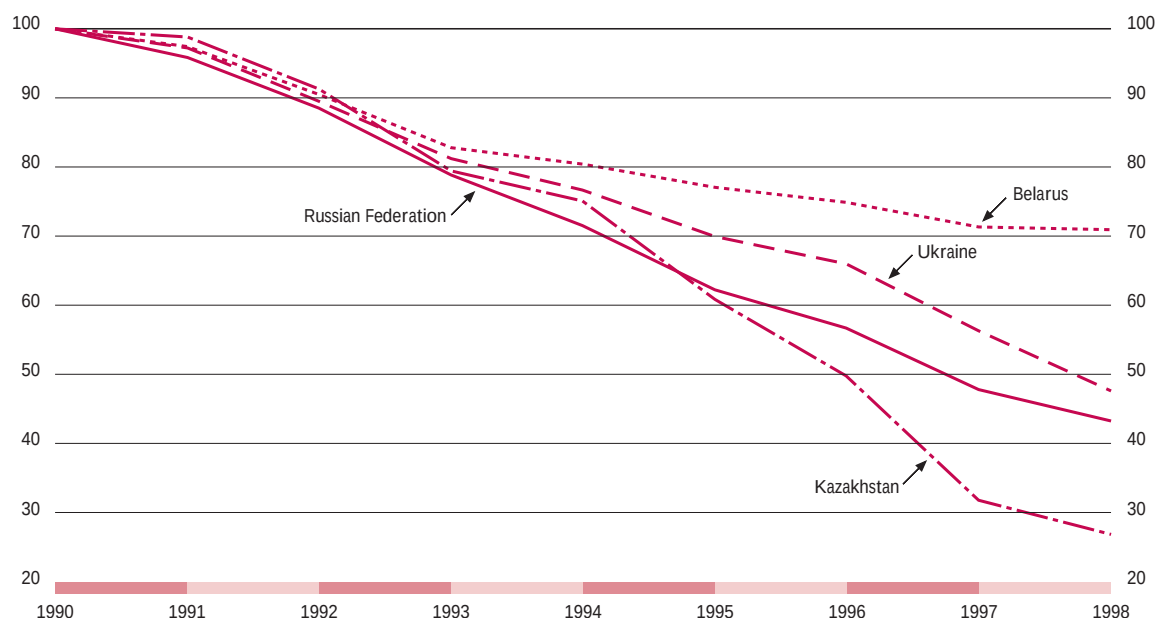
Source: Annex Table II.10.

◆ Graph II.1.7. **Four NIS: cattle inventories, 1990-1998**
1990 = 100



Source: Annex Table II.12.

◆ Graph II.1.8. *Four NIS: hog inventories, 1990-1998*
1990 = 100



Source: Annex Table II.12.

marketing channels, inefficiency of the upstream and downstream sectors, and uncertainties associated with the restructuring process of large-scale farms. However, livestock production, which declined much more than crop production during the transition period, has also been affected by changes in food consumption patterns, with the strongest falls registered in meat and milk consumption (see below), the loss of preferential treatment under the Soviet system which had provided stronger support to livestock production than to crop production, the low competitiveness of the sector against world markets in terms of both price and quality, resulting in a sharp increase in meat imports that, in addition, are supported by export subsidies applied by some OECD countries and, finally, feed shortages resulting from very low grain crops affected by droughts in 1995 and 1996.

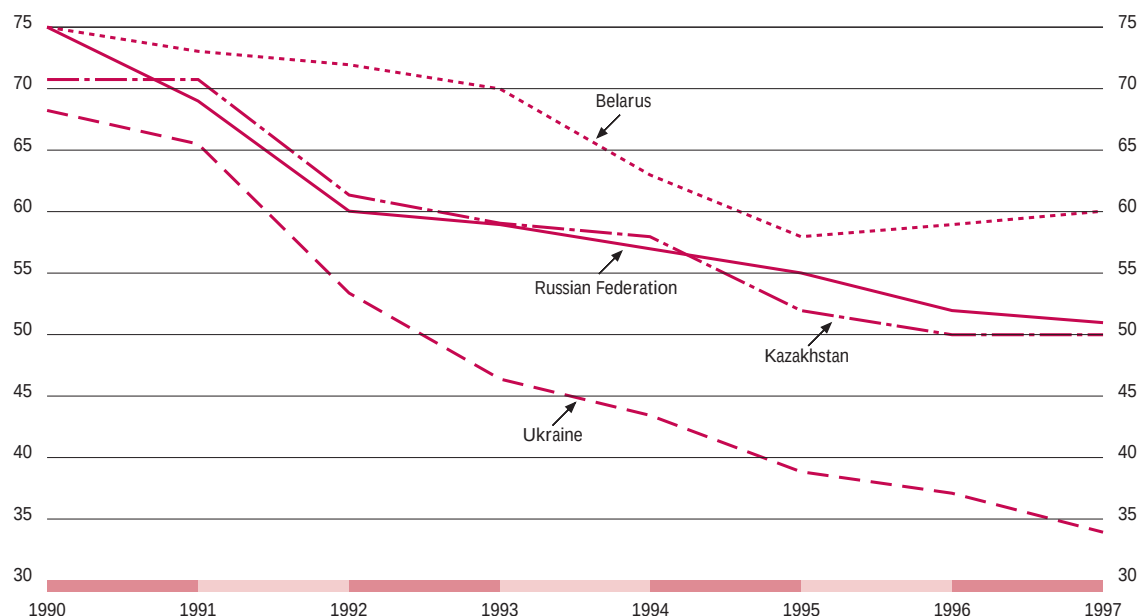
However, aggregate numbers of livestock inventories and meat production hide the differences between large farms and household plots. Household plots have buffered the much sharper decline in livestock numbers and output on the large farms, which in recent years tended to specialise in crop production, in particular grains, leaving more labour intensive livestock production for household plots. Moreover, several sample surveys showed substantial under-estimation of animal inventories on household plots, particularly in Kazakhstan. The good 1997 grain crop, increased grain stocks and a fall in some grain prices, combined with stabilised feed costs that could benefit the livestock sector, in particular pork and poultry production, should slow down the contraction in 1998.

Food consumption

The withdrawal of state support for food consumption at the beginning of the transition period, high food prices, low disposable incomes, rising fixed expenses on housing and utilities, and a wide range of non-food products available on the market caused consumers to reallocate their expenditures and to change their food consumption patterns. As a result, there was a strong tendency for consumers to shift from products with high income elasticities, such as meat and dairy products, towards cheaper

grain products, vegetables and potatoes. The preliminary 1997 data indicate a continuation of these trends, but they vary from country to country and are much less marked than between 1991 and 1994 (Graph II.1.9). As real incomes stabilise, so will patterns of food consumption.

◆ Graph II.1.9. *Four NIS: annual per capita consumption of meat and meat products, 1990-1997*
In kilogrammes



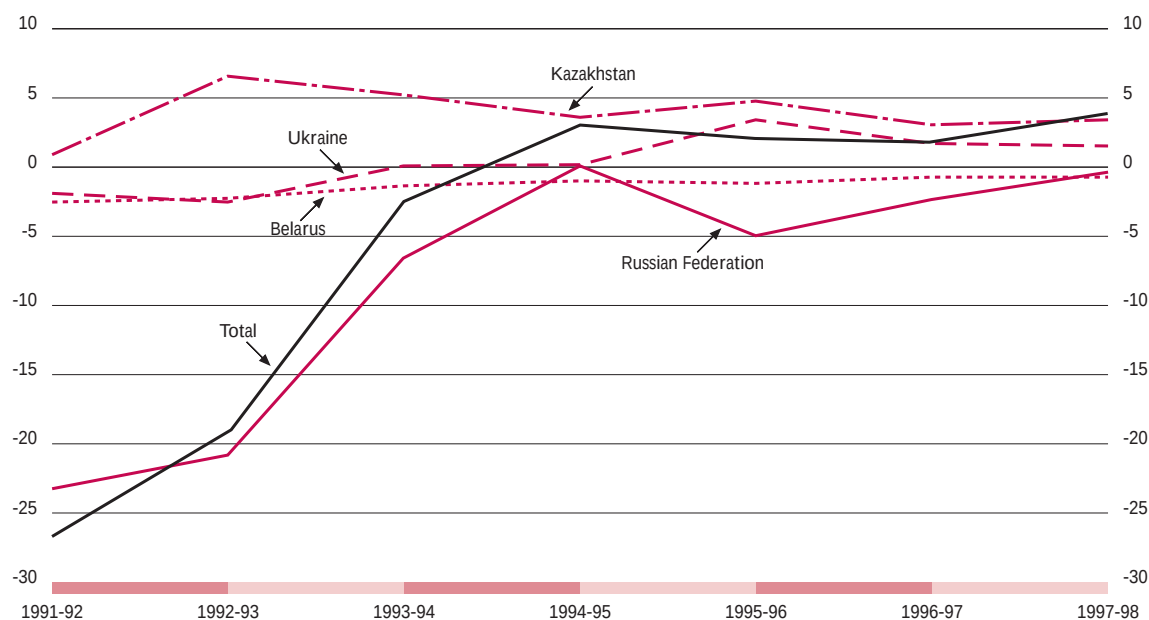
Source: Annex Table II.17.

Trade

A sharp rise in grain output in all four countries combined with a continuing decline in demand for feed grain led to surpluses of feed wheat and feed barley for export, particularly in Ukraine, Kazakhstan and, to some extent, in Russia. However, the relatively low quality of grains resulting from the heavy rains during the harvest period, the oversupply of feed grains on world markets, high grain handling and storing charges, transport and port infrastructure bottlenecks, as well as restrictions imposed by local authorities on grain shipments beyond regional borders, significantly reduced exports other than those to NIS. Moreover, feed grain surpluses in Russia, a traditional grain importer, reduced Ukraine and Kazakhstan export possibilities.

The 1997/1998 grain surpluses in the four NIS confirm the longer-term shift in their trade patterns of grains, i.e. from net imports of about 27 million tonnes at the beginning of the 1990s to net exports of an estimated 4 million tonnes in 1997/1998. This development has been due mostly to the change in grain trade patterns in Russia and to some extent in Ukraine. The net trade position of the other two countries has not changed significantly, with Kazakhstan a constant net exporter and Belarus a constant net importer of grains (Graph II.1.10). Over the same period, the decline in domestic livestock production combined with the inefficiency of the meat processing industry led NIS countries to import substantial quantities of meat and meat products; Russia alone has imported more than 2 million tonnes yearly. Such a change in trade patterns seems to be consistent with the region's comparative advantage in grain production based on vast resources of land and the predominance of large-scale farming.

◆ Graph II.1.10. *Four NIS: net trade in grains, 1990-1997*
 Million tonnes



Source: OECD database.

Agricultural policy developments

Price, market and trade policies

Agricultural policy in the NIS ranged from the fairly liberal policy applied in Kazakhstan to the highly regulated policy regime in Belarus. In January 1997, Kazakhstan abolished the previously existing minimum guarantee price system for grains and maintained price support policies for wool only. The state procurement system in Belarus, however, continued to play a crucial role in purchases and in fixing prices for agro-food products. Moreover, retail food prices have predominantly remained under government control at low levels to favour consumers. In Russia, a law on "State Regulation of Agro-food Production" was passed in July 1997 with the aim of strengthening federal government intervention on agricultural product markets with the principle objective of stabilising prices on the domestic market. Following this law, the Federal Agency for the Regulation of the Food Market was established in autumn 1997 to replace the previously existing Federal Foodstuff Corporation (FFC). However, the implementation of the law and the activities of the new agency remain unclear, particularly in view of serious budgetary problems in Russia and cuts on subsidies for the agricultural sector in the 1998 budget. In Ukraine, direct state procurement of agricultural products was limited to the purchase of grains and the system of procurement remained almost the same as in 1996. The Ukrainian government established a State Grain Intervention Fund in August 1997 whose main task was to keep domestic grain prices stable, but no intervention was undertaken by the Fund in 1997.

In 1997 and early 1998, the trend towards increased border protection against agricultural imports continued in the main NIS countries. Ukraine adopted a set of legislation increasing trade barriers, particularly against imports of livestock products, in the form of higher tariffs, specific duties, import quotas and stringent food safety measures. However, it remains to be seen to what extent these regulations will indeed be implemented. In early 1998, the Russian government added new agricultural

products to the list of products covered by specific duties and at the end of May 1998 announced its plans to raise import tariffs by five percent as a means of raising budget revenues. While higher tariffs and other protectionist measures would enable the Russian and Ukrainian governments to support agriculture in a time of budgetary austerity, strong opposition from Russia's trading partners and the effect of such policies on these countries' bids to join the WTO will, most probably, discourage substantial policy changes in this direction in the near future. Some efforts to harmonise all external tariffs (including for agro-food products) with third countries were undertaken by the members of the Customs Union (Belarus, Kazakhstan, Kyrgyzstan and Russia, to be joined by Tajikistan in 1998), but the process has been laborious and difficult. Within the overall framework of the Commonwealth of Independent States (CIS), an agreement on the establishment of the Common Agricultural Market was signed in October 1997 (Box II.1.1).

Box II.1.1. **Formation of the CIS Common Agricultural Market**

The creation of the Common Agricultural Market (CAM) was signed by the heads of governments during the Commonwealth of Independent States (CIS)* summit in Moldova in October 1997.

The creation of the CAM was intended as a means to liberalise intra-CIS agro-business trade and had been discussed since 1993. A draft document entitled "The Agreement on a Common Agricultural Market" passed through several rounds of discussions between the CIS, but was not signed by the heads of governments until the 1997 summit in Moldova. However, Azerbaijan and Uzbekistan decided not to join the agreement. It is foreseen that the creation of the market should ensure the free movement of farm produce, foodstuffs, scientific and technical goods, technology, means of production and services for the agricultural sector on the basis of jointly developed rules and principles.

The agreement envisages a two-stage transition to the CAM. The first stage foresees the creation of a free trade zone followed by the second stage aiming at the formation of a common customs territory by those countries that would be ready for further integration. In the framework of a common customs territory all tariffs, licences and other obstacles to the movement of goods would be removed and the participating countries would operate a "co-ordinated price regulation system on the basis of market principles". The market intervention system foreseen in the document, based on minimum guaranteed prices and on intervention purchases and sales of agricultural products, resembles the EU's Common Agricultural Policy before its reforms of 1992. The existing Intergovernmental Commonwealth Council for Agro-Industrial Issues would co-ordinate the implementation of the agreement.

Taking into account the political and economic difficulties of co-ordinating trade policies between CIS members and the generally poor record of all other CIS initiatives in this area, it seems that the CAM has a low probability of success. Both the pressures for introducing internal tariffs to prevent the flow of commodities to the country with the highest prices, as well the limited funds available, call into question the feasibility of implementing the planned measures. In addition, commitments made during initial WTO membership negotiations to reduce tariffs mean that there is little room to introduce a "co-ordinated price regulation system" with prices that would be substantially above world market prices.

* The loose Commonwealth of Independent States was set up as a co-ordinating body of the NIS in December 1991 with its Executive Secretariat in Minsk, the Belarussian capital. Since the CIS includes all NIS, there is no difference between the two and in the Russian language only one term is used (*Sotrudnitchestvo Nezavisimyykh Gosudarstv* – SNG, which is CIS).

Source: *Review of Agricultural Policies – Russian Federation*, OECD, Paris 1998.

Privatisation and land reform

There was no major progress in farm restructuring. In practice, in Russia, Ukraine and Kazakhstan large-farms have been re-registered under new names, but this process has had minimal impact on the institutional structure, management practices, or agricultural techniques. In most cases, the new "joint stock companies" or "collective agricultural enterprises" are organised in the form of share-based ownership where land and non-land assets are owned collectively by the enterprises and the

enterprises are in turn owned by shareholders, who are present and former employees. In Russia, where the process seems to be most advanced, more than 90 per cent of those entitled had received official certificates of their ownership rights, of whom about 40 per cent had contracted their entitlements to the actual users of land, mostly under leasing arrangements, by the autumn of 1997. In Ukraine, the process of distributing land entitlements gained some momentum in 1997, but was far from complete by the end of the year. In Kazakhstan, land shares and non-land assets has been allocated to entitled individuals, but the land remains state property; the land share holders are entitled to an inheritable, transferable lease. Belarus is lagging behind with unprofitable farms being merged with better performing neighbours' farms or vertically integrated with agro-service and processing enterprises.

One of the impediments to the restructuring of large agricultural enterprises in the NIS is the absence of land markets. Without proper legislation allowing land markets to operate, land cannot be used as collateral for loans to fund capital investment. As land is a (nearly) free good for managers, it is used inefficiently. Since there is no risk of losing the land, regardless of how unprofitable the farm may be, management can pursue objectives other than profit-maximisation (such as maintaining employment). In this respect, prolonged disputes in Russia and Ukraine between governments proposing legislation allowing for limited land ownership rights, on the one hand, and parliaments opposing any form of land market, on the other, can be considered particularly harmful and augment uncertainties for agricultural producers. Moreover, the disputes absorb a substantial part of the limited administrative and legislative capacity in the countries concerned, thus reducing the possibility of solving other problems facing agriculture and other sectors of the economy. Nonetheless, even if the legal framework for a land market is established, the land market will not operate if the profitability of agricultural production is very low, which is the case for almost all countries in transition. In these circumstances, demand for land is very low, a significant amount of agricultural land is left unused and land price levels remain insufficient to provide collateral for banks to grant long-term loans to agricultural producers. The experience with the sales of agricultural land in the Saratov region in Russia at the beginning of 1998 is particularly relevant in this respect (Part II.4).

The farm structure in the NIS remains polarised between large farming enterprises operating on between 80 and 90 per cent of agricultural land and many small household plots and gardens operating on between 10 and 15 per cent of agricultural land. A third category consisting of individual farms began to emerge at the end of the 1980s and operates on agricultural land ranging from 1 per cent in Belarus to 6 per cent in Russia. Due to lack of start-up capital, legislative and political uncertainty, hard macroeconomic conditions, an unfavourable political climate, difficult access to information, credits and markets, and a lack of tradition and experience with individual farming, only a small proportion of farm workers has established private farms. Moreover, most of those who desired to establish private farms seem to have done so by the mid-1990s. As a result, the total number of family farms stabilised in Ukraine and fell in Russia between 1995 and 1997.

Credit and investment policies

Low farm profitability, the high degree of outstanding debts, continued uncertainty over property rights combined with high real interest rates, as well as weak financial institutions have induced all NIS governments to continue to subsidise credits for agricultural producers. Both the scope of preferential credits and the methods of their distribution differ across the countries. The most common method remains barter arrangements through which the state engages suppliers to provide inputs (in particular fuel and fertilisers) on favourable terms for agricultural producers in exchange for agricultural products (most often grains) supplied after the harvests. The preferential credit system in Russia was substantially reformed in 1997 with the most distortive "commodity credit" programme replaced by a new one financed and distributed in a more market-oriented way. The main source of finance, in addition to the federal budget, has been the receipts from the sale of the 1996 commodity credit debts restructured into bonds and sold at auctions. In 1997, the credits were distributed by two commercial banks. In 1998, the number of banks increased to 12, all selected through tender. The government programme supporting purchases of agricultural machinery, the so-called leasing system, was also reformed with the

previous monopolistic supplier losing its privileged position and replaced by private leasing companies selected through tenders. These changes in Russia are positive developments bringing commercial enterprises and more competition into the system of allocation of preferential credits to agriculture.

Environmental and rural development policies

Environmental and rural development policies continue to be of low priority in the NIS. A major difficulty in rural areas continues to be the lack of non-agricultural activities. As a result, agricultural enterprises have felt obliged to keep employees despite the fact that agricultural production has fallen sharply. Moreover, the transfer of social assets and utilities from large-scale agricultural enterprises to local authorities has been very slow. Despite legislation dating back to the beginning of the 1990s, Russian agricultural enterprises continued in 1997 to be responsible for about 70 per cent of their pre-transition stock of social assets and utilities and those in Belarus for almost 90 per cent. The most important reason is a lack of finance at the local level to put the transfers into practice. Other reasons include the general lack of an institutional framework at the local level to take over the assets, inertia and high prices charged by some of the new owners of transferred utilities that make farm managers reluctant to relinquish control. This situation has led to a deterioration in the provision of social services in rural areas. Moreover, it imposes a substantial burden on agricultural enterprises as it diverts financial and management resources from the commercial functions of farming enterprises.

Conclusions

The sharp contraction in GDP in the NIS seems to be bottoming out and further significant progress in macroeconomic stabilisation has been achieved in the countries analysed, except for Belarus. However, it is essential to note the key role that must be played by structural policies in the transition process; the vigour with which countries implement structural reforms in industry, agriculture, banking and other financial institutions, and social security systems will determine whether re-established economic growth in these countries is strong and sustainable. There are striking examples in other countries in transition, such as Romania and Bulgaria, indicating that inadequate progress in micro-level reforms may undermine gains made in restoring macroeconomic stability and economic growth. The ease with which the Asian financial crisis has been transferred to the NIS, particularly in Russia, has demonstrated the weakness of the financial institutions in these countries.

The sharp decrease in agricultural supplies in the NIS also seems to be bottoming out. Some of the countries have started to experience growth in GDP and in consumer purchasing power, which is expected to increase demand for food, in particular for livestock products. This may be a turning point for both the NIS agricultural producers and for agricultural policies in these countries. If the institutional framework surrounding agriculture improves and farm restructuring makes farms more responsive to market signals, the increased demand for food may stimulate domestic production, limiting further expansion of agro-food imports in the case of Russia and enabling increased agro-food exports from Ukraine and Kazakhstan. However, if marketing channels remain uncompetitive and the flow of agricultural products remains constrained by various infrastructure and administrative impediments, as demonstrated by the problems in disposing of 1997 grain surpluses, market signals will not be transferred to producers. Moreover, slow progress in farm restructuring may leave agricultural enterprises unresponsive to emerging opportunities, resulting in very modest productivity growth in livestock and crop production. As a consequence, the situation of the agricultural sector will not improve, food imports may continue to grow over the medium-term and the NIS governments may face growing pressures for increased border protection which, if applied, will distort markets and tax consumers.

2. BELARUS

Macroeconomic situation

According to official statistics, GDP in Belarus grew by 10.4 per cent in 1997 (Annex Table II.1). The strong growth followed a purported increase of GDP by 2.8 per cent in 1996, the first year of recovery

after several years of decline (Graph II.1.1). The economic revival has been fuelled by a marked increase in industrial activity. Industrial output grew by 15.5 per cent, although this increase was driven by a return to Soviet-style production targets in connection with the extensive provision of cheap credit from the central bank.

The resulting monetary expansion led to an increase in annual inflation. The consumer price index rose by 63 per cent compared to the 39 per cent increase for 1996 (Annex Table II.2). This acceleration of the inflation rate represented a change in the medium-term trend of economic stabilisation that had been achieved since 1994 (Graph II.1.2). The Belarussian government tried to curb inflation by imposing in June 1997 price ceilings on some food products, such as bread, milk and meat. Heating and energy prices were also capped. These administrative measures, however, have not been successful in bringing down the annual rate of inflation to the government target of 26 per cent.

Rising inflation and loss of foreign confidence in the country led to a depreciation of the Belarussian rouble during 1997. The average annual exchange rate rose from BR 13 608 to BR 24 995 per US dollar between 1996 and 1997 (Annex Table II.3). At the beginning of 1998, and particularly during the first half of March, the rouble further decreased in value until the Belarussian president ordered on 17 March firms, shops and foreign exchange kiosks to return to the prices and exchange rates that prevailed at the beginning of the month. Managers and merchants obeyed the order and panic buying by consumers soon emptied the shelves of retail shops, while few foreign exchange transactions were made at the "new old" exchange rate. Meanwhile, the Belarussian currency continued its slide, trading at more than BR 65 000 per dollar at the end of March on the Moscow interbank exchange.

Total Belarussian exports amounted to US\$7.1 billion during 1997, which corresponds to a 26.5 per cent increase over 1996. Total imports rose to US\$8.6 billion, *i.e.* by 24.6 per cent compared to the previous year. In addition, exchange of goods on barter terms, not recorded in the merchandise trade account, continues to play a major role in Belarussian foreign trade. Russia remained by far the most important trade partner, followed by Ukraine, Germany and Poland. The persistent trade deficit with both NIS and non-NIS countries induced the Belarussian government to introduce further restrictions on imports during 1997. Import licences for vehicle tires, for example, became obligatory. Moreover, mounting payment arrears to its foreign suppliers have begun to threaten Belarussian trade relations. The Russian energy company Gazprom, for example, announced in March 1998 that it would cut its gas supplies to the country by 30 per cent unless Belarus paid its cumulated debts of more than US\$200 million.

Wage arrears in connection with accelerating inflation undermined real income levels in Belarus. Delayed payments to workers are also a problem in other NIS countries, but there they result from tight monetary policies, while wage arrears in Belarus continue to mount despite extensive provision of cheap credit to enterprises by the central bank. The Belarussian president has issued a number of decrees to contain and resolve the payment problems, but with limited if any success so far. Moreover, in September 1997 the government increased the minimum wage by a third and in November pensions were raised by an average of 21 per cent to compensate in part for the inflation induced decline of purchasing power. Official unemployment fell from 3.1 per cent to 2.8 per cent of the economically active population during 1997, but even estimates from government sources put the share of workers in hidden unemployment at 15 per cent of the labour force.

The slow pace of economic reforms has strained Belarus' relations with international financial institutions. The Belarussian government signed a memorandum of understanding with the World Bank on 18 June 1997, which spells out parallelism between economic reform measures and World Bank loans. The envisaged reforms include the liberalisation of foreign exchange regulations, removal of trade and pricing restrictions, and the acceleration of the privatisation programme. However, since Belarus did not implement any of the agreed policy measures, the World Bank has suspended the disbursement of funds. Likewise, the International Monetary Fund decided in mid-1997 not to allocate any further credit for the coming financial year because of the economic policies pursued by the Belarussian government.

Meanwhile, lack of democracy and a poor human rights record have attracted criticism from the international community. The Council of Europe has suspended Belarus' guest observer status and the EU cancelled all negotiations on economic and political agreements with Belarus for 1998. Furthermore, the USA recalled its ambassador early in 1997 and suspended aid. Other western countries, such as Austria, Germany, and Switzerland, also withdrew their technical and financial assistance to the country. Diplomatic relations with a number of countries worsened during the first half of 1998.

Situation of the agricultural sector

The contribution of the agricultural sector to GDP in Belarus has declined continuously and indeed was halved during transition, amounting to 11.5 per cent in 1997, down from 13.4 per cent in the previous year and from 23.0 per cent in 1990 (Annex Table II.4). In 1997, agricultural production as measured by GAO decreased by 5.5 per cent compared to 1996, with crop output down by 16.8 per cent; livestock production increased by 5.8 per cent. Crop production accounted for 46.3 per cent and livestock production for 53.7 per cent of the total value of agricultural output. These GAO figures should be interpreted with caution, however, since Belarussian authorities calculate them using agricultural producer prices that prevailed in 1983.

Employment in the agricultural sector fell from 760 000 to 741 000, which corresponds to a drop of agriculture's share in total employment in the economy from 17.4 per cent to 17.0 per cent (Annex Table II.6). Farm employment has remained more stable than agricultural output during transition as farm workers have found it difficult to find alternative employment in non-agricultural sectors. As a result, real incomes in rural areas have been declining while hidden unemployment has increased, and large-scale agricultural enterprises have indeed been actively encouraged by the Belarussian president to act as employers of last resort.

Many large-scale farms continue to experience financial difficulties. In 1997, the number of large-scale agricultural entities reporting operational losses decreased, but remained significant at 9 per cent. The improvement in financial results was in part due to increased government subsidies for the use of fertiliser and mixed feed (see below).

Over-capacity remains one of the major problems in the Belarussian agro-processing sector, with agricultural output decreasing markedly since the early 1990s. In 1997, nearly two-thirds of all processing enterprises in Belarus were reported working at less than half of their potential capacity. The processing technology used is largely outdated since lack of both domestic investment funds and foreign investor interest has prevented enterprises from making the necessary modernisation investments. In addition, agro-processors face competition from on-farm processing activities as large-scale farms have increasingly become reluctant to supply downstream enterprises because of payment arrears.

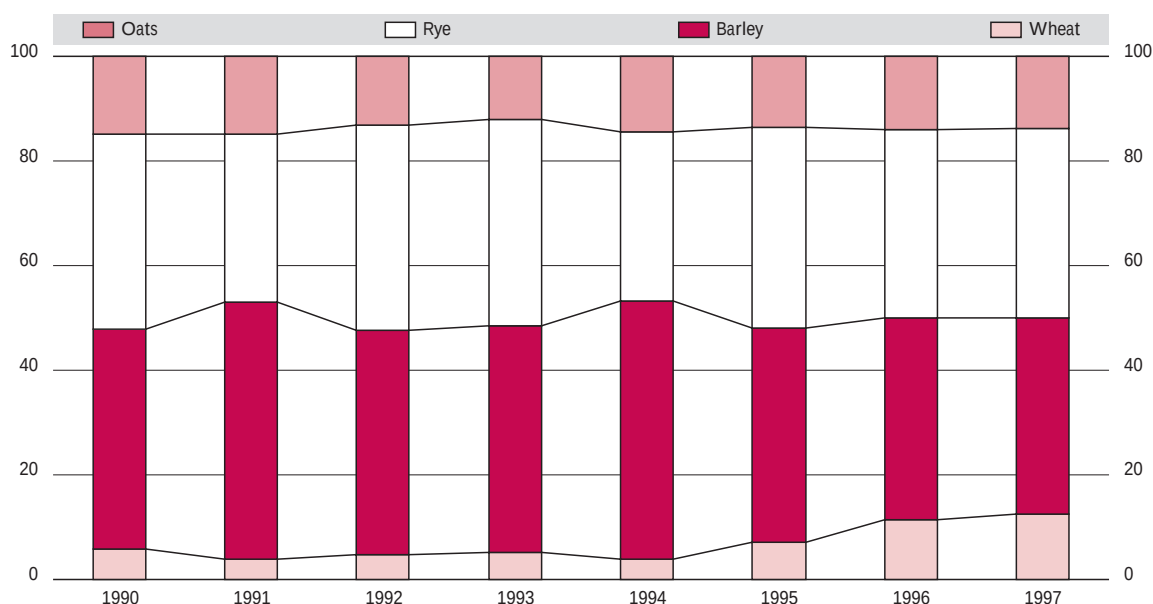
Agricultural production and consumption

Crop production

During the transition period, areas under cultivation and crop production have been relatively stable as reforms in the crop sector have been very limited (Annex Tables II.9 and II.10). In 1997, total area sown increased slightly from 6 180 million hectares to 6 207 million hectares. Most of the increase in acreage under cultivation was due to expanded farming activities of household plot owners and private farmers. Grains, fodder crops, and potatoes were the main crops cultivated, occupying 44 per cent, 38 per cent and 11 per cent of total agricultural land, respectively. Within the grains category, wheat cultivation increased for the third consecutive year at the expense of feed grain production (Graph II.2.1).

Yields of grains, fodder beet and sugar beet increased by 8.8 per cent, 14.4 per cent and 19.7 per cent over 1996 levels, respectively. The better grain and beet harvest reflected a moderate increase in fertiliser application (Annex Table II.7). However, unfavourable weather conditions led to a decline of potato yields by 34.1 per cent compared to the previous year.

◆ Graph II.2.1. **Structure of grain area in Belarus, 1990-1997**
In per cent of total grain area



Source: OECD Secretariat.

Total grain production in 1997 amounted to 6 420 million tonnes, 11.1 per cent more than in 1996. Sugar beet output increased by 24.9 per cent to 1 262 million tonnes, while total potato production was down by 36.2 per cent, amounting to 6 942 million tonnes (Annex Table II.10). The Belarussian government purchased 27.3 per cent of total grain production, 1.6 per cent of potato output and 81.6 per cent of sugar beet production for state reserves.

Livestock production

Livestock herds continued to shrink in Belarus during 1997 as output to input price ratios for livestock producers worsened. The number of cattle, pigs and poultry decreased by 1.1 per cent, 0.8 per cent, and 0.6 per cent, respectively (Annex Table II.12), with the decline affecting both *sovkhozes* and *kolkhozes* as well as household plots and private farms. The cumulative decrease in livestock numbers since 1990 ranged from 20 per cent for poultry to 60 per cent for pigs.

Productivity of livestock farming remained low, even though milk and meat yields improved during 1997. The average annual milk yield per cow amounted to 2 356 kg, representing a 10.3 per cent increase over the previous year. The daily weight gain of pigs increased by 22 per cent, presently amounting to 376 grams, while the number of eggs per hen and per year increased by 1.3 per cent to 240 pieces. The increase in output per animal was driven by a more extensive use of compound feed (Annex Table II.7). There were no significant differences in livestock productivity between the large-scale and small-scale farming sectors.

The improved productivity more than compensated for the reduction in livestock numbers. Production of milk increased by 3.7 per cent to 5.1 billion tonnes, meat output expanded by 0.3 per cent to 625 000 tonnes live weight and egg production increased by 1.7 per cent to 3.5 billion pieces (Annex Table II.13). Roughly half of all livestock output was bought by state procurement agencies (Annex Table II.14).

Food consumption

Since the early 1990s, per capita consumption of meat and milk in Belarus had decreased by 10-20 per cent, while consumption of crop products has not shown a common trend. Sugar consumption has fallen significantly, consumption of cereal products has remained relatively stable and potato consumption has increased somewhat (Annex Table II.17).

In 1997, per capita consumption of meat and milk in Belarus increased slightly from 59 kg to 60 kg and 364 litres to 370 litres, respectively, along with the increase in domestic production of livestock products. Bread and cereal product consumption increased marginally, while potato consumption fell from 185 kg to 180 kg per capita. As food prices rose less than the prices of other consumer goods, the average share of household income spent on food fell from 68 per cent to 59 per cent.

Agricultural trade

Trade flows

Total agro-food exports from Belarus in 1997 amounted to US\$515 million, which represented a 36 per cent increase over the previous year. Agro-food accounted for 7.2 per cent of total exports. The main export commodities were meat and milk products. The overwhelming share of agro-food exports went to NIS countries with Russia alone accounting for 74 per cent of all sales abroad. Barter arrangements, such as food for energy transactions, feature prominently in Belarus' trade with the NIS. Non-NIS countries bought 14 per cent of total Belarussian agro-food exports.

Agro-food imports into Belarus increased by 64 per cent from 1996 to 1997, amounting to US\$1 383 million. This amount corresponded to 16 per cent of the value of all Belarussian imports. About half of all agro-food imports originated in the NIS. The most important commodities imported were sugar, grains and oil seeds.

Trade relations

Belarus cemented its relationship with Russia by signing a Union Charter on 23 May 1997. The Charter is intended to consolidate the Union Treaty which created the Community of Sovereign Republics in April 1996. The agreements include commitments to co-ordinate foreign affairs, defence structures and economic policies. The latter also comprises the harmonisation of tariff systems, unification of investment legislation and the introduction of a common currency. Yet, the implementation of the Union Treaty and Union Charter has floundered due to different interpretations of the agreements by the two governments involved, as well as due to diverging policy developments in Belarus and Russia. Russian economic reformers, in particular, have shown no intention of accepting Belarus, which has increasingly been sliding back into authoritarianism, as an equal partner in an economic union.

Like many other NIS countries, Belarus is at an early stage of negotiating its accession to the WTO. It has observer status with the organisation and first reviews of Belarus' trade regime have been undertaken by a WTO Working Party. The Union Treaty with Russia allows each country to pursue its application to the WTO independently and by mid-1998 Russia seemed far more advanced than Belarus in its preparation for accession. Substantial economic and trade policy changes are required before Belarus would be able to comply with WTO principles.

Agricultural policy developments

Structural policies and privatisation

The large-scale farming sector in Belarus has undergone only limited reforms so far. During 1997, the number of *sovkhozes* decreased from 635 to 587, while the number of *kolkhozes* and farming co-operatives stayed virtually constant (from 1 810 to 1 809, and from 491 to 489, respectively). The main reason for the reduction in the number of large-scale farms was the practice of merging unprofitable agricultural enterprises with neighbouring ones or of vertically integrating them with agro-service and processing enterprises. It is doubtful, however, whether such mergers will be able to solve the underlying problems of poor technology, lack of performance incentives and low productivity.

In the private farming sector, household plots continued to supply more than 80 per cent of all wool, potatoes, and fruit and vegetables. However, these high output shares are only possible because of substantial input supplies from large-scale farms. Individual farms have played only a minor role in Belarus so far, occupying merely 0.7 per cent of arable area. Their number increased by 1.4 per cent to 3 020 during 1997, while their average land holding remained unchanged at 20.6 hectares.

A land market has not yet developed in Belarus. The law "On the Right of Property in Land" adopted in June 1993 allows for both private and state ownership of land. A presidential amendment to this law from 24 December 1997 extended the right to acquire land property to foreign individuals and organisations. However, the law does not allow for buying and selling operations in land so that the practical use of private land property rights remains questionable.

On 3 March 1998, three presidential decrees were issued that attempted to address the difficult financial situation of agricultural producers without embarking on large-scale structural reforms. The decrees concern debt write-offs, grants to unprofitable farming enterprises and the development of individual farms. Debt repayment of large-scale farms is to be postponed until the year 2000 and half of the debt is to be written off. The second decree states that new capital grants are to be given to the most unprofitable agricultural enterprises, but if the situation on the farms does not improve subsequently, they are to undergo thorough reorganisation. The third pronouncement increases the size limit of individual farms from 50 hectares to 100 hectares, calls for farm workers who wish to leave large-scale farms to be allocated good quality land, and establishes the possibility for private farmers to rent buildings and machinery from *sovkhozes* and *kolkhozes* without having to make rental payments during the first two years.

According to a government decree adopted in 1994, enterprises in the agricultural up- and down-stream sectors were to be transformed by assigning shares in their capital to different groups of stakeholders. Half of all shares were reserved for voucher privatisation, 40 per cent were allocated to agricultural producers, and 5 per cent each were given to the companies' workers and the Ministry of State Property. By the end of 1997, all sugar and vegetable oil producers, 90 per cent of the milk industry, 78 per cent of animal feed production capacity, 71 per cent of the confectionery industry, 68 per cent of grain milling, and 40 per cent of meat processing capacity were transformed according to the government's scheme. This has not, however, resulted in significant changes in management.

Agricultural support policies

In 1997, total budgetary support to agriculture in Belarus amounted to US\$441 million, or 3.7 per cent of GDP. About 31 per cent of the total came from the state budget, 26 per cent from local budgets and 43 per cent from non-budgetary funds. The biggest individual positions were grants for tractor and farm equipment purchases and fertiliser subsidies. The latter covered 80 per cent of farms' expenses for fertiliser, up from a 50 per cent subsidy granted in 1996. Other major positions in the agricultural budget included support for the agro-industrial sector, subsidies for agricultural producers in less favoured areas, and credit at preferential interest rates for large-scale farms. Only 0.7 per cent of total budgetary funds were devoted to fostering the development of the private farming sector.

Agro-food prices remain highly regulated in Belarus. State procurement continues to play a much more important role than in other NIS (Annex Table II.11) so that agricultural producer prices are to a large extent determined by the procurement prices set by the Ministry of the Economy. Retail prices for food products are predominantly under governmental control and have been held at very low levels to favour consumers. Meat and dairy products, for example, cost significantly less than in neighbouring Russia.

Agricultural trade policies

In March 1997, Belarus started to bring its tariffs into line with Russia's tariff rates in accordance with the customs union it has with Russia, Kazakhstan, and Kyrgyzstan. However, the harmonisation of border measures has been laborious and politically difficult, not least because adopting the Russian tariff

structure meant that tariffs for a number of products, such as fish, tropical fruit, and sugar, had to be increased. Belarus satisfies the overwhelming part of its demand for these products through imports, so that higher tariffs translated into higher consumer prices without bringing benefits to domestic producers.

Tariffs for grains, sugar and root crops range from 5 per cent to 25 per cent, import duties for dairy products from 10 per cent to 20 per cent, and tariffs for meat products from 15 per cent to 30 per cent. Food products originating in less developed countries are, in general, imported tariff-free.

During 1997, the Belarussian government used *ad hoc* measures, often in the form of non-tariff barriers, as part of its trade policy. A temporary ban on cattle and beef exports, for example, was imposed during the summer of 1997 in order to ensure sufficient meat supplies on the domestic market. Moreover, exports of pork, casein and mineral fertilisers were subject to 'indicative' export pricing to avoid anti-dumping charges from importing countries, notably the EU. On the import side, the Belarussian government introduced a registration commitment for all imports in October 1997. After a short period of monitoring, imports of dairy and poultry products were actually banned, using 'confidential' letters and orders to the ministries concerned.

Rural development and environmental policies

According to a law adopted in 1991, social institutions in rural areas, such as medical or educational centres, were to be transferred from agricultural enterprises to the responsibility of local communities. But this process has been progressing very slowly. In 1997, 86 per cent of all social establishments in rural areas were still operating as part of large-scale agricultural enterprises.

The Chernobyl nuclear disaster continues to inhibit agricultural production in Belarus because of radioactive contamination of large areas of the country. About 253 000 hectares of agricultural land have been taken completely out of production. In 1997, the Belarussian authorities revised their classification of contaminated territories. Now 93 villages with almost 29 000 inhabitants are considered to be living in such areas, compared with 87 villages and 24 000 people under the previous classification.

Summary and outlook

According to official statistics, Belarus experienced an output increase of more than 10 per cent in 1997, although the reliability of this data remains a concern. However, this strong performance was fuelled by cheap credits from the central bank, which in turn led to increasing inflation and a sharp depreciation of the currency. It is doubtful whether economic growth based on expansionary monetary policy can be sustained during 1998 without risking a fallback into hyperinflation.

Production of crops, with the exception of potatoes, increased during 1997. This was in part the result of increased application of fertiliser which was more heavily subsidised than in previous years. Livestock herds continued to decline, but increased production and use of compound feed led to higher productivity and increased output of meat, milk, and eggs. Belarussian agro-food trade remains highly dependent on Russia and other NIS countries, with barter arrangements playing a prominent role.

So far, the Belarussian agro-food sector remains under tight state control. Large-scale farms that have undergone few managerial changes since the Soviet period continue to dominate agricultural production. State procurement at administered prices is the prevailing form of marketing for many agro-food products. A private farming sector is only at an early stage of development.

The Belarussian government has increased its support to agriculture in recent years, both in the form of budgetary transfers and through the price system. These subsidies have made it possible to keep crop output stable and to improve the performance of the livestock sector after several years of decline. But the measures, overwhelmingly aimed at maintaining traditional production systems, have delayed the restructuring of agricultural production and the realisation of cost reductions. Some of the most pressing agricultural policy issues are the removal of legal impediments to market transactions in land, the discontinuation of employment and other social commitments of farms, and the elimination of the bias in support that currently favours traditional large-scale agricultural enterprises over individual farms.

3. KAZAKHSTAN

Macroeconomic situation

Macroeconomic developments continued to stabilise in Kazakhstan during 1997. Gross domestic product grew by 2 per cent (Annex Table II.1). This follows a modest GDP increase of 0.5 per cent in 1996, the first year of recovery after several years of economic contraction (Graph II.1.1). Growth was driven by increased crude oil and ferrous metals exports and by an expanding service sector, which now accounts for 57.9 per cent of total output.

Even though the budget deficit increased slightly to 3.7 per cent of GDP, forcing the Kazakh government to increase its borrowings to finance its activities, inflation rates continued to fall. The annual inflation rate for 1997 amounted to 11 per cent, down from 29 per cent during the previous year (Annex Table II.2). On foreign exchange markets, the Tenge lost 12 per cent in value against the US dollar, trading at an average annual exchange rate of T 75.4 per US\$ (Annex Table II.3).

Total exports from Kazakhstan increased by 8 per cent, while imports rose by only 1 per cent. The main export goods were fuels and oil products, ferrous and non-ferrous metals, and inorganic chemicals, while imports consisted mainly of manufactured goods, machinery and transport vehicles. Kazakhstan's main trading partners continued to be Russia and other NIS countries. The Kazakh trade balance showed an increased surplus of US\$2.1 billion in 1997. Yet, official trade statistics do not take "shuttle-trade" into account, by which small-scale traders repeatedly cross borders to take advantage of differences in product prices and availability. If such informal trade is included in the import and export figures, Kazakhstan's trade balance for 1997 has been estimated to be in deficit by US\$750-800 million.

The officially recorded rate of unemployment fell by 0.4 per cent to 3.8 per cent. These statistics, however, do not present an entirely accurate picture of Kazakhstan's labour market, where hidden unemployment, particularly in rural areas, is prevalent. Trade union officials place the total number of people in open or hidden unemployment at 15 per cent of the labour force. In addition, wage and payment arrears are mounting. State authorities alone are estimated to owe individuals and enterprises about T75 billion, *i.e.* almost 5 per cent of GDP, in overdue payments.

The privatisation of industrial enterprises continued. Several of the largest oil companies, for example, have been sold to private investors. Kazakhstan has generally been open to foreign investors, with no major industrial sectors closed to foreigners. Total foreign investment by mid-1997 amounted to US\$3.24 billion, roughly half of which was foreign direct investment. About 60 per cent of the latter flowed into the oil industry.

Situation of the agricultural sector

Developments in the agricultural sector lag behind those in other sectors in terms of output recovery. In the Soviet period, Kazakhstan used to be a major agricultural producer, supplying other Soviet republics with its surpluses of crop and livestock products. In 1990, agriculture accounted for about a third of GDP. Since then, however, the share of the agricultural sector in GDP has declined continuously and reached 11.0 per cent in 1997 (Annex Table II.4). The value of crop output increased by 4.7 per cent during 1997, but livestock production declined by 11.3 per cent. In consequence, the share of the crop sector in total GAO increased to 58.5 per cent.

Officially recorded employment in agriculture has also decreased during transition, but to a much smaller extent than agricultural output (Annex Table II.6). Official statistics reflect only the employment situation in registered agricultural enterprises but leave household plot production, which account for a considerable share of total livestock, potato, and fruit and vegetable output, aside. The family labour involved in farming on household plots is, therefore, not accounted for. Hence, total agricultural employment seems to have been relatively stable since the early 1990s, which is consistent with the lack of non-agricultural employment opportunities in rural areas.

The financial situation of agricultural enterprises in Kazakhstan remains difficult. About three-quarters of all large-scale farms reported losses during 1997. Deferring payments to input suppliers has been one of the few means for such farms to stay in business. By the end of the year, farms owed their

suppliers about T 70 billion in overdue payments, which corresponds to more than 20 per cent of total agricultural production value. Suppliers, in turn, have become highly reluctant to engage in business transactions with agricultural producers. As a result, government intervention has been necessary to ensure sufficient supplies of production inputs to farmers. In June 1997, for example, the government ordered foreign oil companies operating in Kazakhstan to provide large-scale farms with fuel for the harvest.

Wage arrears have also become a major problem in the agricultural sector. According to a government survey conducted in April 1997, the average monthly wage in Kazakh industry was T 12 858, employees in state government earned T8 619, but agricultural wages amounted to merely T3 801. Many farms are not even able to pay these low wages. Instead, they remunerate their employees in kind. It has, for example, become widespread practice on large-scale farms to plant a certain acreage with oilseed crops that is allocated to farm workers to be harvested in autumn and crushed for their own account.

Agricultural production and consumption

Crop production

In the late 1980s, Kazakhstan used to account for about a fifth of the Soviet Union's grain area and about an eighth of the grain production. Its share of Soviet wheat production was even higher. About 40 per cent of the grain harvest was regularly exported or shipped to other Soviet republics. During transition, both the area sown and yield levels declined markedly, but Kazakhstan has nevertheless remained a net-exporter of grain.

Total sown area decreased by 14.7 per cent compared to 1996, bringing the cumulated decline since 1990 to 37.8 per cent (Annex Table II.9). All crops, except for vegetables, were affected by the reduction in area sown in 1997. Moreover, about 1.5 million hectares of grain, *i.e.* 10 per cent of total grain area, were not harvested because of lack of fuel.

Grain yields in 1997 were higher than the average of previous years due to favourable weather conditions. The north-western region, in particular, experienced a recovery of yields after two consecutive years of crop failures. Yield levels nevertheless remained low because of lack of seeds, fertiliser and pesticides, and large losses due to old, deficient farm machinery. Average grain yields amounted to only 0.88 tonnes per hectare.

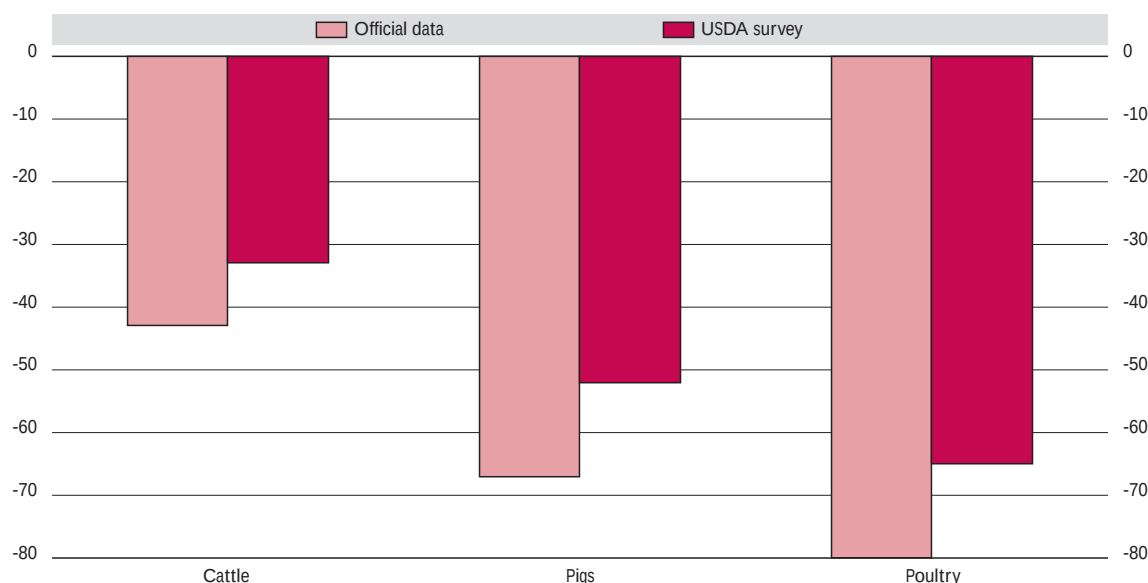
Total grain production was 10.2 per cent higher than in 1996, amounting to 12.4 million tonnes (Annex Table II.10). Other crops yielded a poorer harvest in comparison to previous years. Sugar beet output was down by 62.5 per cent, sunflower seed production fell by 15.6 per cent and potato output decreased by 11.1 per cent.

Livestock production

As a result of worsening output to input price ratios, livestock farming in Kazakhstan became less profitable during transition. Large-scale agricultural enterprises reacted by reducing their livestock herds by slaughtering animals or using them to pay workers in kind. Indeed, according to official statistics Kazakhstan experienced the sharpest reduction of livestock numbers among all NIS countries. In 1997 alone, cattle, pig and sheep herds decreased by 20.6 per cent, 15.2 per cent, and 24.1 per cent, respectively (Annex Table II.12). Poultry represented the exception with an increase in chicken flocks of 3.9 per cent. However, the poultry numbers fell between 1991 and 1996 by no less than 74.3 per cent.

Official data on the number of farm animals, however, is somewhat misleading because it only covers the situation on large-scale farms. A significant portion of total livestock has been transferred from large-scale farms to household plots, so that the extent of decline in livestock numbers is smaller than stated in official statistics. A more comprehensive survey conducted with technical assistance from USDA in 1997 revealed that total livestock inventories are indeed significantly higher than officially stated. The decline in overall livestock numbers remains nevertheless substantial, even though it seems somewhat less dramatic than according to the official data based on large-scale farms only (Graph II.3.1).

◆ Graph II.3.1. **Change in livestock numbers in Kazakhstan, 1991-1997¹**
In per cent



1. Beginning of January.
Source: OECD Secretariat.

Livestock productivity remains very low in Kazakhstan. Average milk yields per cow, for example, were only 1 559 kg during 1997. Moreover, livestock mortality rates were very high, with 14.8 per cent of all pigs, 8.7 per cent of sheep and 3.8 per cent of cattle dying over the course of the year. The low productivity and high mortality of farm animals were the consequences of low feeding intensities and the harsh winter of 1996/97 in conjunction with lack of heating fuels.

Food consumption

During transition, food consumption patterns in Kazakhstan changed markedly. Per capita consumption of cereal products almost doubled, while domestic consumption of other crop products, as well as of livestock products, declined markedly (Annex Table II.17). Potato consumption fell by 20 per cent, meat and milk consumption by 30-40 per cent, and sugar consumption by almost 50 per cent.

In 1997, per capita consumption of food products stabilised in Kazakhstan. Consumption of most crop products increased somewhat, while consumption of most livestock products fell slightly (Annex Table II.17). The average share of household income spent on food decreased by 4 per cent to 45 per cent, as prices for food rose less than those for other consumer products. Bread and cereal products accounted for 33 per cent of total food expenditure, while meat and dairy products absorbed 20 per cent and 11 per cent of total food budgets, respectively.

Agricultural trade

Agro-food exports increased by 24 per cent to US\$920 million, representing 14.4 per cent of total export revenues. Grains accounted for almost two-thirds of total agro-food exports, with 2.3 million tonnes shipped abroad. The vast majority of wheat, Kazakhstan's main grain crop, was bought by Russia, Uzbekistan and other NIS countries. Small batches of grain were also shipped to Iran and Saudi

Arabia in an attempt to open new export markets. Cotton was the second most important export commodity after grain, with Turkey, South Korea, Austria, and Hungary being major customers. Most of Kazakh skin and wool exports went to China.

Major problems for Kazakhstan's agro-food exports result from its geographical position as a land-locked country combined with the poor efficiency of the handling and transport systems. The average farm gate price for wheat in Kazakhstan amounted to merely US\$91 at a time when wheat traded on the world market was about US\$150. Improvements in efficiency of handling operations and transport infrastructure are, therefore, of fundamental importance for facilitating grain exports and lifting agricultural producer prices.

Total agro-food imports into Kazakhstan amounted to US\$456 million or 10.6 per cent of total imports. Sugar remained the most important commodity imported. Kazakhstan bought 167 800 tonnes in 1997, mainly from Russia and Ukraine. The country was also a net-importer of meat and meat products.

Actual exports and imports of agro-food products are likely to be higher than official figures indicate as some farm operators and traders have concealed transactions to avoid tax payments. Unreported trade has been facilitated by the removal of customs posts along the Russian-Kazakhstan border.

Agricultural policy developments

Structural policies and privatisation

The privatisation of *sovkhozes* in Kazakhstan, which started in 1993, has been almost completed with state farms operating on only about 5 per cent of agricultural land at the end of 1997. During the privatisation process, land shares and non-land assets were allocated to current and former farm workers and managers according to their cumulative wage earnings. Land remains state property, but the land share holders are entitled to an inheritable, transferable lease. Privatisation also meant that *sovkhozes* had to change their legal status and most were transformed into collective farms.

During 1997, all collective farming enterprises, i.e. both traditional *kolkhozes* and newly founded co-operative farms, had to undergo re-registration as peasant farms, joint-stock companies or limited partnerships so as to conform with the Kazakh Civil Code. This often involved only a formal change in legal status without corresponding changes in management structures or conduct. But a significant number of collective farms were also broken up into smaller entities and acquired mainly by former managers, although in some cases by upstream enterprises or foreign investors. As a result, the number of agricultural producers increased markedly. About 65 000 farms were operating at the end of 1997, compared with only 9 300 in 1991.

Similar to other NIS countries, household plots account for a large share of potato, fruit and vegetable, and livestock production (Annex Table II.15). Indeed, the contribution of household plots to total meat, milk, egg and wool production has increased continuously since 1995.

From 1992, enterprises in the agricultural upstream and downstream sectors have been restructured into joint stock companies and subsequently privatised. The privatisation of most upstream firms proceeded swiftly, while downstream enterprises remained under state control for a longer time. During 1997, however, most of the state's share holdings were sold in public auctions. Foreign investment remained modest with FDI inflows into the agro-processing and food industry of about US\$40. At the end of 1997, the Kazakh state maintained large controlling interests only in the milk and meat processing industries. These sub-sectors are least attractive for private investors because of their low profitability.

Agricultural support policies

During 1997, Kazakhstan maintained price support policies only for wool. The previously existing minimum guarantee price system for grains was abolished in January 1997 when the State Pricing

Committee at the Kazakhstan International Commodities Exchange was dissolved. During 1996, the Pricing Committee had fixed export prices for grains at around US\$155 per tonne and thereby set a floor price on the domestic market. Following the deregulation of commodity pricing, the farm gate price for wheat fell to 40 per cent below world market price levels as a result of low efficiency in the downstream sector and, in particular, poor marketing links with export destinations.

The Kazakh government did not distribute any direct payments to farmers in 1997 except for the financing of seeds in the north-western region, which had experienced two subsequent years of drought. With respect to input support, the farmers' costs for fuel were reduced indirectly by the requirement that oil companies engage in fuel for grain barter deals on favourable terms for agricultural producers. The 1998 budget envisages the use of US\$33 million to subsidise credits for private, individually operated farms. Moreover, the Kazakh government continues to grant tax concessions to agricultural producers, who pay only a 10 per cent tax on profits instead of the 30 per cent which are applied in general.

Agricultural trade policies

Agricultural trade policies in Kazakhstan have in the past primarily aimed at limiting or regulating exports. The existing measures have, however, been scaled down in recent years. Export licences and quotas were abolished in 1994 and export duties were removed during 1996.

Import tariffs for agro-food products in Kazakhstan are generally below 15 per cent, but often not in line with those of Belarus, Kyrgyzstan and Russia, the other members of the customs union established in 1995. To further the implementation of the union, the four member countries set up an Integration Committee in 1997. Yet, by the end of the year only about half of the agricultural import tariffs between Kazakhstan and Russia had been harmonised, while Belarus and Russia, for example, showed a much larger degree of tariff coincidence. Hence, the tariff structure in Kazakhstan is likely to undergo some adjustment in the medium term future.

On 23 October 1997, Kazakhstan's president and the heads of all other members of the Commonwealth of Independent States, with the exception of Uzbekistan and Azerbaijan, signed an agreement on the creation of a common agricultural market (see Overview of Selected NIS). Moreover, Kazakhstan has observer status with the WTO and is, like many other NIS countries, at an early stage of negotiating its full accession to the organisation. However, according to press reports, the Kazakh government is split about the desirability of an early accession to the WTO.

Rural development and environment policies

In Kazakhstan, no particular policies towards rural areas apart from agricultural policies exist. The laws on privatisation of agricultural enterprises called for the transfer of responsibility for social services from state farms to local communities. Yet the latter often lack the funds to maintain kindergartens, schools and hospitals. As a result, social services have remained in the sphere of agricultural enterprises and have in many cases been scaled down as farms themselves have experienced serious financial problems.

The quality of land resources in Kazakhstan has been deteriorating because of overgrazing and soil erosion. As remote rangeland areas have been abandoned to an even larger extent than livestock herds have been reduced, grazing intensities on the remaining meadows have increased and sometimes reached a critical point. Moreover, because of lack of conservation efforts on cropland, soil erosion has become a problem. Kazakhstan does not have any explicit agro-environmental legislation apart from the provision in the privatisation law that the state could revoke existing land leases if farmers cause land degradation.

Summary and outlook

Economic recovery and stabilisation in Kazakhstan continued during 1997, with economic growth increasing to 2 per cent and inflation falling to 11 per cent. The Kazakh government seems committed to

maintaining its tight fiscal and monetary policies, as well as to its privatisation programme, even though demands for state assistance to ease the social hardships of transition are likely to increase. Because of Kazakhstan's heavy dependence on international commodity markets and the Russian market for its exports, the pace of economic recovery in the medium term will to a considerable extent depend on Kazakhstan's access to international oil markets, the development of world market prices for oil and non-ferrous metals, and the state of the Russian economy.

Following two years of poor harvests, grain production in Kazakhstan recovered, increasing by 10 per cent over the previous year to 12.4 million tonnes in 1997. The better harvest allowed for increased grain exports of 2.3 million tonnes. On the other hand, livestock numbers and livestock production declined further. Use of production inputs in both crop and livestock farming remains very low, largely because many agricultural enterprises cannot afford to purchase sufficient amounts of fertiliser, fuel or feed. The financial difficulties of farms are partly the result of poor operational efficiency in the agricultural downstream sector, which has led to high marketing and processing margins.

The privatisation of state farms and agro-industrial enterprises has virtually been completed. In many cases, senior managers have become the quasi-owners of former large-scale state farms by acquiring the majority of land shares. Yet, the new owners often face social constraints for rationalising work processes and reducing the farm workforce so that only small and gradual changes in the operation of agricultural production units have occurred so far.

In 1998, the area sown to grains was reduced by 2 million hectares because of lack of seeds and high levels of equipment wear and tear. Government officials nevertheless hope for a harvest of 11-12 million tonnes, almost similar in size as in 1997. Moreover, the construction of a new grain terminal at the Caspian port of Aktau is planned for the near future to facilitate grain shipments across the Caspian Sea, particularly to Iran. A reduction in transport costs and marketing margins should certainly help to re-vitalise the agricultural sector in Kazakhstan.

4. RUSSIA¹

Macroeconomic situation

GDP stabilised for the first time since the beginning of Russia's reforms. The economic turnaround was also reflected by a slight decline in the rate of unemployment to about 9 per cent towards the end of the year. Most indicators of social welfare in Russia also showed some improvement. Moreover, with the inflation rate falling, the exchange rate becoming more stable and predictable, and real interest rates falling, Russia has achieved a considerable degree of macroeconomic stabilisation. Progress in stabilisation still needs to be consolidated, however, as evidenced by the difficulties on Russian financial markets that began in autumn 1997.

After a 41 per cent decline in GDP between 1990 and 1996, GDP grew by 0.4 per cent in 1997 (Annex Table II.1). Industrial production grew by 1.9 per cent, for the first time in the transition period. The recovery, with the domestic demand playing a primary role in stimulating production, was rather widespread across most of the main branches of industry.

The rate of inflation measured by the consumer price index (CPI) fell to 11 per cent at the end of 1997 from 22 per cent at the end of 1996 and subsequently dropped to a post-transition low of 8.5 per cent (year-on-year) in March 1998. The 1998 budget foresees a further fall to 5.7 per cent. The general government budget deficit remained high, falling from 8.8 per cent of GDP in 1996 to 7.4 per cent in 1997. The long-awaited comprehensive tax reforms of 1997 did not materialise due to political conflicts. A new draft tax code, more oriented toward political compromise than the previous one, has been prepared by the Finance Ministry, but as of April 1998 had not been approved by the State Duma. The January 1998 redenomination of the rouble, under which 1 new rouble equals 1 000 old roubles, has proceeded as planned.² Old and new roubles coexist in circulation and old roubles are to be gradually removed.

According to Goskomstat data, which include estimates of unregistered trade, the dollar value of imports grew by 18.9 per cent and that of exports by 5.3 per cent in 1997. Exports were affected by declines in oil prices. These developments brought the Russian trade balance to US\$20 billion, down from US\$26.9 billion in 1996.³

The situation of Russian financial markets in the last quarter of the year was marked by a plummeting stock market, soaring interest rates, declining foreign reserves and substantial outflow of capital from the country. As a reaction to the crisis, the Central Bank of Russia (CBR) increased its interest rates, tightened reserve requirements for foreign currency deposits, and announced a more flexible exchange rate policy for 1998. At the beginning of February 1998, the measures were tightened again with the refinancing rate raised from 28 per cent to 42 per cent. A new wave of turbulence on Russian financial markets in May 1998 caused the CBR to raise the refinancing rates again to 50 per cent in mid-May and to triple the rates to a dramatic 150 per cent on 27 May.

Situation of the agro-food sector

Agriculture

In 1997, Russia's gross agricultural output (GAO) stabilised, for the first time since the reforms started, partly due to favourable weather conditions for crop production, but which might also indicate an end to the first and most difficult stage of transition for Russian agriculture.

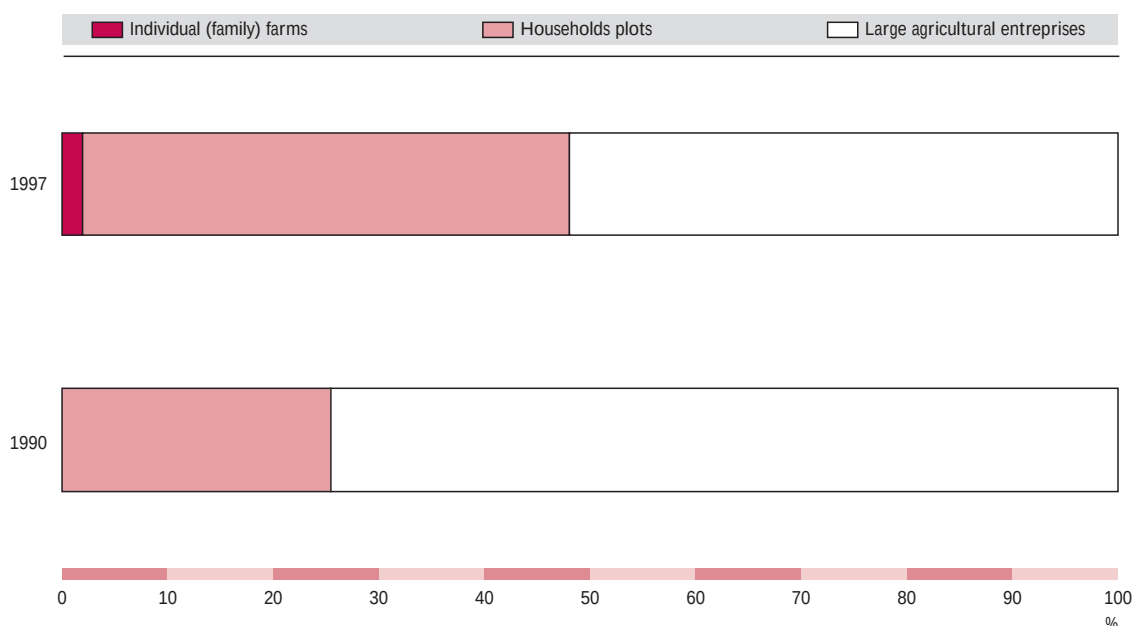
The share of agriculture in the economy has diminished considerably since the start of transition. However, while the sector's contribution to GDP fell from 15.4 per cent in 1990 to 6.5 per cent in 1997, the proportion of the total working population in the sector grew from 13 per cent to about 14 per cent, mostly due to greater reduction of employment in other sectors of the economy (Graphs II.1.3 and II.1.4 in Part II.I and Annex Table II.4 and II.6). The deterioration of agricultural terms of trade continued in 1997 with crop prices increasing at a lower rate than input prices. However, livestock prices increased at about the same rate as input prices.

The cost-price squeeze combined with the lack of liquidity and rising indebtedness significantly reduced the ability of agricultural enterprises to purchase production inputs. A growing number of large farms has been reporting a lack of working and investment capital. According to official figures, 81 per cent of large-scale agricultural enterprises made losses in 1997, up from 79 per cent in 1996 and 57 per cent in 1995. While this measure does not reflect the real situation of agricultural enterprises,⁴ there is little doubt that the majority of agricultural enterprises remain financially insolvent. Due to the huge indebtedness of agricultural enterprises *vis-à-vis* budget and social funds (pension, health care and unemployment funds), all revenues deposited in bank accounts of indebted enterprises are being automatically taken over by the state. This has caused enterprises to avoid the banking system in favour of the shadow economy, including the widespread practice of barter deals.

Changes in agricultural output in Russia have been differentiated across sub-sectors and commodities. While production by large-scale agricultural enterprises were halved between 1990 and 1997, the output of household plots increased by 19 per cent over the same period, resulting in substantial changes in the sectors' contributions to GAO (Graph II.4.1). The high share of household plots in total agricultural output can be partly attributed to their specialisation in high value products such as fruits, vegetables and animal products, but also to their reliance on various registered and unregistered produce and service transfers from large farms. Large farms, lacking liquidity, pay in kind for labour and/or sell products to workers at discount prices. In turn, households may resell the products received from the large farms to whatever buyer they may find. So far production on household plots is mostly for family use. However, a growing part is for sale.

The average monthly wage on large farms was about Rb 423 (US\$73) which was 44 per cent of the national average, down from 95 per cent in 1990. However, wages paid by large farms are a declining part of rural families' incomes. The shift in the structure of agricultural production from large enterprises to household plots indicates that a growing proportion of the incomes of rural households comes from their own production.

◆ Graph II.4.1. *The share of GAO by the three main farm types in Russia*



Source: Goskomstat, Moscow.

Upstream sector

Production of tractors and agricultural machinery continued to decline in 1997, but at slower rates than in previous years. Between 1990 and 1997, the production of tractors and agricultural machinery collapsed, with production of tractors falling to one seventeenth and output of grain combines to less than one thirtieth of previous levels. Production of fertilisers increased by 5 per cent in 1997, but was 40 per cent lower than in 1990 (Annex Table II.7). For the first time during the reform period, the application of mineral fertilisers did not fall and amounted to 15 kg per hectare, compared to 88 kg in 1990. About 80 per cent of fertiliser production has been exported in recent years and, as a result, the fertiliser industry has been less affected than other upstream industries by the crisis in Russian agriculture. However, changes on the domestic and international markets has made the industry's situation very difficult over the last two years. Due to a substantial increase in domestic prices for gas and electricity as well as a rise in domestic transport tariffs, the production costs of agricultural chemicals have increased significantly. Moreover, with China and India leaving the market, world market prices for fertilisers have been falling.

The decline in the application of lime, mineral and organic fertilisers on agricultural land resulted in increasing problems of soil depletion in Russia. The proportion of total sown area treated with mineral fertilisers fell from 66 per cent in 1990 to 25 per cent in 1996, and the area treated with organic fertilisers fell from 7.4 per cent to 2.9 per cent due to the collapse in livestock inventories.

Downstream sector

The food industry's output fell by just 0.8 per cent, indicating a possibility for bottoming out in 1998. However, the registered output of the food industry was much lower than in 1990 and the overall

change ranged from an 84 per cent decline in wine production to a 1 per cent rise in sugar production. In general, there was a greater drop in animal production (meat and milk processing) than in crop processing which reflects changes in the consumption structure in recent years. In 1997, output of meat and milk products amounted to about one fifth of their 1990 levels.

Capacity utilisation rates in most branches of the industry are extremely low, ranging from 12 per cent to 45 per cent in the meat, dairy, bakery and confectionery production. Output trends in 1995-1997 show that in a few industries (canned dairy products, sugar, margarine) the drop in production bottomed out with output rising in 1996 and, according to provisional data, continued to rise in 1997. The increase in sugar production is due to a rise in the processing of raw cane sugar imported mostly from Cuba. These imports give the industry the possibility to distribute its capacity use more evenly throughout the year. As a result, the share of sugar produced from sugar beet fell from 60 per cent in 1994 to 36 per cent in 1997.

FDI in the agro-food sector

The inflow of Foreign Direct Investment (FDI) into Russia has been small. By 1996, only about 3 per cent of food processing enterprises were privatised with the participation of foreign capital, reflecting both the shaky economic and political situation in Russia and rather unfriendly privatisation legislation giving strong preference to insiders and agricultural producers. However, in recent years the inflow of FDI to agro-food sector (including food retailing and catering) increased from US\$682 million in 1995 to US\$831 million in 1996 and US\$980 million in 1997. In 1997, the stock of FDI in the agro-food sector at US\$3.1 billion accounted for 24 per cent of the total FDI stock in Russia. Most FDI in the agro-food sector was concentrated in the food processing industry (58 per cent of the total) and in food retailing and catering (40 per cent of the total). Agricultural production attracted a very small amount of FDI (less than 2 per cent of the total). The main foreign investors in the agro-food sector originate from the USA and the UK. They are becoming more involved in the production of high value products such as confectionery, tobacco products, baby food and ice cream. It can be expected that with continuing macroeconomic stabilisation, the amount of FDI will significantly increase in Russia.

Agricultural production and food consumption

Crop production

Changes in crop output have been highly differentiated across commodities with grain production significantly increasing, fibre flax halved, sugar beet and potato declining, and vegetable and sunflowers slightly increasing (Annex Table II.10). Grain output was almost halved between 1990 and 1995, largely as a result of severe drought conditions in 1994 and 1995. It recovered in 1996, rising by 9 per cent to 69.3 million tonnes and, due to favourable weather conditions, reached as much as 88.5 million tonnes in 1997. During the 1990-1997 period, there was an evident shift in land allocation and production from feed grains, such as barley, oats and maize, to wheat in response to changes in domestic demand. The area sown to wheat was more or less stable between 1990 and 1995 but increased by about 9 per cent between 1995 and 1997. Wheat production fell strongly in the first half of 1990s, but rose by 47 per cent between 1995 and 1997.

Potatoes and vegetables are among the few agricultural products for which production was more or less stable or even increased in the reform period, reflecting both changes in food consumption (see below) and the fact that these crop products are cultivated in particular by household plots, which have resisted the general agricultural crisis. Potato production fell by about 4 per cent compared to 1996, but was 20 per cent higher than in 1990 and accounted for 31 per cent of the total value of crops. Vegetable production rose by 4 per cent and was slightly above the 1990 level. Sunflower production increased slightly by 3 per cent, due to improved yields. Sugar beet production is undermined by the stronger reliance of the sugar industry on imported raw cane sugar (see above). As a result, sown area shrank by 12 per cent contributing to a 14 per cent decline in sugar beet production in 1997. Cumulatively, sugar beet production in 1997 was 57 per cent lower than in 1990.

Livestock production

Livestock production continued to decline as a result of a drop in livestock inventories and in productivity, but at slower rates than in 1996 and there are signs that the decline may slow down further in 1998. The most important positive factor is the increased availability and relatively low prices of feed grains following a good 1997 grain harvest. Actually, while producer meat prices (including on poultry) increased by 24 per cent, grain prices fell by about 2 per cent in 1997.

However, longer term factors such as the decline in demand and intense competition from meat imports may continue to push production down. Between 1990 and beginning 1998, total inventories of cattle, pigs and poultry decreased by 46 per cent, 57 per cent, and 45 per cent, respectively. The decline in cow numbers was less dramatic as the cumulative fall since 1990 was 30 per cent in 1998 (Annex Table II.12). Animal numbers have dropped on all types of farms, but appreciably more so on large farms than on household plots and individual farms. Total meat production in 1997 was 52 per cent below the 1990 level, with poultrymeat falling by 65 per cent, pigmeat by 55 per cent and beef and veal by 46 per cent (Table I.10.). Milk production fell less sharply than meat production and was 39 per cent down in 1997 compared to 1990, but milk yields per cow decreased significantly, amounting to 2 330 kg per cow in 1997 in comparison with 2 710 kg in 1990.

Food consumption

Cuts in consumer subsidies and a fall in real incomes led to a decline in per capita food consumption in the 1990s. However, while demand for products with high income elasticities, such as meat and dairy products, decreased, demand for staple goods like potatoes and bread and bakery products increased at the beginning of the transition but then stabilised at 1993 levels. Consumption of such products as sugar, fruits and vegetables, and vegetable oil declined at the beginning of the transition but then also stabilised at 1992/1993 levels. Preliminary food consumption data for 1997 indicate a continuation of these trends (Annex Table II.17). Per capita consumption of meat and milk products amounted to 51 kg and 235 kg respectively, a decline of 32 and 39 per cent, respectively, compared with 1990. In 1996, the average share of household incomes spent on food was 42.6 per cent, up from 39.1 per cent in 1994, while the share of expenditure on food for low income households was between 70 and 80 per cent.

Agricultural trade

Trade flows

Since the transition started, there has been a striking shift in the composition of Russia's agro-food imports; imports of raw agricultural products have fallen sharply while those of processed foods have increased. More specifically, grain imports declined from about 30 million tonnes in 1992 to about 4 million annually between 1994 and 1996, while imports of meat and meat products rose from 0.5 million tonnes in 1992 to about 2 million tonnes in 1995, only to decline to 1.7 million tonnes in 1996.

Russia remains a net importer of agro-food products *vis-à-vis* all its trading partners. The geographical structure of Russian imports has changed significantly in the post-reform period; while agro-food imports from OECD countries, especially the European Union (EU), increased, imports from traditional suppliers, such as the New Independent States (NIS) and central and eastern European countries (CEEC), declined. Since 1994, the share of agro-food imports from the NIS has been increasing and in 1996 exceeded the share from the EU. In 1996, Russia's main food suppliers were Ukraine, the USA and Germany.

In the 1997/1998 season, following a sharp rise in grain output in 1997, Russia became a net exporter of coarse grains, in particular barley. However, this new situation revealed many impediments to realising Russia's full export potential, such as low quality of grains, high transaction and transportation costs in Russia, internal barriers on grain flows and a lack of adequate market information. As a result, with net imports of wheat of about 1.9 million tonnes and net exports of coarse grains of about 1.4 million tonnes, Russia's net imports of all grains would be at about 0.5 million tonnes in 1997/1998.

Trade relations

After the collapse of the Council for Mutual Economic Assistance (CMEA) and the disintegration of the Soviet Union, Russia needed not only to negotiate new trading arrangements with each of its traditional trading partners, but also to actively seek to reintegrate itself into the world economy on new market terms. Several new trade agreements have been concluded, in particular the Partnership and Co-operation Agreement (PCA) with the EU and various agreements with the NIS.

The PCA was signed in June 1994 and came into force in December 1997. However, an Interim Trade Agreement, the trade part of the PCA, came into force in February 1996 and put bilateral relations in a new GATT/WTO-type framework. Despite the PCA, the EU left Russia on its list of non-market economies, which might be harmful to Russian interests in trade disputes, in particular in antidumping investigations against Russian producers. Such cases, for example, concerned Russian fertiliser producers. In January 1998, the European Commission proposed removing Russia, along with China, from this list and at the end of April 1998, the proposal was approved by EU trade ministers. The decision means a change in the Union's criteria for judging if producers from these two countries are "dumping" goods in the EU market. The EU will now use the countries' own prices of goods under investigation rather than prices from Western producers to determine whether they are selling goods at below cost. Under the new policy, however, the two countries would not be designated as market economies; nevertheless, the new rules will provide the EU with the means to take account of cases where market conditions exist.

Russia continues to develop bilateral and multilateral initiatives to strengthen its economic and political links with the rest of the NIS. One of the latest initiatives was an agreement on the creation of the common NIS agricultural market (CAM) signed in October 1997 by the NIS governments (except for Azerbaijan and Uzbekistan) (Part II.1). On the whole, however, these efforts have not yielded many concrete results. While countries within the NIS normally have no tariffs on each other's goods, they apply varying tariff rates and other import measures against goods coming from outside. So far it has not proved possible to harmonise NIS trade policies towards third countries.

WTO negotiations

Russia formally applied for WTO membership in December 1994. Since then, Russia's trade regime, economic policies and laws have been reviewed during meetings with the relevant WTO working party to determine their compliance with WTO rules and to develop the terms of accession. Selected issues related to Russian agricultural policy, such as market access, internal support, export subsidies, sanitary and phytosanitary measures, and technical barriers to trade, were discussed. Russia argues that the country's still unstable economic situation makes it difficult to accept definite commitments. To preserve some room for manoeuvre in the future, Russia wants a level of agricultural support and tariff protection "comparable with the levels in other WTO-members".

Selected areas of concern have been identified, such as Russia's highly complicated and bureaucratic systems of trade regulations which contrast with relatively low tariffs applied on agricultural imports, trade relations with the NIS countries, which are still not transparent, the tendency to regionalise some agricultural policy measures which may contradict trade concessions negotiated with the federal government, and the base period for the estimation of the Aggregate Measure of Support (AMS). As for the latter, Russia advocates that the 1989-1991 period of "average, normal conditions", and not the "crisis period of Russian agriculture" of 1993-1995, should be used as the base for further reductions in support. However, such a proposal may not comply with the WTO practice of "normally using the average of the most recent three-year period" (WT/ACC/4) as the base period for acceding countries. Therefore, it is not expected that WTO-members would formally accept the 1989-1991 period as proposed by Russia. Moreover, Members of Working Parties for Russia, Ukraine and other countries negotiating their accession to WTO consider that the transformation of their agricultural policies during 1993-1995 did not constitute a "crisis period" but rather a necessary correction of a highly subsidised, inefficient agricultural sector which was neither economically rational nor sustainable. WTO membership

requires applicant countries to make concessions based on their (not other countries') current trade regimes in order to improve market access and ensure that the WTO principles of non-discrimination, equal treatment, predictability and transparency are upheld.

Agricultural policy developments

Structural policy and privatisation

Institutional and legal framework of the privatisation process

The Russian agricultural privatisation programme has been based on the transfer of land and non-land assets to large-farm employees, pensioners and social workers. No restitution of land was provided for. In March 1996, the Presidential Decree "On guarantees of constitutional rights of citizens to land" re-emphasised that land entitlements received by the eligible groups of population could be freely traded and required that all users of agricultural land conclude formal purchasing or leasing contracts with every individual land entitlement owner and that local authorities complete giving land certificates to land owners before the end of 1996.

Although the 1993 Constitution and the as-yet-unimplemented Article 17 of the Civil Code explicitly permit the purchase and sale of agricultural land, there is as yet no implementing legislation specifying a sale mechanism. This mechanism is to be specified in the new Land Code. However, an earlier version of the Land Code, forbidding citizens from mortgaging, selling or giving away agricultural land has passed the Duma twice, only to be vetoed by the President. The last veto was overturned by the State Duma (lower chamber of the parliament) but failed to be overturned by the more moderate Federation Council (upper chamber). In December 1997, a trilateral conciliation commission was set up involving representatives of the Duma, the Federation Council and the government. The commission's task was to revise the code and present a new draft by the end of March 1998. The president, regarding the free sale of land as a major political goal and a precondition for speeding up reforms in the agricultural sector, was ready to accept legislation which would prohibit the use of farmland for non-agricultural purposes, ensure full disclosure of land deals, reduce the risk of speculative deals, put the land market under strict state control and ban land sales to foreigners. However, the version of the Land Code approved by the State Duma on 22 April 1998 was much more restrictive than the president's proposals and failed to take into account the president's objections on the earlier version of the Code. In fact, the version approved by the Duma allows farmers to sell agricultural land only to the state and limits their rights to pass it onto their heirs. Therefore, it was very unlikely that the president would sign this version into law, and by the end of April 1998 the stalemate had not been resolved.

Article 72 of the Constitution assigns "issues relating to the ownership, use and disposal of land" to the sphere of joint federal-regional jurisdiction, leaving the possibility for the regions to act in the absence of federal legislation. Profiting from such a possibility, a law providing for the purchase and sale of land, including agricultural land, was passed by the regional Duma in Saratov and signed by Saratov's governor in November 1997. The first land auction took place in the Saratov region at the beginning of March 1998. Twenty-two plots of non-agricultural land were sold at prices many times higher than the starting prices. However, agricultural land drew much less attention and two plots of 20 hectares each were sold as low as Rb 27 (US\$4.5) per hectare. In general, Saratov's example seems to be attractive for other regions. In April 1998, the parliament of the internal Russian republic of Tatarstan adopted a Land Code which allows for the free sale and purchase of land, including to foreign individuals and companies. Some other regions are considering similar measures.

Restructuring of the former state and collective farms

By the end of 1997, reorganisation in the vast majority of large-scale enterprises has not proceeded beyond re-registration of the original farm under a new legal form. In practice, the reorganisation has changed very little in terms of the institutional structure of the farm, management practices and agricultural techniques. The majority of farms has been converted into production co-operatives in which fixed assets belong to the collective under a form of share-based ownership. In this system, land

and non-land assets are owned collectively by the enterprises and the enterprises are in turn owned by shareholders, who are employees, pensioners and social workers entitled to participate in the distribution of land and asset shares.

Only about 10 per cent of large farms have undergone more substantial restructuring, most often through the break-up of large farms into smaller technologically integrated production units, concentration of large farm land and property entitlements in the hands of small groups of owners through the purchase, exchange and leasing of entitlements, and partition of large farms into many household plots expanded somewhat by land taken over formally and informally from large farms, the latter remaining afterwards with limited functions of input and service supplier for the numerous household plots.

By October 1997, more than 90 per cent of land entitlement holders had received official certificates for their ownership rights. About 40 per cent of them contracted their entitlements to the users of land, mostly under leasing arrangements, with contracts registered officially, but the remaining 60 per cent did not sign contracts. Many managers of large farms were reluctant or unable to pay rents (usually paid in kind and/or in the form of services) for the use of the land. Some of them expected that the new and long-discussed Land Code would give land users (*i.e.* large farms) ownership rights to non-contracted land. The vast majority of entitlements has been contracted to the original, but now re-registered farms. However, between 30 and 50 per cent of land entitlements are owned by pensioners and non-farm workers who have shown more flexibility in allocating their entitlements to other enterprises and some entitlement holders have preferred to lease land plots to neighbouring large enterprises or individual farms in the expectation of receiving higher rents. This is creating opportunities for the reallocation of land use to those enterprises and individual farms which are more efficient and are able to pay higher rents.

Changes in farm structure and size

As a result of the privatisation and reorganisation process, by November 1997 137 million hectares (62 per cent) of the 221 million hectares of agricultural land in Russia were considered privately owned, while the remaining 84 million hectares (38 per cent) were still owned by the State or local municipalities. The majority of "privately" owned land was in the form of collective shared ownership. The rest of privately owned land was owned by individual farms and household plots. Of the 38 per cent of non-privatised land, 9 per cent belonged to municipalities and 15 per cent to various types of agricultural and non-agricultural enterprises and institutions in which land was not privatised for various reasons (Graph II.4.2).

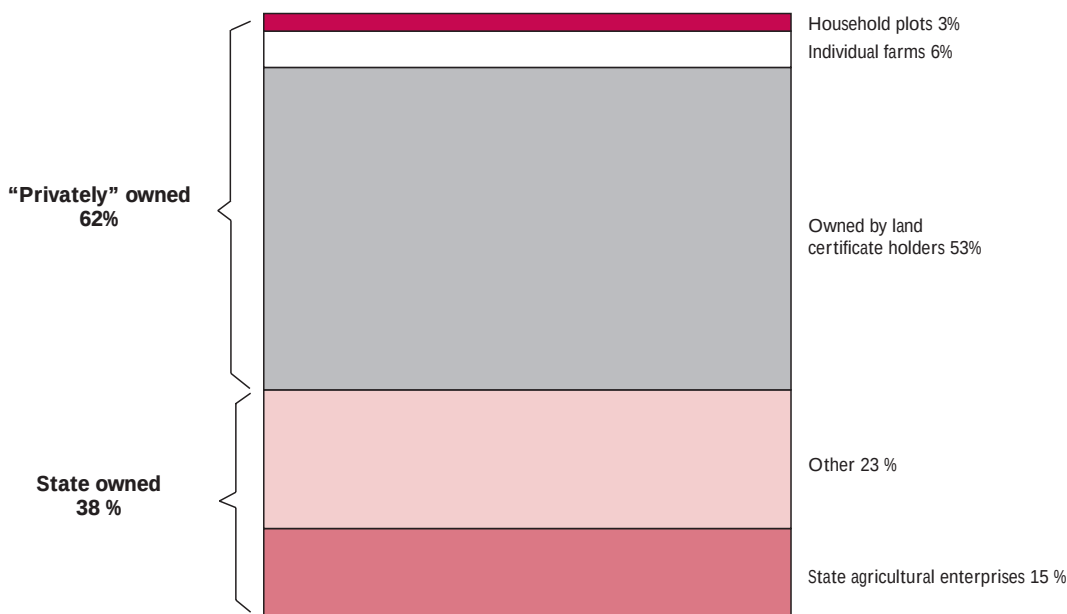
- Large-scale enterprises

In January 1997, there were about 27 000 large-scale agricultural enterprises operating on 134 million hectares of agricultural land and averaging about 4 950 hectares. In addition, there were over 14 000 other enterprises and institutions engaged in agricultural production operating on about 18 million hectares of land and averaging about 1 300 hectares. These enterprises were either not covered by the process of land privatisation and their reorganisation, or reorganised but without privatisation of land.

- Household plots

About 5.7 million hectares, or about 3 per cent of total agricultural land, were divided among 16 million household plot owners resulting in an average of just 0.4 hectares per household. Owners of household plots pay a land tax, which is very low in Russia, and do not pay income tax on income earned from the plot. Following a Presidential Decree of March 1996, household plots are free to use their land entitlements to expand their scale of operation up to the upper limit fixed by the local administration (usually between 6 and 12 hectares), but few of them have used this opportunity and even fewer have shown any interest in developing into more independent, family-type farms.

◆ Graph II.4.2. *Agricultural land ownership pattern in Russia, November 1997*



Source: State Land Committee (Goskomzem), 1997.

- Individual farms

The family farm sector, operating on about 6 per cent of agricultural land in Russia, has remained of minor importance. Due to lack of capital, legislative and political uncertainty, difficult macroeconomic conditions, a rather unfavourable political climate at federal and local level (except for some regions), difficult access to information, credits and markets, and a lack of tradition and experience with individual farming in Russia, only a small proportion of farm workers has decided to establish private farms. Moreover, potential individual farmers are afraid of losing access to production infrastructure (storage, repair service, grain drying facilities, etc.) located on large farms and to the social infrastructure provided through employment contracts with large farms.

The number of individual farms stabilised at about 280 000 between 1995 and the beginning of 1997, but then declined by about 2 per cent by January 1998. However, the total amount of land in use by individual farms increased in 1997 by 7 per cent, mostly due to the enlargement of farms through leasing contracts made with land entitlement holders. As a result, the average size of individual farms increased from 44 hectares at the beginning of 1997 to 48 hectares at the beginning of 1998.

Privatisation of the upstream and downstream industries

By the end of 1997, privatisation of agricultural upstream and downstream sectors was almost finalised. However, as in the case of formally privatised agricultural enterprises, the impact of the change in property rights on input producing enterprises and food processing companies has been weak. While between 1990 and 1996 food production was almost halved, the total number of those employed in food processing remained roughly at the 1990 level, meaning significant overemployment. Most food processing enterprises remain inefficient and try to pass their high production costs onto

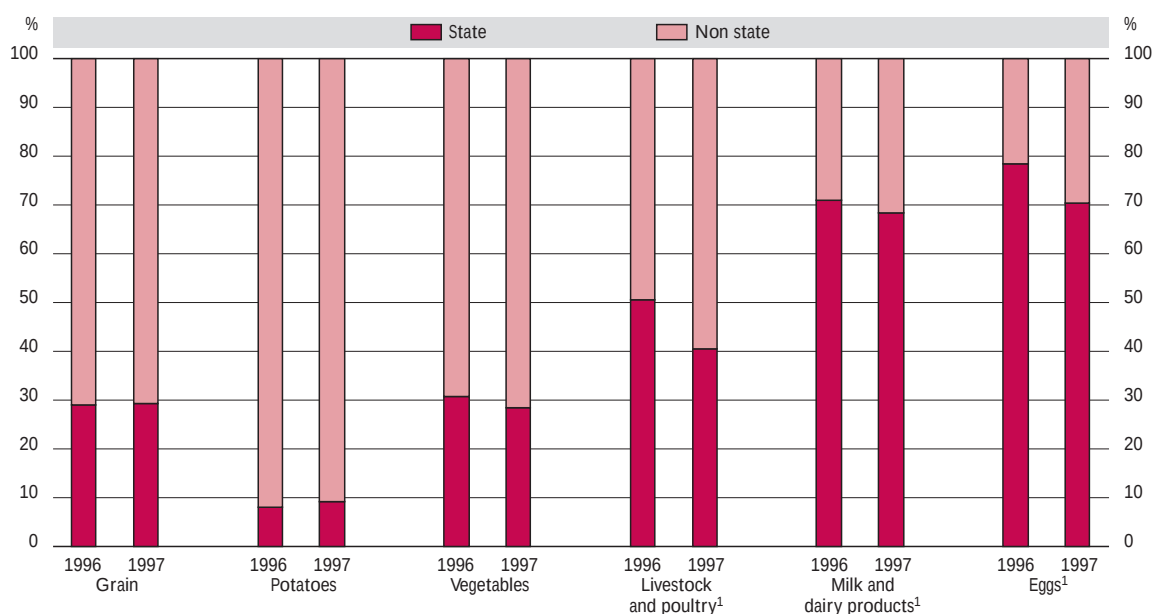
agricultural producers and consumers. Their slow adaptation to market conditions is partly due to the methods of their privatisation, which gave strong preferences to insiders and, in the case of about one fourth of upstream and downstream enterprises, to agricultural producers. In total, the two groups (in particular employees) hold well over half of the shares in the vast majority of medium and large upstream and downstream enterprises.

Domestic support policies

Price and income support

Following the phasing out of the Soviet state procurement system in 1992 a new procurement system was established in which the state has retained some control on prices for agricultural products delivered to government reserves. The federal state procurement system has been used to ensure a supply of food to the large cities (Moscow and St. Petersburg), northern regions in Russia, the army and prisoners. State procurement at the federal level has also served to maintain strategic reserves. In 1995, the Federal Foodstuff Corporation (FFC) began to handle the procurement for federal food stocks and the FFC had its branch in each region for regional procurement. In 1997, the shares of state procurements as a percentage of total production declined and varied between 1 per cent for potatoes and 49 per cent for eggs (Annex Tables II.11 and II.14). However, the shares in total marketed production were much higher at between 9 per cent for potatoes and 70 per cent for eggs (Graph II.4.3). The high shares of animal production purchased by the state may be somewhat misleading. According to available statistics, all livestock products sold to official purchasers are defined as deliveries to the state reserves. The official purchasers are usually privatised local dairy and meat processing enterprises and there is no regulation on how they should distribute processed products. Hence, the fact that a high proportion of animal products is formally bought for the state may be more an indication of the large number of enterprises designated as official purchasers for the state, than of government involvement in market regulation.

◆ Graph II.4.3. *The share of state purchases in total marketed production of selected products, 1996 and 1997*



1. All livestock products sold to the nominated official purchasers are considered as deliveries to the State reserves. The official purchasers are usually privatised local dairy and meat enterprises.

Source: Sotsyalno-ekonomicheskoye polozhenie Rossii: 1997, Goskomstat, Moscow 1997.

In July 1997, a law on “State Regulation of Agro-food Production” strengthened the federal government’s intervention system on agricultural product markets. The law introduced the concept of guaranteed prices at which the state authorities have to buy agricultural production if the average market prices are lower than the guaranteed price. State intervention is limited to a quota fixed by the government. The main declared target of state intervention is to stabilise the prices on the domestic market. In the case of a price increase above a specified level, state authorities are supposed to sell their intervention stocks on the market. Following this law, the government established in autumn 1997 the Federal Agency for the Regulation of the Food Market which was to replace the FFC.

An appropriate market infrastructure has been very slow to develop in Russia. There is a lack of commodity exchanges, wholesale markets and auctions that would improve market transparency and provide clear market signals to producers. Barter trade remains important. In 1994, the Ministry of Agriculture and Food (MAF) adopted a national programme for the development of agro-food wholesale markets, although the programme was implemented on a limited scale due to budget constraints. Only a few regional and local governments supported some activities to develop such markets. At the end of 1997, the MAF began preparation of a new two-stage programme aimed at creating a system of wholesale markets for the whole country by the year 2005.

Supplementary price payments

In 1992, livestock subsidies accounted for around 26 per cent of total budgetary expenditures to agriculture and the share declined slightly to 17 per cent in 1996. In 1997, the transfers from the federal budget to regions to finance livestock subsidies were abolished, but the subsidies as such were continued and paid by most of the regions from their own budgets.

Credit policies

The preferential credit system in Russia was substantially reformed in 1997. The “commodity credit” (*tovarny credit*) programme was replaced by a new one financed and implemented in a less distorting way. In March 1997, the government created a Soft Farm Credit Fund. The Fund was set up to provide preferential short term credits for agricultural producers. For each region the upper limit of these credits was fixed by the Ministry of Agriculture and Food. The limit depended on the total area sown to crops in each region. The subsidised interest rates were fixed at one quarter of the Central Bank’s refinancing rate. In 1997, two commercial banks (CBS-Agro and Alpha Bank) were authorised by the government to provide the preferential credits. For the provision of these credits in 1998, 12 commercial banks, including CBS-Agro and Alpha Bank, were selected through an open tender.

The Fund was to receive Rb 2.8 billion in 1997 from the federal budget for its operations, but due to budgetary constraints the government had to borrow this amount from the two authorised banks. The repayments from the 1996 commodity loans were to constitute the second source of finance for the Fund. In 1996, regions received fuel, lubricants and fodder of a total value of Rb 12 billion to be distributed to agricultural producers in the form of commodity credits. However, the vast majority of agricultural enterprises did not repay the credits and, in turn, regions were not able to repay their debts to the federal government. The debt amounted to Rb 9.6 billion at the beginning of 1997. In May 1997, the government decided to transform the remaining regional debts into three-year bonds to be issued by the regions and sold on the stock market. The decision to issue such bonds depended on the regions themselves, but for the regions which did not issue these bonds the repayments due for commodity loans were to be deducted from the federal budget transfers to the region. The sales of these bonds were not very successful and by the beginning of 1998, the Fund received less than Rb 2 billion from this source.

Input support policies

In 1997, as in previous years, agricultural enterprises were eligible for payments covering 30 per cent of their purchases of fertilisers, but due to budgetary constraints the actual allocation for this purpose was small. Moreover, all import subsidies on pesticides were abolished. From among the wide range of input subsidies used in the pre-reform period current policies have retained the lower price of

electricity supplied to agricultural producers (not financed directly from the budget, but by transfers from industry which was taxed by higher prices used to compensate for low prices for agriculture). The level of support provided to agricultural producers through lower electricity prices was relatively high and it represented an equivalent of around 8.5 per cent of budgetary expenditures to agriculture between 1992 and 1994. This share increased to 11 per cent in 1995 and to 19 per cent in 1996.

The government programme supporting purchases of agricultural machinery, the so-called leasing system, was reformed in 1997. Rosagrosnab lost its monopoly position as machinery supplier and the resources from the Federal Leasing Fund were lent to private leasing companies (leasing operators) selected in open tenders. To be selected in a tender the potential leasing operator had to commit its assets to finance leasing operations. The contracts signed with the Federal Leasing Fund provide that all the financial resources from the Fund must be paid back by the leasing operator according to a specified timetable.

Agricultural trade policies

The percentage tariffs and specific import duties remained, in 1997, unchanged with the exception of import duties on tea in packages under 3 kg which were increased from 10 to 20 per cent in July. The duty on unpacked tea remained at 5 per cent. In February 1998, the scope of agro-food products covered by a minimum import duty increased. It is expected that this will help prevent under-invoicing of products imported into Russia, but minimum import duties translate into higher *ad valorem* equivalents and, in fact, mean an increase in border protection. It should be noted that tariff policy in Russia, as in other NIS, remains under strong fiscal pressures as evidenced by the end-May 1998 announcement that the government intended to increase import tariffs on goods available from domestic producers as part of a crisis programme to boost tax revenues. In May 1997, a 25 per cent duty on imports of white sugar was extended to the NIS countries with the exemption of the members of the Customs Union (Belarus, Kazakhstan and Kyrgyz Republic). This measure created serious trade disputes with Ukraine, a major supplier of sugar on the Russian market. The disputes were solved at the end of 1997 with the introduction of the 0.6 million tonne duty-free quota on sugar imports from Ukraine (for details see chapter on Ukraine).

A food labelling law was introduced in May 1997 requiring all imported foodstuffs into Russia to bear labels in the Russian language and Cyrillic script. The labels are also required to provide product information, the date of manufacturing and the country of origin. So far, no import quotas or selective import licences have been applied to limit imports. Up to 1997, no export subsidies were applied under the Russian trade policies. Subsidies contemplated to compensate part of the transport costs of exported grain were not applied due to a lack of funding.

Percentage tariffs on agricultural products currently applied in Russia, between 10 per cent and 30 per cent, are relatively low compared with some OECD countries which have placed tariffs on their import restricting measures. However, their combination with a multiplicity of regulations and requirements as well as bureaucratic, time consuming and expensive certification process create important trade barriers. Moreover, frequent changes to specific requirements and regulations, often introduced on an *ad hoc* basis, make trade policy untransparent for both domestic and foreign traders.

Rural development policies

The rural economy is still largely dependent on the agricultural sector, which employs almost 50 per cent of the active population in rural areas. A large number of low-skilled workers in rural areas hinders occupational mobility within the labour force. As non-agricultural activities have been slow to emerge in rural areas, reorganised enterprises have felt obliged to keep employees despite the fact that agricultural production has fallen sharply. That policy has helped to ease short-term social tensions in rural areas, but has hindered the effective restructuring of enterprises and contributed to hidden unemployment. However, social tensions may simply be postponed if the lack of effective restructuring brings large scale enterprises to bankruptcy. The Russian government has not yet formulated an integrated policy embracing economic, social and environmental aspects of rural development. Support for the rural population is provided almost exclusively through agricultural policy measures.

Despite legislation providing for the transfer of social assets and public utilities to local authorities, large agricultural enterprises are still charged with the provision of public services. It is estimated that at the beginning of 1997 about 70 per cent of social assets and public utilities were still under the responsibility of these enterprises. This situation diverts financial and management resources from the commercial functions of the enterprise, hampers the restructuring process of agricultural enterprises and continues to make village inhabitants dependent on services provided by the enterprise, making them less interested in reallocating their land and non-land entitlements to other, possibly more efficient, enterprises and/or family farms.

Summary and outlook

Despite significant progress in macroeconomic stabilisation, the Russian economy still suffers from a number of weaknesses which are reflected in shrinking tax revenues, associated with high budget deficits, cuts in expenditures and delays in payments. The financial turbulence in Russia, beginning in the autumn of 1997, has demonstrated the fragility of Russia's emerging financial markets. Moreover, the results of institutional reforms are mixed, with confusing and rapidly changing laws, weak law enforcement, corporate governance, and crime and corruption remaining major obstacles to the development of efficient markets. To speed up reforms, major legislation is still needed, including laws regulating taxation, foreign investments, natural monopolies and land markets.

Progress achieved in farm restructuring has been limited. In the process of privatisation, the vast majority of state and collective farms have re-registered as private enterprises and have formally transferred ownership of collectively held land and non-land assets to workers and pensioners. However, the reorganisation undergone so far has not given a sense of ownership to farm workers and has done little to improve the organisational structure, size, management and economic behaviour of the farms.

The privatisation process of upstream and downstream enterprises has so far meant very little for the internal restructuring of enterprises, with many firms having no clear owners apart from the managers and workers themselves. Such a structure of ownership may lead to a policy of maximising employee benefits by awarding wages and salaries not related to productivity, giving excessive preference to job security, avoiding layoffs, etc. Where enterprises are dominated by agricultural producers, the temptation may be to increase producer returns leaving capital without adequate reward, thus deterring potential external (domestic and international) providers of capital as well as the management, financial and marketing know-how that these enterprises so urgently need.

The progress made by Russian agriculture towards developing a market orientated agricultural policy framework can be measured partly by the trend in the PSE (Box 1). The level of government support, including market price support, fell sharply at the beginning of the transition but has increased in recent years. The sharp fall and subsequent increase in support were predominantly due to macroeconomic factors, especially the substantial depreciation of the rouble followed by rapid appreciation, and less a result of agricultural policies. This evolution was also influenced by the government's policy of taxing agricultural exports at the beginning of the transition and then protecting domestic agricultural markets by increasing import barriers. Attention should be focused on removing inefficiencies in the food chain (through increased market competition), greater market transparency (through better market monitoring and information systems) and on the provision of training, education, research results and advice to producers, rather than on market regulatory measures which are distorting market signals for producers and are detrimental to consumers.

5. UKRAINE

Macroeconomic situation

GDP continued to decline in 1997, but the rate of decline slowed and a moderate turnaround in output may occur in 1998. With the fall in the rate of inflation to a record low and a stable national currency, further progress towards macroeconomic stabilisation policy was achieved. The overall

economic situation in the country, however, remains fragile and the political confrontation between the government and Parliament continues to hamper progress of privatisation and structural reform. The reform process has not yet reached a turning point to induce the private sector confidence needed to start investing and get the economy growing in a sustainable way.

Following a 10 per cent decline in 1996, GDP fell by 3.2 per cent in 1997 (Annex Table II.1), resulting in a cumulative drop of 58 per cent between 1990 and 1997. The decline in industrial output slowed to 1.8 per cent, compared to a 5.1 per cent fall in 1996, and signs of recovery appear in some industrial branches, including ferrous metallurgy and fuel production. However, the above figures do not reflect the development of the grey economy and thus probably overstate the drop in activity. According to various estimates, the grey economy may have accounted for 30 to 50 per cent of the overall economy in 1997.

Important tax reforms were introduced in 1997, including a new value added tax law, laws on excise duties and corporate income taxes, elimination of special exemptions on import duties and attempts to broaden the tax base. However, only 72 per cent of expected budget revenue targets were met which contributed to a widening of the consolidated budget deficit to an estimated 6.8 per cent of GDP, compared to 4.8 per cent in 1996. Moreover, lower budget revenues led to higher government spending arrears with total wage and pension arrears rising to US\$3.7 billion at the end of 1997. The pressures on the budget increased significantly in the first half of 1998 with the government's inability to raise financing to service domestic and foreign debts.

Tight monetary policy of the National Bank resulted in a decline in the rate of inflation to 10.1 per cent, compared to 40 per cent in 1996 (Annex Table II.2). There were no major changes in the exchange rate policy in 1997 and the national currency (hryvnia, UAH) was remarkably stable at between 1.8 and 1.9 UAH per US\$. In real terms, the hryvnia appreciated by about 10 per cent against the US\$ in 1997. However, the fallout of the Asian crisis in autumn 1997, together with the growing concerns about the overall state of the Ukrainian economy, led to a significant increase in interest rates on treasury bills, from 20 per cent in September 1997 to 40 per cent in November and 50 per cent in mid-February 1998 and to strong pressures to devalue the hryvnia. The pressure on the Ukrainian currency continued into early 1998 leading monetary authorities to devalue the currency by changing the currency corridor from 1.75-1.95 UAH to the US\$ to 1.8-2.25 for 1998.

Officially registered unemployment rose from 1.3 per cent at the beginning of 1997 to 2.3 per cent in January 1998. However, hidden unemployment in the form of long, unpaid leaves and forced part-time work remains high at about 20 per cent. It is expected that as structural reforms in the economy proceed, the level of open unemployment will increase in the next few years.

Ukraine's foreign trade in goods and services was reported positive at US\$0.4 billion compared to a deficit of US\$0.9 billion in 1996. Major factors contributing to this outcome were a fall in merchandise imports by 2.8 per cent, compared to a fall in exports by 0.9 per cent, and a positive balance in trade in services (US\$3.3 billion in 1997), mainly fees for the transit of gas exported from Russia to Western Europe. A dispute with Russia (Ukraine's most important trading partner) contributed to a contraction in exports to the NIS countries by over a quarter. As a result, the share of NIS countries in total Ukrainian exports fell from 54 per cent in 1996 to 40 per cent in 1997. The NIS share of Ukrainian imports fell from 68 per cent in 1996 to 60 per cent in 1997.

In January 1998, Ukraine's external debt totalled US\$9.6 billion, up from US\$8.7 billion at the beginning of 1997. About US\$2.6 billion was owed to the NIS countries, mostly for gas supplies from Russia and Turkmenistan, and the rest consisted of foreign loans from multilateral and bilateral creditors. In March 1998, the IMF suspended disbursement of its stand-by loan granted in August 1997. The World Bank also slowed down its assistance to Ukraine given the government's inability to carry out agreed-upon reforms in coal, agriculture and energy sector restructuring. The value of foreign direct investment (FDI) into the Ukrainian economy rose by about US\$0.8 billion to an accumulated total of US\$2.1 billion at the end of 1997. However, the level of FDI remained low compared to most other countries in the region. The high degree of commercial risk, the instability of the legislative and regulatory framework, the lack of efficient procedures for contract enforcement and the numerous bureaucratic impediments to business were the major factors discouraging foreign investment in Ukraine.

Situation of the agro-food sector

Agriculture

Agriculture has traditionally played an important role in the Ukrainian economy. However, while agriculture's share in total employment increased from 19.5 per cent in 1990 to 21.8 per cent in 1997, its contribution to GDP was more than halved from 24.4 per cent to 10.5 per cent over the same period implying a significant fall in labour productivity (Annex Tables II.4 and II.6). The fall in agriculture's share in GDP was the result of both an absolute decline in the volume of production and a relative drop in agricultural prices compared to prices in other sectors of the economy. However, after the severe cost-price squeeze between 1992 and 1995, agricultural output prices rose at only slightly lower rates than input prices in 1996 and 1997, reflecting more stable market conditions for agriculture in recent years.

Gross agricultural output (GAO) has been continuously declining during 1991-1997, with the exception of 1993 when it grew by a modest 1.5 per cent. In 1997, the GAO fell by a further 2 per cent following the 9 per cent fall in 1996 and resulting in a cumulative drop of 42 per cent between 1990 and 1997. Livestock production has been contracting more rapidly than crop production reflecting changes in the structure of demand and the removal of strong preferences given to livestock production under the Soviet system. Livestock production fell by a further 13 per cent contributing to the overall fall of 56 per cent between 1991 and 1997, while crop production grew by almost 8 per cent, but was still 27 per cent lower than in 1990.

While production on former *kolkhozes* and *sovkhozes* (large farms) declined by 5 per cent, there was a 1 per cent increase in the output of the private sector. Large farms contributed 44 per cent to the GAO in 1997, with the private sector, dominated by household plots, contributing the remaining 56 per cent, up from 27 per cent in 1990. Large farms tend to specialise in crop production, which grew by 13 per cent in 1997 while livestock production declined by 28 per cent. Livestock production on large farms was almost five times lower than in 1990.

According to preliminary data of the Ministry of Statistics, 10 933 large scale agricultural enterprises (or 87 per cent of the total) reported losses in 1997, with aggregate losses amounting to UAH 3.6 billion (US\$1.8 billion). No agriculture enterprises, however, are reported to have collapsed which is indicative of the weakness of Ukrainian bankruptcy laws.

The level of wages in Ukrainian agriculture has been traditionally lower than in other sectors of the economy. In 1997, the average monthly wage in agriculture (on large farms) was UAH 81.6 or 58 per cent of the national average monthly wage. A significant proportion of agricultural wages continued to be paid in kind.

Upstream and downstream sectors

Production of agricultural machinery continued to decline, with some minor exceptions. For example, production of tractors stabilised at 5 000 but was less than one twentieth of the level in 1990. The inventory of basic machinery on farms declined further, meaning continued decapitalisation in agriculture. For the first time since the transition began the application rate of fertilisers increased, from 21 kg per hectare in 1996 to 22 kg in 1997, as against 107 kg in 1990 (Annex Table II.7).

Following a 7 per cent decline in 1996, the output of the food processing industry fell by 15 per cent with production down in almost all branches of the industry in 1997. The only exceptions were alcoholic beverages and confectionery goods whose production rose slightly. Compared to 1990 levels, the drop in output ranged from 14 per cent (for alcoholic beverages) to 92 per cent (for whole milk products) (Annex Table II.16). The industry's decline was due to the slow privatisation and restructuring process, the decline in domestic demand, a partial loss of traditional export markets (such as Russia), the decline in agricultural production and growing competition from imported food products in the domestic market, the outdated technologies used by most enterprises, high energy consumption, poor product quality, and low value added.

Most food processing enterprises, even if formally privatised, went through little or no restructuring at all. Many of them are still responsible for maintaining social infrastructure. Like in other sectors of the economy, these enterprises have been suffering from a shortage of working capital resulting in large unpaid debts to agricultural enterprises and in the development of “give-and-take-schemes”, barter arrangements in which processing enterprises retain a part of the processed product and all the rest is paid back to agricultural producers in kind as a payment for the raw produce supplied. It is estimated that this scheme was used to produce 70 per cent of sunflower oil, 44 per cent of flour and 19 per cent of meat in 1997. The scheme imposes an additional burden on farming enterprises by charging them with marketing costs of the processed products and actually delaying the payment for the raw products supplied. Moreover, it reduces taxable incomes of food processing enterprises, thus reducing budget revenues.

Agricultural production and food consumption

Crop production

While overall crop production grew by 8 per cent, the results were mixed across commodities. Grain production grew by a record 44 per cent, but from extremely low harvests in 1996 affected severely by the weather. Production grew also for sunflower seeds (by 9 per cent) and vegetables (by 2 per cent), but declined for sugar beet (by 23 per cent), potatoes (by 9 per cent) and fiber flax (by 50 per cent) in 1997 (Annex Table II.10). For the first time since the transition started, total area sown increased slightly (by 1 per cent) to 30.3 million hectares, but was still about 2 million hectares less than in 1990 (Annex Table II.9)

Grain production grew due to an increase in the area sown (by 14 per cent) and higher yields (by 27 per cent to 2.5 tonnes per hectare). Production of all grains increased in 1997 – wheat by 4.9 million tonnes, barley by 1.7 million tonnes, rye by 0.3 million tonnes, and maize by 3.5 million tonnes (Annex Table II.10). Maize production almost tripled from an exceptionally low level in 1996. However, heavy rains in the summer and autumn meant that only about 20 per cent of the wheat crop was classified as of milling quality. Losses from the 1997 grain harvest are expected to be high as a large part of the total crop has been held on farms for animal feeding where storage facilities are poor. More than 31 million tonnes of grains (89 per cent of the total) were produced by large scale farms (up from 22 million in 1996), 3.4 million by household plots and 0.7 million by individual farms.

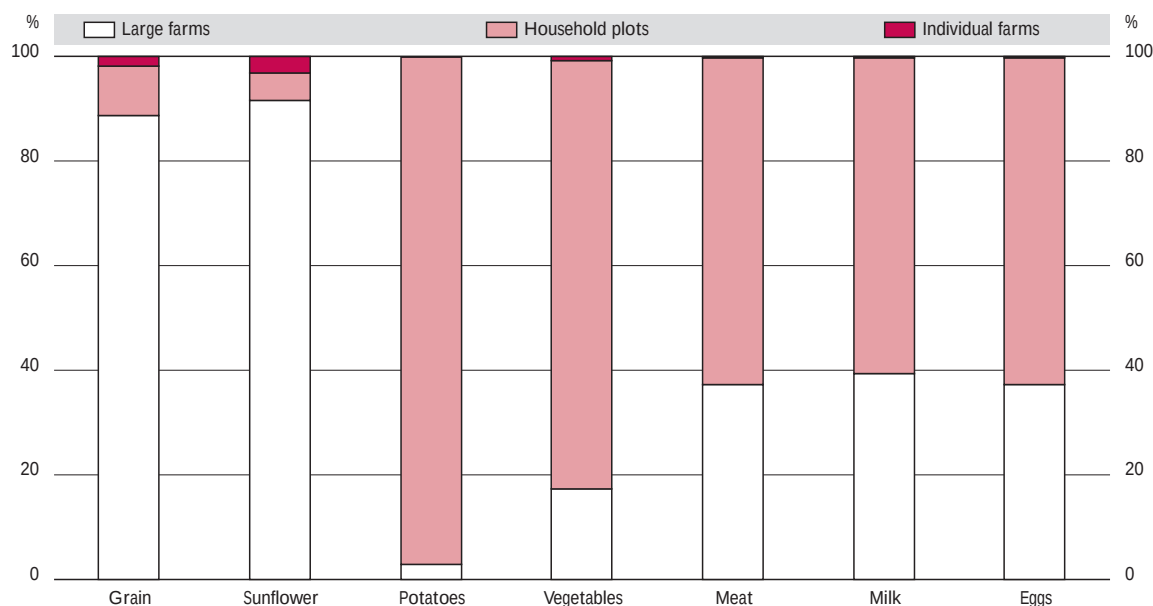
A drop in area sown combined with the rainy summer and autumn weather lowered sugar beet production from 23 million in 1996 to 17.7 million in 1997, and the average yield of 17.6 tonnes per hectare was the lowest in the last 30 years. Moreover, the average sugar content was low at 14.86 per cent (down from 15.62 per cent in 1996), as well as the sugar extraction rate at 11.7 per cent (down from 11.9 per cent in 1996). As a result, output of refined sugar fell by nearly 40 per cent to 2 million tonnes in 1997.

Livestock production

Livestock production continued to decline as a result of both a fall in animal numbers and a drop in productivity per animal, in particular on large scale farms. The sector has suffered from a continued drop in consumption, rising input costs, reduced government support, feed shortages after the disastrous 1996 harvest and the low genetic quality of the stock. The total number of cattle fell by 17 per cent and at the beginning of 1998 was just 50 per cent of the 1990 level. The number of cows fell by 10 per cent and was 26 per cent lower than in 1990. Pig numbers shrank by a further 16 per cent, resulting in a cumulative fall of above 50 per cent since 1990 (Annex Table II.12). Sharp reductions by the large farm sector have been mitigated by better performance of the private sector, especially household plots. For example, private sector cattle herds rose by 1 per cent, compared to a 23 per cent fall in the large-scale sector.

Production of meat, milk and eggs on large farms fell by 25 per cent, 12 per cent and 6 per cent, respectively. Milk yields in this sector fell from 1 697 kg in 1996 to 1 384 kg and the average daily weight gain of cattle fell from 237 g to 213 g over the same period. In the private sector, while production of

◆ Graph II.5.1. *Agricultural output by farm types, 1997*
Per cent of total output



Source: Ministry of Statistics of Ukraine.

meat decreased by 6 per cent, production of milk and eggs rose by about 2 per cent each. These trends have further contributed to a shift in the structure of livestock production from large farms to household plots with the latter now producing more meat, eggs and milk than the former.

Food consumption

As in many other countries in transition, the withdrawal of state support for food consumption, the rising prices of foodstuffs, falling disposable incomes and a substantial increase in the range of non-food goods available in the country have resulted in a sharp drop in food consumption over the past six years, particularly of expensive products such as meat and meat products, milk and dairy products, and eggs. According to official data provided by the Ukrainian Ministry of Statistics, consumption of all livestock products continued to decline with meat consumption averaging 34 kg per capita, just half of the 1990 level. Consumption of sugar and vegetable oil also fell while consumption of fruits, potatoes and cereal products increased (Annex Table II.17). According to preliminary data of the Ministry of Economy, the proportion of household incomes spent on food was very high at 63 per cent, up from 61 per cent in 1996.

Agricultural trade

Trade flows

Agricultural and food exports have traditionally accounted for a significant share of Ukraine's total exports, but following the loss of some traditional markets resulting from the disintegration of the former Soviet Union, the significant decline in agricultural production, and export restrictions imposed by the government to ensure adequate food supplies in the domestic market, agro-food exports decreased significantly in 1992-1993. The situation started to reverse itself in 1994, when most

quantitative restrictions on exports were lifted and trade links with other NIS countries were partly re-established. By 1996, agro-food exports rose to US\$3.1 billion, accounting for 21 per cent of total merchandise exports.

Ukrainian agro-food exports, however, were strongly affected by trade barriers imposed by Russia (see below), its main export market, and by a record low grain production in 1996. As a result, the total value of these exports fell by about 40 per cent to US\$1.8 billion, and accounted for 13 per cent of Ukraine's total merchandise exports in 1997. Exports of all major agro-food products fell, including those of sugar (by more than 50 per cent) to US\$315 million, of alcoholic and non-alcoholic beverages (by 75 per cent) to US\$113 million, and of cereals (by 66 per cent) to US\$128 million in 1997. Agricultural and food imports declined by about 35 per cent, to US\$898 million, accounting for 5 per cent of total imports in 1997. Ukraine thus had an agro-food trade surplus of US\$0.9 billion, down from US\$1.6 billion in 1996.

The good 1997 grain crop raised expectations of significant grain exports. However, the poor quality of grains, combined with good harvests in Russia, Ukraine's traditional customer, the oversupply of feed grains on international markets and poorly developed marketing channels, reduced the amount of grains exported to below 2 million tonnes in the 1997/1998 season from 3-4 million expected by the government. As a result, the majority of the surplus had to be stored on-farm and producer grain prices fell significantly both in nominal and real terms, thus undermining the profitability of grain production in the 1997/1998 season.

Trade relations

After the dissolution of the Soviet Union, Ukraine's trade relations with other NIS countries have been based on bilateral trade agreements signed with all the NIS. Ukraine has not joined any multilateral trade agreements within the NIS. Its trade relations with Russia strained in 1996; after Ukraine decided to exempt exports to the NIS from VAT, Russia made all goods entering its territory from Ukraine subject to the VAT at 20 per cent with effect from 1 September 1996. Moreover, in May 1997, Russia imposed a 25 per cent duty on white sugar imports claiming that unrestricted Ukrainian imports were undermining the Russian sugar industry. Ukraine, on the other hand, maintained that the duty violated the free trade agreement signed by the two countries in 1993.

Ukraine's relations with Russia eased in November 1997 when Russia agreed to establish a 600 000 tonne duty-free quota for refined sugar from Ukraine. Exports in excess of this quota will be subject to the full duty rate of 25 per cent. The quota, to be sold by public tender, applies to the 1998 calendar year so it could be partly supplied from Ukraine's 1998 harvest, thus easing a problem of insufficient quantities of refined sugar available for exports following the poor 1997 beet harvest. In an effort to limit the possible disruptions on the Russian market, the bulk of the quota (400 000 tonnes) will be delivered in the second and third quarters of the year. The remaining 200 000 tonnes will be split equally over the first and fourth quarters.

The agreement on sugar became a part of a new free trade agreement with Russia which came into effect on 1 February 1998. This agreement confirmed the duty-free trade arrangements between the two countries and abolished the VAT on goods (including sugar) traded between them. It is expected that the lifting of VAT will enable Ukraine to raise overall exports to Russia by over 25 per cent in 1998.

The trade agreement fell into the more general framework of political agreements signed between Ukraine and Russia in 1997 and the beginning of 1998. In May 1997, Russia and Ukraine signed a Friendship, Co-operation and Partnership Treaty which had been delayed by the long running dispute over the future of the Black Sea Fleet and over ownership rights to the Sebastopol naval base in Crimea. The Treaty included the clause on the inviolability of their common border and was ratified by the Ukrainian legislature in January 1998. As of April 1998, it was still awaiting ratification by the State Duma in Moscow, however. Moreover, a ten-year programme for economic co-operation between Ukraine and Russia was signed in February 1998.

Ukraine is slowly progressing in its application for WTO membership, for which a request was filed in December 1993 with full negotiations beginning in late February 1995. Information was presented to the WTO in November 1997 on trade policies, tax legislation and state support to agriculture, including

standardisation and certification, sanitary and phytosanitary measures applied to traded goods and a new list of commitments on services. Information on Ukraine's unified customs tariff and on non-tariff measures applied to imports was also made available. Since 1995, there have been six meetings of the Working Party (the last one took place in early June 1998) and the pace at which developments have occurred suggests that the negotiation process will be long and difficult. Particular emphasis has been placed on the market access regime (Ukraine is introducing more restrictive conditions such as quotas), domestic support and export subsidies, sanitary and phytosanitary rules, technical barriers to trade, the importance of barter trade and balance of payments problems, the still dominant role of the state, in particular in agriculture and state trading enterprises, the privatisation process and the land market, price controls, and taxation.

The Partnership and Co-operation Agreement signed between the EU and Ukraine in June 1994 came into effect in March 1998. However, the protocol extending this agreement to Austria, Finland and Sweden will come into force at a later date as the procedures have yet to be concluded.

In May 1997, Ukraine and Poland signed a Declaration on Accord and Unity. Ties between the two countries have become closer in recent years, with Poland supporting Ukrainian membership of CEFTA. Talks were scheduled with Poland, Slovakia and Slovenia on entry to CEFTA, although full membership is unlikely until Ukraine is admitted to the WTO.

In November 1997, the NIS governments, with the exception of Uzbekistan and Azerbaijan, signed an agreement to create a common agricultural market (Part II.1).

Agricultural policy developments

Structural policy and privatisation

Institutional framework of the privatisation process

The Ukrainian privatisation programme, which is being managed by the State Property Fund (SPF), includes separate but inter-related procedures for large-scale, small-scale, mass (voucher) and housing privatisation. There were no major changes in the institutional and organisational framework of the privatisation process in 1997, with the privatisation of medium and large-scale enterprises based on the Presidential Decree No. 699 of November 1994.

The small-scale privatisation programme was virtually complete by the end of 1997 with approximately 90 per cent of an estimated stock of 42 000 small enterprises having been transferred to private ownership. By the end of October 1997, 6 500 medium to large-scale enterprises, out of a total number of about 17 000, were considered privatised (defined as transferring at least 70 per cent of shares to private ownership). However, over 5 000 enterprises have been listed by Parliament as being ineligible for privatisation. Furthermore, large-scale privatisation often involves transferring shares to employees which may hinder the development of effective corporate governance structures, especially given the weak nature of secondary markets. Despite its intention to scale down the mass privatisation programme in favour of a direct sales approach, the government extended the deadline for members of the public to collect their privatisation certificates from 30 October 1997 to 1 January 1998. According to the SPF, only 36 million of Ukraine's 51 million population have collected their vouchers. Privatisation revenues remain small with only UAH 200 million received in the first 10 months of 1997, compared to the annual target of UAH500 million. Another set-back to the privatisation programme occurred in November when Parliament passed a resolution to suspend all sales of enterprise until a new Chairman was found for the SPF. Parliament lifted the privatisation ban in mid-February and approved the government's 1998 privatisation programme providing for privatisation of "strategic" sectors such as energy and telecom, but not for the sale of farm land.

Policies related to the restructuring of the former state and collective farms

There were no major changes in policies related to restructuring of large agricultural enterprises. The basis for the restructuring was fixed by the 1993 Law on Collective Agricultural Enterprises (CAEs),

specifying that farm employees and retirees were to be entitled to a share of the farm's non-land assets based on years of service and aggregate earnings. According to this law, the non-land assets of *sovkhozes* are transferred from the state to the collectives and then distributed to workers in the same way as in *kolkhozes*. The transformation of *kolkhozes* and *sovkhozes* into CAEs combined with their formal re-registration as new enterprises and titling of non-land assets to individuals is considered an initial step for restructuring. The second step relates to land reform and land titling to individuals. The third step entails the restructuring of the CAEs into various types of private enterprises based on private ownership of land and non-land assets.

The first step was almost complete by the end of 1997 with almost all *kolkhozes* and *sovkhozes* transformed into CAEs or limited liability companies. The second stage got underway in 1997 and the third stage has not yet begun.

Land laws and land ownership policies

The process of land reform in Ukraine was initiated in 1992 with the adoption of the new Land Code. President decrees "On priority measures to promote land reforms in the agricultural sector" (October 1994) and "On procedures for titling of land transferred into collective ownership on agricultural enterprises and organisations" (August 1995) further specified measures and procedures of the privatisation process. Under this legal framework, agricultural land was to be transferred from the state to the collective ownership of agricultural enterprises before individual land entitlements were to be determined. Each eligible farm worker or retiree was to receive a certificate ownership for a given amount of land, but without a physical demarcation of the plot. The land entitlement could be sold, inherited, traded or mortgaged, and the entitlement could be transformed into a physical plot when the entitlement holder left the farm.

No new legislation related to land reform was passed in 1997. The Parliament did not approve a new version of the Land Code prepared by the government under the new Constitution which would have clarified land ownership rights and called for the removal of the six-year moratorium on sales of land by new private owners, for further development of land lease legislation and for the creation of an efficient system of registration of land ownership rights.

The transfer of land from the state to the ownership of collective agricultural enterprises gained momentum in 1997 and, by the end of the year, only 7 per cent of agricultural land belonged to the state. According to the data provided by the State Committee for Land Resources, as of 1 January 1998 almost all CAEs had received certificates for collective ownership of land and 10 646 (98 per cent) had completed titling of land to individuals. Land ownership certificates were distributed to 5.9 million farm workers and retirees. As of 1 January 1998, 24 700 people in 1 201 CAEs had converted their land titles into land that was physically demarcated. The first cases of sales of land titles were registered in 1997. However, due to contradictory and incomplete legislation, the legal status of these transactions is not clear.

In October 1997, the government submitted a draft law on a single tax for agricultural producers. A site in Poltava *oblast* was selected for the trial which will run until the end of December 2000. The single land tax will replace all taxes, charges and other payments. In June 1998, the President signed a decree on the unified tax for all agricultural producers in Ukraine. To qualify, a producer must prove that more than 50 per cent of his gross revenues originate from agricultural production. The tax was supposed to become effective as of January 1999, but as of early July 1998 it was not clear whether it would pass through the Parliament.

In February 1998, the government approved a resolution which provides for the establishment of a unified system for registration of ownership rights for land and real estate. It is expected that such a registry can be established as soon as the "Law on Registration of Property" is passed by the Parliament. The draft law was to be presented to the Parliament for the second reading in mid-1998.

Changes in farm structure and size

Progress in land reform and farm restructuring has been slow. Although most land has now been transferred from state to collective ownership and farms are registered in a number of different organisational forms, internal restructuring has been minimal. After six years of reform most of Ukrainian agriculture remains collectivised and only 17 per cent of agricultural land is cultivated by individuals (household plots and family farms). The distribution of land entitlements to individuals in collective farm enterprises is reported to be almost complete, but entitlements remain largely mere paper certificates as no real mechanism has been developed to institutionalise the selling or leasing of individually held entitlements in land or assets.

The private farming sector consists of about 12 million tiny household plots, which accounted for 15 per cent of agricultural land in 1997, up from 6 per cent in 1990, as well as new individual (family) farms occupying 2.1 per cent of agricultural land in Ukraine at the beginning of 1998. Household plots constitute the most dynamic sector of Ukrainian agriculture, accounting for 55 per cent of GAO in 1997, compared to just 27 per cent in 1990. Their share in the production of selected agricultural commodities was even higher, e.g. 97 per cent for potatoes, 82 per cent for vegetables, 63 per cent for meat and eggs and 60 per cent for milk (Annex Table II.15). However, as in other NIS, they strongly rely on various registered and unregistered produce and service transfers from large farms. While most of their production is for household use, an increasing part of production is being commercialised and private suppliers and marketers are beginning to emerge, servicing small scale producers.

The emergence of new private farms slowed down in 1995-1997, mainly due to the unfavourable economic environment, lack of seed capital, limited access to credit, and legislative and political uncertainties. According to a survey conducted by the World Bank in 11 Ukrainian provinces at the beginning of 1996, only 6 per cent of rural residents indicated they would like to leave the large farm enterprise with their share of land and assets and establish a private farm. Moreover, nearly half of the respondents were against the right of exit with land and asset shares, although this right is protected by law.⁵ As a result, the number of family farms stabilised between 35 000 and 36 000. In January 1998, there were 35 927 individual farms in Ukraine (only 574 more than a year earlier). However, the average size of a private farm has been growing. At the beginning of 1998, the average individual farm occupied 26 hectares of agricultural land, including 24 hectares of arable land, compared to 24 hectares and 22 hectares, respectively, one year earlier. There are wide regional variations in the average size of individual farms, which range from 4 hectares in Zakarpotska Oblast (in the west) to 39 in Kirovograd and 45 hectares in Lugansk Oblast (in the east).

Privatisation of the upstream and downstream industries

The procedures applied for the privatisation of the agro-industrial complex (APK) are different from those used in other sectors. In order to restore technological links between producers and processors, in 1994 and 1995 farms were given pre-emptive rights to the purchase at market value of 51 per cent of the capital of agro-food industry enterprises in their area. However, they lacked means to take advantage of their preferential rights and in October 1995 the law "On Peculiarities of Privatisation of Property in Agro-industrial Complex" was passed by the Parliament which envisaged that 51 per cent of shares of agro-food enterprises would be transferred free of charge to agricultural enterprises as legal entities. The law came into force in August 1996. The State Property Fund laid down the procedures for implementing the new law, which allowed for the assets to be transferred from agricultural enterprises as legal entities to farm workers as individuals.

At the end of 1997, the government initiated the privatisation of the majority of grain elevators and grain storage facilities operated by the quasi-government procurement organisation Khlib Ukrainy (Bread of Ukraine) created in November 1996 to take over the grain procurement activities of the Central Grain Products Department of the Ministry of the Agro-Industrial Complex.⁶ It was envisaged that assets of 542 grain processing enterprises would be transferred to the charter capital of Khlib Ukrainy, but the relevant government resolution was not implemented. In November 1997, the government adopted another resolution envisaging the transfer of the assets of 99 grain processing enterprises

to the charter capital of Khlib Ukrainy and the privatisation of the remaining 443 enterprises in 1998. The resolution ordered the SPF to approve privatisation plans of 100 enterprises by the beginning of 1998 and of 343 enterprises by mid-1998. The resolution also recommended the SPF to sell for cash all shares remaining after the completion of preferential sales to employees and agricultural suppliers, but in May 1998 the government decided to retain 25 per cent of shares remaining after the preferential sales for the period of up to five years. By June 1998, the SPF approved privatisation plans of more than 250 grain processing enterprises.

Despite the various resolutions and initiatives, the formal privatisation of upstream and downstream enterprises, based on the transfer of shares to employees and agricultural producers, has not brought any substantial change in their internal organisation and management. Moreover, given the weak nature of secondary markets, the development of effective corporate governance and deeper restructuring will most probably be rather slow.

Domestic support policies

The provision of soft credits to agriculture remained the main form of government support to agricultural sector. Loans from public funds were extended at zero interest rate to agricultural enterprises through the government procurement system and were limited to purchases of grains only. To receive a loan, an enterprise had to sign a contract for the supply of grain to the state procurement organisation.

Direct state procurement of agricultural products was limited to purchases of grains and the system of procurement was almost the same as in 1996. The government planned to purchase 5 million tonnes of grains in 1997. Contracts for grain deliveries were signed between the producers and state procurement organisations. In order to offset the impact of inflation the purchase price was fixed at US\$150 per tonne. The government committed itself to paying 50 per cent of the value of the contract in advance. Direct deliveries of inputs and payment of farms' bills for inputs and services provided by a third party were the main forms of advance payments. The remaining 50 per cent was payable on delivery of the grain to the procurement organisation. However, delays with advance payments, and inability of many farms to deliver high quality grain (third class) reduced the quantity of grains purchased by the state to 4.2 million tonnes (84 per cent of the target). To accelerate deliveries of grains under the state contracts, sales of grain by agricultural enterprises to non-government institutions were made conditional in many cases on fulfilment of the state contracts. Moreover, as in 1995 and 1996, farms which had fulfilled their state contracts were allowed to open a special "untouchable" bank account where up to 30 per cent of revenues from grain sales could be deposited for use in financing 1998 production. Due to a fall in market prices of grains below the state purchase price the state may suffer a significant loss on its procurement operation when the purchased grain is re-sold on the domestic market.

In August 1997, the government established State Grain Intervention Fund. The main task of the Fund was to keep domestic grain prices stable. For this purpose 0.6 million tonnes of grain were allocated to the Fund from the state reserves. However, no interventions were undertaken by the Fund by June 1998.

In September 1997, the government established the State Leasing Fund. The Fund is to be capitalised by the revenues from the loans paid back to the budget by the procurement organisations. It is intended that the Fund buy and supply basic, domestically-produced machinery and equipment for farms to be repaid on an instalment basis. Resources will be disbursed for periods of up to 5 years at an interest rate fixed at half of the refinance rate applied by the National Bank of Ukraine.

A new barter scheme for the supply of fertilisers was also introduced in September by the government for the 1997/1998 season. Fertilisers for the 1998 crop are to be provided by private gas suppliers under guarantees provided by Khlib Ukrainy and are to be distributed in advance by the state-owned input supplier, UkrAgroKhimCenter. Farms are to supply grain to Khlib Ukrainy in autumn 1998 as payment in kind.

Agricultural trade policies

Export restricting measures

After independence, the Ukrainian government introduced a wide range of restrictions on agro-food exports to the benefit of domestic consumers. In late 1994 it abolished export quotas and licensing requirements for most commodities. However, quotas and licences for grain exports were not abolished until January 1996 and some other export restricting measures are still applied.

In May 1996, Parliament passed a "Law on Export Duties on Live Animals and Skins" which introduced export duties on exports of selected live animals and skins at rates ranging from 27 per cent to 75 per cent of the contract value with minimum specific rates set in ECU. In addition, Parliament mandated the government to establish indicative prices for exports of these products. The prices are treated by customs as minimum export prices and exports below these prices are not allowed. Indicative prices are published monthly by the Ministry of Foreign Economic Relations and Trade.⁷

The law was intended to limit exports of live animals and skins because of the decreasing numbers of livestock and the under utilisation of domestic meat processing capacity. However, while exports of live animals and skins in the second half of 1996 and in 1997 fell sharply relative to 1995 and early 1996 levels, this has not stabilised the number of livestock nor improved the performance of the meat industry. The negative consequences of the export duties became obvious by the end of 1996 and the government requested the Parliament to repeal the law. However, the issue became highly politicised and despite four plenary discussions of the Parliament in 1996 and 1997 the law had not been repealed as of June 1998.

In an attempt to improve execution of contracts for supply of grains to the government, administrative restrictions on exports of grains were introduced in August-September 1997. During this period, only grain from farms which had fulfilled their contracts with the state purchaser could be exported. Later on this practice was discontinued.

Import measures

Up until 1997, Ukraine's import trade system remained rather liberal, with no non-tariff measures applied, except for a requirement that importers of certain chemicals and pharmaceuticals be licensed in the interest of protecting public health and the environment. However, the level of import tariffs on agro-food products has traditionally been higher than that for industrial goods. An average weighted import duty on agro-food products was about 15 per cent in 1996 compared to 5 per cent for all imports. A number of border measures introduced at the end of 1996 and in 1997 raised the averages to about 20 and 7 per cent, respectively, according to preliminary estimates based on customs statistics.

In July 1997, Parliament passed the law "On Regulation of Agricultural Imports", introducing a wide range of border protection measures against agro-food imports. The law was vetoed by the President in August, but Parliament overruled the veto in September and the law came into effect in October 1997. The law required the government to establish import quotas for certain categories of fresh, frozen and chilled meat. Quotas for individual products may not exceed 10 per cent of domestic production of the same product in the previous year. The quotas are to be sold to importers through open tenders held by the Ministry of Agro-Industrial Complex. However, as of June 1998 no quotas have been applied.

The law also increased import duties on agro-food products, resulting in rates for many products ranging between 10 and 30 per cent of the invoice value and minimum specific import duties in ECU per unit applied for most agro-food products. For example, the duty on cattle has been fixed at 30 per cent of the customs value, but not less than ECU 0.2 per kg; and a rate of 10 per cent has been established for hard wheat but not less than ECU 40 per tonne. The law also mandates the government to introduce seasonal duties with double rates both in percentage terms and in ECU on certain agricultural commodities for a period of 2-4 months during the harvesting season. These seasonal duties were introduced in May 1998 and became effective in June 1998. In many cases they translate to *ad valorem* equivalents to close to 100 per cent.

In November 1997, the government passed a resolution setting minimum customs values for a range of agricultural and food products, including grains, to be used by customs as the basis for calculating import duties, VAT and customs fees. The resolution was intended to prevent under-invoicing of the contracts, but in fact increased the level of border protection. The resolution became effective in the second half of December 1997.

Summary and outlook

The rate of decline in GDP slowed down in 1997 and a turnaround in economic activity may finally be approaching. Tight monetary policy brought inflation down to 10 per cent at the end of 1997. The budget for 1998, as approved by Parliament at the end of 1997, foresees a deficit of about 4 per cent of GDP, expected annual inflation of 10-12 per cent, and output growth of 0.5 per cent. It is highly questionable, however, if the reduction of inflation in 1997 can be maintained in 1998, given the pressure on, and depreciation of, the currency at the beginning of 1998. The budget deficit will remain under pressure from rising interest payments and debt service. Should the process of structural reform remain slow and government debt continue to accumulate, the consequences could be severe for the medium term.

As expected, crop production recovered from its exceptionally low level in 1996, but the fall in animal production accelerated. In 1998, assuming normal weather conditions, crop production is expected to stabilise at the 1997 level and livestock producers should profit from abundant and cheap feed grains during the 1997/1998 season. As a result, while the fall in livestock production will continue due to longer term structural adjustments, the rate of the decline should significantly slow down in 1998.

The trend to increase border protection against agricultural imports continued in Ukraine with a set of legislation increasing trade barriers, in particular against imports of livestock products, in the form of higher tariffs, specific duties, import quotas and stringent food safety measures. While it remains to be seen to what extent these regulations are actually implemented, many structural barriers impeding the emergence of a strong and competitive agro-food sector in Ukraine have not been sufficiently addressed by the government and legislators. As in previous years, these barriers include inefficient and only formally privatised upstream and downstream sectors; poorly developed marketing channels (as confirmed by the difficulties in disposing of the 1997 grain surpluses); formal privatisation of large-scale farms with no or very little internal restructuring; persistent confusion between individual land-share entitlement holders and the collective title to the total farmland given to the agricultural enterprises themselves; and the lack of proper legal framework for the land market, to name only the most important ones. To ensure a sustainable recovery in production, the Ukrainian government needs to continue its efforts to create a more stable macroeconomic environment and introduce a set of policy measures addressing all these barriers in order to establish a market-oriented framework for the agricultural sector.

NOTES

1. For a comprehensive analysis of Russian agriculture and agricultural policies see *Review of Agricultural Policies – Russian Federation*, OECD, Paris 1998.
2. In this chapter, all nominal rouble amounts for 1998 and historical data are given in new, redenominated roubles.
3. *Russian Economic Trends. Monthly Update*, Russian European Centre for Economic Policy (RECEP), 3 April 1998, Moscow.
4. See discussion on this issue in *Agricultural Policies in Transition Economies: Monitoring and Evaluation 1997*, Part III.2, Paris 1997.
5. See C. Csaki, Z. Lerman “Land Reform in Ukraine. The First Five Years”, *World Bank Discussion Paper* No. 371, World Bank, Washington DC, 1997.
6. In 1997, the Ministry of Agriculture was reorganised and renamed the Ministry of the Agro-Industrial Complex (MinAPK).
7. The system of indicative prices for exports was introduced by Presidential decree in March 1994 and covered a wide range of agricultural products. The range was considerably reduced in November 1995 and February 1996.

SPECIAL ISSUES

1. CREDIT AND FINANCE POLICIES IN THE AGRO-FOOD SECTOR OF TRANSITION ECONOMIES

Of the three main production factors (land, labour and capital), it is the latter that was of the greatest scarcity in transition economies (not only in agriculture, but also in the economy as a whole). During the early years of reform, agricultural enterprises in many transition economies reduced their labour forces and portions of agricultural land were left idle. Capital, on the contrary, was the most expensive and scarce factor of production. Thus, primary indicators of factors affecting the comparative advantage and competitiveness of agriculture in transition economies include: relatively low wages and land prices; relatively high capital costs (including difficult access to credit); poor input supply, processing and marketing facilities.

Even in the most advanced countries agricultural and rural credit, and risk markets work imperfectly, largely due to imperfect and costly information, which are particularly predominant in agriculture. However, more than these “standard” imperfections, a series of specific, transition-related problems have constrained the financing of agriculture in transition economies. These transition-specific problems are related to: the role of credit in the economic system; institutional reforms occurring within the financial system; low profitability in agriculture; accumulated debts; high inflation; risk and uncertainty; and collateral problems. The agricultural and rural financial institutions of the CEECs, NIS and Baltic countries have had to adapt simultaneously to a new macroeconomic framework as well as to the restructuring of the banking systems. They have also been faced with uncertainties related to developments occurring within the restructuring of the agricultural markets, farm organisations, food industry and the related reallocation of resources and property rights. This has often slowed reform and lowered the level of intermediation.

In an attempt to overcome financial and credit constraints during the transition period, governments have provided support to agriculture by subsidising credit, setting up credit guarantee funds, stimulating institutional innovation, investing in human capital and retraining programmes. The results of these policies have been mixed so far. In some cases, government loan guarantee policies have resulted in increased credit supplies and higher repayment rates, but the scope of these programmes has been rather limited to date. In several transition countries, however, government programmes providing subsidised credit and government loan guarantees have failed to stimulate the development of a sustainable financial system. Instead, they have caused a worsening of the debt accumulation of farms and financial institutions, as well as an increase in government budget deficits.

The first section of this chapter discusses the general imperfections of agricultural credit markets and examines the agricultural finance and credit problems in transition. It then analyses the policies implemented during transition and their impact. Finally, it discusses endogenous institutional innovations in rural finance.

Agricultural finance and credit problems in transition economies

Credit and risk markets work imperfectly even in the most advanced countries, largely due to imperfect and costly information. Problems of imperfect information and incomplete risk markets are particularly important in agriculture. Agricultural production incorporates timelags inherent in biological processes, and is subject to the random influence of weather, disease and pests. Producers can trade

away some price risk on futures markets, but farmers are typically at an information disadvantage relative to larger trading companies. Even in the most developed economies, farmers make relatively little use of futures markets. While informational asymmetries limit the ability to insure against price risk, capital-yield risk cannot be fully covered without attenuating incentives. In general, the ability of farmers to share risk is limited (Stiglitz, 1993).

Some of these supposed imperfections reflect real economic costs. Credit rationing and high interest rates may not be due to exploitation by banks and money lenders, but instead may be a rational and efficient response to the information problems that are inherent to agricultural credit markets. High interest rates may reflect high default rates, or high costs associated with screening and monitoring loans. At the same time, imperfect information generally gives rise to imperfect competition so that there may be some scope for lenders to exploit borrowers. Limited credit and high interest rates often appear as an impediment to agricultural development, inhibiting the acquisition of capital necessary for modern agriculture. This seeming market failure often results in pressure for government intervention.

While specific, transition-related problems aggravate the difficulties of financing agriculture in transition economies, many of the challenges of agricultural and rural finance in transition economies are the same as those confronting economic reforms generally. They include the adoption of a new macroeconomic framework, the development of a competitive market environment for agriculture, and the effective restructuring of agricultural resources.

Institutional reform in finance and credit allocation

In centrally planned economies the main monetary policy instrument was credit allocation. A financial plan ensured the realisation of physical targets as expressed in the state plan. The plan specified quotas for working capital, for long term loans, for financing investment, and for public money holdings. Under the centrally planned system, credit was less a monetary than a fiscal and accounting instrument. The role of credit and finance is different in a market economy, where the main monetary policy instrument is the control of the total money supply. The allocation of credit inside the economy is largely left to independent financial institutions that base their lending policies on assessments of risk and financial returns. The changing role of credit and finance during the transition requires a psychological change for users of credit and finance, as well as a reorganisation of the financial institutions and retraining of their employees.

Under central planning, most banks were simply branches of the central bank, with very little independent decision-making. These banks primarily carried out fiscal functions: distribution of subsidies, making loans based upon need, and supporting production plans. However, with the concurrent restructuring of the banking system and reforms to the agricultural sector, a number of problems related to the financing of agriculture and agrobusiness have surfaced: agricultural production units (clients) are undergoing transformation; ownership rights (collateral) are being reallocated; and the fundamental role of the financial system is shifting from regulating fiscal affairs to acting as an intermediary between lenders and borrowers (Adams and Vogel, 1997).

The market mechanism requires different approaches and skills for the evaluation of loan applications. Banking officers often lacked the necessary skills and experience for loan evaluations, thus requiring substantial investments in human capital and retraining by banks. These restrictions reduced the efficient operation of many financial institutions and intermediaries during the initial stages of transition. Also the costs of monitoring and screening loans are higher during the transition in comparison with the relatively stable market structure of developed market economies. The reorganisation of the agricultural enterprises during this transitional period has further increased the difficulties of monitoring for the financial institutions. The lack of a well-developed accountancy and bookkeeping system exacerbates these problems, especially in countries with fragmented farm structures.

Accumulated debts

During the period of central planning, the supply of credit for the agricultural sector was directed and controlled by the national banking systems. Credit worthiness of the borrowers was estimated on the basis of cash flow needs and no collateral or asset pledging was required. When loans were defaulted they were often written-off due to the lack of clear property rights and responsibility for decisions taken. This reduced the incentives for better management and made it difficult to distinguish between credit and subsidies. As a consequence, many enterprises within the agricultural sector accumulated significant bad debts. During the transition, these bad debts were inherited mostly by state farms and transformed collective farms. This indebtedness has severely inhibited the provision of new loans and the process of land restitution and restoration of property rights.

In those countries where governments maintained control over credit allocation and used this control to direct credit to specific (groups of) enterprises it caused a further accumulation of bad debts during transition and has created significant problems for the banks. This has been the case mainly in the NIS and Balkan countries. Where the banks did not collapse, the accumulation of bad debts forced them to charge high interest rates on the remainder of their loan portfolio in order to remain viable. Low profitability is reflected both in farmers' reduced ability to repay existing debt and in their lower demand for new credit.

Profitability constraints

Agricultural profitability declined strongly in the early years of transition and is now slowly recovering in some countries and sectors. Price liberalisation induced a strong deterioration of input/output ratios, and consequently in profitability in agriculture. On the other hand the price and market liberalisation also hurt consumers' terms of trade, and reduced real incomes. In the first years of the reforms declining economic performance in agriculture resulted from:

- a fall in domestic and international demand, in turn induced by price liberalisation, the cut in subsidies to food consumers, the collapse of the former CMEA trading system, and the trade barriers of developed (mainly European) countries;
- a severe cut in subsidies to agricultural producers; and
- the fact that under the first years of price and trade liberalisation farms were exposed to not yet privatised monopolistic structures in both upstream and downstream markets.

Profitability and cash flow problems also resulted from delayed payments by processing and wholesale firms after product deliveries by farms. In times of high inflation, delayed payments, without nominal price adjustments, caused important income declines for farms. A number of CEEC governments have had to establish special credit programmes and funds to alleviate this problem. These programmes typically purchase the outstanding debts and pay a percentage of their value back to the agricultural producers, *e.g.* the Czech Republic does this through the Support and Guarantee Fund for Farmers and Forestry (Horcicova, 1997).

Low farm profitability is currently a major challenge to rural credit markets, since it is one of the primary factors in any financing decision. Thus, dealing with the various inefficiencies of rural financial markets may not be sufficient to increase the flow of agricultural credit. Reasons for low profitability in agriculture must also be addressed: low (or negative) profit margins on farm products, which reflect adverse pricing conditions; and, low levels of financial efficiency, which reflect the lack of effective farm restructuring. Lenders and farmers recognise the implications of reduced financial efficiency for lower farm profitability, reduced loan repayment capacity, and the higher potential for loan default. From this perspective, the lack of profitability has reduced both the supply of, and the demand for, agricultural credit and indirectly contributed to higher interest rates through greater risk of losses occurring in the sector.

Collateral requirements and provisions

Collateral plays an important role in farmers' abilities to secure external financial resources. Financial institutions use the pledging of assets (collateral) as a means of protecting their loans in case of default. In transition economies, the collateral requirements of financial institutions for agricultural loans have often been very high. These high levels of collateral requirements are primarily due to transitional factors: a lack of clear property rights, non-functioning assets (land) markets, high inflation, risk and uncertainty during transition.

As long as land reform stagnates and land property rights are not clearly established, a land market cannot develop.¹ This reduces the possibility for the use of land as collateral. In addition, legislation typically prevents the pledging of assets in so far as they are in the process of privatisation and restitution. Furthermore, banks often refuse agricultural land as collateral, even when property rights are fully restored, because of the absence of a land market or because land prices are too low. Banks typically require high liquidity value assets such as residential property and machinery.

The combination of these factors have restricted the flow of credit to farmers, particularly poorly collateralised farmers. A potential problem could arise with collective farms transformed into large scale corporate farms, as the land on which these farms operate is owned by individuals and cannot be used for loan pledging. However, some of these large scale farms have temporarily overcome this problem by using their fixed assets and machinery as collateral. For this reason the large scale corporate farms are suffering less than other farmers from the current absence of a land market.

Government policies in agricultural credit and finance

Agricultural producers have put strong pressure on governments in transition countries to intervene in the credit market – and to provide support to agricultural finance and credit. An overview of government assistance in transition economies shows that they have all introduced many different forms of government intervention into credit markets, ranging from complete debt write-offs to credit guarantees. In the first years of the reforms, due to high inflation rates and unstable macroeconomic framework, governments mainly provided support to agricultural finance and credit through direct credits and capital grants financed from the budget. In the more advanced stages of reform, transition countries have been increasingly providing support through subsidised interest rates and credit guarantees applied on loans extended by commercial banks.

Credit subsidies

Governments in all transition countries have introduced some form of subsidised credit. The main argument in favour of credit subsidies – provided the collateral problem is addressed – is that the fall in agricultural production and disruption “below a long-run equilibrium” may be mitigated or reversed because of the special conditions of transition.

This is essentially an argument for providing temporary (transition) credit subsidies. However, world-wide experience of government policies in agriculture shows that short term crisis interventions and “temporary” programmes have the tendency to become permanent programmes. This is because credit subsidies: *a*) create expectations on the part of the producers (and possibly also other groups) that they will be continued or repeated under certain circumstances; *b*) tend to create their own constituency, and for political-economic reasons are subsequently difficult to remove; *c*) become incorporated in prices for less mobile production factors (*e.g.*, land values), raising production costs for new producers and therefore the demand for continuation of the programmes. Empirical information suggests that in transition economies, as in many other countries, once implemented, the credit subsidy programmes have been renewed or expanded.

Studies of credit subsidy programmes in developing countries and OECD countries conclude that subsidised credit can have many negative effects on the efficiency of credit allocation, and on the development of alternative financial institutions, both of which are important for the development of a sustainable rural financial infrastructure (Von Pischke, 1991). For example, credit subsidies have a

negative effect on the development of alternative sources of agricultural credit (such as credit from up- and downstream industries) if those alternative sources face uneven competition from the subsidised credits.

Another important consideration is that credit subsidies benefit mainly large-scale farms (former co-operatives and state farms) and have perverse effects on small individual farmers' access to credit (the so-called "Iron Law of interest rate restrictions"). This has been the case in many transition countries. Directed subsidised credits go overwhelmingly to large-scale farms, often with unclear ownership structures. Furthermore, it is a well-known problem that due to the scarcity of credit, credit subsidies intended for agriculture may flow to other, more profitable, activities. Depending on the allocation procedure, they might induce opportunities for corruption. Abuse of these programmes, including corruption, has been particularly important in countries such as Russia with heavy government involvement in credit and subsidy allocation. However, even in countries where the programmes are more carefully managed, the credit subsidies do not reach smaller private farmers (Szabó, 1997).

The latter issue reflects a more general problem of credit subsidy programmes: unless the problem of collateral is addressed, credit subsidies will have little effect on credits allocated to agriculture. For example, the 1992 credit subsidy programme in Bulgaria had little effect as the banks continued to refuse to lend to agriculture because they could not obtain sufficient collateral. The government then obliged the banks to accept future crop output (backed by crop insurance) as collateral. In case of default, the law specified the sharing of collateral risk between the banks and the government. While the banks were still reluctant, the government included a regulation that would penalise bank managers for obstructing loans to agriculture.

A second problem with transition credit subsidies is their tendency to give the wrong signals to the reforming enterprises. Economic adjustments that eventually will have to be made might be postponed, making their implementation later on even more difficult. In some countries subsidies and directed credit have ended up primarily with large farm enterprises under restructuring. For example, in Romania prior to 1997, only large scale farm organisations had access to the banks and to the subsidised loans. Only 20 per cent of the funds went to private farms, which produced 80 per cent of output. Furthermore, generous state guarantees granted to these loans led to low rates of repayment from farms. Much of the support led to large losses and debts. Moreover, subsidised loans reduce the incentives for these organisations to proceed with reforms, and thereby have an adverse impact on the reform process.

Finally, large directed credit and subsidy programmes such as in Romania (1992-1996) and many NIS have resulted in major budget outlays by governments. This has reduced the level of funds available for more productive public investments and often increased the budget deficit or government borrowing, having a negative impact on inflation and nominal interest rates. As the main reason for the introduction of these programmes is high nominal interest rates, the effect is counterproductive. In addition in the early years of the transition, the administrative and regulatory capacity of the government administration reached a very low level, and it was often not clear who were the ultimate recipients of agricultural subsidised credits (Galbi, 1995).

Overall, credit subsidy programmes seem to have addressed primarily the symptoms of the problems instead of the causes. For example, delayed payments to producers by processing and distribution enterprises caused an undue burden on farmers' cash flows. This has induced governments to provide special funds for credit relief, but they still have not solved the cause, *e.g.*, lax regulation of downstream industries, weak enforcement of contracts, and complicated bankruptcy procedures.

Loan guarantees

Loan guarantee programmes have been commonly used in developed market economies to stimulate lending, usually targeted towards small businesses. These programmes typically cover a portion of the losses incurred by lenders in the case of default (*e.g.*, 10 per cent of the loan collateral is provided by the farmer, 20 per cent by the banks and 70 per cent by the government), and hence act as a risk-sharing mechanism. These programmes are designed to increase the supply of loans under

guarantee to borrowers who would otherwise be unable to access these funds due to credit rationing, and collateral problems (unclear property rights and poorly developed land markets). Underlying these programmes is the assumption that additionality will occur (that is, the loan volume with guarantee exceeds the expected loan volume without guarantees), and that there will be minimal substitution of funds within the lending institutions or among lenders as a result of the programme.

Given the acute problems of collateral, many governments in transition economies have introduced some form of government guarantee programme in an attempt to stimulate the availability of credit to the sector. Special guarantee funds were established for that purpose in most of the CEECs and the Baltic countries. The basic idea is to partly cover bank loans and share the risk of non-payment between the bank and the guarantee fund. This form of support to agricultural credit was implemented at the more advanced stage of the reforms. Hungary had already established the Rural Credit Guarantee Fund in 1991. Several other CEEC governments introduced similar schemes in 1994 (Czech Republic, Slovak Republic, Poland and Romania). Croatia and the Baltic countries followed in 1996 and 1997. The summary in Table III.1.1 shows that the recipients (farmers and food industry), the loan conditions (short, medium, or long term), and the extent of the guarantees differ. However, all programmes cover at least 50 per cent of the loan, and typically more for longer term loans. In the NIS, credit guarantee programmes have not been developed so far.

Government guarantees soften the budget constraints for lending institutions and therefore increase the supply of funds for borrowers. However, in transition economies with a developing banking structure, there is a danger that these guarantees could induce an increase in loan defaults and write-offs, rather than increasing the level of financial resources available to suitable borrowers. This is because the guarantee programmes alter the incentive structures within the financial contracts and are unable to target the desired clientele. Specifically they may reduce the incentives for banks to screen, monitor and analyse loans and reduce the incentives for farmers to repay their loans, as they may be viewed as an implicit government subsidy. Additionally, guarantees may adversely affect the development of a viable rural financial system as they discriminate against alternative credit sources and, when limited, may induce lobbying and crowding out effects.

When setting up such loan guarantee schemes, it is important to prevent as much as possible the moral hazard incentives for the agents involved. Therefore, one should be careful to ensure that the borrower has to provide the first part of the collateral and is forced to repay as much as possible in case of default. The bank has to take its share of the risk in order to be stimulated to monitor and screen the loans sufficiently. Furthermore, the project should allow several banks to participate in order to induce competition. Finally, the government should limit its involvement to setting general, simple and transparent rules, and should not be allowed to interfere with specific applications or actual loan decisions.

The credit guarantee system should be considered as a type of financial institution, and managed for the most part in the same manner as commercial banks. Risk management is of utmost importance, and includes the following factors: an assessment system of loan projects, portfolio analysis, assets liabilities management and a decision making procedure.

Empirical observations on transition agriculture indicate that there appear to be two groups of loan guarantee programmes. First, those that have tried to carefully implement incentive structures as outlined above. As a consequence these programmes have resulted in high repayment rates, but at the same time they have been limited in their scope as their requirements were (as a consequence of the careful design) quite strict. Producers generally complained about their excessively tight requirements.² For example, the government loan guarantee schemes in Hungary are well managed and have a default rate of between one and three per cent. However, their scope has been too small to make a sizeable impact on the sector so far (Szabó, 1997).

The second approach occurred in countries where the government relied on the use of "directed credits" to solve the credit demands in agriculture. This often coincided with the provision of loan guarantees by the government as the banks were unwilling to provide loans without such guarantees. These programmes have generally resulted in shifting credit to (former) state farms, at low repayment

Table III.1.1 Credit guarantee programmes in CEECs and Baltics

	Programme name	Est.	Details	Guarantee level
Croatia	Croatian Guarantee Agency	1996	– Provides guarantees for investment loans to individual farmers – Provides guarantees and support for new business entities in agro-food	80% of loan value 80% of loan value + grant support up to 3 750 DEM
Czech Republic	Support and Guarantee Fund for Farmers and Forestry (SGFFF)	1994	– Provides short and long term guarantees through commercial banks	Up to 50% short-term up to 80% long-term
Estonia	Rural Life Credit Guarantee Fund	1997	– Provide additional guarantees to rural enterprises	Up to 60%
Hungary	Rural Credit Guarantee Fund (RCGF)	1991	– Provides short and long term guarantees to agricultural enterprises	Up to 50% of principle plus first year interest
Latvia	Credit Guarantee Fund (CGF)	1997	– Instead of guarantees subsidised interest rates in 1997, from 1998 the Fund finances a part of the investment	
Lithuania	Guarantee Fund for Agricultural Loans	1997	– Provide guarantees on investment loans to individual farmers (with no less than 9 hectares of agricultural land)	Up to 80%
Poland	Agency for Restructuring and Modernisation of Agriculture (ARMA)	1994	– Provides guarantees to both farmers and food processors	Up to 60% for farmers up to 70% for food processors
Romania	Guarantee Fund for Rural Credit	1994	– Provides guarantees on agricultural medium/long term loans through banks	Up to 60% of loan value plus interest
Slovak Republic	Slovak Guarantee Bank		– Provides guarantees for short-term “green” credit through Polnobanka for both farmers and downstream processors	Up to 80%
Slovak Republic	State Support Fund for Agriculture and Food Industry	1994	– Provides both guarantees and special loan programmes to farmers and food processors	Up to 70% of project expenses

Source: Swinnen and Gow, 1997 and OECD.

rates, and in a worsening situation (and sometimes the collapse) of the banks channelling the credit to the farms. This in turn had negative effects on government budgets where important budget resources were used to bail out these banks.

Reform of financial institutions

Agricultural banks

Under the centrally planned economy there were specialised agricultural banks existing within the framework of state financial institutions. In Croatia, Poland and Slovenia, where agriculture was dominated by small individual farms, the rural finance system remained based on rural co-operative banking. However, this co-operative banking was controlled by the state and was increasingly relying on state subsidies to channel cheap credit to agriculture. In the former Czechoslovakia (Czech and Slovak Republics) there were no specialised agricultural banks under the former regime.³

During transition the specialised agricultural banks have generally been privatised and have diversified their loan portfolios into other sectors of the economy, including (rural) savings. For example, by 1996 the Russian Agroprombank had 40 per cent of its loans directed to the agro-industrial complex. In many countries the agricultural banks have lost their monopoly position in agricultural finance and more commercial banks are supplying credits to agriculture. However, some countries still have a banking structure under which agriculture and rural finances are dominated by one bank (Belarus, Bulgaria, Romania). Several governments, especially during the early years of transition, continued to subsidise these “agricultural banks” because these institutions were struggling with large portfolios of non-performing loans and operating losses.

Furthermore, many governments initially used the specialised agricultural bank as their primary means of allocating subsidised credit and loan guarantees. The most important problem arising from the exclusive provision of government subsidy allocation and loan guarantees through these agricultural banks was that producers viewed them as pseudo-government institutions, and viewed loans from these institutions as government handouts rather than as commercial contracts. As a consequence, an important part of these loans was defaulted on, forcing the governments to restructure these loan policies. In those cases in which agricultural banks continued to be government instruments for directing subsidies to farms, the results were poor. A large part of the loans was not recovered and the banks ended in serious financial difficulties caused by bad loans. In turn, the government had to intervene and cover part of the bad loans that resulted in negative impacts on the state budget. Another effect was observed in Russia, where the government used Agroprombank to channel credits to agriculture and allowed only a three per cent margin for the bank. The reaction from Agroprombank was to curtail its activities in agriculture and to shift its activities to other sectors.

In other countries such problems were recognised early on and government programmes are now available for loans extended by the whole commercial banking sector. Governments now channel credit subsidies and loan guarantees through all suitable financial intermediaries. For example, up- and downstream businesses (so-called “integrators”) in Hungary now have the ability to provide many of the same government subsidised financial packages to farms as other financial institutions. Moreover, they are often in a better position to monitor and screen applicants as they are also supplying them with inputs and purchasing the production. A number of additional factors have combined to induce this shift in methods used to channel government funds to the agricultural sector. These include pressure from international donor organisations and the general realisation that the development of alternative financial institutional arrangements is required for expansion of the pool of available funds to rural communities and reduces governments’ liabilities.

Credit co-operatives

Credit co-operatives, which place much stress on local initiatives and peer group assessment of loans, could be one of the alternatives to agricultural financing. In some countries, where the system already existed, and was not discontinued under the centrally-planned economy (Poland, Slovenia,

Croatia), there are some movements to reorganise the system of credit co-operatives, including establishing umbrella financial institutions. In some countries new rural financial institutions, such as credit co-operatives, have emerged. Thus far, the size of the co-operatives is too small to provide loans to the agricultural sector, notwithstanding the vigorous public and private initiatives. Of course, they may become more important in the medium term if their successful approach can serve as a stepping stone and as an example for similar initiatives in other regions, or with extended funding.

For example, in Romania co-operative banks have been very successful in making loans to small private farmers and innovative in the methods used to facilitate this process (Adams and Vogel, 1997). In Bulgaria, a mutual fund programme for agricultural producers has been developed with the support of the EU Phare programme. Producers are required to make a deposit in the institution and receive subsidies up to twice the deposit and may borrow up to 15 times the deposited amount. In the first nine months of operation, the 33 mutual funds presently running have made 1 200 loans averaging ECU 20 000. However, the repayment rate of these loans will determine the longer term viability of the project. The Lithuanian government, in 1995, passed laws allowing the creation of credit unions. There are now 20 credit unions, 12 of which are in the agricultural sector. Eight are currently active and have a combined capitalisation of US\$192 000, the other four are in the process of establishment. The Albanian Development Fund (ADF) has been successfully using international donor funds to provide remote and poor villages with small-scale rural credit and infrastructure. In Russia attempts to create rural credit co-operatives have been mixed at best, and many private farmers' credit co-ops have failed.

These institutional reforms also reflect the fact that different approaches may be needed for vastly different farm structures, as many transition economies have farms now varying in size from very large to very small. It may require different institutions to address the finance requirements of these structures. For example the new (1997) Romanian rural finance policy reflects such an approach. While large farms' credit requirements may be solved by commercial bank loans, these are unlikely in the medium run to solve the small farmers' problems because of much higher intermediation and transaction costs. The Romanian government has therefore implemented a voucher distribution programme to small farms in order to reduce liquidity problems and finance their operation. Simultaneously it has stimulated the creation of credit and savings co-operatives in rural areas. These may also be important to stimulate rural development rather than agricultural production as such. In Poland and Hungary such institutions are also developing, and the government has supported this development. Even though in Hungary, saving co-operatives are still financially weak, they are collecting savings in rural areas, but have not lent much to the local agriculture sector. In the Czech and Slovak Republics the legislation also enables the existence of credit co-operatives (for general purposes, not rural or agricultural specific), which had a significant historic tradition (based in the 19th century) in agricultural finance.

Human capital development and training

Some Governments have made substantial contributions to solving rural financial constraints by investing in human capital and institutional infrastructure development on both sides of the credit market. These activities were mainly focused to support: training for banking officials in market finance skills; financial management training for agricultural enterprise managers; financial consulting services to farmers; and extension and advisory services in agricultural finance.

Many of the programmes are funded or supported by international donor organisations and require extensive business plans and financial management training as a pre-requisite for securing funds. These strict conditions may constrain credit provision in the short run. However, they have obtained very promising results with low default rates comparable to those in developed market economies. For example, in Latvia, the Agricultural Finance Company with the assistance of the World Bank has established a preferential credit line that has strict requirements in relation to bookkeeping, business plans and collateral.⁴ The programme has led to full loan recovery and no default so far.

Some governments (i.e., Estonia) subsidise advisory and farm consulting services to lower the price for private farms for these services, while simultaneously allowing the private sector to provide them. Such private services tend to furnish the more effective and detailed information and advice that farmers require.

Endogenous financial institutional innovations

In many CEECs, NIS and Baltic countries, leasing and various forms of contracting between agriculture and the up- and downstream sectors are emerging as an alternative form of institutional innovation, which has important effects on the credit and finance problems. Several case studies suggest that these contractual innovations are quite successful in addressing the credit problems (Gow and Swinnen, 1997).

The contracts can take various forms, for example:

- leasing of equipment;
- forward contracting of output deliveries in return for inputs and working capital;
- producer loan guarantees backed by processing companies with delivery contracts;
- the provision of commodity loans to contracted farms by processors and input suppliers;
- warehouse receipts, etc.

All of these contractual arrangements somehow address the collateral problem, and the credibility of future cash flows for loan repayment. For example, to solve collateral problems, several banks in transition economies have established leasing companies as their subsidiaries; these companies buy machines and equipment and lend them to the agricultural producers rather than extending loans. They receive rental fees instead of interest and principal. The ownership rights remain in the hands of the leasing companies until the end of the rental period and this plays the same role as collateral. Furthermore, case studies suggest that processing firms even subsidise private consulting and advisory firms to provide financial services and training to the producers they contract with.

Empirical observations suggest that once one company successfully introduces such institutional innovations, there may be an important spill-over effect to other enterprises in the sector (Gow and Swinnen, 1997). All this suggests that leasing and contracting may play a role in improving the credit and finance problems of agriculture during transition. An important question is the role to be played by government in stimulating such developments. Again, the most important role is to stimulate competition, provide information and create the institutional (legal, etc.) infrastructure to support the efficiency and effectiveness of such contracts and leasing arrangements, rather than to engage directly in the design or heavy-handed regulation of the emerging institutions.

Conclusions

Agricultural reform and the simultaneous restructuring of the banking sector create problems for financing agriculture in transition economies. During transition, governments selected and implemented policies that are not necessarily conducive to the development of well-functioning agricultural and rural finance systems. While one should be pragmatic in evaluating these policies, given the significant problems, one should also be careful in promoting government programmes that are presented as temporary measures, but which may conflict with the longer term objective of promoting a sustainable and efficient rural financial system.

Moreover, a large number of the credit programmes focus on symptoms rather than on solving the primary causes of the problems. Many agricultural credit problems are caused by high inflation, uncertain property rights, not functioning land markets, low profitability in farming, and high transaction costs in financial intermediation. Therefore, government policy should address the causes of the problems by: reducing the budget deficit and following cautious monetary policies; speeding up land reform and the privatisation process; developing regulations and institutions for a land market to develop; creating the environment for private agriculture to function; investing in rural infrastructure and agricultural research; and, creating an environment for the development of commercial rural financial institutions.

The finance situation remains most problematic in those countries that have postponed reforms and have continued to use banks to channel subsidised credits and loans to the unstructured farms with heavy government discretion in loan allocation and widespread use of state guarantees. The result

has been low rates of repayment, reduced incentives for farm restructuring, accumulation of bad debts, government budget deficits, and, in some cases, the collapse of banks. Not only are there important differences between countries, but profitability and financial problems also differ considerably between farms. Therefore, it is important to realise that financial constraints are also inherently linked with the restructuring of the farms and the profitability of the sector. Furthermore, the emergence of widely varying farm structures within each country requires different financial institutions for intermediation.

Agricultural finance policies must keep in perspective the long-term situation of the sector. The government should play the role of building and creating long-run sustainable institutions and infrastructures rather than implementing short-run measures focusing on credit subsidies. Short sighted fund provision to the sector has caused serious problems of heavy indebtedness, which may hinder the sound development of the sector. Regarding the financial measures to be taken by the government, any scheme should be designed to be commercially viable assuring the smallest possible negative effect on the economy. Since collateral is one of the greatest impediments to agricultural financing, a credit guarantee scheme would be a useful vehicle to mitigate the temporary difficulties in transition economies, provided that transparent rules limit the possible market distortion and resource misallocation effects.

Loans for agriculture with some government assistance are also developed in OECD countries. However, these programmes are mainly supporting longer term investment projects in agriculture, and represent a minor portion of the total financing of the agricultural sector in most OECD countries. Banks play a key role in agricultural finance and most of the other financial vehicles; for instance, credit guarantee, leasing and credit line schemes, depend on a stable banking system. If this sector is not well developed, almost all the financial schemes will become ineffective, heavily distorted, and commercially non-viable. The agricultural finance systems in transition economies should gradually converge with respect to the reduced role of government, the diversification of activities by agricultural banks, and the widening of competition among banks. Though many banks in transition economies remain reluctant to provide loans to the agricultural sector, increased competition among banks will force them to look for a broader range of customers, including the agricultural sector, and to offer better services. In the transition period an appropriate government role in agricultural financing can be justified provided it is fully transparent and explicitly understood to be of limited duration.

2. IMPEDIMENTS TO EFFICIENCY IN THE AGRO-FOOD CHAIN IN TRANSITION ECONOMIES

During the socialist period, the agro-industry in Central and Eastern Europe and the former Soviet Union was subject to pervasive central planning.⁵ Almost all transactions along the marketing chain were directed and controlled by state authorities. Trading and storage were mainly handled by state monopolies and processing was typically carried out at large-scale, state-owned facilities. Prices at each stage of the marketing chain were set by central planners and were in general only loosely related to costs. Incentives to adopt efficient production and distribution methods were weak. Lack of competition, misguided investments, and a strong focus on satisfying quantitative production targets led to a wastage of resources and poor quality of food products. In the former Soviet Union, for example, post-farm gate losses amounted to 30-40 per cent of agricultural production and the sub-standard quality of food products often hindered exports.⁶ In addition, the weak economic performance of agro-industrial facilities was often accompanied by heavy pollution of the environment.

The breakdown of socialism led to fundamental changes in the agro-food sector. Price and trade regimes were liberalised, producer and consumer subsidies were scaled down, and the privatisation of state-owned enterprises was initiated. The reforms exposed the problems of agro-industry with its high transaction and processing costs. Substantial structural and managerial changes became necessary to adapt to the new economic environment. Progress towards improvements in marketing efficiency and international competitiveness has varied among countries, depending on the initial situation of agro-industry, the timing of reform, and the attitude towards change.⁷

The main impediments to efficiency in the agro-food chain in CEECs and NIS and the related policy issues are discussed and compared across transition countries in the following overview, which is based mainly on individual country reports supplemented by an expert survey.⁸ Impediments to efficiency in the region arise at all stages of the agro-food chain. They result from lack of market transparency and market institutions, deficient transport infrastructure, inadequate storage facilities, technological and managerial shortcomings at processing enterprises, and poor enforcement of contracts. These impediments are often interrelated. Particular countries face different problems and challenges and the policy response should be prioritised accordingly. Removing impediments to efficiency in the agro-food chain, and thereby reducing agricultural marketing and processing margins, would enable farmers to receive higher prices for their produce and/or consumers to buy food products at lower prices.

Market transparency and market institutions

The efficient functioning of the price mechanism, essential for a market economy, requires that market participants be well informed about costs and prices across products, space, and time. Lack of reliable price information results in non-transparent markets and misdirected production and marketing efforts. Asymmetric information provided to different economic agents, such as farmers, making them less aware of price developments than traders, is another source of market failure.

Under central planning, administratively determined agro-food prices remained relatively stable over long time periods. As a consequence, there was little rationale for farmers, intermediaries, or agro-processors to care about price information. The situation changed fundamentally after agro-food prices started to be liberalised in the early 1990s. Immediately, information about variable prices and price relationships became valuable. Yet farmers, traders, and processors had first to learn how to obtain and use market price data. In addition, institutions supporting the collection and dissemination of reliable information on market prices often had to be created from scratch. This process of learning and institution building is still under way in many countries in transition.

In fact, the agro-food market in all of the transition countries can be described as lacking transparency (Table III.2.1). Problems range from non-availability of market price information, poor reliability of published data, and lack of consistent, country-wide standards for the products for which prices are reported. In Albania, for example, the general lack of market price information for agro-food products is indeed a serious impediment to marketing efficiency. Moreover, in some countries, such as Bulgaria, Kazakhstan, and Russia, considerable quantities of produce are handled through barter trade. These transactions are generally not covered by official statistics, and market price surveys, if they exist, do not convey an accurate picture of the economy.

Table III.2.1. **Information related impediments to marketing efficiency in transition countries**

	Lack of reliable information on market prices	Lack of consistent quality standards	Barter trade
Albania	xx	xx	x
Bulgaria	x	xx	xx
Croatia	x	x	o
Czech Republic	x	o	x
Estonia	x	x	o
Hungary	x	x	o
Kazakhstan	x	xx	xx
Lithuania	x	xx	x
Poland	x	x	o
Romania	x	x	x
Russia	x	x	xx
Slovakia	x	o	o
Slovenia	x	o	x

Note: "o": non-existent problem; "x": slight to moderate problem; "xx": serious to very serious problem.

Source: Survey of Agricultural Policy Experts from Countries in Transition.

The need to improve market transparency has been recognised by governments throughout the region. There are a number of justifications for public support to create market information systems in transition economies,⁹ even though price information could also in principle be provided by private firms. First, widespread distribution of price data lessens the information disadvantage that farmers tend to have in comparison with agro-processors and traders, so that agricultural producers are put on a more equal footing in negotiations with the buyers of their products. Second, the provision of frequent evidence of how prices adjust in response to changes in supply and demand over time can serve as a valuable educational tool for all market participants on how a market economy works. Finally, the establishment of institutions that supply information on market prices for agricultural products can help to monitor the performance of the agricultural marketing system and to evaluate the impact of particular policy measures.

With technical and financial support from the World Bank, the EU, USAID, and other donors, projects to create and strengthen agricultural market information services have been launched in almost every country in transition. Regional market information is thereby generally collected on a weekly basis at the farm-gate, wholesale, and retail levels and disseminated through special sections in farm newspapers and journals, or through specialised reports, such as Bulgaria's "Agro-pari." In some countries, agricultural price information is also broadcast by radio.

Despite the existing information services, non-transparent agro-food markets have remained an impediment to marketing efficiency in transition countries. In some cases, market information services seem primarily to supply the statistical databases of agricultural ministries and other state agencies rather than serve the information needs of private economic agents. The collected information does not get disseminated widely enough or is already outdated when it reaches farmers, traders, and agro-processors.

Moreover, market information services are still under development in some transition countries. In Russia, for example, less than half of all regions have so far set up agencies to collect and disseminate information on market prices for agricultural commodities. In 1994, a first market information system was established in the *oblast* of Kaluga with assistance from the World Bank. Similar institutions to increase market transparency were subsequently created in about 30 other regions. However, in the majority of the 89 provinces, the only source of price information remains the local agricultural administration, which normally quotes only the politically determined prices for state procurement.

Also, other institutional means to facilitate price discovery and dissemination, such as wholesale markets, are only at an early stage of development. The concept of marketing fruit and vegetables or other agricultural products via centralised markets is a new one in transition countries. Producer organisations have thereby generally to be set up as links between farmers and wholesale traders. These organisations are then charged with the co-ordination of the market's activities, such as registration of market participants, packaging, transport, and storage of products, and conduct of the auctions. The Russian Agricultural Ministry, for example, launched a programme to establish wholesale food markets in 1994. By the end of 1997, such markets were operating in 20 regions and were planned for 30 more. Another recent example of wholesale market development is Romania, where the government initiated the establishment of seven fruit and vegetable markets in the autumn of 1997 with assistance from the European Bank for Reconstruction and Development.

The development of producer co-operatives and interprofessional organisations is at an similarly early stage as the establishment of wholesale markets. In countries with a rather fragmented farming structure, such as in Bulgaria, Poland, and Romania, co-operatives could play an important role as intermediaries between farmers and agro-processors and as means to gather and disseminate information on market prices and quantities traded. However, the idea of co-operation among producers is still largely discredited in transition countries, because of the experience of forced collectivisation in most CEECs and NIS. Also, interprofessional organisations which bring together farmers, traders, and agro-processors in order to exchange information, to establish business standards, and to co-ordinate professional activities are non-existent in most transition countries. The exceptions are the Czech Republic, Hungary, and Slovakia, where "product councils" have been established with participation of farmers, traders, and agro-processors. The creation of similar institutions is under consideration in Romania.

Transport

Primary agricultural products tend to be bulky, have a high weight to value ratio, so that transporting them is relatively costly. Moreover, the perishability of agricultural commodities means that they require careful and speedy handling in order to minimise losses in quality. For these reasons, the adequacy of the transport network is crucial for efficient marketing of perishable agricultural products.

Weaknesses in the transport system can arise from lack of transport connections, poor state of repair of roads and railways, insufficient supply of transport vehicles, or high per-unit shipping costs. The current situation with respect to rural transport facilities in transition countries is diverse. In some CEECs, such as the Czech Republic, Slovakia, and Slovenia, the transport network does not represent an impediment to agricultural marketing efficiency at all, while in Albania and Kazakhstan, for example, low road density, poorly maintained roads and railways, and lack of transport vehicles are serious problems (Table III.2.2). Throughout the region, a shift from rail to road transport of agro-food products can be observed in order to satisfy increasing demands for flexibility and timely delivery.

Table III.2.2. **Transport-related impediments to marketing efficiency in transition countries**

	Low density of road network	Poor state of repair of roads and railways	Lack of transport vehicles and handling equipment
Albania	xx	xx	xx
Bulgaria	o	x	x
Croatia	x	x	xx
Czech Republic	o	o	o
Estonia	x	x	x
Hungary	x	x	x
Kazakhstan	xx	x	x
Lithuania	x	x	x
Poland	x	x	x
Romania	x	x	xx
Russia	x	x	x
Slovakia	o	o	o
Slovenia	o	o	o

Note: "o": non-existent problem; "x": slight to moderate problem; "xx": serious to very serious problem.
Source: Survey of Agricultural Policy Experts from Countries in Transition.

The density of the network of rural roads is related to the general state of development as well as to the size and population of a country. In large, sparsely populated Kazakhstan, for example, the lack of transport connections as well as poor road quality and maintenance slow-down transport, thus increasing losses due to perishability, and increase transport costs due to higher fuel consumption and greater wear and tear on vehicles. High transport costs translate into high marketing margins. In 1997, farm gate price for wheat in Kazakhstan amounted to merely US\$91, while wheat traded on the world market for about US\$150. Some improvements to Kazakh transport infrastructure have already been made in recent years, but it will take a long time to upgrade and modernise the entire transportation system.

In general, transition countries do not face a shortage of basic transport vehicles, such as lorries, tractors, and tractor trailers. However, a considerable share of the vehicles is rather old or in poor state of repair. Moreover, specialised trailers to transport livestock or lorries with cooling facilities to ship meat, dairy products, or fruit and vegetables are often in short supply. Equipment to load or unload agricultural products, such as fork lift trucks or conveyor belts, is also frequently lacking. This shortage becomes particularly constraining during peak harvest time.

All transition countries have experienced an increase of fuel prices relative to the prices of agricultural products, as their currencies were devalued and input subsidies as well as agricultural price support payments were reduced or phased out in recent years. In Russia, for example, the gasoline to grain price ratio (tonnes) rose from 0.77 to 6.23 between 1991 and 1996. In consequence, transport became relatively more expensive. Moreover, in some countries, such as Lithuania, Poland, and Romania, the large number of small-scale farmers results in high shipping, handling, and transaction costs per unit of agricultural produce. Milk lorries, for example, have to stop and collect many times before reaching a full load that is then shipped to the dairy. Sugar beet-processing plants have to coordinate delivery with thousands of beet-growers. However, most transition countries still have rather large agricultural production units, so that farms tend to be in a relatively good position to make use of economies of scale in transport and handling and to offer large quantities of homogenous produce to agro-processors.

In a number of transition economies organised crime enforces restrictions on free internal transport of agro-food products. Lorries are stopped on the road to extract tolls under threat of violence against people or property. Such illegal activities are reported to be a problem in Albania, Bulgaria, Kazakhstan, and Russia.

Storage

A characteristic feature of the agricultural sector is the need to reconcile seasonality of supplies of agricultural products with consumer demand for food products that is relatively stable throughout the year. Temporal imbalances in supply and demand make storage and inventory management activities of crucial importance in the farmer-to-consumer marketing chain.

Under central planning, field crops were shipped to large state-owned handling and storage facilities immediately after the harvest, since uniform pricing over time did not provide any incentive to store produce on the farm. Only primitive on-farm storage capacities existed. Indeed, farmers wanted to deliver their harvested products as soon as possible to state handling agencies in order to minimise losses from spoilage or theft and to ensure compliance with their procurement quotas. This rush for delivery during peak harvest time placed a heavy burden on the reception and drying facilities at grain elevators, for example, and regularly resulted in substantial physical losses of produce. Also, the considerable age and low technological standards of many storage units led to relatively large quantitative and qualitative losses during storage.

At the beginning of transition, agricultural output fell markedly in all CEECs and NIS. One would therefore have expected that storage capacity for agro-food products would now exceed storage requirements. However, lack of storage capacity is reported throughout the region (Table III.2.3). This shortage is the result of the lack of on-farm storage units, of agricultural warehouses being used to store non-agricultural products, ranging from tyres to refrigerators, and of the lack of specialised units to accommodate fruit and vegetables, for example. So while aggregate storage capacity seems adequate, there are problems with the accessibility of storage facilities as well as with the availability of sufficient warehouse capacity in particular sub-sectors.

Along with other enterprises in the agricultural downstream sector, storage facilities in transition countries have (partly) been privatised. Yet, lack of investment capital of the new owners has prohibited an upgrading of the often aged and outdated facilities so far. Thus large physical losses due to poor loading and unloading equipment as well as sub-standard storage bunkers remain an impediment to marketing efficiency.

Moreover, high per-unit storage costs due to high interest rates are a serious problem particularly in those transition countries that recently experienced periods of high inflation. In some cases, the high costs of storing agricultural products even led to diversions of trade flows. In Bulgaria, for example, carrying grain over time became so expensive that large quantities were exported immediately after the harvest and later re-imported on a month-to-month basis.¹⁰ Grain storage, thus, was carried out outside the country.

Table III.2.3. **Storage-related impediments to marketing efficiency in transition countries**

	Lack of storage facilities	Substantial physical losses due to poor handling/storage	High per-unit storage costs
Albania	xx	xx	xx
Bulgaria	x	xx	xx
Croatia	xx	x	xx
Czech Republic	x	x	x
Estonia	x	x	x
Hungary	x	x	x
Kazakhstan	xx	xx	xx
Lithuania	x	x	x
Poland	x	x	x
Romania	x	x	xx
Russia	x	x	x
Slovakia	x	x	x
Slovenia	x	x	x

Note: "o": non-existent problem; "x": slight to moderate problem; "xx": serious to very serious problem.

Source: Survey of Agricultural Policy Experts from Countries in Transition.

Also, in those transition countries that experienced a fragmentation of farm structures as a result of privatisation, the transaction costs of storage have increased in relative terms. In Romania, for example, the restitution of land to former owners has resulted in the creation of a dominating small-scale farming sector. These small-scale agricultural producers do not use public storage facilities to the same extent as former state farms did, since the handling charges are relatively higher for them than for farming enterprises that can supply large quantities of homogenous products to the operators of storage facilities.

Processing

During the socialist period, pervasive state control, lack of investment funds, and restricted choice of technology resulted in low technical efficiency of agro-processing activities. Use of raw materials, consumption of energy, and labour input per unit of food product were considerably higher than in OECD countries. There were, of course, cases of modern facilities, but these represented only a minority within the overall industry. Thus, at the onset of transition, agro-processing was in poor shape.

Meanwhile, privatisation programmes have been launched in all transition countries and in some CEECs, such as in Estonia, Hungary, and Slovenia, the privatisation of agro-processors has almost been completed. Yet even among the late and more hesitant reformers progress is under way. In Romania, for example, 184 out of 424 agro-processing firms had been privatised by the end of 1997, even though most of the larger enterprises still remain in the state sector. However, privatisation in itself does not guarantee the improvement of a company's competitive ability. Many enterprises in CEECs and NIS that have been transferred into private hands have indeed continued to operate in much the same way as under socialism, since the new owners often lacked information or interest to push for improvements in performance.

Privatisation methods and procedures have varied among countries. Yet, one common aspect of many programmes, namely the reservation of a large fraction of shares in the newly privatised agro-processors for farmers, workers, and managers, has inhibited subsequent attempts to restructure enterprises, to improve their efficiency, and to attract much needed foreign investment. Insider-shareholders have generally not been able to provide agro-processors with the financial capital to modernise processing lines. Also, resistance of agricultural producers to the closure of processing facilities located close to production activities has prohibited a consolidation of processing-plants in the face of aggregate over-capacities so far.

Under-utilisation of capacity at existing large-scale processing facilities has emerged as a widespread problem in the CEECs and NIS after agricultural production dropped markedly in the first years of transition. Many agro-processors have thereby found themselves unable to reduce their labour force to the same extent as output, so that over-staffing and increased per-unit labour costs are reported to be impediments to marketing efficiency in all transition countries (Table III.2.4). Also, debts inherited from the socialist period still have to be serviced. These fixed costs now fall on a reduced output, so that the capital costs per unit of output have increased.

Many agro-processing enterprises in transition countries continue to operate with technology that is obsolete or in a poor state of repair. In some cases it has been possible to upgrade facilities by removing particular technological bottlenecks. Also, those firms that have formed joint ventures or have foreign shareholders have in general had better access to investment capital than enterprises without any participation of foreigners. Indeed, in some countries with substantial inflows of foreign direct investment, such as the Czech Republic, Hungary, and Poland, agro-industry has undergone considerable upgrading already, although not all sub-sectors have benefited to the same extent from modernisation investments.¹¹

In parallel to existing large-scale processing enterprises, a rather vibrant sector of small agro-processors has emerged in many CEECs and NIS. In the Russian region of Rostov, for example, more than 550 small-scale oilseed processing operations have sprung up on agricultural enterprises or private farms, while the two large-scale plants in the region work at a fraction of their potential capacity. In Bulgaria, a multitude of small milk and meat processing firms have emerged to supply local markets with livestock products. Such small enterprises are not able to reap benefits from economies of scale and often supply products that are at the lower end of the market in terms of quality. However, over time some of the nascent firms might be able to grow into formidable competitors for the more established agro-processors.

The quality of food products in many transition countries continues to fall short of western European standards. In the Baltic countries, for example, no single slaughtering and meat processing plant is certified to export meat products into the EU. Estonia, Latvia, and Lithuania, therefore, cannot fill the preferential access quotas for meat negotiated with the EU in their respective Europe Agreements. Another example is Bulgaria, where the State veterinary service inspected 609 dairies during 1997, and forced 104 of these plants to close down because of poor hygiene. The inspectors also investigated 3 864 milk sales outlets, of which 1 306 were forced to stop operations as they lacked refrigerating equipment, thermometers to control milk temperature, and equipment to measure fat content. The EU suspended imports of white cheese from Bulgaria as a result of these findings. Similarly, EU dairy imports from Poland were banned in December 1997, after EU inspectors had found "significant hygiene and operating failures" at half of the plants investigated.

The food quality problems in CEECs and NIS result from low quality of agricultural raw materials, poor handling during transport to the processing plant, use of obsolete processing technology, and poor enforcement of national food quality standards. Some progress towards improving quality and product presentation, for example by using better packaging, has been realised in recent years. This is particularly the case in countries like the Czech Republic, Estonia, and Hungary that fostered competition with western agro-food suppliers by pursuing liberal trade policies and encouraging foreign direct investment.

One of the most serious impediments to efficiency in the agro-food chain is the lack of managerial expertise, particularly in the area of marketing (Table III.2.4). Accustomed to operating in a shortage economy where producers could passively wait for customers, managers at agro-food companies are now forced to learn active sales skills. Marketing has become a favourite buzz-word in transition countries, but few managers of agro-processing companies have a credible marketing strategy, a profound knowledge of their competitors, or a clear idea on how to create brand images. When discussing markets, many managers still think of satisfying wholesalers rather than the demands of consumers. The emerging small-scale agro-processing sector, however, testifies to the fact that entrepreneurial skills are developing in the region.

Table III.2.4. **Processing-related impediments to marketing efficiency in transition countries**

	Over-staffing of large agro-processing enterprises	Debts inherited from the socialist period	Lack of managerial expertise
Albania	x	x	x
Bulgaria	xx	xx	xx
Croatia	x	x	xx
Czech Republic	x	x	x
Estonia	x	x	x
Hungary	o	o	o
Kazakhstan	xx	x	xx
Lithuania	xx	o	xx
Poland	x	x	x
Romania	x	xx	xx
Russia	xx	x	x
Slovakia	x	x	x
Slovenia	x	o	x

Note: "o": non-existent problem; "x": slight to moderate problem; "xx": serious to very serious problem.

Source: Survey of Agricultural Policy Experts from Countries in Transition.

Competition

In the socialist period, the agro-industry was highly concentrated, with huge downstream enterprises sometimes dominating entire sub-sectors. In the former Czechoslovakia, for example, up until 1989 the entire agro-processing industry was composed of merely 69 large companies. Economic reforms after the breakdown of socialism focused initially on price liberalisation, while the restructuring and privatisation of agro-industrial enterprises proceeded more gradually. Hence, the traditional agro-industrial structures remained largely intact during the first stages of transition. With unchanged structures, institutions and legal systems, the freeing up of prices enticed large agro-processors to use their market power to extract monopoly rents by depressing agricultural producer prices while charging inflated food prices.

Subsequently, privatisation in the agricultural downstream sector proceeded in all transition countries and many agro-industrial firms have been restructured. This process has led to a de-monopolisation of the agro-food sector in most CEECs and NIS. Even in Bulgaria and Romania, where reforms started late and were rather hesitant, the four biggest firms in the grain-milling, dairy, and meat-processing industries no longer command a dominant position in the domestic market. Their joint market share is below 50 per cent (Table III.2.5). In Slovenia, the four-firm concentration ratios are rather high, but this is to be expected for a relatively small country. The high market shares of only a few firms, however, highlight the particular importance of enforcing anti-monopoly provisions and pursuing liberal trade policies in order to ensure sufficient competition on the domestic market.

With a relatively large number of agro-processors in most individual sub-sectors and a fragmented retail sector,¹² country-wide competition at the retail end of the agro-food chain seems, in general, to be sufficiently intense. However, at the regional level, agro-processors still have some market power particularly *vis-à-vis* small-scale farmers and indeed engage in anti-competitive behaviour (Table III.2.6). The dominant position of agro-processors on regional markets is reinforced by non-transparent agro-food markets and high costs for transport and storage of agricultural products (see above).

Barriers to entry for new competitors exist in some transition countries. Bulgaria, for example, operates a tax regime that grants reimbursement of VAT paid on inputs only to firms above a particular revenue threshold. Small, recently established enterprises that fall below the threshold are not able to claim VAT paid on inputs from the fiscal authorities and are, therefore, left at a disadvantage compared to large, established firms. Moreover, managers have often proven successful at lobbying for discriminatory regulations *vis-à-vis* outside investors in privatisation programmes in order to preserve dominant

Table III.2.5. **Four-firm concentration ratios in selected countries in transition, 1996**

	In per cent of total revenues		
	Grain milling	Dairy	Meat processing
Bulgaria	48	35	21 ¹
Romania	9	31	12
Slovenia	97	78	47

1. Beef.
Source: OECD Secretariat.

Table III.2.6. **Competition related impediments to marketing efficiency in transition countries**

	Market power of agro-food processors	Barriers to entry for potential new competitors	Lack of commodity specific farmers' organisations
Albania	x	x	xx
Bulgaria	x	x	x
Croatia	x	o	xx
Czech Republic	x	x	xx
Estonia	x	o	x
Hungary	x	o	o
Kazakhstan	xx	x	xx
Lithuania	x	x	x
Poland	x	o	x
Romania	x	o	xx
Russia	x	o	x
Slovakia	x	o	xx
Slovenia	x	o	xx

Note: "o": non-existent problem; "x": slight to moderate problem; "xx": serious to very serious problem.

Source: Survey of Agricultural Policy Experts from Countries in Transition.

market positions for their companies. In some cases this has led to the transformation of former state monopolies into private monopolies. Also, in some countries and sub-sectors, organised crime is reported to enforce restrictions on the market entry of new firms in order to preserve super-normal profits of "their" enterprises generated under the prevailing market structure. Wholesale markets for fruit and vegetables in the Czech Republic, for example, are said to be disturbed by racketeers.

Lack of commodity specific farmers' organisations is seen to be a serious impediment to efficiency in the agro-food chain in most countries in transition. In OECD countries, agricultural producers are often exempt from provisions relating to producer cartels and some countries even encouraged the formation of producer associations to counterbalance the market power of agro-processors.¹³ A farmers' association representing a substantial share of the total regional supplies of a product will have enough bargaining power to overcome the initial bias in market structure and allow agricultural producers to obtain favourable contract terms. In the CEECs and NIS, however, farmers associations are only at an early stage of development and are often not strong enough to negotiate effectively for better delivery terms with agro-processing firms.

Policy intervention

In the socialist period, political intervention in the agro-food chain of CEECs and NIS was extensive. Virtually all transactions were state-controlled and designed to comply with the political objectives of the ruling party. Self-sufficiency in agro-food products was a primary policy aim. Prices and marketing margins were fixed in such a way as to encourage production and to allow farmers, intermediaries, and processors to make "fair" profits. However, the mounting budgetary costs of state intervention contributed to the downfall of socialism.

Rudiments of socialist policies can still be found in some transition countries. State procurement systems remain in operation in Albania, Croatia, Russia, and Slovenia (Table III.2.7). Price and mark-up controls persist in Albania, Croatia, Kazakhstan, Russia, and Slovenia.¹⁴ The extent of the regulations, although clearly interfering with the development of competitive markets, is far less pervasive than under state socialism, though. In all the countries with price and mark-up controls still in place, private market transactions are taking place alongside the regulated activities, gradually undermining the influence of the state.

Table III.2.7. **Policy-related impediments to marketing efficiency in transition countries**

	Weak enforcement of contracts	State procurement at administered prices	Price and mark-up controls
Albania	xx	x	o
Bulgaria	xx	o	o
Croatia	x	x	x
Czech Republic	xx	o	o
Estonia	x	o	o
Hungary	x	o	o
Kazakhstan	xx	o	x
Lithuania	x	x	x
Poland	x	o	o
Romania	xx	o	o
Russia	xx	x	x
Slovakia	xx	o	o
Slovenia	x	x	x

Note: "o": non-existent problem; "x": slight to moderate problem; "xx": serious to very serious problem.

Source: Survey of Agricultural Policy Experts from Countries in Transition.

Instead of the direct influence of public policies on agro-food marketing, indirect policy effects, originating from the still fragile institutional and macroeconomic framework, seems to have become more important. Lack of enforcement of contracts, for example, is reported to be a problem in all transition countries (Table III.2.7). In many CEECs and NIS this is indeed seen as one of the most severe impediments to marketing efficiency. Late payments in conjunction with lack of fully developed civil and bankruptcy law and understaffed legal services turn the collection of payment claims into a risky and time-consuming venture. To avoid these risks and delays, agro-food producers often prefer to transact on a cash or barter basis rather than on credit terms. Also, traditional, trusted supply and delivery channels and agents are preferred to newly established intermediaries, even though the latter might offer better payment terms.

Moreover, outside factors, notably export subsidies, have often had a disturbing impact on the development of the agricultural downstream sector in transition countries. Agro-food exporters from western countries that receive subsidies for selling their products abroad, are clearly at a competitive advantage relative to local producers in transition countries. Since a large fraction of subsidised exports into CEECs and NIS has consisted of high value-added food products, domestic agro-food producers have been pushed out of these rapidly expanding segments of the market or driven out of business altogether.

Summary and conclusions

Impediments to efficiency appear at all stages of the agro-food chain in the CEECs and NIS, although the situation varies from one country to another. Markets are lacking transparency, transport and storage facilities are often deficient, competition is imperfect, agro-processing technology is largely obsolete, and policy interventions interfere with marketing and processing activities. Most of these impediments, which are often interrelated, can be directly linked to the distortions and shortcomings in the agro-food system under socialism.

The heritage from central planning affects agricultural producers, traders, and processors in individual transition countries to a differing extent. In most of the NIS, deficient physical marketing and processing infrastructure, lack of market support institutions, and the partial continuation of earlier agro-food policies continue to lead to high marketing and processing margins. The basic framework for a functioning market economy still has to be put into place in these countries.

In the CEECs, where reforms have in general started earlier and progressed further than in the NIS, the remaining impediments are of a different nature. Price information systems have been established, but do not always succeed in disseminating information to farmers, traders, and processors in a fast and reliable manner. Transport and storage facilities are available in sufficient overall quantities, but shortages occur for handling equipment in particular sub-sectors, such as in those for fruit and vegetables. The break-up of monopolies in the downstream sector has been almost completed, yet individual enterprises often maintain dominant positions on regional markets. A large share of agro-industrial firms has been formally privatised, but the managerial conduct at the privatised enterprises has frequently changed little. Last but not least, the weak enforcement of the existing legal framework for a market-based economy often turns contractual relationships between farmers, traders, and processors into risky ventures.

The improvement of agricultural marketing and processing efficiency requires a continuation of sector-specific policies to restructure agricultural downstream enterprises as well as a reinforcement of economy-wide policies to ensure competition and compliance with existing legislation. Moreover, a stable, investor-friendly policy environment seems crucial for attracting foreign direct investment and the managerial and technological know-how that comes along with it. This capital and know-how from abroad is much needed to modernise agro-industrial firms in transition countries.

3. FOREIGN DIRECT INVESTMENT IN THE AGRO-FOOD SECTOR IN TRANSITION ECONOMIES

At the onset of transition, agro-industry in the central and eastern European countries (CEECs) and the New Independent States of the former Soviet Union (NIS), like industry in general, was in poor shape. Due to lack of investment funds and limited access to Western technology during the socialist period, most agro-processing enterprises entered the transition process using obsolete machinery and equipment. Processing facilities were in strong need of upgrading or even complete replacement. Some modernisation of agro-processing plants has meanwhile already been achieved, partly financed from domestic sources of capital, but to a significant extent also through investments by foreign companies.

Total flows of foreign direct investment (FDI) into CEECs and NIS increased significantly during the early 1990s.¹⁵ Between 1991 and 1996, the amount of capital provided by foreign investors to the region more than quintupled (Table III.3.1). In general, FDI grew along with rapidly expanding trade flows. The main beneficiary countries of foreign investments have been the Czech Republic, Hungary, Poland, and Russia. These four countries together accounted for about 80 per cent of total FDI flows to the region in 1996.¹⁶ The vast majority of investors are from OECD countries, with geographic proximity to the recipient country being a major determinant of investment. German companies, for example, have been important investors in the Czech Republic and Poland, Scandinavian firms have frequently established subsidiaries in the Baltic states, and Greek investors have been particularly active in Bulgaria.

A number of CEEC and NIS governments offer specific incentives for foreign companies to invest in their countries. These concessions generally take the form of temporary tax or import tariff reductions. Hungary, for example, offers profit tax relief for those foreign investors that set up operations in areas affected by high unemployment. Poland also has used temporary tax concessions to lure foreign investors into the country. In some CEECs and NIS, such as in Russia, even individual regions compete for FDI by offering investors particularly favourable tax terms. With respect to import tariff reductions, Croatia and Belarus are examples of countries that have established duty-free custom zones to attract FDI, while Bulgaria and Kazakhstan allow foreign investors to import certain quantities of production inputs at preferential tariff rates.

Foreign direct investment not only provides much needed capital for the restructuring and modernisation of industries in transition countries, but it also brings managerial and technological skills to the region, which are also in short supply. Western trained managers can often more easily introduce

Table III.3.1. **Total FDI inflows into transition countries, 1991-97**

	FDI-inflows (in million US\$)							FDI-stocks (US\$ per cap.) 1997e
	1991	1992	1993	1994	1995	1996	1997e	
Albania	—	20	58	53	70	72	39	97
Belarus	—	7	10	15	7	18	162	80
Bulgaria	56	42	55	105	90	150	438	105
Croatia	—	16	74	98	81	300	334	259
Czech Republic	—	—	654	878	2 568	1 200	1 300	838
CSFR (former)	600	1 103	—	—	—	—	—	—
Estonia	—	82	162	215	202	138	308	760
Hungary	1 462	1 479	2 350	1 144	4 519	1 982	2 085	1 548
Kazakhstan	—	100	150	185	280	310	n.a.	n.a.
Latvia	—	29	45	214	180	292	420	519
Lithuania	—	10	30	31	73	152	344	172
Poland	291	678	1 715	1 875	3 659	5 196	3 034	221
Romania	40	77	94	341	419	624	956	97
Russia	—	700	700	637	2 017	1 800	6 697	100
Slovakia	—	—	199	203	183	150	140	192
Slovenia	—	111	113	128	176	160	315	572
Ukraine	—	200	200	159	267	440	516	36
Total	2 448	4 654	6 609	6 281	14 791	12 984	17 088	179

e) estimate.

Source: United Nations (1997), *World Investment Report 1997: Transnational Corporations, Market Structure and Competition Policy*, Geneva; United Nations (1998), *Economic Survey of Europe 1998 No. 1*, Geneva.

new business practises and can function more successfully in a market environment than local managers, who are not as familiar yet with the workings of private enterprise. The foreign owned firms thereby force local competitors to improve their operations and provide role models for the behaviour of companies in other industries.

On the other hand, FDI, as it is initiated by private, profit-seeking firms, can sometimes be directed towards the exploitation of market failures or regulatory shortcomings in recipient countries. With industrial structures in flux, competition in transition countries is often imperfect and foreign investors might find it relatively easy to establish a dominant position in a developing market. Also, since institutional structures are generally still weak, aggressive foreign companies might try to take advantage of poorly developed regulatory frameworks in areas such as environmental protection.

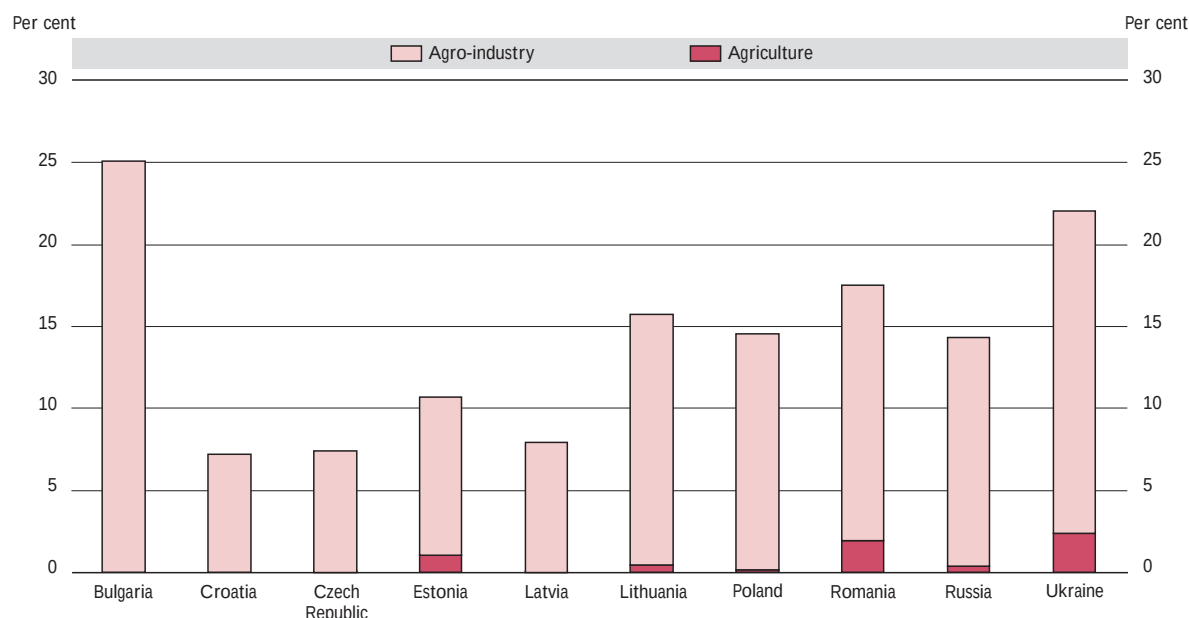
On balance, it is the experience of OECD members that FDI inflows are beneficial for the recipient country. In fact, OECD countries are currently in the process of negotiating the Multilateral Agreement on Investment, which has the principle of non-discrimination at its core. In accepting this principle, countries agree to treat foreign investors no less favourably than they treat their own investors. Non-OECD members are invited to join the Agreement and adhering to its principles will almost certainly increase the participant's attractiveness for potential investors from abroad.

The remainder of this paper provides a brief overview and analysis of FDI in transition countries as it specifically relates to the agro-food sector. It discusses flows of agro-food FDI into different countries and sub-sectors and tries to identify the main determinants of agro-food FDI, the impacts on primary agriculture, and possible impediments to foreign investments in individual countries.

FDI in the agro-food sector

During 1991-97, agro-food FDI accounted for a substantial share of total FDI in transition countries, ranging from about 7 per cent in Croatia to about 25 per cent in Bulgaria (Graph III.3.1). In fact, the Bulgarian agro-food sector attracted more FDI than any other sector in the economy.

◆ Graph III.3.1. *Share of agro-food FDI in the total FDI stock in selected transition countries, 1997*
In per cent



Source: National Statistics.

The vast majority of FDI funds has been directed into the agro-processing industry, rather than into primary agriculture. This development is similar to the experience with agro-food FDI in OECD countries. In many transition countries, however, legislation and related regulations have further limited the involvement of foreigners in agricultural production. Fear of foreign domination in CEECs and NIS, has often resulted in discriminatory treatment of foreigners concerning property rights to land. In Russia, for example, controversial discussions within and between the Russian government, Parliament and the Federation Council about the adoption of the Land Code dragged on for months without coming to a conclusion. All parties, however, were quick to reach agreement on banning foreigners from acquiring property rights to land, even while the dispute about the legality of private land ownership in general was still in full swing.

Within agro-industry, most FDI has been directed into the sugar and confectionery, the tobacco and soft drink sub-sectors (Table III.3.2).¹⁷ Alcoholic beverages and milk and dairy production also attracted substantial FDI. Meat processing, however, has received relatively little attention from foreign investors.

When comparing FDI flows across countries, Poland, Russia, the Czech Republic, and Hungary attracted the highest amount of agro-food investments. On a per capita basis, the Czech Republic, Hungary and Poland stand out as the recipient country with the highest level of agro-food FDI, while FDI inflows into the agro-food sectors in the large NIS countries, Russia and Ukraine, look less impressive when related to the size of their populations.

A large part of the differences in flows of agro-food FDI across countries can be attributed to general political and institutional factors. Foreign investors want to be assured of legal protection of private property rights, of the possibility to dispose freely of any profits they make, and of non-discriminatory behaviour of state agencies. Consequently, those countries that embarked early on the transition towards a market economy and that pursued liberalisation and privatisation efforts decisively have been most successful in attracting foreign investment in general, and agro-food FDI in particular.

Table III.3.2. **Cumulative inflows of agro-food FDI in selected transition countries by sub-sector, 1990-97**

In million US\$

	Milling and baking	Sugar and confectionery	Veg. oils and fats	Fruit and veg.	Milk and dairy	Meat and ready meals	Alcoholic beverages	Soft drinks	Tobacco	Other processed food	Total food processing	Per capita (US\$)
Albania ¹	–	–	–	–	4.0	–	–	10.0	–	–	14.0	4.0
Bulgaria ¹	46.8	18.6	6.8	27.7	12.3	–	37.0	40.9	0.9	–	191.0	22.7
Croatia	–	–	–	3.0	–	–	33.0	31.2	–	0.4	68.0	15.1
Czech Rep. ¹	49.0	23.0	32.0	–	3.0	4.0	157.0	237.0	420.0	72.0	997.0	96.8
Estonia	9.0	–	–	5.0	11.0	1.0	16.0	15.0	17.0	11.0	85.0	57.4
Hungary ¹	41.8	173.0	–	230.5	167.3	9.6	123.9	21.8	32.0	32.4	832.2	80.8
Lithuania	12.0	23.0	–	–	15.0	2.0	25.0	–	64.7	8.2	150.0	40.4
Poland	107.6	765.9	110.6	28.2	123.1	70.8	226.6	454.2	730.0	298.2	2 915.0	75.7
Romania ¹	–	42.4	–	–	–	–	166.0	31.0	–	0.5	239.9	10.6
Russia ¹	65.0	692.7	–	–	138.6	57.0	121.9	294.2	90.0	–	1 459.4	9.9
Ukraine ¹	–	42.5	91.5	4.4	50.0	50.0	6.8	116.0	–	–	361.2	7.1
Total	331.2	1 781.1	240.9	298.8	524.2	194.4	913.2	1 251.3	1 354.6	422.7	7 312.8	24.2

1. The information on the sub-sectoral breakdown of agro-food FDI is derived from a press survey, which might not be comprehensive.

Source: National Statistics; Agra Europe, *East Europe Agriculture and Food*, several issues.

Hungary's agro-industry, for example, has been able to attract large amounts of FDI as a result of a relatively stable macroeconomic environment and a privatisation programme that proceeded swiftly and encouraged participation of foreign companies. By mid-1997, about 88 per cent of the total food industry capital was in private hands, of which about 53 per cent was owned by foreign companies.¹⁸

On the other hand, FDI in many Balkan countries and NIS has been impeded by macroeconomic instability and non-transparent agro-food markets. High rates of inflation, frequent policy changes, and poor enforcement of contracts have deterred potential foreign investors. Also, the generally slow pace of institutional reform and state enterprise restructuring has frequently left foreign companies that had entered these markets at a disadvantage compared to local insiders in such areas as distribution and marketing. As a result, follow-up investments have been postponed.

However, in addition to the degree of political and economic stability, several other determinants of FDI flows are considered in the international economics literature. Three of these factors, namely border protection, resource costs, and consumer demand, are discussed and evaluated in the following three sections with respect to agro-food FDI in transition economies.¹⁹

Protection induced agro-food FDI

One of the classical arguments for FDI to occur is "tariff jumping". Companies that face high tariff barriers for their exports use FDI to establish operations inside the tariff walls, both to avoid having to pay the import duties, and to benefit from the protection on the host country market. However, import tariffs for agro-food products in the CEECs and NIS are in general relatively low compared with EU border levies, for example. Hence, protection does not seem to represent a primary motive for agro-food FDI in transition countries at first sight.

Yet, investment projects in agro-industry are projected and calculated over a medium- to long-term period. With a number of CEECs having started negotiations for EU accession in Spring 1998 and the possible first round of enlargement taking place soon after the turn of the century, some agro-food FDI, particularly from non-EU companies, may be motivated by the prospect of future EU membership of host countries. The fact that countries are in the run-up for accession assures foreign agro-food investors not only of the latter's commitment to market-based development and private enterprise, but also offers the prospect of being ultimately able to benefit from the support granted under the EU's common agricultural policy (CAP).²⁰ Hence, it might be the prospect of future protection rather than present trade policies that attracts agro-food FDI in some of the CEECs.²¹

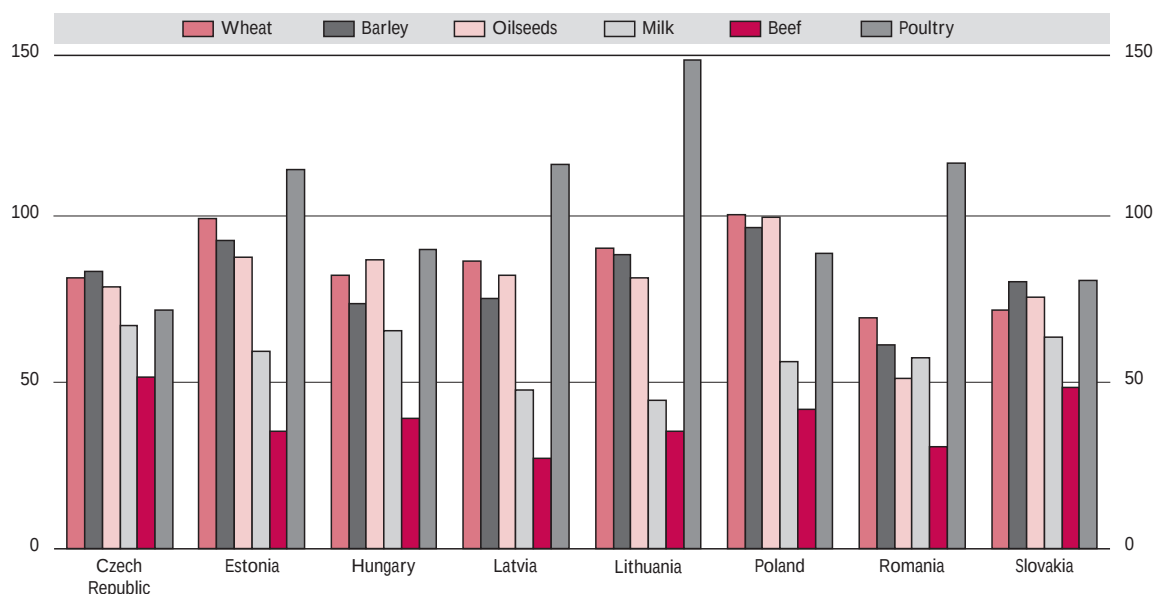
The front runners for EU accession, *i.e.* the Czech Republic, Estonia, Hungary, Poland, and Slovenia, are also the countries that are most advanced with respect to establishing a functioning market economy. It is, therefore, difficult to distinguish whether agro-food FDI in these countries is predominantly determined by their solid economic performance, or by the prospect of EU accession. Anecdotal evidence, however, suggests that the anticipation of high protection under the CAP might at least have inspired FDI in some sub-sectors. Hungary, for example, has experienced a dramatic expansion of iso-glucose production capacity. A new plant with a production potential far beyond Hungarian domestic needs has been built by an Austro-Belgian sweetener joint venture. This factory would have a high profit potential after Hungary accedes to the EU and receives a sweetener production quota based on historical production levels, as has been the practice in past EU enlargements.²²

Resource cost induced FDI

A second rationale for companies to invest in CEECs and NIS could be the aim to benefit from lower production costs in the region. Central and Eastern European countries have relatively good soils and favourable climatic conditions for agricultural production, high land per capita ratios and a well-qualified, relatively low-cost labour force. Agricultural market price support has also remained below the OECD average. These advantages could motivate agro-processing companies to shift existing production to the region or to establish additional production facilities there.

Indeed, farm gate prices for agricultural products are in general considerably lower in the CEECs and NIS than in the EU. For most commodities, agricultural producer prices are 40 to 80 per cent of EU levels (Graph III.3.2). Only poultry prices in some CEECs have the same magnitude as or even exceed prices in the Union. Hence, most agro-processors located in transition countries face lower raw material costs than in their home countries.²³

◆ Graph III.3.2. *Agricultural producer prices in selected transition countries, 1997*
EU = 100



Source: OECD Secretariat.

Intensive agro-processing activities of raw material, such as grain milling or meat processing, seem to have attracted relatively less FDI in transition countries than agro-industries that produce highly processed foods, such as confectionery and ice cream.²⁴ The latter benefits to a larger extent from the low wage levels in transition countries because of their higher labour cost share in total production costs. More importantly, high value-added food industries are not subject to the same extent to over-capacities as are agro-industries producing staple foods. Many grain mills and slaughterhouses in the CEECs and NIS have been operating at 30 to 50 per cent of their potential capacity since demand for staple food products fell markedly during the first years of transition. Competition for market share is intense and the prospects of earning a satisfactory return on new investments in these sub-sectors look slim in the short- to medium-term. Foreign investors have, therefore, been reluctant to engage in these industries and have instead concentrated their interest on high value-added foods.

Demand-induced FDI

Another factor that has contributed to the high inflow of FDI into industries for highly processed foods is the good market growth prospects for these products, in terms of both volume and variety, in the CEECs and NIS. The initial economic slump has bottomed out and GDP growth has resumed

throughout the region. In fact, some countries, such as Estonia, Poland, and Slovakia, have sustained economic growth rates in excess of 5 per cent over several years. Consumer incomes have risen correspondingly, allowing for increased expenditures on food products. Moreover, the spending power of high income households has increased even faster than average incomes, so that the number of people that are willing to pay for highly processed foods has expanded over the past years and is likely to continue to do so over the medium-term.

Furthermore, per capita consumption of staple food products, like bread, sugar or meat, in transition countries has been about as high as in western countries, while consumption of convenience foods, like biscuits and soft drinks, is in general still rather low (Table III.3.3). Hence, there are opportunities for investors in the markets, for example, of processed foods and drinks, ready meals and baby food. Some segments within the confectionary market have also shown strong growth over the past years. Sales of crackers in central and eastern Europe, for example, increased by 152 per cent between 1990 and 1995 and consumption of confectionery in Slovakia and Russia during 1992-96 rose by 37 and 46 per cent, respectively.²⁵ Such expanding markets have encouraged many Western companies to establish operations in the CEECs and NIS. *PepsiCo*, for example, has acquired a majority stake in *Wedel*, the leading Polish confectionery producer, and *Cadbury Schweppes* has built the world's second largest chocolate factory in Russia.

Table III.3.3. **Per capita food consumption in selected transition and EU countries, 1997¹**

	In kg or litre per year				
	Grain products	Sugar	Meat	Biscuits	Carbonated soft drinks
Czech Republic	112.7	38.9	81.4	5.6	57.1
Hungary	84.1	37.7	63.1	1.8	64.1
Lithuania	145.0	22.4	51.0	3.7	13.2
Poland	120.0	39.7	59.4	5.0	32.3
Russia	128.0	32.0	51.0	4.7	11.1
Slovakia	101.0	34.0	69.1	4.0	51.1
Belgium	73.8	42.2	98.1	20.6	85.0
Italy	120.1	27.3	85.4	11.7	45.5
United Kingdom	82.9	36.2	70.1	32.6	81.9

1. Or latest available.

Source: European Commission; CAOBISCO; UNESTA/CISTA, OECD Secretariat.

Substantial amounts of FDI have also been invested in agro-food sub-sectors with oligopolistic market structures and strong consumer brand recognition, such as in the tobacco and soft drink industries.²⁶ Indeed, multinationals active in these sub-sectors were among the first to undertake major investments in transition countries. Tobacco companies, like *Philip Morris*, *Reemtsma*, or *Rothmans*, thereby generally bought stakes in national cigarette producers which gave them access both to national brands and to established distribution networks. Soft drink companies, on the other hand, enhanced their geographical scope of activities typically through greenfield investments.

Moreover, beer brewing is an industry where substantial transport costs and strong brand loyalty by consumers favour local production over imports and which has attracted FDI in virtually all transition countries. The importance in such industries that is sometimes attached to brand names when making FDI decisions is illustrated by the lengthy dispute between the US American beer maker *Anheuser-Busch* and the Czech company *Budvar* over the use of the "Bud" trademark. Initially, the US company tried to claim exclusive rights to the trademark, but after judicial proceedings failed to clarify the situation, it attempted to buy a controlling stake in the rival firm. Thus in some cases, acquiring a product name or eliminating a potential competitor seems to be a consideration for the initiation of FDI projects alongside the desire to establish a local production base.

Impacts of agro-industrial FDI on primary agriculture

Even though the vast majority of agro-food FDI in transition countries, similar to developments world-wide, has been directed into agro-industry rather than into primary agriculture, the primary sector in CEECs and NIS is starting to benefit indirectly from foreign investments in the downstream sector. The modernisation of agro-processing facilities and the re-vitalisation of agro-business practices initiated by subsidiaries of foreign companies allows for reduced processing and marketing margins. These efficiency gains are eventually transmitted to agricultural raw material producers via higher procurement prices, as competition in the downstream sector develops.

Moreover, there are many cases of foreign investors transferring technical and managerial know-how, and introducing better agronomic techniques into transition countries. For example, the Slovakian sugar beet-processor *Juhocukor*, majority owned by the Anglo-French joint-venture *Eastern Sugar*, has provided technical assistance and advice to sugar beet farmers in order to build up its raw material base from previously low levels and to improve beet quality. Sugar beet yields of *Juhocukor* suppliers improved from 33 to 45 tons per hectare during 1993-97, while sugar content in the beet increased from 13 to 16 per cent over the same time period. *Juhocukor* also established a reputation for timely and correct payment of farmers, which has forced other agro-industrial firms to match its business practices.²⁷ Similar developments were experienced in Bulgaria, where French based *Danone* has set up a joint venture with the local dairy company *Serdika*. The joint venture has made an active effort to improve the quality and quantity of raw milk supplies and has enabled farmers to upgrade the quality of their animal stock and milking equipment by providing targeted, low interest rate loans.²⁸

Furthermore, foreign investments in agro-industry or other manufacturing sectors will leave more of the domestic capital supply for farm level investments. Financial markets in transition countries are neither fully developed, nor perfectly integrated into the global financial system yet. Capital inflows, therefore, do not just substitute for domestic funds, but augment the total supply of capital in transition economies. A larger inflow of agro-industrial FDI will, hence, tend to benefit farmers by giving them easier and cheaper access to credit, even though the generally low profitability of farming and the high costs of financial intermediation will continue to limit farmers' opportunities to obtain credit.

Impediments to FDI

Foreign investors face many difficulties in transition countries. Some past examples of FDI-ventures have made foreign firms easy scapegoats for the general economic plight. Some of the resentment of FDI in transition countries might indeed be related to the effects of economic restructuring rather than to FDI *per se*. If a foreign investor builds a new, modern agro-processing facility, this often leads to the closure of several old, inefficient plants in the vicinity. As a result, workers at these old factories lose their employment and farmers have to give up on conveniently located processing factories, fostering political opposition to FDI as the apparent cause of the social and economic hardship. The East German sugar industry, for example, was completely transformed by West European investors within just three years after German re-unification. Thirty-four of the existing 43 sugar beet processing facilities were closed down, while the remaining nine plants were modernised and expanded so as to maintain aggregate sugar production capacity. Sugar production efficiency and labour productivity surged, but total employment in the East German sugar industry fell dramatically and farmers had to accept longer transport distances to ship their sugar beets to the processing plants.²⁹

Another frequent concern in transition countries over FDI is that well funded foreign firms might find it easy to destroy weak domestic competitors, obtain dominant market positions, and extract monopoly rents from consumers. It is argued that local producers need time for restructuring before they are ready to face competition from multinationals. In order to deliver the necessary protection to emerging domestic industries, market entry of foreign investors should be restricted.

In many transition countries, governments have indeed given in to concerns over income distribution, job losses, or "unfair" competition and enacted provisions effectively restricting the possibilities for FDI. In the Baltic countries and many NIS, agricultural producers and factory workers have been granted preferential access to shares in agro-processing enterprises, for example. This made it more

difficult, if not impossible, for outsiders to acquire a share of the firm's capital large enough to have allowed them to influence management decisions. In Latvia, for example, the privatisation law stipulated that 51 per cent of the shares in grain milling companies were to be sold to farmers' co-operatives or associations, and that 70 per cent of the shares in large dairy companies were to be allocated to milk producers. In Lithuania, agricultural producers were allowed to buy shares in agro-processing enterprises at a mere 2.5 per cent of their nominal value. These provisions have deterred foreign investors and left agro-processing firms struggling to raise capital for much needed modernisation, since the farmers and workers who own the enterprises lack sufficient financial resources.

Other impediments to FDI include the imposition of restrictions on the investor's business conduct. Quite frequently, foreign investors are asked to provide employment guarantees for the existing workforce, or to commit to a certain amount of follow-up investment over a given time period in return for being allowed to buy a controlling stake in a company. The Dutch firm *Cereol*, for example, was asked to maintain the size of the company's labour force for two years, and to agree to modernisation investments of US\$40 million when it bought a 45 per cent stake in the Polish vegetable oil producer *Zakłady Tłuszczowe Kruswica*. Such conditionality is rarely in the investor's interest and might indeed have discouraged some FDI projects altogether.

Discriminative behaviour of public or state agencies towards foreign investors is another hindrance to FDI. UK-based *Tate & Lyle*, for example, was charged electricity prices for its newly acquired raw sugar refinery that were seven times higher than those paid by other businesses. Moreover, the Ukrainian government later imposed import restrictions on raw sugar to protect its domestic beet sugar industry, thereby effectively driving the foreign-owned raw sugar refinery to the brink of bankruptcy.

Summary and conclusions

This section provides an overview of agro-food FDI in transition countries, analyses the empirical importance of different determinants of foreign investments, and identifies major impediments to FDI flows. The agro-food sector in the CEECs and NIS has attracted a substantial share of overall FDI flows during the transition period, most of which have gone into agro-industry rather than into primary agriculture. Countries that have been able to convince investors of their commitment to private enterprise in a market economy have generally been most successful in obtaining FDI for the restructuring and modernisation of their agro-food industries.

Expectations of future protection in those CEECs in line for EU membership, and low agricultural producer prices seem to have motivated some agro-industrial FDI, but the majority of foreign investments have apparently aimed to position the investors on CEEC and NIS markets so as to enable them to satisfy growing local demand for high value-added food products, such as confectionery, ice-cream, and beverages. Acquiring local brand names as well as establishing Western brands in transition countries seem to have been additional considerations.

Concerns over social and economic hardship of restructuring, or market domination by foreign owned firms have given rise to the imposition of restrictions on agro-food FDI in many transition countries. These impediments have taken the form of preferential share allocations to insiders during the privatisation of agro-processing companies, of conditions attached to investments by foreign companies, or of discriminatory measures invoked by state agencies. Fears over increasing rural unemployment and monopolistic market structures might indeed have grounds in some transition countries. But these economic problems should be addressed directly, *i.e.* through appropriate rural development and competition policies, rather than through restrictions on FDI which tackle the underlying problems only indirectly, if at all.

Moreover, restricting the activities of foreign investors deprives the agro-food sectors in transition countries of the much needed inflows of investment funds and managerial know-how. It is doubtful whether the domestic capital markets and education systems in CEECs and NIS alone will be able to mobilise the financial and human resources necessary for the modernisation of their agro-food sectors. Without FDI inflows, the transition to functioning, internationally competitive market economies in CEECs and NIS could take a long time.

NOTES

1. Moreover, in many countries there are persisting problems with the physical identification of the plots of privately-owned land currently being farmed by the large scale-farms.
2. This was also typically the case with international donor lending programmes.
3. The agricultural banks *Agrobanka* (Czech Republic) and *Polnobanka* (Slovak Republic) are completely private commercial banks, newly established during the reform period. The share of loans to agriculture from these banks represents only 20 per cent of their total loans.
4. Agriculture Finance Company credits are provided after a rigorous assessment of the project and it requires the borrower to put up 20 per cent of the cost as well as to furnish collateral equivalent up to 150 per cent of the value of the loan.
5. The term "agro-industry" is in the following taken to refer to handling and processing operations. The latter form part of the larger seed-to-consumer agribusiness system.
6. See *The Soviet Agro-Food System and Agricultural Trade*, OECD, Paris, 1991.
7. In all transition countries, retail prices for food increased markedly relative to farm gate prices as a result of price liberalisation and subsidy removal in the early 1990s. In the Baltic countries, for example, the retail to farm gate price ratios for most agro-food products increased during the early years of transition, but seem to have stabilised or even shown a declining trend since 1994. This might indicate some improvements in efficiency in the agricultural downstream sector during the transition period, even though the evidence is insufficient to draw firm conclusions.
8. A questionnaire was sent in November 1997 to members of the OECD Expert Group on Agricultural Policies in Non-Member Countries. Experts were asked to rank the importance of particular impediments to efficiency in the agro-food chain in their home countries on a five-point scale ranging from "non-existent impediment" to "very serious impediment". It should be borne in mind that the ranking is subjective and not directly comparable across countries. Also, experts were asked to provide an overall assessment, even though the situation might vary in individual sub-sectors.
9. See Nikolov, G. and D. Hughes, *Market Information Services as a Means to Improve Competitiveness of the Food Sector: The Case of Bulgaria*, paper presented at the 54th Seminar of the European Association of Agricultural Economists on "Food Production and Distribution in Transition Economies: Problems and Perspectives", Halle/Saale, 7-9 December 1997.
10. See Leach, M., M. Haley, D. Skully, M. Smith, R. Meekhof, N. Cochrane, and E. Young, *Bulgarian Grain Marketing and Management Reform*, USDA Agricultural and Trade Analysis Division, Washington, DC, 1994.
11. See the special issue paper *Foreign Direct Investment in the Agro-food Sector in Transition Countries*, CCET/AGRI/TD(98)3 for a more detailed analysis.
12. In Bulgaria, for example, there were more than 30 000 retail firms offering bread, meat, and dairy products to consumers in 1995. The four-firm concentration ratio amounted to less than 0.5 per cent. This low ratio stands in stark contrast to the high degree of concentration in many OECD countries.
13. Exemptions from competition law for agricultural producer associations or co-operatives have recently undergone scrutiny in several OECD countries. See OECD (1996) *Competition Policy and the Agro-Food Sector*, Paris, for details.
14. Romania removed its remaining price and mark-up controls in February 1997 and Bulgaria abolished its mark-up regulations in July 1997.
15. In this paper, foreign direct investment is taken to be the movement of private, non debt-creating capital, which allows the investor to exercise an effective influence over the management of a firm that is located in a different country.

16. There are considerable problems associated with the collection and comparability of data on FDI. These difficulties are related to the somewhat artificial differentiation between FDI and portfolio investments, the treatment of retained profits or intra-firm loans, and differing reporting thresholds and methods in recipient countries. As a result, different agencies frequently report diverging information.
17. The data in Table III.3.2 is not directly comparable across countries since the information for some countries is derived from press reports and might not be comprehensive.
18. See Agra Europe Ltd. (1997), *East Europe Agriculture and Food*, May Issue, London. The 53 per cent figure provided by Agra Europe includes portfolio investment alongside foreign direct investment.
19. See Agarwal, J.P. (1980), "Determinants of Foreign Direct Investment: A Survey" in *Weltwirtschaftliches Archiv* 116(4), pp. 739-73 for an analysis of factors influencing FDI flows.
20. This is particularly the case with respect to the common market organisations for sugar and milk that provide mainly support at the processed food, rather the raw material, level.
21. Trade preferences as given through regional trade agreements, like CEFTA and BAFTA, or import duty reductions as in the case of the Europe Agreements, can also provide incentives for FDI.
22. Spain experienced a similar expansion of its iso-glucose production capacity during the years preceding its accession to the EU in 1986.
23. Slovenia, which has a rather high agricultural producer price level, is an exception.
24. This is one of the main results of the studies by Ryan, M., and W. Jones (1997), *Globalisation of the Food Industry in Central and Eastern Europe*, paper presented at the seminar of the European Association of Agricultural Economists on Globalisation of the Food Industry: Policy Implications, Reading/United Kingdom, 18th-19th September 1997 and Josling, T.E., S. Tangermann, and P. Walkenhorst (1996), *Foreign Direct Investment and Trade in Eastern Europe: The Creation of a Unified European Economy – The Agricultural and Food Sectors*, Working Paper No. 1/2 of the Joint FAIR Project, Institute for Agricultural Economics, University of Göttingen, Göttingen.
25. See ERC Statistics International (1997), *Biscuit Markets in Central and Eastern Europe*, London, and Datamonitor (1997), *Global Confectionery Report*, London, respectively.
26. In the case of the tobacco industry, less stringent regulations concerning tobacco advertising and a generally weak anti-smoking lobby might also have stimulated FDI inflows.
27. See Gow, H.R., and J.F.M. Swinnen (1997), *Agribusiness Restructuring, Foreign Direct Investment and Hold-up Problems in Agricultural Transition*, paper presented at the 54th Seminar of the European Association of Agricultural Economists on Food Production and Distribution in Transition Economies: Problems and Perspectives, Halle/Saale, 7th-9th December 1997.
28. See Vicheva, C. (1997), *An Overview of Foreign Direct Investment in the Bulgarian Food Industry and Agriculture*, paper presented at the 54th Seminar of the European Association of Agricultural Economists on Food Production and Distribution in Transition Economies: Problems and Perspectives, Halle/Saale, 7th-9th December 1997.
29. Similar developments can be expected in many CEECs and NIS over the medium to long-term. See, for example, Walkenhorst, P. (1998), *Restructuring the Sugar Industry in Poland: Transition from State Socialism to the Common Agricultural Policy*, Verlag Bartens, Berlin.

AGRICULTURAL POLICIES IN OTHER COUNTRIES

1. BRAZIL

General overview of macroeconomic and agricultural developments

Brazil is the largest country and the largest economy in South America with a GDP of US\$790 billion and half of the continent's population, i.e. 159 million people. But GDP is unevenly distributed both across regions and population groups: one third of GDP and population is concentrated in the state of São Paulo; two thirds of GDP are concentrated in the states of São Paulo, Rio de Janeiro and Minas Gerais; and, half of the total population retain only 12 per cent of total income, while the richest 20 per cent of the population have access to 65 per cent of GDP.

The tight monetary policy of the "Real Plan"...

For decades, inflation has been the country's main problem. After a number of failed stabilisation plans in the past, the initiation of the "Real Plan" helped the economy to return to greater monetary stability and economic growth. The main contributing factor to lower inflation was a tight monetary policy. Other elements included the de-indexation of prices, privatisation of government-owned industries, and an opening of the domestic market through reductions of tariff and non-tariff barriers. The "Real Plan" was the first reform package that was not based, like other stabilisation plans in the past, on artificial price controls and governmental interventions in business transactions.

... has resulted in a sharp drop in inflation...

The most important result of the "Real Plan" was a sharp drop in inflation. In 1997, the rate of inflation measured by the consumer price index fell to 4.5 per cent, the lowest rate since 1957. But the tight monetary policy also brought about a growing appreciation of the real exchange rate, which in turn contributed to rapid growth in imports and reduced exports. Growing net imports aggravated the current account deficit, making the economy more vulnerable to potential contagion effects of the financial crisis in Asia. To solidify the important achievements of the "Real Plan" in the longer run, Brazil will have to extend its reform endeavours to other areas, such as the reform of the federal system, the pension system, the importance to its transportation and port system, as well as a reform in the tax and social security system.

Initially, the "Real Plan" helped to increase real incomes and purchasing power, particularly in the lower and middle income groups. Real GDP growth declined from 6.1 per cent in 1994, to 4.3 per cent in 1995, and to a mere 2.9 per cent in 1996. In 1997, economic growth stabilised at around 3 per cent. The slow-down in growth was mainly brought about by slower growth in domestic consumption, after rapid demand growth driven by growing purchasing power and enhanced credit availabilities at the beginning of the reform programme. On the other hand, investment grew faster than in the past, resulting in higher output particularly in intermediate and capital goods. Production in many other sectors, including food and beverages, textile and clothing shrank, hit by increasing import penetration from Asia.

... but is also putting a brake on exports

As a result of the growing purchasing power and the strong appreciation of the real exchange rate, the overall trade surplus of US\$10.5 billion achieved in 1994 turned into a trade deficit of about US\$8.5 billion by the end of 1997. The trade deficit became increasingly disturbing for the government

and threatened to put some of the recent economic reform efforts into jeopardy. The government reacted by implementing measures to discourage imports and promote exports. The import measure that most affected Brazil's agricultural imports was the introduction of a so-called "Provisional Measure", restricting the use of short-term import financing. For imports financed up to 179 days, an importer must now pay the full purchase price to the Central Bank immediately upon clearing the goods through customs in Brazil. The measure effectively eliminated short-term (up to 180 days) financing as it required that foreign exchange must be purchased before goods can clear customs.

Impacts of the "Real Plan" on agriculture

Mixed impacts, overall, but...

The overall impact of the "Real Plan" on the agricultural sector is difficult to gauge. While consumer purchasing power increased, sharply higher interest rates boosted capital costs of farming and squeezed profits in agriculture. Particularly producers with large debts suffered from the 1994 transition towards the tighter monetary environment. In addition, the government reduced funding for subsidised credit programmes, making it more difficult for farmers to re-schedule loans. This made banks more selective when making new loans. The Bank of Brazil, for instance, which accounted for about 75 per cent of the production and marketing loans under government programmes, demanded that farm borrowers clear up outstanding loans through a special refinancing programme before making new loans for the 1996/97 crop year. In 1995, old debt was re-scheduled with the first payment coming due in October 1997. When the first payments came due, the farm sector pressed the government and gained a further postponement of payments.

The "Real Plan" also changed government support policies. While the government used to be a major buyer, distributor, and holder of agricultural commodities (particularly in the grain sector), it gradually withdrew from the direct management of markets in the course of the implementation of the "Real Plan". For price-supported commodities, for instance, market prices used to be kept at or above a minimum price. Since the "Real Plan", the minimum price functions as a target price as farmers are no longer guaranteed the minimum price when they sell their products. The role of minimum prices in the farm credit programme remains unchanged, particularly as the basis for production loans.

... agriculture is under added pressure from tighter monetary and fiscal policies since October 1997

In the second half of 1997, the financial crisis that engulfed much of Asia and world stock markets began to spill-over into other emerging markets. Plagued by a current account deficit of US\$26.5 billion (by October 1997), the Brazilian government became increasingly concerned that the international financial crisis could trigger a major devaluation of the "Real". In a first reaction in October 1997, interest rates were almost doubled. As the Asian crisis deepened, the government unveiled an additional package of measures in November 1997, which aimed at achieving fiscal savings of about US\$20 billion by the end of 1998. The package includes tax increases, budget cuts, reductions in fiscal incentives, public sector layoffs, and other measures aimed at improving trade performance and reducing the budget deficit.

Again, the impacts of these measures on agriculture are difficult to gauge. While interest rates for the agricultural sector are kept below market rates, the October hike in interest rates boosted overall capital costs for the Brazilian farm sector. This added to the existing problems of large scale, capital intensive production. But farmers may also benefit from the measures aimed at reducing the trade deficit. The package includes, for instance, increased funds for export credits and the option of borrowing money abroad for export crops. In conjunction with the Export Credit Advance mechanism (ACC), this may result in a net increase of exports. In the long-run, fiscal savings could help to relax the tight monetary policy, to increase consumer purchasing power, and to lower the capital costs of farming.

Agriculture in the Brazilian economy

Agriculture accounts for about 11 per cent of GDP and 25 per cent of total labour force. If upstream and downstream industries are included, the sector accounts for as much as 35 per cent of total GDP. Brazil is currently the world's fifth largest exporter of agricultural products and the largest producer of coffee, sugar, citrus and frozen orange juice. Agriculture as a whole generated a net trade surplus of US\$11.5 billion in 1997. This is equivalent to 35 per cent of total exports and means that agriculture was the single most important contributor to foreign exchange earnings. Agricultural production and processing is concentrated in the South and Centre South of Brazil, but as new crop land is developed in the Centre West and Northeast, these regions are gaining importance at least for production of primary agricultural commodities.

With more than 330 million cultivable hectares in favourable climatic conditions, Brazil has one of the largest agricultural resource bases. The tropical and sub-tropical savanna areas, the so-called "cerrados", account for approximately 60 million hectares of crop land in excellent conditions for agricultural production. To date, only 40 million hectares have been taken into cultivation. Soyabeans, maize, rice, beans, cotton, sugar, and cassava are the most important annual crops and account for more than 80 per cent of total cultivated area. Coffee, cocoa and oranges are the most important perennial crops, making up for about 9 per cent of cultivated area.

Livestock production accounts for nearly 40 per cent of agricultural output, and more than 25 per cent of the agricultural labour force. Beef and dairy production represent about three-fourths of total livestock output, using about 200 million hectares of pasture land, but only 10 per cent of the work force required for crop production.

Agricultural production, food consumption and trade in 1997/98

The crop sector in 1997/98

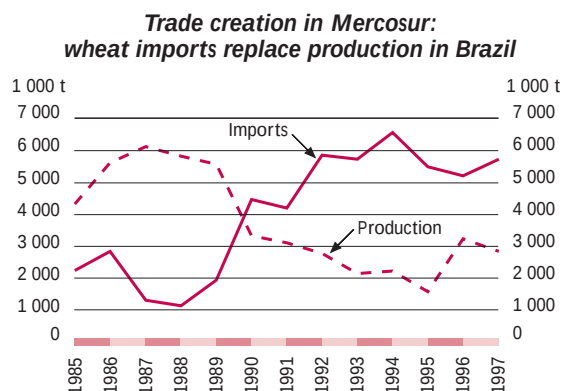
Wheat

The natural growing conditions of the tropics and subtropics are generally not suitable for wheat production. As a result, wheat production in Brazil is concentrated in the very south of the country, particularly in Rio Grande do Sul, Paraná and to a lesser extent in Santa Catarina. Rio Grande do Sul and Paraná together account for 90 per cent of total wheat acreage. Yields are low and variable, reflecting low intensity levels and production concentrated in the short, off-season winter period. Higher output would require heavy investment in inputs to control pests and diseases. Notwithstanding these problems, yields increased from less than 1 tonne per hectare in the 1970s to nearly 2 tonnes per hectare in the mid 1990s. However, these yields are still low by international standards.

In 1997/98, wheat production reached almost 2.8 million tonnes, down from about 3.2 million tonnes in 1996/97. The fall in domestic production was largely due to significantly lower area planted, reflecting low international wheat prices at planting time. The effect of lower acreage was partly offset by above-average yields, benefiting from excellent growing conditions for most of the season (with the exception of dry conditions in some areas early in the season). A minor part of the crop was affected by heavy rains during the month of October so that about 500 000 tonnes are likely to be destined for feed use rather than human consumption.

Wheat competes with rice and manioc for a place as the staple food in the Brazilian diet. While rice and beans still remain the traditional ingredients in the diet of poorer population segments, the increase in purchasing power (particularly in the middle and lower income classes) has supported the shift away from rice-based toward wheat-based products, particularly in urban areas. Pasta consumption, for instance, increased by 5 per cent in 1996 and is expected to increase by another 15 per cent in 1997.

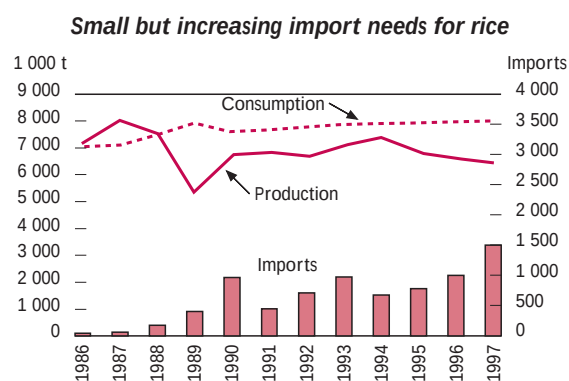
Traditional agricultural policies in Brazil focused on higher self-sufficiency and import substitution for wheat. Wheat producers received high subsidies aiming at an expansion of wheat land and the intensification of production. Growing integration into Mercosur – the free trade agreement with Argentina, Paraguay, and Uruguay – made it difficult to maintain this policy. As a consequence, production in Brazil declined and domestic needs are largely met by imports from the Mercosur area. (See Graph). With a current consumption level of about 8.1 million tonnes and domestic production of 2.8 million tonnes, Brazil imports about 4.0-4.5 million tonnes of wheat, mostly from Argentina.



Source: OECD.

Rice

Rice is grown in irrigated and upland production systems. Irrigated systems are more productive, produce the better quality and account for about 30 per cent of rice area, equivalent to 54 per cent of total production. Upland rice accounts for 70 per cent of cultivated area and 46 per cent of output. Over the last nine years, total cultivated area for rice dropped from 6 million to 3.6 million hectares, largely reflecting a decline in the less productive upland rice systems.



Source: OECD.

Rice competes with protein foods and wheat for a place in the Brazilian diet. Per capita consumption of rice is decreasing so that total consumption remained flat or was increasing more slowly than population growth. However, demand for higher quality, irrigated rice is increasing. Despite declining per capita consumption, rice remains one of the staples in the Brazilian diet and domestic production has been insufficient to meet demand estimated at around 11.7 million tonnes. To meet domestic needs, Brazil regularly imports between 1 and 1.5 million tonnes per annum (see Graph).

Maize

In 1997, Brazil produced 34.6 million tonnes of maize, harvested from 13.5 million hectares with an average yield of 2.65 tonnes per hectare (Annex Table IV.1.1.). Much of the output originated from subsistence production with yields far below the levels attained in many OECD countries. In addition to the traditional, low-intensity, subsistence segment there is a new, dynamically growing market in fully commercialised maize production systems. This segment owes much of its dynamics to the rapidly expanding pork and poultry industry and is fully integrated into a modern feed/livestock industry. Maize production for the pork and poultry industry is concentrated in highly specialised operations, with input and output levels comparable to specialised maize production systems in OECD countries.

Oilseeds

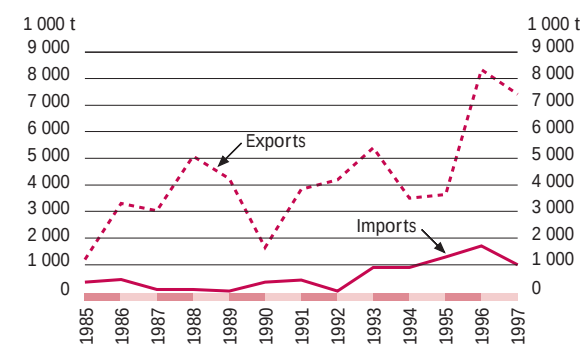
Production and processing of soyabeans dominates the Brazilian oilseeds sector. With an output level of about 26 million tonnes in 1997/98, it accounts for over 20 per cent of total world soyabean production, making Brazil the world's second largest producer of soyabeans. Traditionally, a large share

of production has been processed domestically, benefiting from policies which promoted exports of soyabean meal and oil. To date, Brazil is the most important exporter of soyabean meal and oil and the second largest exporter of soyabeans.

Increasing soyabean production in the past was accompanied by the northward and westward movement of Brazil's agricultural frontier, intensified production and higher yields. The low land costs in the "cerrados" of Mato Grosso do Nord, Bahia, Tocantins, Maranhão and Piauí have attracted new growers, and the profitability of production in these new areas was boosted by improvements in infrastructure, resulting in lower transportation costs of soyabeans destined for export. The effects of improved crop management have become especially apparent in Paraná, currently Brazil's leading soyabean producing state. Investments in no-till farming, increasing commitments to crop rotation, and use of improved seeds have maintained yields there at record or near-record levels for the last five years.

The exportable surplus of soyabeans will continue to rise over the next years, benefiting from the elimination of the export tax (ICMS) for soyabeans, and the abolition of the tax differential between soyabeans and crushed products, which favoured exports of soyabean meal and oil. The combined effect of the two measures could lead to a doubling of soyabean exports in 1997/98. It will reduce profits of the domestic crushing industry and crushers have started to urge the government to reinstate the export tax on soyabeans. But given Brazil's growing trade deficit, there seems to be little policy support for measures retaining exports.

Soybean exports benefit from tax removal



Source: OECD.

Sugarcane

Brazil is the world's largest producer of sugarcane. Total cane production is estimated at 305 million tonnes in 1997/98, equivalent to a world market share of 9 per cent. About two-thirds of the cane are used for ethanol production, the backbone of the national alcohol programme (*proálcool*). The rest goes into sugar production, still enough to make Brazil the second largest producer and exporter of centrifugal sugar.

The *proálcool* programme was launched in the aftermath of the first oil crisis with the aim of making Brazil less dependent on imports of fossil fuels. While episodes of high oil and low sugar prices suggested that the programme could become economically viable in the long-run, falling real energy prices over the past two decades made the programme increasingly dependent on subsidies. Today, the *proálcool* programme has reached a cross-roads, and it seems unlikely that the programme will be kept afloat in its present form. Growing fiscal pressure is expected to gradually reduce the government's presence in the programme, bringing about lower subsidies and a phasing-out of tax incentives for ethanol consumption. The first steps in that direction have already been taken: the government no longer establishes sugar export quotas; sugar cane and alcohol prices are no longer under government control; and the monopoly of *Petrobras*, the state owned oil company, has been dismantled.

Brazil is not only the largest but also one of the most efficient producer of sugar with average production costs estimated at about US\$24 per tonne. The trend towards mechanised harvesting should further reduce production costs. Mechanised harvesting of sugarcane has started in the state of São Paulo, largely in response to stricter environmental legislation which restricts the burning of sugarcane. While the new technology is expected to remain an important source for efficiency gains in the future, investment in mechanised sugar cane harvesting may aggravate rural unemployment, and, according to some analysts, contribute to the growing political instability in many agricultural areas throughout Brazil.

Citrus

Brazil is the world's largest citrus producer and exporter of frozen concentrated orange juice. The total orange crop for 1996/97 is estimated at nearly 17 million tonnes,¹ which will allow the production of about 1 152 million tonnes of frozen concentrated orange juice; almost 90 per cent of production is concentrated in the state of São Paulo. About two-thirds of total production are processed into juice concentrates for export, the rest is absorbed by the domestic market.

A number of developments suggest that the situation for citrus growers is likely to become increasingly difficult. First, production is forecast to rise over the next few years with prospects for slow growth in international demand. This means that Brazilian citrus growers will be obliged to produce more efficiently and focus their attention more on marketing their products in Brazil's growing domestic market. Second, market power is increasingly shifting towards the processing industry. While the Brazilian citrus processing industry was already dominated by a handful of major enterprises, and largely represented by the Brazilian Association of Citrus Exporters (*Abecitrus*), recent mergers and acquisitions have added to the market power on the processing side. Third, after the end of the contractual arrangements between the processing industry and growers in 1996, processors are no longer responsible for the picking and hauling of oranges from producers' groves. This has shifted increased costs of production to growers and conferred a financial benefit to processors.

Domestic citrus consumption has benefited from increasing purchasing power, particularly at the beginning of the "Real Plan". While exports are exclusively in the form of frozen concentrated orange juice, the domestic market is dominated by the consumption of pasteurised and fresh squeezed orange juice. Currently, there are at least half a dozen companies, most of them traditional food manufacturers, which are producing pasteurised orange juice. Brazilian processors and growers expect the domestic demand to expand and hope to benefit from the preference for fresh orange juice over other soft drinks. Growing domestic consumption of fresh juice could help to offset sluggish world demand for frozen concentrated orange juice.

Coffee

Brazil is also the world's biggest coffee producer and accounts for about 27 per cent of total world production. In 1997/98, production of arabica and robusta coffee is estimated at 19.4 and 4.6 million bags respectively. Over 45 per cent of Brazil's coffee is grown in the state of Minas Gerais. Brazilian coffee production has almost fully recovered from the devastating freeze of 1994, which was followed by a prolonged drought. As production was recovering, exports rose in parallel. The demand side provided for added incentives. Exports benefited from exceptionally high international prices while the upswing in domestic consumption was reinforced by robust income growth and the promotional campaigns launched by the Brazilian Coffee Industry Association (ABIC). ABIC aims for a domestic consumption level of 15 million sacks by the year 2000. With current consumption estimated at 11 million bags (about 3.4 kilograms per capita), the industry hopes to regain the per capita consumption level which prevailed in the mid-1960s. The improvement in overall coffee quality, together with the opening of a number of gourmet coffee bars in Brazil's major cities, should support the boom in domestic consumption.

The livestock sector in 1997/98

Beef

With about 146 million heads, Brazil has one of the largest cattle herds in the world. With 6 million tonnes of beef produced in 1997, output is small relative to the herd size, largely reflecting the traditional, low cost, low productivity stocking system, based on natural pastures. Stocking rates vary widely across the country and, more importantly, from winter to summer-rainy seasons. This introduces a pattern of seasonal supply and price fluctuations. The technology necessary to smooth-out the seasonal pattern, i.e. a sophisticated chilling chain, is not available, which undermines the competitiveness of the sector in the off-season periods.

Exposure to competitors from regional and international markets made the lack of productivity more visible, resulting in a reduction in cattle herds, a loss of beef export markets, higher beef imports, and new consumer demand for high quality beef. Given the long beef production cycle and the substantial investment requirements in physical infrastructure, these problems are expected to last well into the next decade. Brazilian ranchers are still slow in adopting better cross breeding practices and shifting to confinement feeding/finishing to reduce average slaughter age and improve meat quality. A successful eradication of foot and mouth disease in the southern states will be the major factor in the efforts to regain markets abroad.

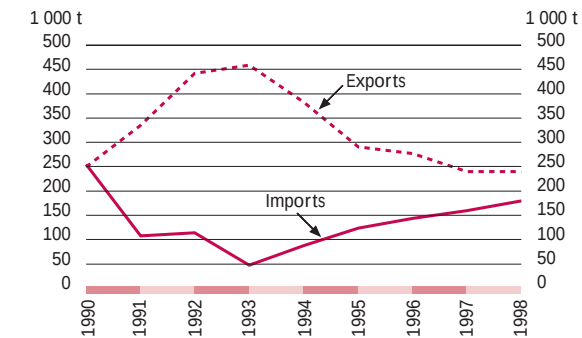
Poultry

Brazil has a modern, highly integrated poultry production and processing system which relies on both domestic and export markets. Productivity compares favourably with some of the most advanced poultry producing countries. Broiler meat production accounts for nearly 98 per cent of total poultry production, with most of the operations concentrated in the southern region of Brazil. Broiler production continued to grow in 1997 and reached another record level at 4.4 million tonnes, nearly 10 per cent above the previous year, reflecting declining feed costs, strong export and domestic demand. A similar performance is forecast for 1998 (see Graph). With about 645 000 tonnes, broiler exports have reached a new record level in 1997. The removal of exchange rate and tax distortions is becoming increasingly important for the competitiveness of the industry, particularly as the financial crisis in Asia is beginning to affect exports to many emerging market economies.

Pork

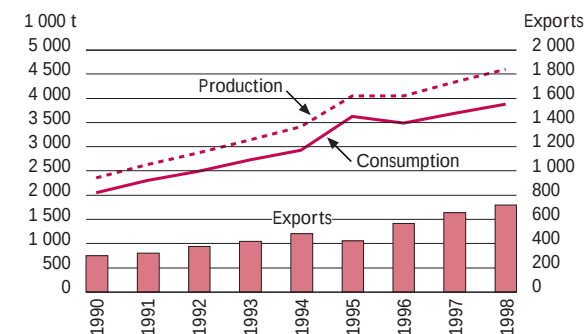
The pig herd has grown at an annual rate of 3.1 per cent a year over the past 25 years to a total of 31 million head. The long-term prospects for pork production in Brazil are good with new investments in pork operations coming on stream in the Centre-West regions of Brazil, closer to the grain and oilseed

The beef sector remains under import pressure...



Source: OECD.

... while poultry becomes increasingly competitive



Source: OECD.

production areas. Pork exports are expected to increase by 25 per cent in 1997 after a major increase of 75 per cent in 1996. This reflects higher exports to Hong Kong, which accounts for an average of 85 per cent of Brazil's pork exports, but also to new export destinations, such as Russia.

Agricultural policy developments

Regional and multilateral trade reforms

The unilateral trade reform measures of the early 1990s...

Over the past decade, Brazil has significantly reduced non-tariff barriers across all sectors. The abolition of non-tariff barriers was accompanied by reductions in other border measures. In a unilateral reform initiative in 1990, tariff rates for many manufactured goods were reduced to levels of less than 20 per cent. Within three years, the average tariff rate fell from 32 per cent to 14 per cent. Agriculture pioneered the trade reforms by freeing exports and imports from quantitative controls already in 1989. Tariffs for agricultural commodities were reduced to a flat rate of 10 per cent, except in the case of milk powder, butter and cheese, where tariffs were kept at 20 per cent.

... prepared for growing regional integration in the Mercosur agreement

On 26 March 1991, Argentina, Brazil, Paraguay and Uruguay signed the so-called "Treaty of Asunción", which initiated a process of progressive trade integration among the signatories to result in the Common Market of the South, or "Mercosur", free trade zone between the Mercosur signatories. The agreement provides the creation of a customs union between the four countries by 2006. For many agricultural commodities, the regional integration process is accompanied by additional reductions in general border protection, resulting in final tariff rates of 6 to 20 per cent under a newly established Common External Tariff (CET). Average tariffs in the CET schedule for agricultural products are: 5.5 per cent for grains, 8.6 per cent for food products and agricultural raw materials, 7.9 per cent for livestock products, 12.4 per cent for processed food products and 15 per cent for milk and dairy products. However, the CET was raised by 3 per cent across-the-board for about 9 000 products including many agricultural products, while Mercosur countries were excluded from these measures.

These tariffs are low relative to the degree of protection that existed in Brazil and most Mercosur countries prior to the conclusion of the agreement. Analyses undertaken by Brazilian researchers² suggest that the application of the (low) CET rates is unlikely to lead to significant trade diversion in the future. This study also indicates that by 2006, after the full implementation of the CET,³ Brazil's agricultural exports to Mercosur partners will continue to increase, though more slowly than those for processed goods. However, a study by the World Bank suggests that there is trade diversion from Mercosur. Recent exceptions to other Mercosur members in trade credits and the increase in the CET would seem to support this view.

The process of regional integration in South America continues. In 1996, a free trade agreement was signed between the Mercosur signatories and Chile which was extended in 1997 to include Bolivia. An enlargement to include Mexico and countries of the Andean Pact (Peru, Venezuela, Bolivia, Ecuador and Colombia) is currently under discussion. In addition, negotiations are underway to improve trade relations with the European Union and a number of Asian countries. Mercosur countries are also participating in the discussions of the Free Trade Area of the Americas (FTAA).

Main support policies

The National Rural Credit System provided substantial benefits in the past...

The National Rural Credit System (NRCS), established in 1965, comprises three components: production, investment and marketing loans. The first helps finance short-term costs for inputs such as fertilisers, pesticides and seeds. Investment credits have been established to accelerate the mechanisation of agricultural production, soil protection and amelioration, as well as irrigation. Marketing credits are granted to help finance storage, processing and marketing costs. These credits are available to agricultural producers, farm co-operatives, and processors.

Between 1970 and 1984, NRCS credits included a sizeable public subsidy element. During that period, interest rates paid in the NRCS programme were always below commercial rates. In fact, high inflation rates often resulted in pronounced negative real interest rates for the farmer. From 1984 onwards, interest rates for NRCS loans were kept above inflation rates but still below commercial credit rates and thus continued to include a subsidy element.

The strong segmentation and regulation of the Brazilian credit market makes it difficult to measure the subsidy equivalent transferred to the individual farmer. There are numerous credit subsidy programmes and related distortions, which makes it difficult to use the official market rate as a benchmark to measure the subsidy equivalent. It is also important to note that only small and medium size producers were eligible for credit subsidies under the NRCS programme. Larger producers had only limited access to NRCS loans and had to resort to the open credit market to supplement their capital requirements. This notwithstanding, the overall transfers to the sector are clearly identifiable from the programme expenditures of the overall budget.

... but recent reforms make it more specific and better targeted

The most important change in 1997 was a reduction in short-term interest rates from a flat rate of 12 per cent (for the 1996/97 crop) to different levels according to the farm size. About one billion US dollars will be allocated to this programme; 20 per cent of the total are scheduled for production costs and 80 per cent to help finance longer-term investment expenditure. Small producers will pay 9 per cent interest rates, and all other producers, 12.5 per cent. Interest rates for "micro" producers under the National Program to Strengthen Family Farming (PRONAF), were reduced to 6 per cent in 1998, compared to 9 per cent in 1997.

Traditional price support programmes...

The Brazilian minimum price programme (MPP) was first implemented in 1943. With the creation of the Commission for Production Financing (CPF), a state-owned agency involved in the marketing of agricultural products, the programme became a cornerstone of Brazilian agricultural policy. In the beginning, the scope of the MPP was limited to rice, black beans, maize, peanuts, soyabbeans, and sunflower seeds. Over the years, the coverage of the programme was widened and finally encompassed about 40 commodities and their by-products. The list of products included in the MPP ranged from black beans, rice, and maize, to carnauba wax and guaraná (important crops for low-income regions) to poultry, pork and milk powder.

The main objective of the minimum price guarantees was to reduce the price risk at the beginning of the planting season, an important issue in view of the high proportion of variable costs in Brazilian crop production. Farmers and farm co-operatives had the option of selling their products to the market at the current price, selling to the CPF at the guaranteed minimum price, or borrowing from the CPF against the minimum (price) value of the stored crop for later sales to the market or to the government.

The minimum price programme for agricultural products was supplemented by a procurement price policy for staple food items, notably for milk, rice and edible beans. The main measures of the so-called "cheap food policy" included price controls, upper limits for consumer prices and marketing margins, imports of so-called "buffer" stocks for milk powder, as well as subsidised imports. This system of dual price intervention (minimum prices for producers and subsidised food prices for consumers) was created to meet two objectives simultaneously: to increase agricultural production and self-sufficiency, while maintaining food security and cheap food.

... are increasingly difficult to maintain...

The dual price system also meant that the government had to maintain a dual subsidy system to ensure higher product prices for farmers and lower prices for consumers. As fiscal pressures increased in the 1980s, the dual price support system became increasingly difficult to maintain. In 1985, the government discontinued the credit and minimum price policy for milk and dairy products (milk powder, predominantly, and some cheese). This initiative was followed by the elimination of minimum price marketing loans for poultry and pigmeat. In 1991, the government abolished the price control

system for all livestock products. In parallel, the first reform programmes were introduced in the crop sector. In 1985, the MPP was limited to the compensation of the increase in interest rates. While the MPP was maintained until 1987, transfers were largely given in lieu of reduced subsidies from the NRCS. As the budgetary crisis deepened in 1988, price guarantees were adjusted downward in line with the limited public resources.

... due to fiscal restraint and greater regional integration

While the programme was never discontinued entirely, its influence declined steadily. Today, only small farmers, with credit limits up to US\$30 000 for each crop year, are still eligible for benefits under the MPP and they are likely to lose these benefits soon. The main factors driving this process are fiscal reform and growing regional integration. Continuing pressure to deepen fiscal reforms is likely to reduce the funds necessary to effectively operate the programme and growing trade integration within Mercosur will force the government to eventually discard the minimum price programme entirely. Free trade within Mercosur means that the Brazilian government would effectively start to stabilise prices of all producers in the Mercosur market. The role of the government is likely to shift from providing price subsidies towards facilitating access to private risk management tools.

In parallel, the private sector is moving in...

As the government was gradually moving out of the marketing of agricultural commodities, room was created for the private sector to move in. However, the transition towards greater private risk management turned out to be a complicated process in practice. In the beginning, the vacuum left due to the reduction of public price guarantees was largely filled by the renaissance of private barter trade arrangements. The most common barter contracts in the past were:

- the “*barter contract*” between the providers of inputs and farmers, where farm inputs are traded against future delivery of grain; and
- the “*grain contract*”, usually between the producer and a grain purchaser, which provides credit against future delivery of grain.

The “*barter*” and “*grain contract*” became increasingly popular during the 1993/94 crop season. But their informal character, a key contributing factor to their initial success, turned out to become a major handicap, particularly as default rates increased in 1994.

... and new risk management tools are gathering importance

These problems raised the popularity of new, more efficient risk management instruments. So-called marketing or merchandise guaranteed certificates (CM-G), were developed, which could be issued by producers, co-operatives, processors or any market agent who either has a certain amount of a commodity or will have it at harvest time. The contracts are liquidated against actual delivery of the merchandise. The certificate is traded in commodity exchanges and supported by banks or insurance companies, which guarantee the quality and the quantity of the merchandise. The Certificate of Agricultural Product (CPR) is another instrument that enjoys growing popularity for managing risk and financing production costs. The CPRs can only be issued by producers and co-operatives and are normally purchased by agents in the downstream industry. The CPR comes with two accompanying documents, a certificate of deposit, issued by accredited warehouses, and a warrant, which is admitted as a valid document for transactions. Finally, there are the Commodity Linked Bonds (CLBs), commercial contracts for farm credits, which are traded against future delivery of grain harvested.

But the government continues to play a role

It is important to note that the introduction of new risk management tools was only supplementing public policies, not replacing them. With the exception of the soyabean market, the government continues to play a role in managing production and marketing risks for the farm sector. But the role of the private sector is likely to grow. While past experience proved that private risk management is by no means a panacea, market analysts believe that the private sector is ready to step into the larger and hence more liquid markets, e.g. maize (with 32 million tonnes traded), wheat (2 million tonnes), rice

(12 million tonnes), edible beans (3 million tonnes), and sugar, provided that the government refrains from creating competing stabilisation measures. This is already the case in the soyabean market where private risk management has worked successfully for more almost two decades.

Liquidity was key for the development of a functioning futures market for soyabeans. There, liquidity was generated through access to futures markets abroad; the opening-up of a futures market helped in the creation of financial instruments that allowed farmers to hedge their risks at lower costs and at any point in the annual production cycle. The Mercantile and Futures Exchange of São Paulo (BMF) is engaged in developing futures contracts for other agricultural commodities. The limited success of these efforts is partly due to the lack of organised spot markets for these commodities, and partly due to the institutional risk created by the presence of public risk management measures that are “crowding-out” greater private interest.

Assessment of policies and outlook

Reforms in agriculture were brought about by...

Since the beginning of the 1990s, Brazil's food and agriculture sector went through a process of important reforms. Three major factors brought about change: the “Real Plan”, the regional integration into the Mercosur process, and growing international trade integration.

... fiscal restraint,

The “Real Plan” affected agriculture through tighter monetary and fiscal policies, the de-indexation of prices, and an overall reduction of boarder measures. The impacts on agriculture were mixed. Brazil's agriculture benefited from lower tariffs for machinery and other inputs. It also benefited from an increase in purchasing power, most importantly at the beginning of the reform programme. All export-oriented agricultural activities gained from the removal of export-taxes and improved access to export credit facilities like the newly created ACC mechanism.

The “Real Plan” also meant there were new challenges and problems for Brazil's farm sector. Tight monetary policies caused an appreciation of the real exchange rate and thus a bias against the export-oriented farm sector. Rising real interest rates caused severe difficulties for producers with large debts and this became the main contributing factor to slower overall output growth in agriculture. The situation for indebted producers was aggravated by the fiscal measures of the “Real Plan”. Reductions in credit subsidies made it increasingly difficult to re-schedule debt or roll it over into the next crop year. The net effect for agriculture is difficult to gauge, particularly in the short-term. Over the longer term, however, agriculture is most likely to benefit from the advantages of an environment of low inflation, freer trade, and rising purchasing power.

... regional integration into Mercosur,

Regional integration through the Mercosur process was another important factor affecting agriculture and agricultural policies. The removal of trade barriers within the agreement resulted in trade creation and a reallocation of production according to comparative advantage. While Brazil benefited from higher exports for most of its produce, the opening up of borders caused a replacement of domestic produce by imports for some products. The impacts were felt most strongly for wheat and beef.

The enlarged regional market also meant that numerous domestic policies became increasingly difficult to maintain. As trade integration in the Mercosur market progressed, the market price programmes (MPPs), in particular, became unsustainable. A continuation of the MPPs would have triggered imports from member countries and Brazil would have started to bear the costs of price stabilisation in other Mercosur countries.

The withdrawal from these policies caused new challenges in the quest for alternative price stabilisation mechanisms. The private sector is gradually moving into the risk management market, but important obstacles remain. A broader and more efficient private risk management market would require that the government move out of this area and signal to the private sector that it will stay on the sidelines.

... and growing global integration

Over and above the growing regional integration, Brazil's agriculture became increasingly integrated into the globalised market for food and agricultural products. The protection it enjoys through the Common External Tariff (CET) of the Mercosur agreement is limited and scheduled to decline. Greater exposure to competition in the international market is likely to speed-up the reform process underway at home and fully integrate Brazil's agricultural sector into the world market.

To date, the factors that limit the benefits from freer trade lie in the limited access to markets abroad. Brazilian exporters still face important barriers to trade in other countries. While the Uruguay Round agreement constituted a first step towards improved market access in WTO countries, the pace of the trade liberalisation process will significantly influence future policy reforms in Brazil.

2. CHINA

Macroeconomic situation

China has achieved impressive economic growth coupled with significant structural transformation since it embarked on major market-based reforms in 1978. Between 1978 and 1997, the real GDP growth rate averaged more than 9 per cent per annum. Reforms have been implemented without large output declines and severe macroeconomic instability that have tended to characterise transition economies.

Economic developments in 1997 and early 1998

Growth of domestic economy is slowing down...

The economy has increasingly been subject to restraining forces arising from falling industrial capacity utilisation, oversupply of consumer goods, growing volumes of unsold inventories, increasing failures of business firms and rising lay-offs of workers. Real GDP growth slowed to 8.8 per cent in 1997 – below the 9.6 per cent recorded in 1996 and 10.5 per cent in the previous year. The slowdown of GDP growth mainly reflects reduced capital spending, and sluggish private consumption. Fixed investment growth dropped to 9 per cent in 1997 from 12.7 per cent in 1996, and the decline was more pronounced in non-state-owned sectors. The fixed investment in the real estate sector, which played an important role in China's high growth economy after 1992, recorded an outright decline last year. Consumer spending – which makes up about half of China's GDP and had been relatively robust in recent years – was also dampened by falling wage growth. Growth in retail sales fell to 11.6 per cent last year, well below the 19.4 per cent growth recorded in 1996.

... inflation is under control but deflationary pressures are gathering strength...

Further moderation of price inflation was evidenced in 1997 and there are now indications of growing deflationary pressures in the economy. Retail prices rose by only 0.8 per cent for 1997, compared with 6.1 per cent in 1996, and 14.8 per cent the previous year, while the consumer price index rose 2.8 per cent in 1997. By the end of 1997, retail prices started to fall. By February 1998, negative inflation was recorded for the fifth consecutive month. The falling prices are partly a reflection of abundant food stocks from recent good harvests but are also due to administrative controls on prices in some sectors as well as a slowdown in the rate of growth of the money supply. This year some of the leading manufacturers have been forced to cut prices in order to gain a greater share of an oversupplied market, and revive consumer spending. The recent price cuts for cars, personal computers and consumer appliances offer further anecdotal evidence of deflationary pressures in the economy.

... while unemployment is rising

Registered unemployment has been rising due to the slack domestic demand, and reforms of the state-owned enterprises (SOEs) accelerated. The urban unemployment rate is estimated to have risen to the highest level in nearly 50 years, estimated at 3.1 per cent (around 6 million) at the end of 1997. However, the true urban unemployment rate is believed to be much higher – at least 7 per cent – since official statistics do not include hidden unemployment in the SOEs, so-called “xiagang” workers who are

sent home but kept on partial pay. According to a recent survey by the Ministry of Labour, there were around 6 million “xiagang” workers at the end of 1997. Furthermore, it is estimated that up to 11 million workers could lose their jobs this year as a result of reforms to state sectors, especially in the rust belt industrial areas of Northeast China. There has already been sporadic labour unrest as an increasing number of state factories find themselves without government subsidies, unable to pay wages or forced to shut down. Moreover, an estimated 20 million people enter the job market each year as a result of high birth rates in the 1980s. The political and social consequences of rising unemployment have become a cause of great concern in China. Slower income growth flowing from the rise in the jobless rate could also further depress economic growth.

Growth last year was sustained by buoyant external sector...

The main contributing force behind the overall 1997 GDP growth were buoyant exports which led to a record trade surplus of US\$40.3 billion. As domestic demand continued to slow down, businesses redirected their products to export markets. Driven by strong foreign demand, the dollar value of China's exports grew by 20.9 per cent to US\$182.7 billion. Imports fell due to slowdown in investment growth and by the reductions in inventories for exports, edged up by only 2.5 per cent to US\$142.4 billion. The surge in the trade surplus led to a rising current account surplus which is estimated to have reached US\$22 billion in 1997. Fuelled by a surging trade surplus and steady inflows of foreign investment, foreign exchange reserves hit a record US\$139.9 billion at the end of 1997, an increase of US\$34.9 billion compared with 1996.

... but exports and foreign investment have already showed signs of weakening...

However, the ongoing Asian financial crisis appears to have already started affecting China's exports, and foreign direct investment, although it is too early to determine if and to what extent the impacts of the Asian crisis will persist. Since late 1997, exports have shown signs of slowing, down due in part to weakening external demand from other Asian countries. The economic difficulties in the Asian neighbour countries have also contributed to a pronounced slowdown in foreign direct investment (80 per cent of China's investment inflows come from the region) which declined by 29 per cent last year.

Table IV.2.1. **China: key economic indicators and outlook**

	1995	1996	1997e	1998f	1999f
GDP	10.5	9.7	8.8	6.7	8.0
Inflation (retail prices)	14.8	6.1	0.8	1.2	2.0
Urban unemployment rate (end year) ¹	2.9	3.0	3.1	—	—
Government budget balance (% of GDP)	-1.7	-1.5	-0.8	—	—
Current account balance (US\$ billion)	1.6	7.2	22.0	12.0	6.5
Current account balance (% GDP)	0.2	0.9	2.8	1.2	0.9

1. The urban unemployment rate does not include hidden unemployment in the SOE sector and, therefore, is likely to underestimate the true extent of urban unemployment.
e = estimate; f = forecast.

The agricultural sector

The role of agriculture

The agricultural sector took the lead in overall economic reforms in the late 1970s with measures such as the leasing of land to farmers under the household responsibility system and the introduction of a two-tier price system, which allowed for market based pricing in many areas. The success of the

initial rural reforms led to a gradual broadening of reforms since 1984, including the restructuring initiatives of SOEs in urban areas, and the gradual dismantling of the central planning system. Benefiting from these reforms, agriculture has made important contributions to overall economic development, employment, capital accumulation, urban welfare and foreign exchange earnings.

The successful reform process in agriculture also laid the foundation for the country's outstanding overall economic growth in the past. As other sectors grew, however, the relative importance of agriculture declined. Before 1980, agriculture contributed more than 30 per cent to GDP and generated more than half of the nation's export earnings. By the early 1990s the share of agricultural output in GDP was estimated at about 18 per cent in 1997. In parallel, agriculture's share of total employment declined from 81 per cent in 1970 to about 50 per cent in 1997.

Rapid population growth and limited land resources were the main factors responsible for the shift in comparative advantage from land intensive economic activities like agriculture to labour intensive manufacturing and industrial activities. The same factors brought about a significant shift in the structure of agricultural production across sub-sectors. The importance of the crop sector, traditionally dominating agricultural output in China, fell from about 80 per cent in the 1970 to about 59 per cent in 1997. During the same period, the share of livestock production and aquatic output more than doubled.

Agricultural production, trade and food consumption

The crop sector

Another good grain crop in 1997...

Despite falling grain prices in 1996, policy makers successfully pushed farmers to maintain the total grain area at around 112 million hectares. As a result, 1997 grain production stabilised at a level of 490 million tonnes, close to the bumper crop recorded in 1996. Net imports of grain fell to around 2.2 million tonnes, considerably below the 1995/96 level of about 16.5 million tonnes. Forecasts for 1998 indicate that China may even produce an exportable surplus of 1.3 million tonnes. In conjunction with increases in production, government and on farm grain stocks rose and grain prices declined markedly.

... due to a bumper crop for wheat

With a record crop of 128 million tonnes, wheat was the most important contributor to the high overall grain harvest. This remarkable performance was based on a number of policy changes. Under the "grain bag responsibility system", provincial governors used administrative and price mechanisms to encourage farmers to increase area sown to winter wheat. Particularly farmers in south China, who in the last few years left their land fallow to work in more lucrative jobs in towns and villages, have been encouraged to increase the area sown to winter wheat.

In addition, government authorities kept the fixed-quota price for wheat at the high 1996 levels. In an effort to encourage farmers to intensify production and to increase farm income, authorities had increased the government's fixed-quota price from US\$131 in January 1995 to US\$160 in June 1996. Finally, the effects of an expanding area and higher use of inputs were reinforced by favourable weather conditions, which boosted yields to a record level of more than 4.2 tonnes per hectare and yielded a total wheat crop of more than 128 million tonnes, exceeding the 1996 record crop by 18 million tonnes.

... and a new record harvest for rice

With 31.8 million hectares, the rice area sown in 1997 remained largely unchanged compared to 1996. The tendency to reduce rice sowing in favour of more profitable land use such as growing fruits and vegetables was largely offset by the incentives of the "grain bag" policy in which provincial governors are required to maintain areas sown to grain. In addition, government officials implemented measures to ensure adequate input supplies, but farmers facing low rice prices may tend to reduce input usage in 1998.

Benefiting from favourable growing conditions and high fertiliser applications, rice yields continued to increase in 1997 to a new record level of 6.5 tonnes per hectare. Record yields and expanding acreage boosted output to a new record crop of 20.6 million tonnes, 1.1 million tonnes above the 1996 record level. The increase in production yielded an increase in self-sufficiency, and a shift in the country's net trade position from a net importer to a net exporter of rice. Despite the overall production surplus, more than 300 000 tonnes of high quality rice were imported from Thailand destined for high-income urban residents. Demand for imported rice could further increase largely because of rising urban incomes as consumers seek diversity and high-quality rice. In addition, there are likely to be further imports of lower quality rice to cater for the requirements of lower income consumers in big coastal cities.

Vigorous income growth and urbanisation have also brought about major changes in food consumption patterns. Consumers in urban areas are eating less rice and more meat, fruits, vegetables and wheat products. High income urban residents tend to shop for their rice in open free markets where they can purchase fresh domestic and imported rice. Rice consumption trends in China parallel those in Korea and Japan where one can observe static or falling per capita rice consumption. In general, China's consumers seem to be following in the footsteps of their East Asian neighbours: as per capita incomes rise, and more foodstuffs are available domestically, families tend to reduce rice consumption and eat more wheat products, meat, fruits and vegetables.

... despite a smaller crop for maize

With large maize stocks in the major producing areas, farmers have had difficulties selling maize in late 1996 and early 1997. As the open market price for maize fell from yuan 1 557 per tonne in January to yuan 1 253 per tonne in December 1996, and soyabean prices increased, maize growers started to reduce areas sown in 1997 (Annex Table IV.2.4.). In January 1997, the market price was only about 48 yuan above the fixed quota price, *i.e.* the price the government purchased maize from farmers according to their contract arrangements. Given these conditions, farmers allocated less labour, fertilisers and pesticides to their maize crop. Severe droughts in northern provinces added to the effects of lower fertiliser applications and reduced the average maize yield to 4.9 tonnes per hectare, somewhat below the 5.2 tonnes per hectare reported for 1996/97. The combined effect of lower yields and reduced acreage resulted in a fall in production of almost 10 per cent.

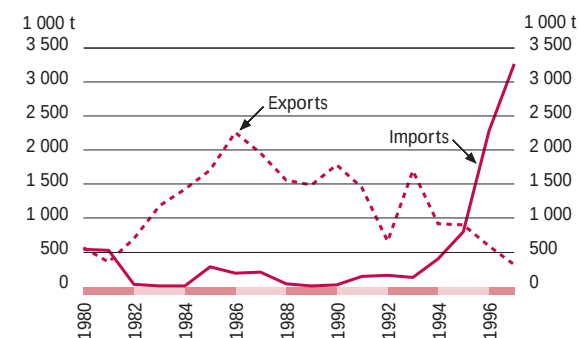
But China remains self-sufficient for maize...

During the 1990s, China's net trade position for maize has frequently changed. At the beginning of the decade, the government reduced its subsidies for public grain companies holding maize stocks. This policy change encouraged firms to reduce their stocks and in turn increased feed grain supplies and exports. By 1993/94, China exported 11.8 million tonnes with no imports. In 1994 and 1995, government authorities raised maize procurement prices, a measure that lifted domestic maize prices quickly above the world price and maize exports declined. In parallel, demand for feed maize continued to rise driven by increasing meat demand in urban households. In the second half of 1994, foreign trade authorities issued instructions to ban maize exports, and in December China contracted to purchase maize on the international market. In 1995, China's state trading corporation COFCO limited maize exports and purchased maize on the international market. Interest in exporting maize re-emerged with the record 1995 crop and very high international maize prices in mid-1996, and China's domestic maize prices were below world prices. China could have exported large quantities at high prices but its leaders chose to limit exports, and within the policy guidelines set by the governors' "grain bag" responsibility system, transferred maize surplus from northern provinces to feed grain deficit provinces in the south. With a record maize crop in 1996, along with full granaries and domestic prices slightly above the world price, China resumed maize exports in 1997.

... while it becomes a major importer of oilseeds, oil, and meals

As grains compete with oilseeds and other crops for land, high grain support prices brought about a decline in the production of the four major oilseeds, and hence, total oilseed production declined in 1997. To meet domestic requirements for feed and food, China has to rely increasingly on imports of oilseeds, oil and oil meal. In 1997/98 imports of all three products shot-up to new record levels. Oilseed and oil meal imports have more than quadrupled over the past two years (see Graph).

China: oilseed imports continue to expand rapidly...



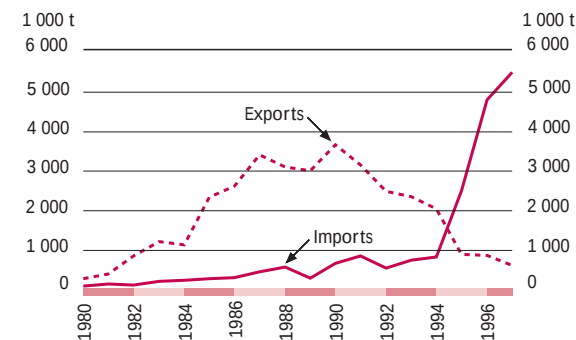
Source: OECD.

... and increasing imports of vegetable oils...



Source: OECD.

... accompanied by imports of oilmeals



Source: OECD.

In 1997, soyabean imports accounted for almost 90 per cent of total oilseed imports. Assuming unchanged import policies for soyabeans, the large difference between home and foreign prices will further stimulate soyabean imports. At the beginning of 1996, China announced that it would implement tariff-rate quotas (TRQs) for several commodities, including soyabeans. However, the TRQ system was never put in operation and import licenses, though readily available, continued to determine trade flows. Given low domestic production in 1997/98, the absence of quantitative restrictions, and a low tariff of 3 per cent, soyabean imports are expected to remain high. In addition, joint venture and wholly-owned foreign refineries have no choice but to crush beans because import quota allocations for crude oil are nearly impossible to obtain.

In an effort to reduce smuggling of palm oil, China reduced tariffs on 1 January 1997 from 18 per cent for crude and refined palm oil to 9 per cent for crude palm oil and 12 per cent for refined. Given that tariffs for crude palm oil are now below that of soya oil, the relative share of imports could change. With palm oil trade at a premium in international markets, imports of soyabean oil increased sharply in 1996/97.

China's cotton imports to contract

China is the single largest producer and consumer of cotton. In 1997, China's cotton production reached a level of 4.25 million tonnes, slightly up from the 1996 harvest. However, relatively good crops in the last three years in conjunction with rising imports have led to a significant accumulation of stocks.

In view of ample domestic supplies, China's central government-dictated cotton import plan left little room for cotton imports this year in order to draw down stocks. Total imports are expected to fall by as much as 30 per cent in 1997/98.

In previous years, lower priced imported cotton, primarily from the United States, attracted many joint-venture cotton yarn mills to import. Although difficult to verify, many non-joint venture yarn mills reportedly were able to illegally obtain this lower priced imported cotton, increasing the financial pressure on the China Cotton and Jute Company, the government's official cotton marketing and warehousing agency.

The livestock economy

The impacts of rapid economic growth will most strongly be felt in China's livestock economy. The shifts in dietary patterns away from food grains like rice and wheat towards livestock products is likely to continue. Changes in consumption patterns are likely to have a big impacts on the country's livestock sector, and derived feed demand. Rising meat demand will continue to put pressure on China's livestock producers to increase productivity, a development that is likely to favour professional production systems over the widespread backyard pig production of private households. But in countries with severe limits on agricultural resources, like China, the costs associated with increasing livestock production rise rapidly, causing meat imports to become more competitive.

The situation in 1997/98

China remains self-sufficient in beef...

China's cattle inventory, the largest in the world, grew by 5 per cent in 1997 to 147 million head. With 3 million more head slaughtered, beef production rose by 9 per cent to 5.4 million tonnes in 1997, the single largest increase in production. Most of the beef produced went towards meeting domestic demand, while a small portion – 60 000 tonnes – was exported. Prior to 1996, Hong Kong was the major destination for Chinese beef exports, but during the last two years, Russia has become the leading market for Chinese beef.

China imports very little beef, about 3 000 tonnes in 1997. China's Animal and Plant Quarantine (CAPQ) initiated a one year pilot project that would allow imports of meat for the retail market from selected plants in Australia, Canada, and the United States. But so far no meat has come in under the project because of a high 45 per cent tariff and an additional 13 per cent value-added tax (Table IV.2.2). Although beef imports are negligible, China has been an expanding market for beef offal during the last two years. When beef offal are added to other cuts, China's imports rise to over 23 000 tonnes in 1997.

Table IV.2.2. **Import tariffs for livestock products in China**

In per cent

	Preferential	Normal	VAT
Beef	50	70	13
Pork	45	70	13
Poultry meat	45	70	13
Eggs	55	80	13
Butter and cheese	65	90	17

Source: Beijing, *Customs Declaration Manual*, 1997.

... and pork...

Pig inventories are projected to increase in 1998. Chinese pig inventories expanded in 1997 with end of year inventories up 3 per cent. Inventories are forecast to increase by 5 per cent during 1998. In China, fluctuating grain prices appear to have little impact on producers' decisions to contract or expand holdings due to the structure of the Chinese pig industry.

Approximately 85 per cent of the pig producers in China are small family units fattening 1-3 pigs per year. For these small producers, economic returns from pork production is only one of the determining factors in the decision to maintain holdings. Pigs are a source of field fertiliser, and efficient converters of table scraps. As a result, the impacts of grain prices on meat production is much lower than in OECD countries. For instance, when maize prices soared in 1996, producers reacted by adjusting the pigs' diets and fed the animals more table scraps and field waste, thereby slowing the consumption rate of feed concentrates.

The Chinese pork import market is a small and underdeveloped segment, relying on domestic production. Though small, imports grew particularly from Canada the main supplier of the growing market. Import levels in 1998 are projected to remain flat as the domestic industry expands. In June, China initiated a one year pilot project which permits meat imports from designated plants in Australia, Canada and the United States to enter China's retail market. To date, no meat has been imported under the project as imports are subject to a 45 per cent tariff coupled with the 13 per cent value-added tax (Table IV.2.2).

China has been working to improve its domestic pig breeds and has received assistance from the United States and Canada. The assistance, in turn, has helped foster co-operation and industry linkages. The US Feed Grain Council in China has been working with commercial pig producers in southern China to improve the efficiency of their operations through improvements in breeding and feeding.

... but imports low-quality poultry meat via Hong Kong

Falling feed grain prices in 1997 and 1998 (maize in February 1998 was quoted at US\$144 per tonne) and sluggish international demand for Chinese exports brought about an increase in the supply of poultry meat. Broiler production is expected to rise by 4 per cent to 6 million tonnes, accounting for about half of China's poultry meat production in China in 1998. The continued expansion in domestic broiler output in China resulted in lower domestic prices and reduced the competitiveness of imported poultry meat in 1997.

Ample supplies and a slow down in consumption pushed poultry meat prices to their lowest level in four years; the average price for live broilers in 1997 sold in wet market is around US\$1 160 per tonne, broiler meat averages US\$1 320 per tonne. Despite lower prices, consumers have reduced demand for poultry meat, diversifying their consumption patterns to include a wider variety of seafood and fresh produce.

Almost all imports of poultry meat are transhipped via Hong Kong into the dynamically growing provinces of southern China. A major part of total imports are lower quality cuts (chicken wings) and offal (paws and chicken drumsticks), important ingredients to the traditional Chinese diet. With an import price of about US\$800 per tonne c.i.f. Hong Kong, the prices paid for these products are well below the average poultry prices in international markets. Nevertheless, it is one of the most lucrative segments for OECD exporters as importers are paying by far more for the same product as for instance the US rendering industry is prepared to pay.

Food consumption

- Grains

In view of the statistical problems mentioned above, an objective assessment of the current food consumption situation in China becomes a difficult task. Given the obvious problems in the official statistical sources, the analysis presented will largely be based on household survey information, reflecting the opinion of experts.

Box IV.2.1. The data problem

Numerous studies have indicated that there are inconsistencies, flaws and biases in the official statistics of China's agricultural sector. The most important are:

- Many supply-utilisation accounts of China's basic food stuff sector appear to be heavily biased. On the supply side, the most important problem is a substantial under-estimation of crop land in the official statistics. To date, this is a well-established fact. A land census undertaken in the 1980s revealed that total crop land amounts to about 133 million hectares, whereas the State Statistical Bureau (SSB), *i.e.* the official source, only reported about 96 million hectares. The underestimation was due to the fact that crop land traditionally formed the basis for taxation and delivery quotas. Thus underreporting of cultivated land directly translated into savings and lower delivery obligations for the farmer.
- It was assumed that the underreporting of crop land implied a one-to-one overestimation of yields, while the reported crops reflected correct data for production. While there is no doubt that actual yields are significantly below reported levels, there are also indications that actual yields are higher than implied by the biased land statistics. As a result, actual grain production, for instance, could be some 50 million tonnes above the reported levels.
- In addition to the data problems in the crop sector, there is ample evidence of severe statistical problems in the data series on China's livestock economy. A comparison of official meat consumption figures with corresponding information from household surveys, for instance, points at a significant overestimation of meat consumption and production. In 1995, the gap between SSB consumption figures and household survey data for meat consumption was as high as 165 per cent (Table IV.2.3), and the discrepancy is estimated to be even higher for red meat.
- While the SSB balance sheets overstate actual consumption, household surveys tend to understate total demand. First, eating-out is not included in the surveys and accounts for about 10 per cent of total meat consumption. Second, the so-called "floating population", about 50 million rural migrants are included in the rural group while their consumption levels are close to the higher levels of the urban population. Third, the balance sheet information is measured in carcass weight equivalents, while consumption surveys are based on boneless, purchased cuts. Finally, surveys do not include meat consumption by tourists, which however should only account for a minor share of the total. Taking these factors into account, the actual 1995 consumption level is estimated at around 30 million tonnes, compared with 52 million tonnes in the official statistics.
- While consumption levels are difficult to compare, their evolution over time is equally difficult to interpret. For instance, cross-section data from the China State Statistical Bureau's annual urban household and consumption expenditure surveys clearly show growth in consumption for all food items. The urban survey time series show just as clearly that per capita consumption of grain has been declining over the past decade, while income has been increasing rapidly – implying that grains may have become an "inferior good". These data also indicate that per capita meat consumption has increased only marginally. Rural household trends are similar, but at different levels.

These examples underline the importance of obtaining more reliable information, which is crucial for domestic policy formulation. Over the medium term, more reliable information will be instrumental for assessing the impacts of China's growing integration into the global trading system. Growing awareness of the importance of an unbiased statistical system has brought about new attempts to improve the statistical database. With technical and financial support from international organisations and many countries, including FAO, the United States, Italy and Japan, the SSB initiated a comprehensive agricultural census in 1994.

Table IV.2.3. Household surveys versus SSB data: differences in meat consumption

	Million tonnes			
	1980	1985	1990	1995
SSB balance sheets	12.58	18.75	27.95	51.87
Household surveys	10.53	15.35	18.2	19.59
Percentage difference	19	22	54	165

Box IV.2.2. China's agricultural census

In January 1994, China's State Council made a decision to undertake a comprehensive census for agriculture. China's policy makers have begun to acknowledge the importance of obtaining basic agriculture and rural data for policy formulation to promote the development of agriculture, rural areas, and even the national economy.

The contents for the first census include:

1. Number and structure of rural households and non-household holdings.
2. Size and distribution of the rural population.
3. Stock and flow of land in agriculture, forestry, and fisheries.
4. Stock and flow of rural labour.
5. Stock and flow of capital in agriculture, forestry, and fisheries (machinery and equipment).
6. The rural community environment and infrastructure
7. Living environment of rural residents.
8. General characteristics of non-household holdings.

China's State Statistical Bureau (SSB) estimated that the census will require 30 000 administrative organisers and 6 000 000 enumerators. The results of the agricultural census will be published about 6-12 months after the surveys. The publications will be released on a continuous basis as results are compiled. This will be different from the fixed-schedule publication as practised in most other countries. However, a selected set of preliminary results has already been presented by Mr. Ming, Deputy Director of the SSB. They confirm:

- SSB statistics understate area cultivated and overstate yields by about 35 per cent;
- SSB statistics overstate actual consumption of meat, the exact numbers are expected to be published shortly after the completion of the census;
- China continues to be a predominantly rural economy in spite of the rapid growth and structural transformation of the economy over the last two decades. The new data suggest that rural areas account for a significantly higher part of the country's total employment (561 million or 24 per cent more) than the previous estimate of 453 million;
- The differences between the new and the previously used data for the rural population vary widely among regions, ranging from minor differences of under 10 per cent in Guangdong and Zhejiang to large ones of over 50 per cent in Xinjiang, Liaoning and Heilongjiang.

The census will help policymakers, researchers and investors, to better understand China's agricultural sector. It will also allow to monitor more accurately the effects of policy change, and help to improve the policy formulation process, particularly the prioritisation process for public investment allocations.

According to market analysts, China's grain consumption increased in 1995 from 430 million tonnes to about 460 million tonnes in 1996. Supported by a record crop in 1996, China has produced a small exportable surplus (Ma Xiaohe, Li Zhiqiang, Guo Shutian, Zhu Zhe). With about 50 to 60 per cent of domestic use, food consumption represents the lion share of domestic disappearance. Feed use follows as the second largest form of demand (about 30 per cent), the rest is industrial use (5-7 per cent), or used for seed production (6 per cent) or constitutes waste, loss or spoilage (10-15 per cent).

Two major forces have determined the evolution of food demand. While rising incomes and increasing urbanisation brought about stagnant or declining per capita consumption levels, population growth more than offset this trend, and resulted in a moderate growth rate for total food consumption. From 1990 to 1995, for instance, direct food-grain consumption increased by about 1.2 per cent, or 0.2 per cent per annum. Again, this reflects the net result of two diverging trends in different consumption segments. While rural consumption of grain increased by 9.2 per cent (per capita consumption decreased by 1.2 per cent, while population increased by 21.6 per cent), urban consumption decreased by 13.6 per cent (per capita consumption decreased by 25.8 per cent, while population increased by 16.5 per cent).

- Meat

As mentioned above, studies by national and international experts suggest that national data on meat production, and thereby consumption, are strongly inflated. The actual level of meat consumption in 1995 is estimated at some 30 million tonnes, compared with 52 million tonnes in the SSB statistics, or 24 million tonnes derived from household surveys.

Regardless of the exact amounts being consumed, there are many indications that meat consumption – especially beef and poultry – is increasing. In a national Chinese consumer survey just completed by Gallup China, 38 per cent of the households surveyed in 1997 reported that they have frozen meat or vegetables in their households, compared to 13 per cent surveyed by Gallup China in 1994. In the three main cities (Beijing, Shanghai and Guangzhou), 80 per cent of the households surveyed had frozen meats and vegetables, and when the responses from seven other urban centres are included, the response was 62 per cent.

Information on consumption levels and behaviour of different consumer groups point to substantial differences between urban and rural areas, different regions and between high and low income groups. However, while the gap in meat consumption between the urban and rural areas is narrowing, there remains a significant difference in consumption levels between high and low income groups. In addition, an increasing part of the population is eating out and with meals in restaurant and more meat is consumed than at home.

Agricultural policies

Market and support policies

A number of objectives have been shaping Chinese agricultural policies over the past two decades. They include self-sufficiency in staple food supplies, steady growth in farm incomes, food price stability, secure urban food supplies, but also the participation in world trade. Despite the obvious incompatibilities between some of these objectives, the overall set of goals have remained remarkably stable over the past two decades. The emphasis on individual objectives, however, has shifted frequently during this period.

Greater market orientation in the 1990s...

The last shift towards greater liberalisation and deregulation of agricultural markets started in 1992, when the central government introduced market reforms to reduce subsidies and to improve the economic efficiency of grain markets. By the end of 1993, these reforms accelerated and the grain rationing system was effectively phased out. While the delivery quota system was officially maintained, grain quota deliveries were purchased at the (high) market price. The original state procurement price was set as a floor price for quota deliveries and comes into force when market prices fall below procurement prices.

... but the government keeps control over the grain sector

A number of factors pushed China's leaders to reassert government control over grain markets. First, inflationary pressures in 1993/94 began to undermine the government's decision to carry out market reforms. Official sources blamed increasing food prices, particularly the sharp rise in rice prices, to be the underlying source of rising inflation rates. Apparently, a more important factor for the hike in inflation was the large increase in money supply, that was necessary to bail out inefficient state-owned enterprises and to increase wages and bonuses for urban workers. In 1994 and 1995, anti-inflationary measures were instituted, including price controls. It is interesting to note that despite the importance given to the agricultural sector in official policy statements, China's leaders opted for the traditional urban bias of pursuing price stability, when the objective of price stability came into conflict with raising farm incomes. Second, while rural reforms brought relatively rapid increases in grain production in the 1980's, the rate of increase slowed in the 1990s and leaders became concerned about the decrease in the area sown to grains. Third, analysts in and outside of China increasingly questioned the country's capacity to produce enough grain to meet growing consumption requirements.

The governors' grain responsibility programme of 1994...

Growing concerns raised by domestic and international analysts that China is unlikely to meet its future grain requirements pushed central leaders to reformulate market reforms and to initiate the "governors' grain responsibility system" (or "grain bag" policy, "*mi dai zi shengzhang fuzezhi*"), a policy destined to promote adequate supplies of domestic grain at provincial levels whenever possible. While the various instruments of "grain bag" policy were designed to preserve government control over the grain market, it was also expected that the policy changes will facilitate the transition from a policy of heavy government involvement in the purchase and supply system towards greater reliance on the market forces.

The main thrust of this policy change was to give provincial governors specific responsibilities concerning grain supply and demand. Based on supply-utilisation accounts for the grain economy of a province, a governor has to determine his grain surplus or deficit status. If the province is in deficit, then the governor must first attempt to increase supplies by increasing the area sown to grain, raising the supply of inputs to raise yields, and providing subsidies to grain producers. Second, the province provides a list for the amounts and kinds of grains to be purchased domestically or imported. Third, the governor purchases domestic grain through wholesale markets or receives imported grain from the central government. If the province produces a grain surplus, then the governor maintains efficient grain production and supports grain sales to deficit provinces.

... helped to raise domestic supplies...

As this policy has only been in operation for the past 3 years, it is difficult to arrive at a final and objective evaluation. In the short-term, there is evidence that this policy has been broadly successful in achieving its output related objectives. Area sown for instance increased steadily from about 148 million hectares in 1994 to about 153 million hectares in 1997. This reflects in part an increase in the cropping intensity from 1.562 in 1994 to a record 1.61 in 1996. The expansion of crop land was accompanied by increased investment and higher input use. In 20 provinces, investment in agriculture rose by about 15 per cent. In 1995 and 1996, the use of chemical fertilisers increased by 8.1 per cent and 6.5 per cent, respectively, and pesticide applications increased 268 000 tonnes in 1994 to 360 000 tonnes in 1995 and 427 000 tonnes in 1996. This boost in the intensity of production, together with a larger crop area were the underlying factors of the record crops in 1996 and 1997.

... but higher self-sufficiency comes at a cost.

While the short-term production objectives have been accomplished, the administrative and economic costs of this policy change become increasingly burdensome. The "grain bag" policy has encouraged farmers to concentrate on the production of land extensive grain crops, a specialisation in which China has no advantage. At the same time this policy dampened economic factors which encouraged farmers to specialise in producing labour intensive horticultural crops, where China has a comparative advantage.

On the administrative side, several implementation problems arose already in 1995. Some areas focused only on local grain balances and set-up measures to restrict grain flows among administrative units. Some governors pressed the policy down their administrative structure to prefecture, then to county, and to township, adding to the costs of a bureaucracy of four million workers and retirees of government departments and about 10 000 grain related enterprises. In addition, the close linkages between the grain reserve and grain distribution system triggered many speculative transactions. Grain officials often sold grain from state granaries to take advantage of high market prices, making a profit for their departments but depleting reserves.

Over the longer term, the "grain bag" policy is likely to come also at a high "external" cost. While much of China's environmental problems are caused by the rapid industrialisation and urbanisation process, subsidies on chemical fertiliser and pesticide use have certainly added to water and air pollution problems. Subsidies on irrigation facilities and water use, for instance, have aggravated the growing depletion of aquifers and accelerated the dramatic fall in water tables in northern China, where 40 per cent of the country's grain is produced.

The continuation of reforms in 1998

As economic and administrative problems were mounting, the government decided in May 1998 to re-emphasise the importance of a functioning market place for the country's grain economy. The main features of the reforms are to i) separate the administrative and commercial functions of the grain economy (*zhengqi fenkai*); ii) separate central government responsibilities from local government responsibilities (*zhongyang yu difang de zeren fenkai*); iii) minimise public stock management (*chubei yu jinying fenkai*), iv) force unprofitable state-owned grain enterprises to survive on their own, and v) encourage an increasing number of private traders to compete under free market conditions. The largest part of the grain harvest will be traded on the free market and the State Grain Reserve Bureau will retain quota purchases at procurement price levels only for a small part of the total grain harvest.

Land tenure policies

Agricultural land in China is predominantly in the hands of community-based collectives, land use is contracted-out to farmers as members of the communities. The terms and conditions of these land contracts crucially affect the profitability of agricultural production and the livelihood of entire rural communities. Under the household contract responsibility system, farmers lease land from the state in exchange for selling parts of their harvest – currently 10 to 20 per cent – to the government at contracted prices. The rest is consumed on farm or sold on the free market.

The central government has frequently underlined the importance of a stable land contracting system. The 1997 revisions of the land contracting system re-emphasise the importance of continuity and stability, and set out the terms for agricultural land mobility in the future. The four pillars of the system are:

- Land tenure for rural household management will be extended to 30 years from the expiration of the original contract.
- The distribution of land established during the land contractual period should be maintained, whereas the number of people within a farm household can vary.
- The right to farm agricultural land can be sold provided that the original use of land is maintained. The property rights remain with the collective.
- Long-term investments in the fertility of land and the development of unproductive land are encouraged.

As in previous legislation, the main objective of the new land tenure policy was to overcome the problem of inadequate investment flows in land as a resource base for sustainable production. After only a few years in operation, the effectiveness and efficiency of this policy in meeting its stated objective is difficult to gauge. Anecdotal evidence suggest that some progress has been made, but has been limited to a few provinces. In some areas, investment in land increased due to the confirmation of land tenure rights over a relatively long period. For example, in the province of Shanxi, where the renewal of land contract policy was conducted relatively well, private farm investment increased by 25 per cent in 1995. However, in many cases, policy implementation by local authorities gave rise to a number of problems. There is growing evidence that some local officials shortened the contract duration or forced farmers to terminate their original contracts before the expiration date in order to maximise land contract fees. These administrative problems limit the success of the land tenure reforms to accomplish greater land mobility and rising investments in the resource base.

Environmental policies in agriculture

The Chinese government has made environmental protection a fundamental national policy since the 1990s and introduced a series of policy measures, laws, and regulations to protect the agricultural resource base. The main thrust of the new legislation is to limit negative environmental effects of

agricultural activities and encourage sustainable food production systems. Specific measures encompass:

- Improved protection of cultivated land. Complementary to policy measures of the land tenure system, the measures include the introduction of a permanent protection system of farmland, a licensing system for the conversion of farmland into non-agricultural use, and incentives for the reclamation of wasteland.
- Improving the power generation with the aid of big rivers.
- Afforestation projects to limit wind and water erosion and contain desertification.
- Encouraging sustainable fishing practices.
- Reinforcing pollution control. More than 80 000 heavily polluting rural enterprises were closed and the control of agricultural emissions into the Huaihe River and the Taihu Lake was strengthened.
- Building ecological agriculture pilot programmes. More than 2 000 pilot projects to promote ecological farming systems were initiated in numerous counties, townships and villages.

Financial reform in rural areas

Over the 1990s, the main objective of rural financial reforms was to restore the co-operative character of rural credit co-operatives and to enhance the efficiency of financial institutions in rural areas, while strengthening the leading role of state commercial banks. Specifically, the objectives of these reforms were:

- Rural credit co-operatives should be separated from agricultural banks and be transformed into co-operative financial institutions, run by farmers for farmers.
- Agricultural banks should be transformed into a fully commercialised operation.
- Highly commercialised credit co-operatives should be amalgamated into rural co-operation banks.
- The revamped agricultural development bank and its branches should operate as financial policy institutions to support agricultural development.
- The creation of agricultural insurance companies is supported.
- Rural co-operative funds will be defined as non-financial institutions and should operate as mutual aid organisations in communities. Many of the guidelines for re-organisation have been implemented successfully, without however helping to restore the co-operative nature of rural credit co-operatives.

Poverty alleviation policies

In February 1994, the government re-defined its target for rural poverty alleviation. The new, ambitious goal is to eliminate rural poverty by the end of the decade. By 1996, the number of rural poor was reduced from 80 million to 65 million or 5.4 per cent of the total population in 1996, partly as a result of the poverty alleviation measures taken in 1994. To accomplish the goal set in 1994, the government stepped-up the original plan in October 1996 and endorsed a number of additional measures. These include:

- additional direct transfers of 1.5 billion yuan as well as transfers of 3 billion yuan through subsidised loans;
- partial or full exemptions from the state grain procurement quota and tax exemptions for the creation of new enterprises in poor areas;
- implementation of micro loan projects, poverty eradication and social infrastructure projects (*yigongdaizheng*), as well as subsistence programmes (*wenbaogongcheng*).

Township and village enterprise (TVE) East-West Co-operation Programme

Traditionally, there are large regional disparities in China's economic development. Over the last ten years this gap – which exists in particular between eastern rural areas and central and western parts of the country – has increased. The main reason for this evolution is the relatively slow growth of TVEs in the central and western areas. In order to reduce divergent income developments, the government has introduced a series of policy measures in recent year to expand rural employment, to increase farm incomes, and to develop TVEs. The most important elements of this initiative include:

- a deepening of the reform of property rights through new co-operative shareholder systems and enterprise groups to improve TVE management mechanisms, structures and efficiencies;
- the development and practical application of technological innovations in the so-called “spark project” (*xinghuojihua*), in order to improve product quality and productivity of TVEs;
- supporting export-oriented enterprises by providing them with greater import and export autonomy;
- promoting centralisation of TVE initiatives in small towns to reap the benefits of scale economies and support the development of tertiary industries in rural areas;
- introduce measures to channel inter-regional movements of labour in order to integrate excess rural work force into urban centres.

An initial performance review suggests that the programme has been successful in promoting east-west co-operation in developing TVEs. Nevertheless it has met with a number of problems. First, the programme required horizontal links and co-ordination with fiscal, financial, and trade policies, etc. However, there is no institutional structure in place to facilitate such co-ordination. Second, the generally poor infrastructure in the central and western areas are a strong impediment to the development of TVEs in these regions and to the implementation of TVE East-West Co-operation Programme as a whole. Finally, as with some other agricultural policies currently implemented in China, the TVE East-West Co-operation Programme is conducted mainly through the state administration and does not provide the necessary private incentives to improve efficiency.

Agricultural trade policies

A number of recent unilateral reform efforts underline the governments principal commitment to a more liberal foreign trade system. Starting in 1996, import tariffs for a number of agricultural products were reduced. Tariff rates for many livestock products, for instance, were cut from around 50 per cent to 20 per cent, those for aquatic products from 30-50 per cent to 15-30 per cent; tariffs for dairy products were reduced from 70 per cent to 50 per cent, those eggs from 65 per cent to 25 per cent, those vegetables from 22 per cent to 13 per cent, those fruits from 50 per cent to 30 per cent, and those for tea from 70 per cent to 30 per cent. As a result, the average agricultural tariff rate fell from 40.3 per cent to 32.6 per cent in 1996. Further reductions followed in 1997 and lowered the average tariff rate for agricultural products to 20.4 per cent.

The cuts in tariff measures were accompanied by reforms of non-tariff barriers (import licenses and quotas) for numerous items. By the end of 1997, the number of commodities under import licensing management was limited to 36 categories including 354 individual items. However, imports for 28 product groups including wool, rubber, sugar, chemical fertiliser, tobacco, cotton, and edible vegetable oil are still limited by quota restrictions. In addition, export restrictions have been reduced for numerous commodities, however, still leaving 114 products under export license systems. While progress has been made in the past to reduce both tariff and non-tariff barriers, state control over imports and administrative impediments still constitute significant trade barriers for a number of important products.

Foreign direct investment (FDI)

The growth of FDI flows to China has been very impressive in recent years. In 1993, China was the single largest recipient of FDI among low-income countries, absorbing US\$27.5 billion or 14 per cent of global FDI or 68 per cent of FDI flows to developing countries in Asia. The total direct investment flow increased to US\$33.9 billion in 1994, US\$37.8 billion in 1995, and US\$42.3 billion in 1996, making China the second largest recipient of FDI globally. However, only less than two per cent of these funds went into agricultural projects (Table IV.2.4).

Table IV.2.4. **Foreign direct investment in food and agriculture, China 1979-1996**

Year	Number of projects			Pledged amount (million US\$)		
	Total	Agriculture	% share	Total	Agriculture	% share
1979-88	15 997	853	5.3	28 166	906	3.2
1989	5 779	183	3.2	5 600	121	2.2
1990	7 273	223	3.1	6 596	122	1.9
1991	12 978	325	2.5	11 977	220	1.8
1992	48 764	1 017	2.1	58 124	678	1.2
1993	83 437	1 704	2.0	111 436	1 191	1.1
1994	47 549	1 046	2.2	82 680	992	1.2
1995	37 011	903	2.4	91 282	1 736	1.9
1996	24 556	812	3.3	73 276	1 139	1.6
Total	283 344	7 066	2.5	469 137	7 105	1.5

Source: China Statistical Yearbook.

FDI in agriculture

A number of features are characteristic for foreign direct investment in China's agricultural sector. First, the scale of investment was relatively modest both in number of projects and the amount of investment. While agriculture still accounts for almost 20 per cent of GDP, investment projects in the sector could only attract 2.2 to 2.4 per cent of total FDI in 1994 and 1995. And, while China's leaders emphasise that agriculture plays a crucial role for the overall economic development of the country, there is no special policy to encourage FDI in agriculture. However, starting from a low level, FDI in agriculture enjoyed the same rapid growth as inflows into other sectors of the economy. This inflow benefited from measures, including:

- the increase in FDI has been raised to a “fundamental policy issue”;
- as of 1994, foreign and domestic investors enjoyed the same treatment;
- there are plans to offer more favourable investment conditions to foreign investment.

Second, consistent with the distribution of FDI in China, agricultural FDI is also concentrated in coastal areas. The provinces Guangdong, Fujian and Shandong, for instance, accounted for more than 70 per cent of total FDI in agriculture. Third, over the 1990s, FDI has replaced foreign loans as the main vehicle for channelling foreign funds into agriculture. Finally, FDI in agriculture went primarily into food processing projects, many of which were short-term and small scale projects, far below the average scale of US\$1 million.

Capital shortage remains the most binding constraint for the development of the sector. Promoting FDI in agriculture could become an interesting option to overcome this constraint and is therefore likely to attract more attention in policy formulation. A successful removal of the capital constraint could induce rapid and substantial growth in food and agriculture and provide a boost to related upstream and downstream industries.

Assessment of policies and outlook

China's economic growth slowed to 8.8 per cent in 1997, down from 9.7 per cent recorded in 1996. The slowdown in growth was mainly due to deceleration in domestic capital spending and sluggish private consumption. Unemployment has been rising rapidly and the prospect of massive layoffs from state-owned enterprises has become a cause of great concern. Politically, the collective leadership of President Jiang Zemin has consolidated. The ongoing Asian financial crisis has given the leadership a sense of urgency to press forward with major reforms to state-owned enterprises, the financial system, and the government administrative system. To meet this year's target of at least 8 per cent real growth, the authorities may have to offset slowing export growth arising from the regional downturn by boosting domestic demand. However, the target may be out of reach given that domestic capital spending is likely to be restrained by falling direct investment inflows. The main challenge for the Chinese leadership in the near term lies in its ability to balance the speed of the country's ambitious structural reform plans with relatively high economic growth and employment creation.

The agricultural sector as a whole experienced another year of robust output growth. With the exception of maize and oil crops, production of all major agricultural commodities increased. Total grain production, for instance, exceeded the mark of 490 million tonnes, only about 12 million tonnes shy of the 1996/97 record harvest. The third good crop in a row helped to replenish private and public grain stocks and is likely to create an exportable net surplus in 1997/98. But growing self-sufficiency in grains came partly at the expense lower oilseed production. Coupled with robust demand for vegetable oils and oil meals, the drop in production resulted in new record levels for oilseed and oil meal imports.

It is interesting to note that the political priority given to grain production is largely ignoring the preference of the market for oilseeds and oilseed products. Urbanisation and vigorous income growth resulted in shrinking demand for grain and grain products, a demand segment that is increasingly characterised by low or negative income responsiveness. At the same time, higher incomes spurred demand for vegetable oils and meat (demand for oil meals reflects derived demand for meat and livestock products) and drove imports of oilseeds and oil meals to new record highs.

While the trend towards a further liberalisation of agricultural markets progressed, policy measures to attain higher self-sufficiency in grains continued to dominate the country's grain economy. Grain output continues to increase and, no doubt, the "governors' grain responsibility programme" was contributing a lot to this achievement. It is increasingly evident, however, that this success comes at a high cost. The administrative work load necessary to control the programme becomes burdensome and bureaucratic interventions were seldom helpful in guiding resources in line with comparative advantage. In addition, acreage expansion into marginal areas, higher applications of chemical fertilisers and pesticides as well as a growing reliance on irrigated agriculture added to environmental problems and an unsustainable use of the resource base.

Growing awareness of administrative, economic, and ecological problems are likely to free the grain sector from some of the remaining regulations. A new reform package is expected for 1998. While details of this programme are still unknown, the major thrust of these reforms is expected to re-emphasise the importance of a functioning market place, encourage private agents to enter the grain marketing system and reduce overall government interventions in the country's grain economy.

For many agricultural sectors, the reform process embarked upon in the recent years continued in 1997. This includes policies promoting sustainable farming practices, land mobility, but also mobility of rural labour through job creation initiatives in TVEs. As domestic policy reform proceeds, the exchange of agricultural commodities between China's surplus and deficit regions will largely be left to the market forces. In tandem with the liberalisation of the domestic product markets, the de-regulation efforts of factor and input markets continued. In 1998, the most important step in this direction was the abolition of the state monopoly in marketing chemical fertiliser.

The movements towards freer internal agricultural markets was and will continue to be accompanied by the reduction of border measures. In 1998, both tariff and non-tariff measures were reduced for a wide array of goods, often by substantial margins. Despite these liberalisation efforts, tariffs for many

farm commodities remain prohibitively high and, more importantly, the state continues to exercise control over imports for many products, both through quantitative restrictions (quotas) and import licenses.

3. INDIA

General overview of macroeconomic and agricultural developments

Since 1991/92, India has been engaged in a process of gradual macroeconomic and structural reform. Given that its economy is still relatively insulated and highly regulated, India did not suffer from the same immediate, short-term effects that hit the countries most directly involved in the Asian financial crisis. But the decline in East Asian export demand is already felt. Medium and long-term developments will be highly sensitive to the policy course to be charted by the newly elected government (March 1998).

India's population explosion increases the pressures for sustained economic growth. More than 300 million people remain undernourished, posing the food security issue in the starkest terms, and India accounts for one-quarter of the world's poorest people. Both GDP and Gross Agricultural Output (GAO) growth rates have been keeping ahead of population growth. Although the rate of population growth has been declining, the absolute numbers of people added every year are cause for concern. It is expected that by the turn of the century India will cross the one billion mark and during the early 21st century may overtake China as the world's most populated country. Higher demand in the two countries combined is expected to account for nearly 40 per cent of the incremental demand for agricultural commodities over the next two decades.⁴

Economic performance improved significantly from 1992 to 1996...

In order to tackle severe fiscal and external imbalances, in 1991 India embarked on a programme of economic stabilisation and liberalisation. The rapid payoff from reform efforts was illustrated by growth rates of 6.0, 6.9 and 7.0 per cent for the three fiscal years⁵ (FY) up to 1996/97. During the period 1991/92-1995/96, compared with the five-year period preceding the reforms, not only was overall economic growth faster, but there was a significant step-up in the domestic savings rate to 25.6 per cent of GDP. External debt at the end of March 1996 was US\$99 billion, with the debt to GDP ratio declining from 41 per cent in 1991/92 to about 29 per cent in 1995/96.

The manufacturing sector grew almost 2 per cent faster per year than during the five preceding years. Exports and imports increased rapidly, both in value as well as in proportion to GDP, although at less than 2 per cent, India's share in world trade is lower than in 1950 just after independence. The balance of payments position strengthened considerably with the trade and current account deficits declining. The central government's fiscal deficit as a proportion of GDP also declined significantly. In recent years, inflation has been of the order of 4.5 per cent, down from double digits of about 11 per cent in 1994/95 and 16 per cent in 1991/92. During the same period new policy measures in several areas such as industrial de-licensing, foreign investment, trade policy, financial sector and capital markets were introduced to help open up India's economy. The agrofood sector was largely excluded from the economic reform process and it maintained growth of about 3.5 per cent per annum in both periods, lower than growth in any other sector

... but most recent GDP growth has fallen short of target...

From 1994/95 the overall pace of reform slowed markedly. Fears that the rate of growth of around 7 per cent might not prove sustainable have materialised, with GDP growth for FY 1997 estimated to have slowed to 5 per cent, falling short of the government's target of 6 per cent, which had already been revised downward from 7 per cent. The inflation rate was estimated to have risen to about 6.5 per cent in 1997. Industrial and export growth subsided. The slowing pace of reform was further thwarted by government capitulation to pressures for public sector wage increases and agricultural and industrial subsidies, as well as by delays in the programme of divestment (i.e. privatisation). The economic

sluggishness is mainly rooted in unresolved structural problems, including inadequate physical infrastructure, persistently high levels of protection, public sector dominance, seriously underdeveloped human resources, the inefficient financial sector, and the need for agricultural policy reform.

... and prospects for recovery are complicated by recent events

Exogenous factors related to the Asian financial crisis cloud the growth outlook for 1998 due partly to lower export demand from India's East Asian neighbours, as well as increased competition from their exports at devalued prices. The East Asian experience has also reinforced anti-globalisation sentiment in India in favour of self-reliance (*swadeshi*). In addition, the effects of economic sanctions imposed mainly by Japan and the United States after India's May 1998 nuclear testing and the immediate reaction of financial markets are complicating policy-setting parameters.

Appropriate remedial policies could produce unanticipated benefits

The Indian currency fell to an all-time low of over 41 rupees to the US dollar following a downgrading of its credit rating, which reflected fears of reduced capital inflows of multilateral loans, grants, foreign portfolio investment and access to external finance more generally. Some exports will benefit, but the depreciation will raise import prices for certain products, to the detriment of import-dependent industries, as well as the cost of foreign debt-servicing. The rise in interest rates to defend the rupee also risks raising the cost of debt servicing and dampening economic activity, threatening India's strategy to integrate progressively into the global economy. Nonetheless, the economic sanctions have already prompted the rapid adoption of alternative measures to open up the economy, such as the removal of procedural obstacles to a backlog of foreign investment projects.

Agriculture's major contribution to the Indian economy...

The contribution of agriculture to GDP declined from 35 per cent in 1980/81 to 30 per cent in 1993/94, still making India the fourth largest agricultural producer in the world in terms of value of production. India's significant agricultural potential is embodied in its size and its abundant and diverse natural resources. Widespread availability of arable land (180 million hectares) and a largely favourable and conducive climate have provided India with a natural advantage in agriculture. This vast productive potential for improving economic growth and reducing poverty is still not fully tapped.

... has not been equitably shared by the population engaged in the sector

In contrast with agriculture's declining though major contribution to GDP, the share of employment generated in this sector increased from 60.5 per cent to 64.8 per cent over the period 1981 to 1991 and currently stands at 66 per cent. Although the decrease in the share of agriculture in total GDP reflects the faster growth of the industrial and service sectors, the continuing increase in agriculture's share of employment indicates that incomes of nearly two-thirds of the country's population do not share in the growth of the economy. There is, therefore, need for increased productivity growth in the agricultural sector, in addition to the creation of alternative income sources.

Agriculture's priority is explicit in the latest government strategy

In January 1997, the National Development Council approved a GDP growth target of 7 per cent *per annum* for the Ninth Five Year Plan (1997-2002), "Growth with Social Justice and Equity", in which the contribution of the agrofood-food sector is expected to be 4.5 per cent per year. For the first time, a five-year Plan incorporates specific agricultural objectives:

- "priority to agriculture and rural development with a view to generating adequate production, employment and eradication of poverty;
- accelerating the growth rate of the economy with stable prices;
- ensuring food and nutritional security for all, particularly the vulnerable sections of the society."

Agricultural production,⁶ food consumption and the upstream and downstream sectors

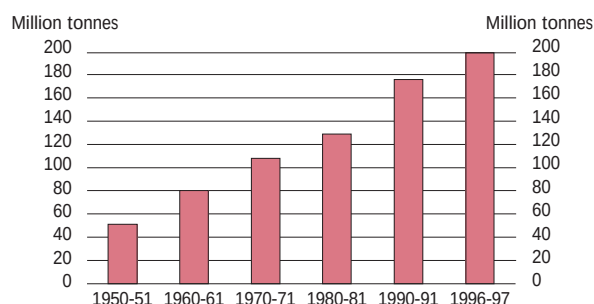
The crop sector in 1997/98

The green revolution has brought about significant growth in food grain production, which has almost quadrupled in the last five decades. Through the effective application of research results and through concerted central and state government efforts, India has successfully overcome the acute shortages witnessed in early 1960s culminating in the worst period of famine following two serious droughts in 1965/66 and 1966/67. It has also been possible to build greater resilience into agricultural production systems, as demonstrated by the fact that declines in food grain production resulting from adverse weather conditions have not been as steep as before the mid-1960s.

The area covered by food grains has been almost constant since 1994/95, increasing marginally by about 1 million hectares to 125 million, whereas production rose from 191 million tonnes to 199 million tonnes in 1996/97. The yield per hectare increased from 1 546 kg to 1 601 kg.

The annual growth rate of food grain production during the post-independence period at 2.5 per cent has been slightly higher than the population growth of 2.1 per cent. During the 1980s, growth was strongest at about 3.7 per cent. However, a deceleration in the growth to 1.8 per cent in the 1990s has been a cause of concern. Production increases in the last two years have reversed this trend.

**India's green revolution:
spectacular gains in food grain production**



Source: OECD.

Wheat and coarse grains

The most spectacular growth has been achieved in wheat, whose production has increased eleven times since 1950 to a record 68.7 million tonnes in 1997/98. Most of this, i.e. 85 per cent of production or 70 per cent of total supply including stocks in 1997/98, is used for food. Government stocks alone represented 5 million tonnes in 1997/98. This figure is up from 3.7 in 1996/97, but significantly lower than closing stocks of 9.1 million tonnes held in 1995/96.

It is reported⁷ that the government wishes to keep its wheat procurement at the 1997/98 level of 9.3 million tonnes. The procurement price is up from RS 475 a quintal in 1997/98 to RS 510 in 1998/99. In order to meet public distribution needs of 11 million tonnes, as well as to replenish buffer stocks, domestic supplies are supplemented through imports. Wheat imports in 1997/98 were of the order of 2.25 million tonnes and are expected to increase in 1998/99. Delays in a major wheat delivery under an import contract negotiated under the previous government will work to the advantage of domestic growers, who will have been able to sell a significant amount of their output before the imported wheat arrives. However, the 1998/99 wheat harvest is expected to decline to 64.5 million tonnes, due to late sowing caused by early winter rains, crop damage from hailstorms and reduction in area sown.

Maize production in 1997/98 was 9 million tonnes, while millet and sorghum production reached 10.5 million tonnes each. Coarse grains overall amounted to 31.4 million tonnes in 1997/98, a reduction over the previous year's output.

Rice

Rice, together with wheat, account for about 30 per cent of India's agricultural production. Rice production, which has quadrupled since 1950, reached 123 million tonnes of paddy rice in 1997/98, a 2 million tonne increase over 1996/97. India is the second largest producer after China, and increases in the two countries' production in 1997/98 offset the decline in Indonesia's rice output. Government

procurement stocks at the beginning of 1998 were about 11.4 million tonnes, down from 12.9 million tonnes in 1997. Rice exports were liberalised in 1994. Exports of milled rice more than halved to 1.6 million tonnes in 1997 from 3.6 million tonnes, but India retained its place as the fifth largest exporter.

Oilseeds: the yellow revolution

Oilseeds such as groundnuts, soyabean, rapeseed and mustard have shown substantial growth in production and yield, although the area sown did not increase significantly during the period 1994/95 to 1996/97 and reportedly decreased in 1997/98. For nine oilseeds, the area increased from 25 million hectares to 27 million hectares during the years 1994/95 to 1996/97, while production improved from 21 million tonnes to 25 million tonnes. Soyabean and rapeseed production and quality suffered in 1997/98 due to inclement weather at harvest time. Despite significant domestic production, India remains a net importer of oilseeds and imports are expected to rise in 1998.

Fruits and vegetables

India is the world's largest producer of fruits and vegetables with an annual output of 110 million tonnes, although only 1.3 per cent of output is commercially processed. While most production is for domestic consumption, India is a major exporter of tropical fruits, notably to the EU and the Near East. Mangoes illustrate some of the problems and potential of the fruit and vegetable sector.

Mangoes are the second largest internationally traded tropical fruit, and India is their largest producer (some 50-60 per cent of world production in a normal year). With output of almost 11 million tonnes cultivated on 1.136 million hectares, India is reported to have accounted for only 15 per cent of 1997 world exports, even though exports at 27 000 tonnes were up by 8 per cent over the previous season. Exports could reach 45 000 tonnes by the year 2000 under favourable weather conditions, and exporters are calling for government assistance to boost Indian exports to the major overseas markets. However, unfavourable weather aggravated by poor post-harvest technology have delayed the current crop, which is expected to drop severely to 7 million tonnes in 1997/98, and anticipated domestic wholesale price increases of some 30-50 per cent are expected to push consumer prices up by a similar percentage. With large new mango orchards being added, a doubling of productivity could be achieved to 15 tonnes per hectare if appropriate scientific practices were to be applied.

Sugar

The Indian sugar manufacturing industry is based wholly on sugarcane as the raw material. Between 50 and 60 per cent of the cane produced is used for sugar production. India produced a record 282 million tonnes of cane in 1995-96, but acreage declined the following year due to payment arrears to farmers by processors. India remains the third largest sugar producer after the EU and Brazil, with raw sugar estimated to have reached 13 million tonnes in 1997, down from 14.7 million tonnes in 1996 and 18 million tonnes in 1995. The effects of the El Nino weather phenomenon are predicted to bring droughts that will damage Asian, including Indian, sugar crops. For the past three years India has held the world's largest sugar stocks. Per capita sugar consumption is projected to increase somewhat over the next 5-7 years.

Tea

India is the world's largest tea producer and consumer. Despite unfavourable weather conditions, production is estimated to have risen in 1997 to 800 000 tonnes from 780 000 tonnes the year before. For 1997 India's tea exports are also estimated to have risen, after a decline of 5.5 per cent to 154 000 tonnes in 1996 due to rising domestic consumption. Prices have risen to lower yields in other producing countries. A further increase in tea exports is expected in 1998. The El Nino weather system is expected to have mixed effects on Indian tea production, depending on the area of the country.

Cotton and jute

India is the world's third largest producer of cotton after the USA and China. Cotton textiles account for around 5 per cent of the total value of production in India's organised manufacturing sector, which provided employment to one million workers in 1995/96. Local cottage industries (powerloom and handloom) provided employment to a larger number. Cotton garments amount to just about 15 per cent of world clothing trade. A number of misguided regulatory and protective policies are preventing modernisation and greater competitiveness of the Indian cotton industry. Cotton production increased by 8 per cent over 1995/96 levels to 2.975 million tonnes, with 1997/98 production expected to decline to 2.8 million tonnes due to poor weather and pest infestation. India remains a net importer of cotton, with imports expected to reach 600 000 bales in 1997/98. If appropriate policy adjustments were introduced, India could take advantage of its export potential in this commodity and the resulting employment generation.

India is also the world's largest producer of fibres (jute, kenaf and allied fibres), with an estimated 1 764 million tonnes accounting for half the world's production in 1997/98, but it is only the second exporter with volumes significantly lower than those exported by Bangladesh. It is estimated that jute harvests in both countries in 1998/99 will be 30 to 35 per cent lower than in 1997/98, as farmers have switched production to rice paddy and oil seeds for higher returns. The bumper harvest produced in 1997/98 resulted in sale prices that failed to cover costs. The favourable monsoon (*khari*) predicted for 1998/99 is likely to improve productivity and quality, despite reduction in acreage.

Tobacco

India is the fourth largest producer of tobacco in the world. Indian tobacco is used both for cigarettes and 'beedi' making. The latter accounted for 5 per cent of the total workers employed in the factory sector. In 1993/94 it employed 37 million persons in over 4 200 establishments.

The livestock sector

Livestock production in the 1990s in India has shown considerable progress over preceding decades, out-performing food grains. Milk, egg, meat and fish have registered impressive growth rates of 5-10 per cent. India's minimum targeted annual growth rates for attaining self-sufficiency in milk, fish, meat and eggs by the year 2001 are 5.54, 6.25 and 5.5 per cent per annum respectively.

India has one of the world's largest livestock populations (about 22 per cent of the total) and accounts for 16 per cent of the world's cattle, 55 per cent of the buffalo, and 20 per cent of the goat populations.

The livestock sector contributes between 6 and 8 per cent of GDP. The gross value of output from the livestock sector during 1995-96 was about Rs.827 billion as against Rs.3 150 billion from agriculture. The current number of cattle estimated at 230 million play an important role in India's poorest farming sector as a source of tilling power, as well as a source of biogas (dung-derived gas) for cooking and lighting.

Table IV.3.1. **India: livestock inventories, evolution from 1951 to 1992**

	Million heads		
	1951	1992	1992/1951 % change
Cattle	155	205	32.3
Buffalo	43	84	95.3
Sheep	39	51	30.8
Goat	47	115	144.7
Pigs	44	13	-70.5
Poultry	77	307	298.7

Milk: the white revolution

The production of milk, which was 17 million tonnes in 1950/51, increased to 68 million tonnes in 1996/97 and to an estimated 71 million tonnes in 1997/98. The *per capita* availability of milk has also increased from 124 grams per day during 1950/51 to 197 grams per day in 1995/96. This enhanced growth in milk production is due to various cattle development programmes taken up under the central and state sectors and Operation Flood programme. As a result, India has become the second largest milk producer after the USA and is expected to be the first by the end of the century. Production and processing of milk took place largely in the household sector until the co-operative movement industrialised and liberalised the dairy sector and stimulated competition. Up to March 1997 about 74 300 dairy co-operative societies were organised involving over 9.4 million farming families. Under the programme, the average milk procured during 1996-97 was 12.3 million kilograms per day.

Food Consumption

According to the fifth Quinquennial Survey (1993/94) on the Level and Pattern of Consumer Expenditure, for rural India, *per capita* 30 days consumer expenditure of Rs.281 was broken down into Rs.178 on average for food, (Rs.68 for cereals, Rs.56 for milk and milk products, vegetable, edible oils, etc.) and Rs.103 for non-food. For urban India, average monthly per capita consumer expenditure (MPCE) of Rs.458 was broken down into Rs.251 for food (Rs.64 for cereals and Rs.90 for milk and milk products, vegetables and edible oil, etc.) and Rs.208 for non-food. The trends in average consumption expenditure and consumption patterns at the all-India level indicate that the share of cereals has fallen both in rural and urban areas. The share of some food groups, notably milk and milk products, fruits and vegetables, has increased both in urban and rural sectors. Consumption of processed foods remains extremely low.

The upstream and downstream sectors

Food grain production and the production of oilseeds and other major crops have increased over the years due to various steps taken by the central and state governments, as well as by several private sector agencies and progressive farmers. Production, distribution and timely supply of good quality seeds have been ensured. Seed multiplication programmes for cereals, pulses, oilseeds, potato, fibre and fodder crops are implemented through the National Seeds Corporation (NSC) and State Farms Corporation of India (SFCI). In addition, 13 State Seed Corporations, 20 State Seed Certification Agencies, 96 State Seed Testing Laboratories and Private Companies are engaged in the development and production of quality seeds in the country.

There has been a steady increase in the consumption of fertiliser (NPK) over the years. From 0.03 million tonnes in 1960-61, fertiliser consumption in terms of nutrients rose to 5.5 million tonnes in 1980-81 and further to 12.5 million tonnes in 1990-91. In 1995-96, it reached 13.9 million tonnes. Other inputs like pesticides, agricultural credit and farm mechanisation have improved production and productivity in agriculture. The industries relating to inputs like seeds, fertilisers, farm mechanisation, have increased substantially. The domestic production of fertilisers falls short of India's requirements. The total production capacity of nitrogenous fertilisers increased from .02 million tonnes in 1950-51 to 4.59 million tonnes in 1980-81. With the commissioning of large size gas-based fertiliser plants in the 1980s, the total nitrogenous production capacity doubled to 9.44 million tonnes as of December 1996. As of March 1995 there were 20 Urea producing units with an aggregate installed capacity of 16.65 million tonnes per annum, whereas, 30 Complex manufacturing units had a total capacity of 7.77 million tonnes. In terms of nutrients, public sector undertakings account for 38 per cent, private sector units for 44 per cent, and the co-operative sector for 48 per cent.

On the downstream side, agrofood-food processing industries produce mainly ready-to-eat products or ready-to-cook products like pasta products, cocoa based products, bakery products, biscuits, etc. The food processing industry has witnessed substantial progress since the early 1990s. In an effort to attract foreign investment, proposals to provide up to 51 per cent of equity are automatically

approved except in industries reserved for the small scale sector. The industry is de-licensed, except for beer, (potable) alcohol and wines. The bakery industry in India is probably the largest among processing industries, and its production has been steadily increasing: India has an estimated 65 000 bread manufacturing units and manufactures about 1.1 million tonnes of biscuits. As of 1 January 1997, there were 812 roller flour mills in the country.

As a major oilseeds producer, India has a large oil industry, ranging over primary processing units such as decorticating, dehulling, expellers, etc., to vegetable oil refineries, solvent extraction plants and vanaspati manufacturing units. However, the oilseeds processing industry is technically and economically inefficient and suffers from poor infrastructure, particularly in terms of port facilities and marketing.

Trade in agriculture, trade policies and trade relations

During 1996/97, total exports of agricultural products amounted to Rs.210 billion representing about 18 per cent of India's total exports. In recent years the share of agriculture in total exports has been steadily increasing. On the other hand, the equivalent of Rs.53 billion of agricultural products were imported during 1996/97 accounting for 3.4 per cent of total imports. The share of agriculture in total imports in the recent past has been fluctuating between 2.7 and 5 per cent.

Exports of agricultural products include food grains, tobacco, cashew, oilmeals, sesame, niger seeds, groundnut, beverages, oilseed extractions, shellac, sugar and molasses, and, more recently, items like horticulture and floriculture products, marine products, processed foods and meat preparations. But India's share of the world trade in agricultural commodities is a mere 1 per cent.

Agricultural exports have received special attention from the Government, given their significant potential for raising incomes, tackling unemployment and earning foreign exchange. The impetus for accelerated growth in agricultural exports is envisaged through enhanced infrastructure support and by building up a conducive policy environment. A number of policy changes have been introduced to make agricultural exports more competitive and viable. Market determined exchange rate policy has favoured agricultural product exports. Lowering of import duties of capital goods particularly for green house equipment and plant and machinery necessary for food processing industries, as well as the availability of credit for exports, have also helped. Some of the restrictions on agricultural exports have been removed. The items on the restricted list have been pruned down and only a few items now remain subject to either licensing or quantitative ceilings.

As regards agricultural trade agreements, the most important one relates to trade in sugar between Government of India and European Union. India has signed no other specific agricultural trade agreements. However, in the bilateral trade agreements entered into by India with other trading partners, agriculture often constitutes a component. Tea is exported mostly to countries like Russia, UK, UAE, Germany, USA, Holland etc., whereas coffee is exported to Russia, Italy, Germany, USA and Japan. For spices, the USA, UK, Singapore, Japan and UAE constitute India's major customers. Marine products are exported by India to Japan, USA, UAE, China, UK and Hong Kong. While Basmati rice is exported to Saudi Arabia, USA, UK & UAE, non-Basmati rice is exported to Russia, South Africa, Saudi Arabia, Sri Lanka, Bangladesh and USA. Oilmeal is mainly exported to Singapore, China, Indonesia, Korea and Japan.

WTO implications for Indian agriculture

As one of the founding members of the World Trade Organisation (WTO), India had signed the latest Agreement of 1994, which became effective on 1 January 1995 and which included trade in Agriculture, Services and Technology, Foreign Target Investment, and Trade Related Aspects of Intellectual Property (TRIPS) for the first time. Under the provisions pertaining to TRIPS, India has opted to protect its plant varieties through *sui-generis* legislation (as opposed to patenting). Its ratification improves access to technologies that may improve Indian farmers' productivity. It is expected that the implementation of the Agreement on Agriculture would provide incentives to the development of Indian exports: Indian exports of rice, vegetables, fruits and marine products are on the rise and are expected to increase further with the implementation of WTO provisions.

As a developing country under WTO rules, India is not required to reduce domestic support as far as agricultural exports are concerned, since domestic support measured by the Aggregate Measure of Support (AMS) was below 10 per cent (*de minimis* level for trade distorting measures by developing countries) during the base period. India was exempt from providing additional market access. In addition, India had not been required to reduce its tariffs because of adverse balance of payment (BOP) conditions during the base period. However, it has been pointed out by the USA, Japan, Australia and countries of European Union that India no longer suffers from an adverse BOP and as such its quantitative restrictions (QR) should be converted into tariffs and bound. Canada, the US, the EU, Australia, Switzerland and New Zealand held Article XXII consultations with India with respect to the liberalisation of its BOPs restrictions. Japan joined as a third party. Canada, the EU, Australia, Switzerland, New Zealand and Japan have each reached a bilateral agreement with India on the phase-out of its Qrs. The US and India did not reach a bilateral settlement and the US called for the establishment of a WTO panel. Should this be the outcome, in order to protect domestic agricultural producers India would likely apply the following import tariff rates approved by WTO: edible oil, 300 per cent; processed food, 150 per cent; whole commodities, 100 per cent.

Agricultural policy developments

Changes in farm, structure and size

The average size of farm holdings has declined from 1.69 hectares in 1985/86 to 1.55 hectares in 1990/91. The number of holdings operated by marginal and small farmers increased from 76 per cent in 1985/86 to 78 per cent in 1990/91. Five per cent of the population holds the remainder of the land. Nearly all farms (99 per cent) are privately owned by individuals. Commercial farms grow mainly tea, coffee, rubber, sugar cane and tobacco. Small farms are mainly subsistence farms growing grains with little or no marketable surplus except in certain states. The ownership pattern has changed during the last 50 years after independence. Land reform laws in many States have transferred the ownership from the landlord to the tiller. However, due to the land ceiling policy in the Land Reforms Act, the reforms have not yielded substantial surplus land for distribution to the landless labourers, nor has the Consolidation Holdings Act been implemented. Furthermore, India's inheritance laws have resulted in sub-division and fragmentation of land holdings. Thus, the main issues in farm structure and size revolve around land fragmentation and the absence of consolidation.

Agriculture credit

Agricultural credit plays a crucial role in maintaining or increasing agricultural production and productivity. But small farmers have had limited access to credit, and there are numerous institutional and regulatory constraints that have made the rural financing system inefficient. Since 1994/95, the system has been undergoing reform. A multi-agency system consisting of co-operatives, commercial banks and regional rural banks has formed a network for providing agricultural credit to the farming community. The percentage share of the total institutional credit distributed through this network to the gross credit requirements of the agricultural sector, has increased, but the emphasis continues to be on concessional, supply-led credit programmes, rather than demand-driven rural financial systems.

The total loans disbursed by the institutional agencies have been increasing over the years. The amount of agricultural credit disbursed during 1992/93 was of the order of Rs152 billion which increased to Rs 286 billion during 1996/97. Projections of credit proposed to be disbursed during each year of the Ninth Plan are:

Year	Rs. billion
1997-98	334
1998-99	386
1999-2000	448
2000-01	521
2001-02	608
Total	2 297

In order to sustain agricultural growth, the credit system is to be further restructured. Many co-operative banks are not financially viable because of heavy accumulated losses due *inter alia* to the implementation of the Agricultural Rural Debt Relief (ARDR) scheme of 1990. Therefore, in order to cleanse the balance sheets of co-operative institutions, a rehabilitation package for the revitalisation of the Co-operative Credit Structure is being formulated for implementation during Ninth Plan. The amount of resources required under the scheme has been tentatively estimated to be of the order of Rs67 billion. Providing better access to institutional credit for small and marginal farmers and other weaker sectors has been one of the major objectives of the country's agricultural policy.

Further, in consonance with priorities under the Production Credit dispensation programme, the National Bank for Agriculture and Rural Development (NABARD) has initiated terms and steps for relaxing the discipline of minimum own participation and minimum recovery norms to ensure adequate coverage of least developed regions of the country including the North-East.

Domestic support policies

In its classification of estimated public spending on agriculture in 1994/95, the World Bank has identified three categories:⁸ close to 40 per cent was used for subsidies, 22 per cent for safety net programmes, and 38 per cent for productivity enhancement, whereas in 1981/82 60 per cent was devoted to the latter category. Public spending on agriculture reached Rs685 billion (US\$2 billion) in 1994/95, the equivalent of 28 per cent of agricultural GDP and 8 per cent of total GDP, but this amount has not yielded commensurate improvements in agricultural performance. As the states are constitutionally responsible for the agriculture sector and with their shares of subsidies growing, states with lower fiscal revenues and with higher poor populations have the least to spend. The experience with the extensive use of subsidies in India is that they have not been adequately targeted and have often been misdirected to unintended beneficiaries. In addition to their fiscal drain, subsidies contributed to the misallocation of technologies, distortions in cropping patterns, and nutrient imbalances in fertiliser application. The long-term effects of inappropriate pricing policies raise concerns about the sustainability of agriculture.

Price and income support

A stable agricultural pricing policy was formulated and implemented in order to provide farmers with an assurance that increased productivity and production will not bring down market prices and that parastatal agencies will enter the markets to procure selected agricultural commodities coming under a Minimum Support Price scheme so as to sustain farmer's interest in enhancing productivity and production.

At present, in India, there is no social support in the form of pensions for farmers or agricultural labourers.

Input support

Water and electricity rates/tariffs are highly subsidised in India. Farmers are charged nominal rates for use of the water through canal irrigation. The absence of appropriate tarification may lead to wastage, as well as the planting of water-intensive crops in sub-optimal areas. The ultimate irrigation potential of the country from major and medium irrigation projects is assessed at 58.5 million hectares. Around 200 irrigation projects are covered under the Command Area Development Programme (CADP) to bridge the gap between the farmer and water. Currently, there are 54 CADPs in the country.

The annual cost to the government of subsidised power to farmers is about US\$3.5 billion. Despite the fact that this represents the largest share of subsidies, quality and reliability of power delivery in many cases are poor. Prices of agriculture inputs such as seeds and fertilisers have been increasing every year, as have the prices of agriculture machinery such as tractors, power tillers, threshers, seed drills. From time to time, subsidies have been given for fertilisers, sometimes without appropriate technical support concerning their proper application.

To control pests and diseases, the Government implements three plant protection schemes, namely the Integrated Pest Management Scheme (IPM), the Locust Surveillance Scheme, and the Plant and Seed Quarantine Scheme. The IPM scheme includes pest monitoring, promotion of biological control of pests, organising demonstrations, training and raising awareness of IPM technology and encourages the use of safer pesticides including botanical (neem based) and bio-pesticides, pheromones and other bio-chemical products to manage pest problems. Under the Locust Surveillance and Control Scheme the Locust Warning Organisation undertakes surveillance to ensure timely ground control of the locust population over an area of 0.2 million sq.kms. of scheduled desert area of Rajasthan and parts of Gujarat and Haryana. The Plant and Seed Quarantine Scheme incorporates the provisions of the Destructive Insects and Pests Act and Plant Quarantine Rules including the Plants, Fruits, and Seeds (Regulations of Import into India) Order issued to prevent the introduction of exotic pests, diseases and weeds, etc. into India.

Agricultural implements and machinery

Farm mechanisation has been one of the key areas in the programmes of the Government with the aim of optimal utilisation of available sources of farm power. With a view to achieving this goal, the Government has emphasised promotion and popularisation of improved agricultural implements and machines and on extending financial assistance to the farmers for purchasing tractors, power tillers and other farm equipment. Infrastructure has been developed for testing agricultural machines and imparting training to the farmers and other personnel for management and efficient utilisation of farm machines.

Indigenous fuel-efficient tractors and other implements and machines are now available to Indian farmers. The availability of farm power has also increased from a level of about 0.26 kW/hectares in the early s 1970s, to about 0.81 kW/hectares. The sale of tractors and power tillers in the country has increased from a level of 139 831 and 6 316 during 1990/91 to 220 937 and 15 000 respectively, during 1996/97. There is no statutory control on the prices of agricultural implements and machines. However, tractors fitted with engine capacity not exceeding 1 800 cubic centimetres, power tillers and agricultural implements have been exempted from the levy of excise duty.

Other support policies

So far, agricultural marketing in India has been focusing mainly on the marketing of agricultural produce, including fruits and vegetables. Most recently cultivation and marketing of flowers has emerged as an area demanding immediate attention due to their highly perishable nature and high export potential.

A Comprehensive Crop Insurance Scheme (CCIS) has been under implementation since 1985 with the objective of providing financial support to farmers in the event of crop failure due to drought, flooding or similar developments. The scheme is area based and credit linked. From its creation to 1995/96, 52.41 million farmers have been covered over an area of 89 million hectares. The Government of India provides physical and financial support to the state governments for undertaking relief and rehabilitation measures in the wake of natural calamities.

Government expenditure on agricultural research is extremely important. Its level in relation to the value of agricultural output and its distribution over different commodities and regions hold the key to the growth of output, efficiency in research allocation and the distribution of gains from agricultural productivity. However, the annual growth rate in public expenditure on agricultural research and education having accelerated in the post-green revolution period of the 1970s has slowed down since the mid-80s and has hovered around 0.5 per cent of agricultural Gross Domestic Product in the early 90s. Under the requirements of the Ninth Plan a 1 per cent allocation is projected.

Agricultural extension

The public extension system is in the process being redefined with the focus on knowledge based technologies to upgrade and improve the skills of the farmers. Through their sheer numbers (100 000)

and outreach, public extension system workers would continue to play a prominent role in technology dissemination. The vast sector of small and marginal farmers and landless labourers would continue to be serviced by the public extension workers. The other factors involved in the extension and transfer of technologies such as non-governmental organisations, farmers organisations, corporate sectors, etc. would supplement public sector extension efforts. Technologies required to address the total farming systems are knowledge intensive. The extension mechanisms will have to be driven by farmers' needs and to address issues of local specificity and crop diversification. There is room for both public and private sectors in the development of a demand based and feed back driven system.

Rural development and environmental policies in agriculture

With nearly three-fourths of the country's population living in rural areas, the importance of rural development cannot be over-emphasised. Clearly efforts to increase agricultural production contribute to rural development but equally important is the provision of basic minimum services to the people living in rural areas so as to improve the quality of life. Rural households in India are dependent for their income primarily on agriculture, animal husbandry, dairying, poultry, horticulture, etc. Supplementary income accrues from various poverty alleviation and rural employment programmes organised by the Government. Off-farm activities such as beedi rolling, handloom and handicrafts are other major sources of income for rural households. Realising that economic growth alone does not ensure that its fruits reach the most disadvantaged sectors of society, the State has resorted to direct intervention in terms of special re-distributive measures focusing on vulnerable groups. While promoting infrastructure for improving productivity and social development in rural areas, the Government has made a frontal attack on rural poverty so as to reach out to the poorest of the poor through programmes of asset building, income generation and wage employment.

Support for disadvantaged regions

The North Eastern States of India are in a disadvantaged location. These States find it very difficult to secure seeds, fertilisers and various other inputs at reasonable prices due to high transport costs. Accordingly, there are schemes for providing transport subsidies for the movement of fertilisers and seeds in the North Eastern regions and other hilly areas. Similarly, there are subsidies for the provision of various inputs. The Planning Commission has stressed the need to reserve 10 per cent of the funds under the Central Plan schemes exclusively for the disadvantaged regions like the North Eastern States, viz., Assam, Meghalaya, Manipur, Tripura, Nagaland, Arunachal Pradesh and Mizoram.

Assessment and outlook

In assessing current policies and the outlook for agriculture in India, it is useful to keep in mind the changing economic environment in which agriculture has to grow. The Indian economy is undergoing a process of reform, whereby macroeconomic policies are being adjusted and the industrial sector is undergoing structural reforms. While the reform effort seems to have slackened in recent years, it is to be hoped that the recently elected government will move forcefully to reinvigorate the adjustment process. In addition, there is a new dimension that has been added by the World Trade Organisation, under which the member countries, including India, are committed, though only gradually, to opening up to world markets.

Despite slowed economic growth in 1997/98, the government is keeping to its targets of GDP growth of 7 per cent per annum and a single digit inflation rate. The rate of population growth, which has been over 2 per cent in the last three decades is likely to decline to 1.56 per cent. The incidence of poverty expressed as a percentage of people below the poverty line is also likely to decline. The unemployment rate during 1997 was 1.89 per cent which is marginally lower than 2.01 per cent in 1994. The absolute figures are alarming as the total population itself is very high.

Indian agriculture has come a long way from subsistence farming at the time of independence to commercial agriculture and, in some ways, is transforming itself to exploit opportunities opened up in world markets. Major achievements in food grain production have been registered as a result of the

green revolution. The record food grain production of more than 199 million tonnes of 1996/97 was almost a fourfold increase over the output of 51 million tonnes at the time of independence. Spectacular gains have particularly been achieved in wheat production (69 million tonnes from a mere 6 million tonnes in the early 1950s). The country has come a long way since the fateful drought years of the mid 1960s when survival depended on shiploads of food aid.

Buffer stocks of food grains helped tide over the drought years of 1979/80 and 1987/88. Despite the unabated growth of population, food grain output has kept ahead at about 2.5 per cent per year. Diversification of agriculture into commercial and high value crops is a first step in engaging India into a process of gradual integration into world markets. At present India is the largest producer of fruits and vegetables in the world. Milk production in the country is second highest in the world.

The government is aware that these achievements should not be a cause for complacency. Food security is a critical issue for India's more than 300 million undernourished people and in the light of over one billion people to feed in the 21st century. Indian agriculture has entered the post green revolution stage of development and environmental concerns must necessarily be integrated into future development strategies. Problems of dryland farming will have to be quickly addressed if poverty is to be significantly reduced. Agriculture faces the major challenges of increasing food production in a sustainable manner and improving farmers' incomes in order to ensure household food requirements, while at the same time conserving the natural resource base. New agricultural technologies such as those provided by bio-technology and information technology will need to be generated, harnessed and rapidly disseminated if these challenges are to be met.

The agriculture sector continues to be central to the socio-economic development in India. It provides food grains to 940 million people of India and raw material to agro-based industries of the country. Some two-thirds of the country's population depends on agriculture for its livelihood. Nearly 30 per cent of the country's gross domestic product comes from the agricultural sector. Agriculture provides employment in rural areas. There is scope for increased employment in this sector with higher investment and better infrastructure, faster dissemination of improved practices and production technologies, and the application of a targeted, appropriate policy framework.

The value of agricultural input is targeted to increase at an annual rate of 4.5 per cent. Despite this target, the gap between agricultural production and demand is anticipated to widen during the 21st century. India's success in agriculture owes much to high rates of public investment in irrigation, research and most importantly, input subsidies. The long-term outlook suggests that India's agriculture will be able to meet domestic food demand. It will also be able to accommodate a relative switch from food grains to higher value food products and defend its position as a small net-exporter of agricultural commodities.

NOTES

1. 416 million 40.8 kg boxes.
2. These analyses had been undertaken with the aid of the GTAP (General Trade Analysis Project) model. GTAP is a general equilibrium model developed by Prof. Thomas W. Hertel and associates at Purdue University in the United States.
3. There is a gradual schedule of tariff reduction to the CET that will be completed by the year 2006.
4. *The World in 2020: Towards a New Global Age*, OECD 1997.
5. The Indian fiscal year is from 1 April to 31 March.
6. Information based on figures provided by the Indian government and *Commodity Market Review 1997-98*, FAO, Rome 1998.
7. See "Commodities and Agriculture, Shortfall forecast in wheat harvest" in *Financial Times*, 15 April 1998.
8. *India: Five Years of Stabilisation and Reform and the Challenges Ahead*, World Bank, 1996.

BIBLIOGRAPHY

- ADAMS, D.W. and VOGEL, R.C. (1997), *Rural Finance in Romania*, Report for IMCC, Arlington, VA.
- AUBERT, C. (1998), "Food Consumption and Food Production in China, Statistical Uncertainties, Educated Guesses, Reasoned Optimism", paper presented at a Conference of the School of Oriental and African Studies, London, February 1998.
- CSAKI, C. and LERMAN, Z., "Land Reform in Ukraine. The First Five Years", *World Bank Discussion Paper*, No. 371, World Bank, Washington, DC, 1997.
- The Economist (1998), "China's Economy, East Asia's Whirlwind Hits the Middle Kingdom", *The Economist*, February 1998, pp. 63-65.
- The Economist Intelligence Unit, 1998, *Country Report China, Mongolia*, 4th Quarter, 1997.
- FAO (1998), *Food Outlook, Current Production and Crop Prospects*, February 1998, Rome.
- GALBI, D. (1995), *The Significance of Credits and Subsidies in Russian Agricultural Reform*, Policy Research Working Paper, World Bank, Washington, DC.
- GOW, H.R. and SWINNEN, J.F.M. (1997), "Agribusiness Restructuring, Foreign Direct Investment and Hold-up Problems in Agricultural Transition", paper presented at the 54th Seminar of the EAAE, Food Processing and Distribution in Transition Economies: Problems and Perspectives, Institute of Agricultural Development in Central and Eastern Europe (IAMO), Halle, Germany, 7-9 December.
- HORCICOVA, M. (1997), "Financing of Agricultural Sector in the Czech Republic", paper presented at the Expert Meeting on Agricultural Finance in Transitional Economies, OECD, Paris, 18-19 February 1997.
- LIU, J. (1998), "Foreign Direct Investment in China", paper prepared for the Workshop on Agricultural Policies in non-member Economies, OECD, Paris, March 1998.
- Millennium Institute (1998), "The Strategy and Action Project for Chinese and Global Food Security", Final Report of the February 18-19, 1998 Working Meeting, Washington, DC.
- OECD (1998a), "Implications of the Mercosur Agreement between Argentina, Brazil, Paraguay and Uruguay for Cereal and Livestock Product Markets and Trade", Paris (forthcoming).
- OECD (1998b), *Agricultural Policies in OECD Countries: Monitoring and Evaluation 1998*, Paris.
- OECD (1998c), *Agricultural Policies in the Baltic Countries*, Proceedings of the Parnu Seminar held in September 1997, Paris.
- OECD (1998d), "China: Review of Recent Developments in Agricultural Policies, Markets and Trade", Paris.
- OECD (1998e), *Review of Agricultural Policies: Russian Federation*, Paris.
- OECD (1998f), *The OECD Economic Outlook 63*, Chapter III, Developments in Selected Non-Member Economies, Paris.
- OECD (1997a), *Agricultural Policies in Transition Economies: Monitoring and Evaluation 1997*, Paris.
- OECD (1997b), "Brazilian Agriculture: Recent Policy Changes and Trade Prospects", Paris.
- OECD (1997c), "Market and Policy Issues in the Cereal and Animal Feed Sector of the People's Republic of China", Paris.
- OECD (1997d), *Review of Agricultural Policies: Slovak Republic*, Paris.
- OECD (1996a), *Review of Agricultural Policies: Estonia*, Paris.
- OECD (1996b), *Review of Agricultural Policies: Latvia*, Paris.
- OECD (1996c), *Review of Agricultural Policies: Lithuania*, Paris.
- Russian European Centre for Economic Policy (RECEP), *Russian Economic Trends*. Monthly update, Moscow, 3 April 1998.
- State Statistical Bureau (SSB), *China Statistical Yearbook*, various issues.

- STIGLITZ, J. (1993), "Incentives, Organisational Structures and Contractual Choice in the Reform of Socialist Agriculture", in Bravemann, A., Brooks, K. and Csaki, C., *The Agricultural Transition in Central and Eastern Europe and the Former USSR*, World Bank Publications.
- SWINNEN, J.F.M. and GOW, H.R. (1997), "Agricultural Credit Problems and Policies During the Transition to a Market Economy in Central and Eastern Europe", Policy Research Group Working Paper No. 6, Department of Agricultural Economics, Katholieke University Leuven, Leuven, Belgium.
- SZABÓ, M. (1997), "Policies for the Development of the Agricultural Finance System: Focusing on the Hungarian Experience", paper presented at the Expert Meeting on Agricultural Finance in Transitional Economies, OECD, Paris, 18-19 February 1997.
- UNDP (1996), *Human Development Report for Brazil*, Chapters 1 and 2, New York, 1996.
- USDA (1998), *FAS Attaché Reports*, Brazil.
- USDA (1997), *China: Situation and Outlook Series*, WRS-97-3, June 1997, Economic Research Service, Washington, DC.
- VON PISCHKE, J.D. (1991), *Finance at the Frontier. Debt Capacity and the Role of Credit in Private Economy*, EDI Development Studies, World Bank Publications.
- World Bank (1997), *At China's Table, Food Security Options*, Washington, DC.
- YEATS, A. (1997), "Does Mercosur's Trade Performance Raise Concerns About the Effects of Regional Trade Arrangements?" *Policy research paper No. 1729*, World Bank, February 1997.

STATISTICAL ANNEX

Part I

**TABLES FOR CENTRAL AND EASTERN EUROPEAN
COUNTRIES (CEECs)**

Annex Table I.1. **CEECs: output, 1989-1998**

	GDP ¹ (%)									
	1989	1990	1991	1992	1993	1994	1995	1996	1997 ²	1998 ³
Albania	9.8	-10.0	-27.7	-7.2	9.6	8.3	13.3	9.1	-7.0	10.0
Bulgaria	-1.9	-9.1	-8.4	-7.3	-1.5	1.8	2.1	-10.9	-6.9	3.0
Croatia	n.a.	-6.9	-19.8	-11.1	-0.9	0.6	1.7	4.3	4.5	4.5
Estonia	8.1	-6.5	-14.0	-14.3	-8.6	-1.8	4.3	4.0	9.0	5.5
Latvia	6.5	2.9	-10.5	-34.9	-14.8	0.6	-0.8	2.8	6.0	6.0
Lithuania	3.3	-3.3	-13.1	-34.0	-27.1	1.0	3.0	4.2	6.0	6.0
Romania	-5.8	-5.6	-12.9	-8.8	1.5	3.9	7.1	4.1	-6.6	0.0
Slovak Republic	1.1	-2.5	-14.5	-6.5	-3.7	4.9	6.8	6.9	6.0	4.0
Slovenia ⁴	-1.8	-4.7	-8.9	-5.5	2.8	5.3	4.1	3.1	3.2	3.5
OECD Member countries⁵										
Czech Republic	4.5	-1.2	-14.2	-7.1	-0.9	2.6	6.4	3.9	1.0	2.0
Hungary	0.7	-3.5	-11.9	-4.3	-2.3	2.9	1.5	1.3	4.4	4.5
Poland	0.2	-11.6	-7.0	2.6	3.8	5.2	7.0	6.1	6.9	5.8

n.a.: not available.

1. Change in gross domestic product.

2. Provisional figures.

3. Forecast.

4. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

5. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.2. **CEECs: unemployment, 1989-1998**

	Unemployment ¹ (%)									
	1989	1990	1991	1992	1993	1994	1995	1996	1997 ²	1998 ³
Albania	7.3	9.8	9.1	26.5	22.3	18.3	12.9	12.9	13.6	n.a.
Bulgaria	n.a.	1.7	11.1	15.3	16.4	12.8	10.8	12.5	13.7	14.0
Croatia	n.a.	n.a.	n.a.	15.3	14.8	14.5	14.5	15.9	16.6	16.6
Estonia	n.a.	n.a.	n.a.	1.7	1.9	5.1	5.0	5.5	4.6	n.a.
Latvia	n.a.	n.a.	n.a.	2.3	5.8	6.5	6.6	7.2	7.0	n.a.
Lithuania	n.a.	n.a.	0.3	1.1	1.6	4.5	7.3	6.2	6.7	n.a.
Romania	n.a.	n.a.	3.0	8.2	10.4	10.9	9.5	6.3	8.8	10.0
Slovak Republic	n.a.	1.6	11.8	10.4	14.4	14.8	13.1	12.5	12.5	n.a.
Slovenia ⁴	2.9	4.7	8.2	11.4	14.4	14.4	13.9	13.9	14.4	n.a.
OECD Member countries⁵										
Czech Republic	n.a.	0.8	2.8	2.6	3.5	3.2	2.9	3.5	5.0	6.0
Hungary	n.a.	1.4	7.5	12.7	12.1	10.4	10.4	9.9	8.7	8.0
Poland	n.a.	6.3	11.8	13.6	16.4	16.0	13.3	12.4	11.3	10.1

n.a.: not available.

1. Official data.

2. Provisional figures.

3. Forecast.

4. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

5. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.3. **CEECs: inflation, 1989-1998**

	Inflation ¹ (%)									
	1989	1990	1991	1992	1993	1994	1995	1996	1997 ²	1998 ³
Albania	0.0	0.0	100.0	226.0	85.0	23.0	6.0	12.0	40.0	10.0
Bulgaria	n.a.	50.6	473.7	79.5	63.9	121.9	32.9	310.8	579.0	20.0
Croatia	n.a.	609.5	123.0	665.5	1 517.5	97.6	3.7	3.5	4.0	5.2
Estonia	n.a.	32.8	232.0	1 075.9	89.8	41.7	28.9	14.8	12.5	8.0
Latvia	n.a.	11.0	125.0	951.0	35.4	26.3	23.1	13.1	7.0	7.0
Lithuania	2.1	9.0	383.0	1 163.0	188.7	45.1	35.7	13.1	8.4	7.0
Romania ⁴	n.a.	105.1	222.8	199.2	295.5	61.7	27.8	56.9	151.0	40.0
Slovak Republic	4.9	10.6	61.2	10.0	23.2	11.7	7.2	5.4	6.4	6.0
Slovenia ^{4, 5}	1 306.0	549.7	247.1	92.9	22.9	18.3	8.6	8.8	9.4	8.0
OECD Member countries⁶										
Czech Republic	1.4	9.7	56.6	11.1	20.8	10.0	9.1	8.8	8.5	12.0
Hungary	17.0	28.9	35.0	23.0	22.0	18.8	28.2	21.7	18.3	14.9
Poland	251.1	585.8	70.3	43.0	35.3	32.2	21.6	18.5	13.2	10.5

n.a.: not available.

1. End year changes in consumer prices (%).

2. Provisional figures.

3. Forecast.

4. For Slovenia and Romania, the inflation rate is an annual average rate before 1991 and a year-end rate thereafter.

5. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

6. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.4. **CEECs: population, exchange rates, current account balance and government budget, 1994-1997**

	Population (million)			Exchange rate (annual average per US\$)				Current account balance (per cent of GDP)				Budget balance (per cent of GDP)			
	1990	1996	1997	1994	1995	1996	1997	1994	1995	1996	1997	1994	1995	1996	1997
Albania	n.a.	3.50	3.40	94.7 Leks	92.8 Leks	104.5 Leks	148.7 Leks	n.a.	n.a.	n.a.	9.0	-7.5	-7.5	-10.2	-15.0
Bulgaria	8.98	8.34	n.a.	54.3 Leva	67.2 Leva	176.2 Leva	1 676.5 Leva	-3.1	-0.8	0.9	7.2	-6.0	-6.0	-10.4	-2.9
Croatia	4.51 ¹	4.49	4.49	5.99 HRK	5.23 HRK	5.43 HRK	6.16 HRK	0.7	-9.5	-7.6	-8.0	0.6	-0.8	-0.2	-1.5
Estonia	1.58	1.48	1.46	12.96 EEK	11.5 EEK	12.04 EEK	13.87 EEK	-7.0	-5.0	-9.8	-13.0	2.8	-0.9	-1.5	-0.2
Latvia	2.67	2.48	2.46	0.56 Lats	0.53 Lats	0.55 Lats	0.58 Lats	-3.0	-4.0	-8.2	-7.0	-1.7	-2.9	-1.2	0.0
Lithuania	3.71	3.71	3.71	4.0 Litas	4.0 Litas	4.0 Litas	4.0 Litas	-2.0	-10.0	-9.2	-10.0	-1.0	-2.3	-2.0	-1.2
Romania ²	23.21	22.60	n.a.	1 670 Lei	2 050 Lei	3 083 Lei	8 000 Lei	-1.4	-5.0	-7.4	-7.3	-5.5	-2.9	-6.5	-4.5
Slovak Republic	5.30 ³	5.40	5.40	32.04 SKK	29.74 SKK	30.65 SKK	33.62 SKK	4.8	2.3	-11.0	-7.5	-0.4	0.1	-1.3	-3.3
Slovenia ⁴		2.00	2.00	128.81 T	118.52 T	135.37 T	160 T	3.8	-0.2	0.2	0.4	-0.2	-0.2	0.3	-1.2
OECD Member countries⁶															
Czech Republic	10.31	10.32	10.31	28.8 CZK	26.6 CZK	26.1 CZK	31.7 CZK	-0.1	-2.7	-7.6	-6.0	-0.1	-4.1	-8.6	-6.1
Hungary	10.37	10.21	10.19	105.13 Ft	125.69 Ft	152.57 Ft	186.75 Ft	n.a.	-5.5	-3.8	-2.2	-8.4	-6.1	-3.2	-4.8
Poland	38.18	38.62	38.70	22 727.0 ZI	2.42 NZL ⁵	2.7 NZL	3.28 NZL	n.a.	0.7	-2.4	-4.4	-2.7	-2.6	-2.5	-1.4

n.a.: not available.

1. 1991 data.

2. The budget balance includes quasi-fiscal deficit (*i.e.* includes refinancing from the National Bank of Romania).

3. Economic Survey of Europe in 1992-1993, Economic Commission for Europe.

4. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

5. In January 1995, the zloty was redenominated such that one new zloty (NZL) equals 10 000 old zlotys.

6. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.5. CEECs: agriculture and food trade balance, 1990-1997

US\$ million

	Exports					Imports					Balance ¹				
	1990	1991	1995	1996	1997 ²	1990	1991	1995	1996	1997 ²	1990	1991	1995	1996	1997 ²
Albania	86	n.a.	27	34	32	122	n.a.	219	326	190	-36	n.a.	-192	-292	-158
Bulgaria	2 026	752	1 115	882	699	571	196	399	372	428	1 455	556	716	511	271
Croatia	308	301	529	547	552	883	447	952	946	1 029	-575	-146	-423	-399	-477
Estonia	n.a.	n.a.	301	327	475	n.a.	n.a.	361	500	730	n.a.	n.a.	-60	-173	-255
Latvia	n.a.	n.a.	216	245	243	n.a.	n.a.	189	311	378	n.a.	n.a.	28	-66	-135
Lithuania	n.a.	n.a.	496	574	613	n.a.	n.a.	488	598	624	n.a.	n.a.	8	-24	-11
Romania	82	260	532	677	595	1 211	785	896	758	694	-1 129	-525	-364	-81	-99
Slovak Republic ³	210	267	539	423	443	208	181	747	819	835	2	87	-208	-396	-392
Slovenia ⁴	n.a.	290	430	445	436	n.a.	375	953	923	885	n.a.	-85	-523	-478	-449
Total	n.a.	n.a.	4 185	4 155	4 088	n.a.	n.a.	5 204	5 552	5 793	n.a.	n.a.	-1 019	-1 398	-1 705
OECD Member countries⁵															
Czech Republic	n.a.	n.a.	1 268	1 236	1 243	n.a.	n.a.	1 741	2 060	1 896	n.a.	n.a.	-473	-824	-653
Hungary	2 318	2 636	2 901	2 746	2 849	692	627	978	940	1 087	1 626	2 009	1 923	1 806	1 762
Poland	n.a.	n.a.	2 511	2 737	3 297	n.a.	n.a.	2 978	3 955	3 767	n.a.	n.a.	-467	-1 218	-469

n.a.: not available.

1. Exports-Imports.

2. Provisional.

3. 1990-1991: Slovak estimates.

4. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

5. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.6. **CEECs: share of agriculture and food trade in total trade, 1993-1997**

Per cent

Countries	Agriculture share of total exports (%)					Agriculture share of total imports (%)				
	1993	1994	1995	1996	1997	1993	1994	1995	1996	1997
Albania	21.4	19.9	14.4	13.0	22.0	26.2	31.6	36.3	36.7	n.a.
Bulgaria	19.2	23.3	21.9	18.0	14.2	9.6	11.7	8.4	7.9	9.5
Croatia	12.5	11.7	10.7	12.1	12.7	12.0	12.2	12.6	12.7	11.3
Estonia	24.8	22.0	16.3	16.1	14.0	15.3	15.9	14.2	15.8	13.0
Latvia	17.0	12.8	16.8	17.2	15.0	7.2	10.7	11.0	14.1	14.0
Lithuania	7.5	24.0	19.4	17.7	16.0	2.3	10.0	13.4	13.2	11.0
Romania	6.7	6.5	6.8	8.8	7.0	14.8	9.3	8.9	7.6	7.0
Slovak Republic	5.8	6.0	6.3	4.8	5.0	8.8	9.4	8.5	7.5	8.1
Slovenia ¹	6.2	6.2	5.2	5.3	5.2	10.	11.1	10.2	10.0	9.6
OECD Member countries²										
Czech Republic	7.7	7.4	7.4	5.6	5.5	8.7	9.0	8.3	7.4	7.0
Hungary	22.3	21.5	22.5	20.9	14.9	6.4	7.3	6.3	5.8	5.1
Poland	11.9	12.1	10.8	11.0	13.0	11.9	11.3	10.2	11.0	9.0

n.a.: not available.

1. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

2. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.7i. **Agricultural and food exports from the CEECs by destination, 1993**

	Per cent					
	EU	Other OECD	CEECs	NIS	Other	Total
Albania	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Bulgaria	22	12	11	28	27	100
Croatia	25	4	39	24	8	100
Estonia	18	9	20	44	9	100
Latvia	9	5	20	65	1	100
Lithuania	16	4	12	66	2	100
Romania	34	16	8	19	23	100
Slovak Republic	16	8	57	13	6	100
Slovenia ¹	36	12	2	5	45	100
OECD Member countries²						
Czech Republic	33	9	40	11	7	100
Hungary	45	16	10	20	9	100
Poland	57	14	3	19	7	100

n.a.: not available.

1. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

2. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.7ii. **Agricultural and food exports from the CEECs by destination, 1996**

	Per cent					
	EU	Other OECD ¹	CEECs ²	NIS	Other	Total
Albania	84	10	4	0	2	100
Bulgaria	23	9	6	45	17	100
Croatia	21	3	30	4	42	100
Estonia	20	3	15	59	2	100
Latvia	15	0	12	72	1	100
Lithuania	18	4	12	63	4	100
Romania	21	13	10	18	37	100
Slovak Republic	17	2	56	19	7	100
Slovenia ³	32	4	3	4	57	100
OECD Member countries⁴						
Czech Republic	36	4	35	15	10	100
Hungary	47	6	17	20	10	100
Poland	49	2	6	36	7	100

n.a.: not available.

1. Excludes in 1996 Poland, Hungary and Czech Republic which became Members of OECD.

2. Includes in 1996 Poland, Hungary and Czech Republic which became Members of OECD.

3. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

4. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.7iii. **Agricultural and food exports from the CEECs by destination, 1997**

	Per cent					
	EU	Other OECD ¹	CEECs ²	NIS	Other	Total
Albania	85	5	3	0	6	100
Bulgaria ³	25	12	7	46	9	100
Croatia	19	3	34	3	41	100
Estonia	16	3	16	63	2	100
Latvia	11	0	16	66	6	100
Lithuania	20	7	12	59	3	100
Romania	27	17	9	21	26	100
Slovak Republic ⁴	22	n.a.	50	20	9	100
Slovenia ⁵	35	4	3	4	53	100
OECD Member countries⁶						
Czech Republic	35	3	33	19	10	100
Hungary	40	8	17	23	12	100
Poland	39	8	5	41	7	100

n.a.: not available.

1. Excludes in 1997 Poland, Hungary and Czech Republic which became Members of OECD.

2. Includes in 1997 Poland, Hungary and Czech Republic which became Members of OECD.

3. Nine months only.

4. The category "Other" includes "Other OECD" for Slovakia.

5. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

6. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.8i. **Agricultural and food imports by the CEECs by source, 1993**

	Per cent					
	EU	Other OECD	CEECs	NIS	Other	Total
Albania	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Bulgaria	44	19	7	4	28	100
Croatia	36	2	34	2	26	100
Estonia	49	28	5	9	9	100
Latvia	36	12	17	25	10	100
Lithuania	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Romania	47	21	8	1	23	100
Slovak Republic	24	10	51	1	14	100
Slovenia ¹	32	19	11	2	36	100
OECD Member countries²						
Czech Republic	37	11	26	0	26	100
Hungary	42	16	7	3	32	100
Poland	57	22	3	4	14	100

n.a.: not available.

1. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

2. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.8ii. **Agricultural and food imports by the CEECs by source, 1996**

	Per cent					
	EU	Other OECD ¹	CEECs ²	NIS	Other	Total
Albania	66	9	15	1	10	100
Bulgaria	21	15	8	9	47	100
Croatia	48	2	24	0	26	100
Estonia	64	8	12	10	6	100
Latvia	51	0	27	12	11	100
Lithuania	45	3	17	21	14	100
Romania	40	14	6	5	35	100
Slovak Republic	36	4	43	1	17	100
Slovenia ³	46	9	14	2	29	100
OECD Member countries⁴						
Czech Republic	54	6	15	0	25	100
Hungary	43	8	5	1	43	100
Poland	70	5	10	6	9	100

n.a.: not available.

1. Excludes in 1996 Poland, Hungary and Czech Republic which became Members of OECD.

2. Includes in 1996 Poland, Hungary and Czech Republic which became Members of OECD.

3. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

4. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.8iii. **Agricultural and food imports by the CEECs by source, 1997**

	Per cent					
	EU	Other OECD ¹	CEECs ²	NIS	Other	Total
Albania	79	7	7	0	6	100
Bulgaria ³	30	26	17	6	20	100
Croatia	44	6	24	0	26	100
Estonia	45	20	8	5	22	100
Latvia	52	11	25	3	8	100
Lithuania	51	14	22	10	3	100
Romania	38	14	14	7	27	100
Slovak Republic ⁴	37	n.a.	40	4	19	100
Slovenia ⁵	46	8	16	2	28	100
OECD Member countries⁶						
Czech Republic	50	6	17	0	27	100
Hungary	42	7	10	1	40	100
Poland	46	18	3	18	15	100

n.a.: not available.

1. Excludes in 1997 Poland, Hungary and Czech Republic which became Members of OECD.

2. Includes in 1997 Poland, Hungary and Czech Republic which became Members of OECD.

3. Nine months only.

4. The category "Other" includes "Other OECD" for Slovakia.

5. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

6. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.9. CEECs: Share of agriculture in GDP, employment, and average share of household income spent on food, 1989-1997

	Share of agriculture in aggregate GDP (%)				Share of agricultural sector in total employment (%)				Average share of household income spent on food (%)				
	1989	1995	1996	1997 ¹	1989	1995	1996	1997 ¹	1989	1991	1995	1996	1997 ¹
Albania	32.0	54.9	52.3	56.0	49.0	64.6	64.5	50.0	56.5	63.0	72.1	75.0	75.0
Bulgaria ²	11.0	12.5	11.1	18.8 ³	18.1	23.3	24.2	n.a.	38.1	47.4	46.0	48.2	54.3 ³
Croatia ⁴	10.1 ⁵	9.5	9.2	9.0	15.2 ⁵	13.0	12.5	10.9	40.0 ⁵	40.1	n.a.	n.a.	n.a.
Estonia	17.8	6.7	6.0	5.5	12.0	7.7	7.0	7.0	28.2	36.4	33.3	32.7	39.9 ⁶
Latvia ⁷	10.2	8.9	7.6	6.9	14.6	18.0	17.8	17.2	30.3	42.5	44.2	50.9	49.0
Lithuania ⁸	26.5	8.5	11.8	12.0	17.6	22.8	22.5	21.5	34.9	38.3	57.0	55.7	52.2
Romania ⁹	13.7	19.4	18.7	18.5	27.5	33.6	37.3 ¹⁰	39.7 ¹⁰	69.9	71.4	57.5	57.6	58.6
Slovak Republic	9.3 ¹¹	5.6	5.2	5.1	12.1	7.1	7.0	6.9	35.4	36.5	37.4	37.1	37.3
Slovenia ¹³	4.4	4.5	4.5	4.4	8.4 ¹²	6.3	6.3	6.2	24.9 ⁵	26.1	23.1	22.7	22.5
OECD Member countries¹⁵													
Czech Republic ¹⁴	6.3	3.1	3.0	3.0	9.9	4.4	4.3	4.0	32.9	34.0	31.2	30.5	n.a.
Hungary	15.6	7.1	7.0	n.a.	17.9	8.9	8.2	n.a.	25.4	21.5	17.7	n.a.	n.a.
Poland	11.8	6.1	6.0	n.a.	26.4	25.0	25.7	n.a.	36.9	32.4	28.0	n.a.	n.a.

n.a.: not available.

1. Provisional.

2. Average share of household income spent on food includes food produced in households.

3. Nine months only.

4. Agriculture includes fishing.

5. 1990 data.

6. A new classification system for estimations household expenditures was introduced during 1997.

7. Agriculture includes hunting, forestry and fishing.

8. The methodology used to estimate the components of GDP was modified in 1992 and this change contributed to the dramatic fall in agricultures' share of GDP in 1992.

9. Includes employment in the processing sector.

10. Survey on labor force in households, National Commission for Statistics 1996-1997.

11. Including hunting and Forestry.

12. 1991 data.

13. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

14. Food expenses include beverages and tobacco.

15. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.10. **CEECs: volume of gross agricultural output, 1989-1997**

	Total G.A.O. (%) (per cent change from previous year)								
	1989	1990	1991	1992	1993	1994	1995	1996	1997 ¹
Albania	6.5	-2.0	-17.4	17.1	18.6	8.3	13.2	3.3	1.0
Bulgaria	0.8	-6.6	-0.3	-12.0	-18.2	6.8	15.4	-13.1	30.2
Croatia	4.0	-3.0	-5.0	n.a.	n.a.	-3.0	0.7	1.2	2.1
Estonia	7.5	-13.1	-4.0	-18.6	-7.7	-14.2	-1.2	-3.6	-2.0
Latvia	3.9	-10.2	-3.9	-16.0	-22.4	-20.5	7.7	7.4	-2.4
Lithuania	1.5	-8.9	-4.3	-23.8	-8.0	-18.0	6.0	10.3	6.0
Romania	-5.1	-2.9	0.8	-13.3	10.2	0.2	4.5	1.8	1.6
Slovak Republic	0.6	-7.1	-7.0	-12.8	-7.2	9.3	2.1	4.1	-0.8
Slovenia ²	-0.7	3.5	0.4	-10.1	-2.6	22.6	2.3	1.6	0.3
OECD Member countries³									
Czech Republic	2.3	-2.3	-8.9	-12.1	-2.3	-6.0	5.3	-0.9	-5.9
Hungary	-1.8	-4.7	-6.2	-20.0	-9.7	3.2	2.6	4.9	-0.6
Poland	1.8	-5.5	-1.6	-10.7	8.0	-10.8	16.3	-8.9	-0.7

n.a.: not available.

1. Provisional.

2. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

3. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.11i. CEECs: volume of gross agricultural output, total crops, 1989-1997

	Total crops (%) (per cent change from previous year)								
	1989	1990	1991	1992	1993	1994	1995	1996	1997 ¹
Albania	5.6	-6.6	-29.2	35.9	11.9	-2.1	13.3	4.4	2.0
Bulgaria	5.3	-7.4	18.6	-12.8	-21.0	21.0	20.3	-29.6	38.3
Croatia ²	8.0	-2.0	-4.3	-4.3	-4.3	0.0	5.8	1.3	n.a.
Estonia	29.8	-24.7	7.3	-14.8	10.5	-15.4	5.3	-1.6	-3.0
Latvia	14.7	-19.3	4.5	-11.0	-0.3	-24.0	18.4	17.5	-3.3
Lithuania	3.9	-17.8	9.0	-33.6	13.1	-30.1	16.3	21.7	9.0
Romania	-1.7	-7.2	4.2	-14.8	14.6	0.3	5.4	1.9	n.a.
Slovak Republic	-1.9	-11.6	5.3	-13.4	-5.1	19.1	1.9	5.7	0.4
Slovenia ³	4.4	10.0	-0.7	-13.4	1.3	45.6	-1.0	2.0	-2.9
OECD Member countries⁴									
Czech Republic	n.a.	-0.7	-3.0	-17.0	4.6	-7.2	4.2	-4.2	-2.9
Hungary	-1.1	-9.3	4.0	-25.7	-9.2	9.7	1.9	9.5	n.a.
Poland	5.9	-4.9	-4.6	-24.8	47.7	-23.8	27.6	-1.7	n.a.

n.a.: not available.

1. Provisional.

2. Total crops refers to only arable crops.

3. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

4. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.11ii. CEECs: volume of gross agricultural output, total livestock, 1989-1997

	Total livestock (%) (per cent change from previous year)								
	1989	1990	1991	1992	1993	1994	1995	1996	1997 ¹
Albania	5.6	10.9	-0.8	7.4	27.6	19.6	11.7	3.0	-2.0
Bulgaria	-2.8	-4.6	-18.6	-10.7	-18.0	-7.5	11.8	-2.6	0.7
Croatia	0.0	-5.0	-10.3	-10.3	-10.3	-2.1	-7.2	1.0	n.a.
Estonia	1.0	-8.0	-10.0	-20.9	-20.1	-13.2	-6.0	-5.3	-1.0
Latvia	-0.7	-5.5	-7.6	-18.0	-34.0	-18.0	0.2	-1.2	-5.7
Lithuania	n.a.	-4.4	-10.6	-18.2	-15.7	-11.1	-2.7	-2.8	2.0
Romania	-8.9	2.2	-3.8	-10.5	4.2	0.0	3.0	1.7	n.a.
Slovak Republic	2.7	-3.8	-16.0	-12.2	-9.2	0.0	2.2	2.2	-1.8
Slovenia ²	-3.7	-1.6	1.5	-7.2	-6.4	1.4	6.2	1.1	3.6
OECD Member countries³									
Czech Republic	n.a.	-3.5	-13.2	-8.1	-7.3	-4.9	6.1	1.4	-8.4
Hungary	-2.5	-0.2	-15.6	-12.6	-10.4	-4.2	3.4	-1.0	n.a.
Poland	-0.5	-5.8	-0.1	-4.0	-11.5	-0.4	8.0	n.a.	n.a.

n.a.: not available.

1. Provisional.

2. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

3. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.12. **CEECs: total grain production, 1986-1997¹**

Thousand tonnes

	1986-89 (average)	1990	1991	1992	1993	1994	1995	1996	1997 ²	1997/96 (%)
Albania	921	860	431	415	648	626	631	497	616	23.9
Bulgaria	8 401	8 216	9 072	6 644	5 717	6 462	6 572	3 581	6 218	73.6
Croatia	3 715 ³	3 827	4 138	2 174	2 732	2 594	2 758	2 756	3 175	15.2
Estonia	784	958	939	599	811	512	520	643	600	-6.7
Latvia	1 469	1 622	1 336	1 152	1 235	901	694	969	1 043	7.6
Lithuania	3 257	3 265	3 348	2 225	2 708	2 136	1 954	2 703	3 052	12.9
Romania	18 520	17 108	19 275	12 250	15 457	18 169	19 859	14 177	20 058	41.5
Slovak Republic	4 132	3 617	4 004	3 552	3 152	3 701	3 490	3 322	3 741	12.6
Slovenia ⁴	500	577	558	426	455	567	540	530	515	-2.9
Total	41 699	40 050	43 100	29 437	32 915	35 667	37 018	29 178	39 018	33.7
OECD Member countries⁵										
Czech Republic	7 496	8 947	7 845	6 565	6 600	7 210	6 602	6 644	6 983	5.1
Hungary	14 464	12 462	15 666	9 864	8 412	11 517	10 626	11 066	13 723	24.0
Poland	25 691	28 014	27 811	19 962	23 417	21 800	25 905	25 298	25 400	0.4

1. Wheat and coarse grains (includes: maize, barley, rye and oats).

2. Provisional estimates.

3. 1988-1989 average.

4. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

5. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.13. **CEECs: wheat production, 1986-1997**

Thousand tonnes

	Wheat production									
	1986-89 (average)	1990	1991	1992	1993	1994	1995	1996	1997 ¹	1997/96 (%)
Albania	602	613	298	252	465	420	405	271	370	36.5
Bulgaria	4 406	5 292	4 497	3 443	3 618	3 754	3 438	1 788	3 556	98.9
Croatia	1 361 ²	1 602	1 496	658	887	750	877	741	833	12.4
Estonia	45	65	62	89	106	57	77	101	100	-1.0
Latvia	305	372	190	332	338	199	244	357	395	10.6
Lithuania	929	1 184	855	834	891	549	637	936	1 127	20.4
Romania	7 359	7 289	5 473	3 206	5 314	6 135	7 667	3 144	6 643	111.3
Slovak Republic	2 166	2 083	2 124	1 697	1 529	2 145	1 938	1 713	1 886	10.1
Slovenia ³	159	200	181	153	143	155	156	139	137	-1.3
Total	17 332	18 700	15 175	10 664	13 290	14 165	15 438	9 190	15 047	63.7
OECD Member countries⁴										
Czech Republic	3 924	4 624	4 081	3 413	3 370	3 898	3 823	3 727	3 640	-2.3
Hungary	6 277	6 198	6 008	3 453	3 021	4 874	4 614	3 910	5 270	34.8
Poland	7 872	9 026	9 270	7 368	8 243	7 658	8 668	8 592	8 249	-4.0

1. Provisional.

2. 1988-1989 average.

3. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

4. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.14. **CEECs: coarse grain production, 1986-1997**

Thousand tonnes

	Coarse grains production									
	1986-89 (average)	1990	1991	1992	1993	1994	1995	1996	1997 ¹	1997/96 (%)
Albania	319	247	133	163	183	206	226	226	246	8.8
Bulgaria	3 740	2 924	4 575	3 201	2 099	2 708	3 134	1 793	2 662	48.5
Croatia	2 354 ²	2 225	2 642	1 516	1 845	1 847	1 881	2 015	2 342	16.2
Estonia	739	892	878	509	706	438	418	494	443	-10.3
Latvia	1 164	1 250	1 145	820	897	701	450	586	610	4.1
Lithuania	2 350	2 081	2 492	1 391	1 817	1 473	1 198	1 565	1 653	5.6
Romania	11 161	9 818	13 802	9 043	10 142	12 033	12 192	11 033	13 415	21.6
Slovak Republic	1 967	1 535	1 880	1 855	1 623	1 556	1 552	1 609	1 855	15.3
Slovenia ³	335	377	377	248	282	385	363	369	378	2.4
Total	24 129	21 349	27 924	18 746	19 594	21 347	21 414	19 690	23 604	19.9
OECD Member countries⁵										
Czech Republic	3 571	4 323	3 764	3 152	3 230	3 312	2 779	2 917	3 343	14.6
Hungary	8 187	6 264	9 658	6 411	5 391	6 643	6 026	7 156	8 453	18.1
Poland ⁴	17 819	18 945	18 502	12 560	15 125	14 075	17 191	16 653	17 127	2.8

1. Provisional.

2. 1988-1989 average.

3. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

4. Coarse grains: all grains less wheat.

5. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.15. **CEECs: total meat production, 1989-1997**

Thousand tonnes, carcass weight

	1989	1990	1991	1992	1993	1994	1995	1996	1997 ¹	1997/96 (%)
Albania	44.9	50.0	44.8	48.3	50.3	59.4	62.2	56.6	57.7	2.0
Bulgaria	820.0	791.0	659.0	650.0	565.0	447.0	481.0	505.0	450.0	-10.9
Croatia	307.0	294.0	217.0	225.0	205.0	197.0	178.0	177.0	185.0	4.5
Estonia	229.0	219.0	151.8	107.9	83.7	69.4	67.7	58.6	55.3	-5.6
Latvia	331.0	309.0	296.0	246.0	192.0	136.0	122.8	75.7	71.0	-6.2
Lithuania	534.4	530.1	449.6	415.2	275.9	223.8	208.2	198.6	189.0	-4.8
Romania	1 264.0	1 491.0	1 346.0	1 256.0	1 279.0	1 215.0	1 221.0	1 234.0	1 141.0	-7.5
Slovak Republic	516.4	514.9	459.2	419.3	390.7	366.4	343.7	363.6	396.9	9.2
Slovenia ²	172.6	181.3	165.1	161.0	164.3	156.6	165.0	172.2	177.7	3.2
Total	4 219.3	4 380.3	3 788.5	3 528.7	3 205.9	2 870.6	2 849.6	2 841.3	2 723.6	-4.1
OECD Member countries⁴										
Czech Republic	973.0	975.0	947.0	879.0	831.0	754.0	766.0	789.0	791.0	0.3
Hungary ³	1 656.0	1 625.0	1 448.0	1 246.0	1 096.0	995.0	1 038.6	1 138.2	1 108.3	-2.6
Poland	2 979.0	3 113.0	3 150.0	3 037.0	2 799.0	2 522.0	2 847.1	2 957.3	2 851.1	-3.6

1. Provisional.

2. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

3. Total meat production includes: beef and veal, pigmeat poultrymeat and sheepmeat.

4. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.16. **CEECs: production of beef and veal, 1989-1997**

Thousand tonnes, carcass weight

	Beef and veal production									
	1989	1990	1991	1992	1993	1994	1995	1996	1997 ¹	1997/96 (%)
Albania	20.2	22.4	21.3	23.5	24.6	28.6	31.4	33.2	n.a.	n.a.
Bulgaria	130.0	126.0	115.0	154.0	122.0	99.0	71.0	80.0	67.0	-16.3
Croatia	85.0	76.0	49.0	58.0	52.0	48.0	42.0	40.0	35.0	-12.5
Estonia	58.6	63.0	52.0	45.0	42.6	31.0	25.8	22.1	21.1	-4.5
Latvia	129.0	125.0	132.0	120.0	107.0	68.1	48.0	26.5	25.5	-3.8
Lithuania	224.0	231.0	209.0	226.1	161.8	116.1	86.9	83.0	79.3	-4.5
Romania	211.0	255.0	225.0	242.0	253.0	280.0	247.0	250.0	280.0	12.0
Slovak Republic	109.8	110.7	108.1	89.8	91.8	66.2	58.0	59.5	65.6	10.3
Slovenia ^{2, 3}	49.7	56.9	50.8	46.4	53.3	47.9	49.0	50.8	52.0	2.4
Total	1 017.3	1 066.0	962.2	1 004.8	908.1	784.9	659.1	645.1	625.5	-3.0
OECD Member countries⁴										
Czech Republic	269.0	266.0	298.5	218.4	203.0	163.0	169.0	163.0	157.0	-3.7
Hungary	158.0	141.0	149.0	147.0	107.0	83.0	71.7	77.8	72.8	-6.5
Poland	720.0	856.0	710.0	546.0	458.0	422.0	419.0	435.0	486.8	11.9

n.a.: not available.

1. Provisional.

2. Change of methodology after 1992.

3. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

4. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.17. **CEECs: production of pigmeat, 1989-1997**

Thousand tonnes, carcass weight

	Pigmeat production									
	1989	1990	1991	1992	1993	1994	1995	1996	1997 ¹	1997/96 (%)
Albania	7.0	8.5	6.1	7.5	8.5	9.4	9.4	4.2	n.a.	n.a.
Bulgaria	413.0	408.0	362.0	319.0	277.0	214.0	258.0	267.0	225.0	-15.7
Croatia	132.0	132.0	96.0	96.0	93.0	94.0	86.0	85.0	86.0	1.2
Estonia	103.5	95.1	75.2	50.1	34.7	30.4	35.4	31.7	29.2	-7.9
Latvia	154.0	138.0	126.0	101.0	68.0	54.0	62.6	39.5	37.1	-6.1
Lithuania	250.0	241.0	194.4	155.3	90.2	81.6	93.1	88.5	84.3	-4.7
Romania	588.0	706.0	678.0	608.0	645.0	598.0	601.0	612.0	620.0	1.3
Slovak Republic	310.0	304.0	266.0	253.8	238.5	235.2	232.6	239.1	254.8	6.6
Slovenia ^{2, 3}	44.6	45.4	41.0	57.3	61.8	63.1	59.5	62.7	62.0	-1.1
Total	2 002.1	2 078.0	1 844.7	1 648.0	1 516.7	1 379.7	1 437.6	1 429.7	1 398.4	-2.2
OECD Member countries⁴										
Czech Republic	552.0	548.0	490.0	525.0	504.0	465.0	462.0	492.0	493.0	0.2
Hungary	1 054.0	1 032.0	946.0	758.0	666.0	599.2	568.8	668.0	648.0	-3.0
Poland	1 819.0	1 841.0	2 011.0	2 069.0	1 975.0	1 736.0	2 008.0	2 072.0	1 894.6	-8.6

n.a.: not available.

1. Provisional.

2. Change of methodology after 1992.

3. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

4. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.18. **CEECs: milk production, 1989-1997**

Million tonnes

	1989	1990	1991	1992	1993	1994	1995	1996	1997 ¹	1997/96 (%)
Albania	0.47	0.53	0.54	0.63	0.69	0.83	1.00	1.08	1.03	-4.2
Bulgaria	2.51	2.46	2.06	1.86	1.58	1.46	1.44	1.43	1.48	3.5
Croatia	0.99	0.94	0.79	0.73	0.64	0.62	0.60	0.61	0.64	5.1
Estonia	1.32	1.25	1.13	0.95	0.83	0.77	0.71	0.68	0.71	4.4
Latvia	1.98	1.89	1.74	1.48	1.16	1.00	0.95	0.93	0.99	6.5
Lithuania	3.24	3.16	2.92	2.42	2.07	1.90	1.82	1.83	1.90	3.8
Romania	4.66	4.56	4.75	4.63	4.88	5.52	5.85	5.98	5.99	0.2
Slovak Republic	2.06	1.98	1.57	1.37	1.25	1.19	1.19	1.16	1.16	0.0
Slovenia ²	0.60	0.60	0.64	0.58	0.55	0.58	0.61	0.59	0.62	5.1
Total	17.82	17.37	16.14	14.65	13.65	13.86	14.17	14.29	14.52	1.6
OECD Member countries³										
Czech Republic	5.00	4.80	4.20	3.80	3.50	3.20	3.03	3.10	2.80	-9.8
Hungary	2.86	2.85	2.49	2.30	2.08	1.93	1.98	1.89	1.85	-2.0
Poland	15.90	15.40	14.00	12.80	12.30	11.50	11.72	11.96	12.17	1.8

1. Provisional.

2. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

3. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.19. **CEECs: annual per capita food consumption, 1990-1997**

		Kg/head			
		1990	1994	1996	1997 ¹
Albania	Meat and meat products ²	13.0	28.2 ³	27.3	n.a.
	Milk and dairy	123.0	105.7 ³	138.9	n.a.
	Grain and grain products	228.0	204.0 ³	179.9	n.a.
	Potatoes	15.0	17.4 ³	29.1	n.a.
Bulgaria	Meat and meat products ²	36.50	25.80	24.90	17.30
	Milk and dairy ⁴	55.7	38.9	34.7	31.30
	Grain and grain products ⁵	184.20	156.10	145.80	141.70
	Potatoes	28.80	25.60	26.40	24.40
Croatia	Meat and meat products ²	50.10	55.40	52.90	n.a.
	Milk and dairy	116.73	178.85	187.72	n.a.
	Grain and grain products	65.60	n.a.	n.a.	n.a.
	Potatoes	45.70	71.82	88.0	n.a.
Estonia	Meat and meat products ²	78.00	50.00	54.00	55.00
	Milk and dairy	502.00	274.00	269.00	280.00
	Grain and grain products	69.00	74.00	78.00	80.00
	Potatoes	98.00	125.00	115.00	113.00
Latvia	Meat and meat products ²	77.00	48.00	57.00 ⁶	56.00
	Milk and dairy	480.23	345.00	311.00	291.00
	Grain and grain products ⁷	107.00	89.00	86.00	82.00
	Potatoes	125.00	108.00	152.00	144.00
Lithuania	Meat and meat products ²	89.00	52.00	51.00	51.00
	Milk and dairy ⁵	480.00	238.00	213.00	222.00
	Grain and grain products ⁷	108.00	136.00	142.00	145.00
	Potatoes	146.00	127.00	133.00	120.00
Romania	Meat and meat products ²	61.00	45.50	46.20 ⁸	46.20 ⁹
	Milk and dairy	140.10	179.50	192.70	157.80
	Grain and grain products ⁷	n.a.	n.a.	121.20	128.40
	Potatoes	59.40	66.70	49.20	52.80
Slovak Republic	Meat and meat products ²	88.10	67.50	69.10	n.a.
	Milk and dairy	123.95	88.70	95.99	n.a.
	Grain and grain products	116.50	103.00	101.00	n.a.
	Potatoes	85.80	74.20	75.00	n.a.
Slovenia ¹¹	Meat and meat products ²	87.50 ¹⁰	92.00	97.0	98.00
	Milk and dairy	193.00 ¹⁰	206.00	228.00 ⁶	232.00
	Grain and grain products	111.00 ¹⁰	154.00	136.00	130.00
	Potatoes	74.00 ¹⁰	73.00	85.00	76.00
OECD Member countries¹⁴					
Czech Republic	Meat and meat products ²	96.50	81.20	85.3	81.40
	Milk and dairy	256.20	191.90	199.2	195.00
	Grain and grain products	114.90	116.90	113.8	112.70
	Potatoes	77.90	78.00	77.2	76.00
Hungary	Meat and meat products ²	73.10	66.40	63.1 ⁶	n.a.
	Milk and dairy ¹²	166.90	141.10	133.4 ⁶	n.a.
	Grain and grain products ¹³	106.20	87.20	84.1 ⁶	n.a.
	Potatoes	61.00	58.70	60.9 ⁶	n.a.
Poland	Meat and meat products ²	63.60	58.50	59.4	n.a.
	Milk and dairy	254.91	221.16	196.0	n.a.
	Grain and grain products	115.00	120.00	120.0	n.a.
	Potatoes	144.00	136.00	135.0	n.a.

1. Provisional.

2. Meat includes poultry.

3. 1993 data.

4. Only milk.

5. Bread and pastry.

6. 1995 data.

7. Bread.

8. Data for July 95-June 96 period.

9. Data for July 96-June 97 period.

10. 1992 data.

11. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

12. Excluding butter.

13. Flour.

14. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.20. **CEECs: exports of wheat and coarse grains, 1990-1997**

Thousand tonnes

	Wheat								Coarse grains ¹							
	1990	1991	1992	1993	1994	1995	1996	1997 ²	1990	1991	1992	1993	1994	1995	1996	1997 ²
Albania	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulgaria	446.0	109.0	327.0	44.0	15.0	681.0	0.0	11.0 ³	11.0	0.0	400.0	28.0	44.0	9.0	0.0	4.0 ³
Croatia	120.0	76.1	73.6	9.7	28.3	226.8	138.9	0.7	28.0	56.5	188.5	13.4	23.7	37.3	73.5	5.6
Estonia	n.a.	n.a.	n.a.	4.5	1.4	1.9	5.5	9.4	n.a.	3.4	0.0	0.0	0.0	0.0	0.0	0.0
Latvia	n.a.	n.a.	6.4	27.0	2.0	0.0	0.0	13.5	n.a.	n.a.	n.a.	32.0	65.9	24.4	11.7	2.7
Lithuania	n.a.	n.a.	n.a.	11.6	6.9	3.4	14.1	109.1	n.a.	n.a.	n.a.	n.a.	3.5	19.8	0.1	17.2
Romania	0.0	120.0	0.0	0.0	0.10	649.7	1 274.9	209.9	0.3	0.6	8.0	3.1	7.0	220.5	182.9	130.2
Slovak Republic	0.6	32.7	185.1	261.3	27.9	622.2	11.2	26.3	0.0	39.7	46.4	168.8	171.3	179.4	13.4	60.6
Slovenia ⁴	n.a.	0.0	0.0	0.0	0.0	0.0	2.0	0.0	n.a.	0.0	2.0	2.0	2.0	2.0	2.0	2.0
OECD Member countries⁵																
Czech Republic	170.0	66.5	1.8	128.0	28.8	1 004.0	146.0	3.5	0.0	103.4	803.4	57.0	49.5	118.0	7.2	10.7
Hungary	1 120.0	1 019.0	997.0	94.0	759.0	2 765.0	299.0	n.a.	228.0	619.0	2 970.0	206.0	363.0	1 444.0	189.0	n.a.
Poland	0.0	261.0	514.7	1.2	1.0	53.4	22.4	74.0	n.a.	n.a.	840.3	0.6	2.0	9.1	21.1	53.0

n.a.: not available.

1. Includes maize, barley, rye and oats.

2. Provisional estimates.

3. Nine months only.

4. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

5. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.21. **CEECs: exports of sugar, 1990-1997**

Thousand tonnes

	Sugar							
	1990	1991	1992	1993	1994	1995	1996	1997 ¹
Albania	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulgaria	0.0	0.0	44.0	59.0	52.0	25.0	126.0	45.0 ²
Croatia	3.0	21.7	19.2	4.7	1.3	1.5	11.5	0.3
Estonia	n.a.	n.a.	0.0	25.2	13.0	4.8	9.4	28.8
Latvia	98.4	10.7	14.3	1.5	0.9	22.2	39.2	3.8
Lithuania	n.a.	n.a.	0.9	4.3	0.4	1.7	10.6	0.1
Romania	4.1	0.0	0.2	5.4	0.1	0.4	0.3	0.8
Slovak Republic	1.4	0.6	51.2	10.2	2.0	10.5	6.3	19.3
Slovenia ³	n.a.	0.0	10.0	4.0	2.0	5.0	3.0	1.0
OECD Member countries⁴								
Czech Republic	31.7	5.7	26.5	58.0	97.2	28.4	34.1	134.1
Hungary	9.0	30.0	144.0	0.0	1.0	1.0	n.a.	n.a.
Poland	343.0	332.0	134.0	112.0	179.0	4.2	160.4	523.5

n.a.: not available.

1. Provisional estimates.

2. Nine months only.

3. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

4. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.22. **CEECs: imports of wheat and coarse grains, 1990-1997**

Thousand tonnes

	Wheat								Coarse grains ¹							
	1990	1991	1992	1993	1994	1995	1996	1997 ²	1990	1991	1992	1993	1994	1995	1996	1997 ²
Albania ³	118.0	267.0	330.0	241.0	198.0	185.0	473.0	215.0	—	—	—	—	—	—	—	9.0
Bulgaria	121.0	289.0	6.0	30.0	1.0	0.0	190.7	351.8 ⁴	23.0	0.0	100.0	158.0	1 604.0	3.0	10.0	36.0 ⁴
Croatia	0.1	0.0	4.6	4.0	1.7	5.6	11.0	151.8	415.2	20.8	6.0	7.0	71.6	34.0	4.0	20.0
Estonia	140.0	96.4	142.3	28.4	41.6	56.6	89.3	110.2	479.5	321.0	284.3	29.8	n.a.	n.a.	n.a.	n.a.
Latvia	364.0	262.0	279.0	4.0	34.0	36.0	124.1	26.4	118.0	202.0	219.0	4.0	14.0	18.0	107.0	41.4
Lithuania	n.a.	n.a.	258.4	82.6	101.7	33.8	41.5	9.7	n.a.	n.a.	n.a.	n.a.	1.24	99.9	140.6	36.5
Romania	228.5	445.7	1 124.0	1 252.1	0.10	8.7	0.0	11.5	610.5	304.3	320.0	326.7	2.8	3.7	0.3	106.9
Slovak Republic	4.0	5.2	0.2	96.4	119.8	1.3	10.6	129.6	5.2	18.6	38.9	170.6	79.6	68.6	147.6	96.9
Slovenia ⁵	n.a.	8.0	69.0	162.0	125.0	82.0	65.0	65.0	n.a.	101.0	369.0	340.0	367.0	307.0	336.0	338.0
OECD Member countries⁶																
Czech Republic	20.4	0.2	0.8	350.0	44.5	4.7	2.0	224.7	142.4	73.8	71.9	295.5	241.3	194.4	428.3	331.6
Hungary	20.0	40.0	1.0	48.0	56.0	5.0	14.0	n.a.	483.0	368.0	42.0	39.0	222.0	196.0	88.0	n.a.
Poland	81.0	16.0	508.0	800.0	204.7	976.6	2 187.5	664.1	11.0	38.0	358.0	2 064.0	190.0	986.0	n.a.	n.a.

—: negligible.

n.a.: not available.

1. Includes maize, barley, rye and oats.

2. Provisional.

3. Figures include wheat and flour.

4. Nine months only.

5. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

6. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.23. **CEECs: imports of sugar, 1990-1997**

Thousand tonnes

	Sugar							
	1990	1991	1992	1993	1994	1995	1996	1997 ¹
Albania	33.2	31.3	31.7	25.2	40.0	64.7	65.0	50.2
Bulgaria	176.0	103.0	349.0	364.0	357.0	83.0	314.0	282.0 ²
Croatia	14.7	50.7	145.1	65.4	57.0	70.6	49.8	6.2
Estonia	n.a.	15.0	27.5	56.0	52.4	38.9	56.9	95.1
Latvia	6.1	1.6	32.1	1.8	0.9	18.3	82.9	17.3
Lithuania	n.a.	n.a.	3.5	1.8	0.2	3.7	4.9	10.9
Romania	293.9	235.4	302.1	217.5	212.0	262.0	379.3	215.4
Slovak Republic	65.2	0.0	0.2	28.8	38.0	54.0	21.1	8.3
Slovenia ³	n.a.	11.0	45.0	52.0	59.0	65.0	55.0	49.0
OECD Member countries⁴								
Czech Republic	71.0	30.6	0.1	1.0	1.7	13.1	22.3	8.3
Hungary	37.0	13.0	10.0	1.0	0.0	0.8	2.5	1.3
Poland	0.0	0.0	44.1	14.6	0.0	152.8	47.1	54.1

-: negligible.

n.a.: not available.

1. Provisional.

2. Nine months only.

3. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

4. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.24. **CEECs: exports of beef and veal and pigmeat, 1990-1997**

Thousand tonnes

	Beef and veal								Pigmeat							
	1990	1991	1992	1993	1994	1995	1996	1997 ¹	1990	1991	1992	1993	1994	1995	1996	1997 ¹
Albania	—	—	—	0.05	0.8	0.90	—	—	—	—	—	—	—	—	—	—
Bulgaria	3.0	0.2	6.0	1.0	10.0	0.7	1.0	0.2 ²	0.2	19.0	6.0	1.0	1.8	0.7	10.0	6.6 ²
Croatia	22.8	16.6	21.9	5.0	3.8	2.5	1.7	1.8	1.0	0.9	1.1	0.2	0.4	0.3	0.2	0.3
Estonia	11.6	13.5	6.0	3.0	3.7	3.3	1.6	2.1	n.a.	n.a.	n.a.	8.2	3.8	2.6	1.6	3.5
Latvia	57.0	38.0	46.0	29.0	1.0	0.1	0.0	0.0	9.0	10.0	13.0	0.1	0.0	0.0	0.0	0.0
Lithuania	n.a.	n.a.	n.a.	30.1	16.7	13.0	6.4	n.a.	n.a.	n.a.	n.a.	0.2	0.2	0.9	0.5	n.a.
Romania ³	0.1	5.5	5.5	6.5	3.7	1.6	0.7	0.6	0.3	38.3	43.6	61.6	86.3	37.7	31.8	57.2
Slovak Republic	n.a.	6.9	4.7	1.1	0.8	0.1	0.4	0.2	n.a.	2.7	1.6	1.2	0.2	0.2	0.2	0.0
Slovenia ⁴	n.a.	16.0	13.0	8.0	7.0	5.0	2.0	4.0	n.a.	2.0	3.0	2.0	2.0	2.0	2.0	1.0
OECD Member countries⁶																
Czech Republic	22.3	26.7	3.9	6.1	1.1	1.7	1.8	2.4	7.3	3.2	1.0	8.0	4.7	0.1	0.9	7.3
Hungary	78.0	65.0	63.0	35.0	33.0	24.0	10.9	n.a.	177.0	167.0	53.8	20.1	15.3	15.7	107.3	n.a.
Poland ⁵	44.0	25.0	55.0	37.0	41.0	48.0	49.0	63.3	49.0	21.0	14.0	13.0	15.0	27.8	45.0	39.0

—: negligible.

n.a.: not available.

1. Provisional.

2. Nine months only.

3. Excludes trade with live animals.

4. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

5. Excludes meat equivalent of live cattle exports.

6. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.25. **CEECs: exports of poultrymeat, 1990-1997**

Thousand tonnes

	Poultrymeat							
	1990	1991	1992	1993	1994	1995	1996	1997 ¹
Albania	—	—	—	—	—	—	—	—
Bulgaria	17.0	14.0	17.0	5.0	3.0	2.5	10.0	6.8 ²
Croatia	2.5	1.8	12.2	9.4	5.8	2.5	1.2	1.8
Estonia	n.a.	n.a.	0.2	0.5	1.0	4.1	2.3	84.3
Latvia	n.a.	n.a.	n.a.	n.a.	0.0	0.2	0.1	0.1
Lithuania	n.a.	n.a.	1.2	2.9	3.1	2.4	3.1	n.a.
Romania	0.0	1.2	0.9	3.1	5.0	1.0	0.9	1.3
Slovak Republic	n.a.	6.7	4.7	2.1	2.9	2.6	1.7	0.9
Slovenia ³	n.a.	10.0	52.0	24.0	18.0	17.0	15.0	14.0
OECD Member countries⁴								
Czech Republic	5.9	1.7	14.8	10.1	5.0	5.2	4.5	3.9
Hungary	193.0	165.0	78.7	72.6	76.5	103.0	108.7	n.a.
Poland	n.a.	16.0	22.0	15.0	8.0	16.9	21.2	25.1

—: negligible.

n.a.: not available.

1. Provisional.

2. Nine months only.

3. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

4. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.26. **CEECs: imports of beef and veal and pigmeat, 1990-1997**

Thousand tonnes

	Beef and veal								Pigmeat							
	1990	1991	1992	1993	1994	1995	1996	1997 ¹	1990	1991	1992	1993	1994	1995	1996	1997 ¹
Albania	1.6	2.4	28.5	6.1	8.6	10.5	6.1	2.6	–	–	–	–	–	2.2	2.5	1.2
Bulgaria	2.0	0.2	1.3	20.0	9.3	7.4	7.5	9.1 ²	0.7	0.0	1.4	4.0	2.6	0.2	0.2	1.5 ²
Croatia	46.1	24.2	28.3	15.9	19.7	17.6	15.8	n.a.	37.7	11.0	11.2	8.3	9.7	18.2	19.2	23.4
Estonia	n.a.	n.a.	–	1.5	4.1	2.9	6.3	4.4	n.a.	n.a.	n.a.	2.2	6.8	4.4	9.9	10.1
Latvia	n.a.	n.a.	n.a.	1.1	0.5	0.5	1.6	3.2	n.a.	n.a.	n.a.	n.a.	2.6	2.0	5.9	2.5
Lithuania	n.a.	n.a.	n.a.	0.1	0.5	0.5	0.7	n.a.	n.a.	n.a.	n.a.	0.5	6.8	5.2	6.5	n.a.
Romania ³	75.1	10.2	10.7	5.1	9.6	22.0	n.a.	3.7	63.2	0.0	0.6	0.0	1.5	2.2	0.8	0.5
Slovak Republic	n.a.	0.0	0.4	0.3	1.7	0.9	0.4	0.5	2.5	1.4	1.9	6.6	4.8	2.6	1.3	2.4
Slovenia ⁴	n.a.	16.0	16.0	14.0	21.0	15.0	7.0	5.0	n.a.	11.0	24.0	26.0	27.0	24.0	21.0	26.0
OECD Member countries⁶																
Czech Republic	0.3	0.2	1.6	2.3	7.8	3.0	3.7	1.4	0.9	2.3	0.6	1.2	11.7	6.6	6.2	2.4
Hungary	3.9	10.0	7.0	18.0	28.0	14.0	9.7	n.a.	3.0	3.0	9.0	8.0	21.0	n.a.	12.0	n.a.
Poland ⁵	n.a.	39.0	32.7	27.5	17.8	8.2	23.3	7.1	32.0	72.0	31.0	44.0	97.4	46.2	36.5	29.1

–: negligible.

n.a.: not available.

1. Provisional.

2. Nine months only.

3. Excludes trade with live animals.

4. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

5. Excludes meat equivalent of live cattle imports.

6. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Annex Table I.27. **CEECs: imports of poultrymeat, 1990-1997**

Thousand tonnes

	Poultrymeat							
	1990	1991	1992	1993	1994	1995	1996	1997 ¹
Albania	0.2	4.0	—	9.7	14.8	18.9	18.7	8.6
Bulgaria	0.0	0.0	0.3	4.5	3.2	1.8	4.2	4.9 ²
Croatia	0.7	0.7	11.2	4.8	1.3	1.1	0.7	1.2
Estonia	n.a.	n.a.	n.a.	0.8	4.1	8.7	13.8	89.8
Latvia	1.9	n.a.	n.a.	1.1	1.5	1.4	4.5	6.8
Lithuania	n.a.	n.a.	n.a.	n.a.	1.6	2.6	5.4	n.a.
Romania	0.4	0.4	26.8	36.8	39.0	24.5	3.2	14.4
Slovak Republic	n.a.	0.8	1.0	4.1	2.6	2.9	3.0	2.9
Slovenia ³	n.a.	0.0	10.0	4.0	1.0	2.0	3.0	3.0
OECD Member countries⁴								
Czech Republic	0.1	0.1	0.4	1.1	4.8	8.6	13.5	16.6
Hungary	1.0	1.0	1.0	3.0	2.0	n.a.	n.a.	n.a.
Poland	1.0	17.0	55.0	77.0	60.8	33.6	44.1	n.a.

—: negligible.

n.a.: not available.

1. Provisional.

2. Nine months only.

3. The statistical office of Slovenia is presently undertaking major revisions of all historical data series. Data presented in this report has a closing date of March 1998.

4. Czech Republic joined the OECD in 1995, Hungary and Poland in 1996.

Source: OECD Secretariat.

Part II

TABLES FOR SELECTED NEW INDEPENDENT STATES (NIS)

Annex Table II.1. **Selected NIS: annual per cent change in GDP, 1991-1997**

	1991	1992	1993	1994	1995	1996	1997 ¹
Belarus	-1.2	-9.6	-7.6	-12.6	-10.4	2.8	10.4
Kazakhstan	-9.8	-2.9	-10.4	-12.6	-8.2	0.5	2.0
Russian Federation	-5.0	-14.5	-8.7	-12.7	-4.1	-4.9	0.4
Ukraine	-8.7	-9.9	-14.2	-22.9	-12.2	-10.0	-3.2

1. Provisional.

Source: OECD Secretariat.

Annex Table II.2. **Selected NIS: inflation, 1991-1997**

	1991	1992	1993	1994	1995	1996	1997
Belarus	148	1 559	1 997	1 960	244	39	63
Kazakhstan	147	2 961	2 165	1 158	60	29	11
Russian Federation	160	2 510	840	215	131	22	11
Ukraine	290	2 000	10 156	401	182	40	10

Note: Per cent change in Consumer Price Index, December-December.

Source: OECD Secretariat.

Annex Table II.3. **Exchange rates to US\$, annual average**

	Currency	1994	1995	1996	1997
Belarus	Rubel	4 652	11 525	13 608	24 995
Kazakhstan	Tenge	35.8	60.9	67.3	75.4
Russian Federation	Rouble ¹	2.203	4.554	5.124	5.785
Ukraine	Karbovanets	31 700	147 307	—	—
Ukraine	Hryvnia	—	—	1.889	—

1. New rouble redenominated.

Source: OECD Secretariat.

Annex Table II.4. **Selected NIS: per cent share of agriculture in GDP, 1990-1997**

	Current-year prices							
	1990	1991	1992	1993	1994	1995	1996	1997 ¹
Belarus	23.0	20.1	22.4	16.8	13.1	15.2	13.4	11.5
Kazakhstan	33.9	29.3	23.1	16.4	14.9	12.2	12.0	11.0
Russian Federation	15.4	13.7	7.2	7.4	6.0	6.9	6.7	6.5
Ukraine	24.4	24.5	20.8	21.5	14.3	13.4	11.8	10.5

1. Provisional.

Source: OECD Secretariat.

Annex Table II.5. **Selected NIS: working-age rural population, 1980-1997**

	Thousand									
	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
Belarus										
Rural population	4 157	3 771	3 369	3 318	3 310	3 283	3 236	3 193	3 146	3 132
Total population	9 663	9 986	10 213	10 233	10 298	10 319	10 297	10 264	10 236	10 203
Rural working-age population	2 147	1 897	1 560	1 520	1 506	1 489	1 426	1 463	1 444	1 426
Total working-age population	5 660	5 709	5 680	5 677	5 703	5 720	5 749	5 722	5 731	5 749
Rural working-age population as per cent of total rural population	52%	50%	46%	46%	46%	45%	44%	46%	46%	46%
Kazakhstan										
Rural population	6 863	6 969	7 105	7 125	7 188	7 268	7 299	7 242	7 165	7 112
Total population	14 991	15 739	16 618	16 721	16 892	16 914	16 442	16 151	15 981	15 861
Rural working-age population	3 358	3 536	3 609	3 604	3 634	3 681	3 755	3 734	3 708	3 704
Total working-age population	8 189	8 687	8 994	9 025	9 114	9 120	9 104	8 957	8 898	8 877
Rural working-age population as per cent of total rural population	49%	51%	51%	51%	51%	51%	51%	52%	52%	52%
Russian Federation										
Rural population	41 530	39 838	38 332	39 117	39 837	39 987	40 051	39 938	39 790	39 520
Total population	138 839	143 528	148 164	148 326	148 295	147 997	147 938	147 609	147 137	146 737
Rural working-age population	22 563	21 111	19 764	19 832	20 210	20 346	20 479	20 510	20 615	n.a.
Total working-age population	83 706	83 415	83 976	83 892	83 748	83 767	84 059	84 209	84 425	n.a.
Rural working-age population as per cent of total rural population	54%	53%	52%	51%	51%	51%	51%	52%	52%	n.c.
Ukraine										
Rural population	19 078	17 958	16 895	16 796	16 809	16 750	16 645	16 537	16 408	16 264
Total population	50 070	50 986	51 690	51 802	51 989	51 860	51 473	51 079	50 639	50 245
Rural working-age population	9 999	9 148	8 305	8 229	8 216	8 184	8 137	8 114	8 034	n.a.
Total working-age population	29 097	28 767	28 816	28 857	28 925	28 860	28 682	28 522	28 321	n.a.
Rural working-age population as per cent of total rural population	52%	51%	49%	49%	49%	49%	49%	49%	49%	n.c.

Notes: Permanent residents (holding residence permits) at end of period, except for Kazakhstan: permanent population, beginning of the year.

Non-invalid men between the ages of 16 and 65 and non-invalid women between the ages of 16 and 60 are "working age".

n.a.: not available.

n.c.: not calculated.

Source: OECD Secretariat.

Annex Table II.6. **Selected NIS: agricultural and total civilian employment, 1980-1997**

	1980		1985		1990		1992		1994		1995		1996 ³		1997 ³	
	Thousands	Per cent	Thousands	Per cent	Thousands	Per cent	Thousands	Per cent	Thousands	Per cent	Thousands	Per cent	Thousands	Per cent	Thousands	Per cent
Belarus																
All agriculture ¹	1 282	25.9	1 182	23.1	985	19.1	976	20.0	892	19.0	844	19.1	760	17.4	741	17.0
Total civilian	4 959	100.0	5 112	100.0	5 149	100.0	4 887	100.0	4 701	100.0	4 410	100.0	4 365	100.0	4 370	100.0
Kazakhstan																
All agriculture ¹	1 545	23.3	1 646	23.1	1 713	22.6	1 781	24.2	1 406	21.4	1 432	21.9	1 376	21.1	n.a.	n.a.
Total civilian	6 640	100.0	7 136	100.0	7 563	100.0	7 356	100.0	6 582	100.0	6 552	100.0	6 519	100.0	6 400	n.a.
Russian Federation																
All agriculture ¹	10 718	14.6	10 405	13.9	9 728	12.9	10 101	14.0	10 278	15.0	9 744	14.7	9 243	14.0	9 070	13.9
Large farms only	9 689	13.2	9 277	12.4	8 341	11.1	8 062	11.2	7 333	10.7	6 678	10.1	n.a.	n.a.	n.a.	n.a.
Total APK ²	16 211	22.1	16 036	21.4	15 889	21.1	14 968	20.8	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total civilian	73 275	100.0	74 937	100.0	75 325	100.0	72 071	100.0	68 484	100.0	66 441	100.0	65 950	100.0	65 400	100.0
Ukraine																
All agriculture ¹	5 733	22.6	5 350	20.9	4 960	19.5	4 920	20.1	4 750	20.6	5 258	22.2	5 006	21.4	4 935	21.8
Total civilian	25 335	100.0	25 592	100.0	25 419	100.0	24 505	100.0	23 025	100.0	23 726	100.0	23 232	100.0	22 600	100.0

n.a.: not available.

1. "All agriculture" (*sel'skoe khoziaistvo*) is assumed to mean production agriculture.

2. "APK": "Agro-industrial Complex", standard Soviet-type statistical construct approximately equivalent to "Agro-food sector".

3. Provisional.

Source: OECD Secretariat.

Annex Table II.7. **Selected NIS: production and delivery of inputs, 1980-1997**

			1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
Belarus												
Tractors	Produced	000 units	90	96	101	96	96	82	43	28	27	27
	Inventory ²	000 units	114	126	126	126	123	123	117	108	102	97
Grain combines	Delivered	000 units	n.a.	n.a.	3	1	1	0	0	0	0	0
	Inventory ²	000 units	27	34	30	29	27	26	24	23	21	20
Mineral fertilizer ¹	Produced	000 tonnes	4 931	5 972	5 996	5 170	4 080	2 513	2 981	3 349	3 382	3 874
	Delivered	000 tonnes	1 470	1 867	2 161	1 911	1 386	841	623	457	n.a.	n.a.
	Applied	000 tonnes	1 472	1 689	2 011	1 936	1 530	1 225	701	512	677	882
	Application rate	Kg/ha	163	186	233	224	192	157	90	66	89	115
Compound feed ³	Produced	000 tonnes	3 215	3 619	4 903	4 531	3 131	3 107	2 450	2 061	1 888	2 159
Gasoline	Delivered	000 tonnes	n.a.	579	672	637	583	459	328	265	273	276
Diesel fuel	Delivered	000 tonnes	n.a.	1 346	1 325	1 328	1 112	1 109	893	803	783	798
Kazakhstan												
Tractors	Produced	000 units	47	55	41	34	13	6	2	2	3	2
	Inventory ²	000 units	239	270	220	219	217	212	196	170	142	n.a.
Grain combines	Delivery	000 units	16	12	7	6	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Inventory ²	000 units	110	119	89	87	84	79	71	62	54	n.a.
Mineral fertilizer ¹	Produced	000 tonnes	1 262	1 430	1 656	1 516	880	304	126	197	191	151
	Delivered	000 tonnes	2 894	1 091	589	531	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Applied	000 tonnes	520	939	665	n.a.	n.a.	226	72	36	29	17
Compound feed ³	Produced	000 tonnes	n.a.	3 287	4 189	4 169	3 024	2 959	2 331	927	331	187
Russian Federation												
Tractors	Produced	000 units	249	261	214	178	137	89	29	21	14	13
	Delivered	000 units	177	187	144	131	65	40	22	10	9	8
	Inventory ²	000 units	1 472	1 592	1 520	1 500	1 444	1 381	1 274	1 168	980	978
Grain combines	Produced	000 units	117	112	66	55	42	33	12	6	3	2
	Delivered	000 units	75	70	38	32	17	14	9	4	3	2
	Inventory ²	000 units	448	511	408	394	371	347	317	292	285	248
Mineral fertilizer ¹	Produced	000 tonnes	11 772	17 304	15 979	15 042	12 300	9 917	8 266	9 639	9 076	9 532
	Delivered	000 tonnes	8 911	12 674	11 051	10 102	5 510	3 721	1 398	1 601	1 579	n.a.
	Applied	000 tonnes	7 480	9 790	9 923	10 100	8 600	4 295	2 091	1 487	1 473	1 500
	Application rate	Kg/ha	n.a.	n.a.	88	46	n.a.	n.a.	24	17	15	15
Compound feed ³	Produced	000 tonnes	32 464	37 896	40 976	37 405	27 426	25 218	18 137	14 300	9 600	6 700
Gasoline	Delivered	000 tonnes	18 300	18 500	11 264	10 633	9 456	6 223	3 670	3 345	2 945	n.a.
Diesel fuel	Delivered	000 tonnes	21 600	23 200	20 032	19 424	16 522	12 767	7 846	7 105	6 212	n.a.
Ukraine												
Tractors	Produced	000 units	136	136	106	90	71	55	16	10	5	5
	Delivered	000 units	49	54	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Inventory ²	000 units	469	503	495	497	511	506	499	469	442	406
Grain combines	Produced	000 units	—	—	—	—	—	—	—	—	—	—
	Delivered	000 units	13	15	9	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Inventory ²	000 units	110	110	107	105	103	100	97	91	86	79
Mineral fertilizer ¹	Produced	000 tonnes	4 086	5 074	4 815	4 238	3 261	2 492	2 340	2 221	2 449	2 326
	Applied	000 tonnes	3 400	4 228	4 242	n.a.	n.a.	2 021	n.a.	n.a.	525	562
	Application rate	Kg/ha	109	140	141	n.a.	n.a.	74	n.a.	n.a.	21	22
Compound feed ³	Produced	000 tonnes	15 832	15 607	16 471	14 536	11 322	9 730	7 957	6 439	4 111	1 279
Gasoline	Delivered	000 tonnes	n.a.	n.a.	2 897	2 857	2 297	1 921	1 678	1 480	1 231	1 025
Diesel fuel	Delivered	000 tonnes	n.a.	n.a.	5 371	5 173	4 405	4 155	3 856	3 622	3 014	2 965

n.a.: not available.

—: none.

1. Mineral fertilizer amounts are recalculated to a nominal 100 per cent of active ingredients.

2. "Inventory" is amount on hand in agricultural enterprises at end of period.

3. Compound feed (*kombikorma*) produced at state feed mills.

Source: OECD Secretariat.

Annex Table II.8. **Selected NIS: agricultural land use, 1980-1996**

Thousand hectares

	1980	1985	1990	1991	1992	1993	1994	1995	1996
Belarus									
Total area	20 759	20 760	20 760	20 760	20 760	20 760	20 760	20 760	20 760
Total agricultural land	9 728	9 720	9 415	9 403	9 391	9 354	9 346	9 339	9 333
Arable land	6 211	6 213	6 105	6 092	6 084	6 104	6 225	6 232	6 230
Permanent crops	153	151	153	164	177	144	147	147	146
Permanent meadows	1 519	1 455	1 323	1 321	1 311	1 288	1 266	1 254	1 258
Pastures	1 845	1 901	1 834	1 826	1 819	1 817	1 708	1 706	1 699
Irrigated area	163	159	149	143	132	131	124	115	115
Drained area	2 717	2 967	3 229	3 280	3 324	3 350	3 373	3 395	3 403
Kazakhstan									
Total area	272 490	272 490	272 490	272 490	272 490	272 490	272 490	272 490	272 490
Total agricultural land	223 934	224 724	222 452	222 368	222 303	222 338	222 255	222 224	220 362
Arable land	35 496	35 713	35 577	35 384	35 269	34 915	33 685	31 886	29 206
Permanent crops	137	141	165	186	153	147	146	144	141
Permanent meadows	6 079	5 738	5 185	5 121	5 103	5 096	5 069	5 053	5 028
Pastures	181 986	182 987	181 341	181 411	181 460	181 727	182 133	182 326	182 117
Irrigated area	2 130	2 233	2 380	2 393	2 402	2 385	2 382	2 380	2 358
Russian Federation									
Total area	1 707 500	1 707 500	1 707 500	1 707 500	1 707 500	1 707 500	1 707 500	1 707 500	1 707 500
Total agricultural land	229 929	228 959	222 128	222 125	222 332	220 788	220 767	220 958	220 607
Arable land	134 275	134 247	132 308	132 071	132 008	131 124	130 302	129 844	128 517
Permanent crops	1 348	1 328	1 511	1 813	2 007	1 776	2 000	2 074	1 949
Permanent meadows	29 737	28 916	23 470	23 322	23 237	23 834	23 593	23 841	23 235
Pastures	64 531	64 321	64 492	64 544	64 687	63 573	63 774	63 743	64 903
Irrigated area	5 009	5 822	6 180	6 139	5 722	5 496	5 367	5 114	4 994
Drained area	5 891	7 026	7 399	7 629	7 629	7 640	7 628	7 598	7 566
Ukraine									
Total area	60 355	60 355	60 355	60 356	60 356	60 355	60 355	60 355	60 355
Total agricultural land	42 558	42 402	42 030	41 973	41 930	41 890	41 861	41 853	41 840
Arable land	34 357	34 342	33 571	33 429	33 363	33 334	33 291	33 286	33 189
Permanent crops	1 158	1 079	1 058	1 073	1 094	1 083	1 066	1 043	1 022
Permanent meadows ¹	2 227	2 152	2 305	7 466	7 473	2 215	2 212	2 221	2 246
Pastures ¹	4 810	4 822	5 092	n.a.	n.a.	5 258	5 292	5 303	5 383
Irrigated area	2 014	2 457	2 601	2 631	2 607	2 605	2 591	2 585	2 517
Drained area	2 539	2 940	3 220	3 254	3 274	3 281	3 298	3 299	3 299

Note: "Total area" includes inland bodies of water.

n.a.: not available.

1. For 1991 and 1992, only the aggregate figure is available for permanent meadows and pastures.

Source: OECD Secretariat.

Annex Table II.9. **Selected NIS: crop sown areas,¹ 1980-1997**

Thousand hectares

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
Belarus										
Total sown area	6 308	6 241	6 126	6 038	6 005	5 979	5 992	6 150	6 180	6 207
All grains ²	3 139	2 816	2 645	2 606	2 698	2 714	2 720	2 692	2 671	2 718
Wheat	209	196	140	96	118	132	101	177	273	296
Barley	1 219	918	1 030	1 195	1 102	1 115	1 267	1 033	935	885
Rye	1 074	1 015	917	781	1 001	1 011	827	969	867	854
Oats	391	380	360	360	333	309	368	337	335	325
Sugar beet	52	59	46	45	51	55	58	55	45	47
Fiber flax	234	200	149	120	125	96	83	98	79	72
Potatoes	787	708	638	654	779	749	697	725	719	700
Vegetables	54	47	41	51	62	65	71	77	85	83
Kazakhstan										
Total sown area	36 390	35 796	35 182	34 936	34 839	34 060	31 662	28 679	25 644	21 874
All grains ²	25 340	25 129	23 356	22 753	22 596	22 250	20 710	18 877	17 188	15 681
Wheat	17 094	16 162	14 070	13 456	13 877	12 753	12 620	12 552	12 280	11 512
Barley	6 091	6 825	6 660	6 614	5 718	7 001	6 053	4 826	3 640	3 182
Rye	262	230	772	570	629	605	329	176	108	73
Oats	493	351	382	512	456	549	644	491	452	387
Maize	97	134	129	121	126	117	112	86	86	69
Seedcotton ³	127	131	120	117	112	111	111	110	106	104
Sugar beet	78	72	44	46	85	69	56	41	32	14
Sunflowers	103	104	137	190	297	271	282	346	336	224
Potatoes	191	191	206	217	247	244	218	206	189	176
Vegetables and melons	102	100	107	113	123	100	98	103	112	116
Vegetables	66	65	71	75	83	74	73	76	80	87
Russian Federation										
Total sown area	124 815	119 121	117 705	115 508	114 591	111 827	105 340	102 540	99 626	96 505
All grains ²	75 465	68 138	63 068	61 783	61 939	60 939	56 280	54 705	53 388	53 611
Wheat	34 000	25 284	24 244	23 152	24 284	24 666	22 190	23 909	25 707	26 026
Barley	18 554	16 144	13 723	15 282	14 564	15 478	16 404	14 710	11 793	12 493
Rye	6 125	7 214	8 008	6 480	7 592	6 000	3 903	3 247	4 147	4 005
Oats	9 901	10 981	9 100	9 032	8 540	8 402	8 333	7 928	6 904	6 436
Maize	590	1 080	869	733	810	800	524	643	622	918
Sugar beet	1 615	1 492	1 460	1 399	1 439	1 333	1 104	1 085	1 060	935
Sunflowers	2 380	2 320	2 739	2 576	2 889	2 923	3 133	4 127	3 874	3 585
Fiber flax	595	550	418	328	327	263	135	177	153	113
Potatoes	3 790	3 538	3 124	3 187	3 404	3 548	3 337	3 409	3 404	3 350
Vegetables and melons	742	676	764	807	826	781	796	875	859	897
Vegetables	n.a.	n.a.	618	662	682	684	704	758	737	749
Ukraine										
Total sown area	33 578	32 656	32 406	32 021	31 542	31 264	31 008	30 963	30 061	30 304
All grains ²	16 473	16 077	14 583	14 671	13 903	14 305	13 527	14 152	13 248	15 051
Wheat	8 031	6 667	7 576	7 023	6 328	5 772	4 562	5 509	6 148	6 674
Barley	3 474	3 148	2 729	3 191	3 451	4 242	5 192	4 507	3 653	3 908
Rye	799	652	519	491	500	510	490	609	636	711
Oats	707	634	492	496	495	516	625	570	515	574
Maize	1 498	2 581	1 223	1 461	1 161	1 343	668	1 174	703	1 678
Sugar beet	1 775	1 641	1 607	1 558	1 498	1 530	1 485	1 475	1 359	1 104
Sunflowers	1 683	1 480	1 636	1 601	1 641	1 637	1 784	2 019	2 107	2 065
Fiber flax	226	211	173	159	156	136	85	98	65	40
Potatoes	1 682	1 528	1 429	1 533	1 702	1 552	1 532	1 532	1 547	1 579
Vegetables and melons	607	614	582	599	619	567	523	603	565	587
Vegetables	497	499	456	477	500	474	457	504	476	480

n.a.: not available.

1. "Sown area" is total area ever seeded during the calendar year. It is therefore inflated by any area re-seeded (after winterkill, for instance). The harvested area is likely to be somewhat smaller.

2. "All grains" are wheat, barley, rye, oats, maize, buckwheat, millet, unmilled rice and pulses.

3. "Seedcotton" is cotton before ginning.

Source: OECD Secretariat.

Annex Table II.10. **Selected NIS: crop production, 1980-1997**

Thousand tonnes

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
Belarus										
All grains ¹	4 108	5 790	7 035	6 296	7 230	7 508	6 095	5 502	5 792	6 420
Wheat	302	401	381	242	330	354	230	439	600	744
Barley	1 693	2 378	2 908	3 032	2 934	3 165	3 013	1 965	2 194	2 359
Rye	1 515	1 848	2 652	1 962	3 063	2 826	1 864	2 143	1 794	1 788
Oats	493	786	806	760	723	871	760	638	707	822
Sugar beet	1 122	1 568	1 479	1 147	1 120	1 569	1 078	1 172	1 011	1 262
Fiber flax	61	85	52	76	61	57	49	60	49	26
Potatoes	9 333	10 553	8 590	8 958	8 984	11 644	8 241	9 504	10 881	6 942
Vegetables	733	828	749	918	838	1 048	1 029	1 031	1 204	1 177
Kazakhstan										
All grains ¹	25 930	22 694	28 488	11 992	29 772	21 631	16 454	9 506	11 237	12 378
Wheat	17 548	14 191	16 197	6 889	18 285	11 585	9 052	6 490	7 678	8 955
Barley	6 037	5 955	8 500	3 085	8 511	7 149	5 497	2 189	2 696	2 583
Rye	123	135	839	480	525	835	264	84	29	51
Oats	649	539	611	231	727	802	822	250	359	286
Maize	414	598	442	330	368	355	234	136	122	111
Seedcotton ²	358	305	324	292	252	200	208	223	183	198
Sugar beet	2 038	1 750	1 044	674	1 160	843	433	371	341	128
Sunflowers ³	83	83	126	93	99	86	97	99	64	54
Potatoes	2 238	2 197	2 324	2 143	2 296	2 296	2 040	1 720	1 656	1 472
Vegetables and melons	1 443	1 385	1 438	1 258	1 273	990	927	942	960	1 061
Vegetables	1 134	1 085	1 136	955	985	808	781	780	778	880
Russian Federation										
All grains ¹	97 233	98 564	116 676	89 094	106 855	99 094	81 297	63 406	69 341	88 505
Wheat	50 278	38 362	49 596	38 899	46 166	43 547	32 129	30 119	34 916	44 188
Barley	22 243	23 013	27 235	22 174	26 988	26 843	27 054	15 786	15 933	20 774
Rye	5 703	10 691	16 431	10 639	13 887	9 166	5 989	4 098	5 934	7 480
Oats	11 260	15 201	12 326	10 372	11 241	11 556	10 757	8 562	8 346	9 381
Maize	1 448	3 020	2 451	1 969	2 155	2 441	892	1 738	1 088	2 671
Sugar beet	24 130	31 450	32 327	24 280	25 548	25 468	13 946	19 072	16 166	13 841
Sunflowers	1 995	2 621	3 427	2 896	3 110	2 765	2 553	4 200	2 765	2 824
Fibre flax	120	126	71	102	78	58	54	69	59	23
Potatoes	36 971	33 840	30 848	34 329	38 330	37 650	33 828	39 909	38 652	37 015
Vegetables and melons	12 197	12 393	11 443	11 458	10 731	10 424	10 079	11 897	11 233	11 684
Vegetables	11 101	11 131	10 328	10 425	10 018	9 827	9 621	11 275	10 731	11 085
Ukraine										
All grains ¹	36 625	38 899	51 009	38 674	38 537	45 623	35 497	33 930	24 571	35 472
Wheat	20 567	16 482	30 374	21 155	19 507	21 831	13 857	16 273	13 547	18 404
Barley	6 910	7 763	9 169	8 047	10 106	13 550	14 509	9 633	5 726	7 407
Rye	1 064	1 036	1 260	982	1 158	1 180	942	1 208	1 094	1 348
Oats	1 119	1 396	1 303	945	1 246	1 479	1 385	1 116	731	1 062
Maize	4 070	8 228	4 737	4 747	2 851	3 786	1 539	3 392	1 837	5 340
Sugar beet	37 558	38 326	44 264	36 168	28 783	33 717	28 138	29 650	23 009	17 663
Sunflowers	2 119	2 168	2 571	2 311	2 127	2 075	1 569	2 860	2 123	2 308
Fibre flax	92	114	108	106	105	73	49	48	18	9
Potatoes	13 133	20 315	16 732	14 550	20 277	21 009	16 102	14 729	18 410	16 701
Vegetables and melons	7 911	8 336	7 458	6 698	5 556	6 369	5 324	6 377	5 432	5 448
Vegetables	7 186	7 384	6 666	5 932	5 310	6 055	5 142	5 880	5 070	5 168

1. "All grains" are wheat, barley, rye, oats, maize, buckwheat, millet, unmilled rice and pulses.

2. "Seedcotton" is cotton before ginning.

3. Cleanweight.

Source: OECD Secretariat.

Annex Table II.11. **Selected NIS: state crop procurements as per cent of total production, 1980-1997**

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
Belarus										
All grains ¹	25.1	36.5	17.6	17.2	23.0	24.7	30.5	31.4	30.2	27.3
Wheat	20.4	28.9	9.7	6.2	9.8	14.9	24.0	27.9	27.6	29.0
Barley	19.5	33.5	10.6	11.0	12.3	10.2	21.7	15.3	18.5	19.1
Rye	35.7	47.3	31.7	32.8	38.8	46.5	45.9	50.0	49.2	47.7
Oats	10.2	26.8	3.9	6.5	7.2	11.8	21.8	18.1	26.3	19.7
Sugar beet	84.5	89.4	89.0	91.9	79.9	89.3	87.8	60.5	75.2	81.6
Fiber flax	84.8	98.8	99.2	99.5	99.2	100.0	100.0	98.8	99.0	99.2
Potatoes	12.5	19.7	16.1	14.2	7.8	6.1	3.4	2.0	1.8	1.6
Vegetables	38.2	51.6	50.1	32.6	19.6	15.5	13.0	9.0	5.4	4.9
Kazakhstan										
All grains ¹	63.3	61.0	52.0	28.8	44.1	32.0	25.1	8.4	11.0	n.a.
Wheat	71.1	65.4	60.4	29.7	50.6	38.2	33.4	n.a.	13.9	n.a.
Barley	41.2	47.1	34.4	9.5	31.5	21.4	12.0	n.a.	4.1	n.a.
Rye	43.2	30.2	64.4	47.4	41.0	29.3	30.6	n.a.	7.0	n.a.
Oats	33.1	43.1	22.0	6.0	19.9	13.9	0.1	n.a.	1.6	n.a.
Maize	71.8	77.7	48.8	55.4	52.7	64.0	63.1	—	4.1	n.a.
Seedcotton ²	100.0	100.0	100.0	100.1	97.5	74.3	98.8	—	—	—
Sugar beet	94.2	100.9	99.0	91.4	38.0	30.4	0.2	—	—	—
Sunflowers	78.7	72.2	87.1	56.8	46.4	2.6	0.0	n.a.	—	—
Potatoes	28.4	31.1	24.6	16.7	10.2	6.3	2.7	0.2	—	—
Vegetables	66.6	71.3	59.5	47.6	31.4	19.4	10.5	2.9	—	—
Russian Federation										
All grains ¹	38.0	40.4	29.1	26.5	24.5	28.4	15.2	15.4	12.7	12.1
Wheat	47.4	45.8	37.0	33.8	27.3	34.8	25.1	21.1	14.6	n.a.
Barley	25.4	31.3	14.1	13.6	13.5	18.0	6.8	8.7	7.0	n.a.
Rye	38.3	54.1	43.9	39.6	42.1	48.7	22.4	27.5	26.7	n.a.
Oats	17.5	28.9	9.8	10.9	12.5	14.0	5.2	5.1	6.8	n.a.
Maize	35.6	30.9	21.6	29.8	22.7	13.9	12.5	4.2	1.4	n.a.
Sugar beet	84.8	88.9	77.7	76.8	42.0	27.7	6.3	3.3	n.a.	n.a.
Sunflowers	73.2	79.9	68.3	62.2	46.1	32.2	5.9	9.5	6.6	n.a.
Fibre flax	91.1	91.3	100.0	101.0	98.7	106.9	102.9	100.1	95.1	n.a.
Potatoes	18.3	21.6	18.6	13.9	7.8	4.4	2.3	1.8	1.4	1.1
Vegetables	63.0	70.0	63.6	42.7	29.8	21.6	15.2	10.6	7.8	6.3
Ukraine										
All grains ¹	31.0	36.3	30.2	29.7	28.7	31.6	31.0	17.8	17.7	12.0
Wheat	41.5	41.6	37.9	37.9	35.2	36.5	38.0	26.7	24.7	15.3
Barley	16.9	29.1	17.6	17.9	22.1	29.4	24.7	8.6	6.8	3.5
Rye	16.4	28.0	29.4	31.4	29.6	37.0	43.2	34.9	29.7	24.9
Oats	10.0	22.0	12.2	14.4	18.5	23.4	22.0	8.0	6.9	6.0
Maize	10.7	30.3	14.8	16.5	9.9	12.9	10.9	4.5	3.8	0.8
Sugar beet	100.0	100.0	97.8	94.7	92.3	86.8	69.9	0.1	0.02	n.a.
Sunflowers	78.4	84.5	79.3	78.3	64.3	49.3	15.7	2.6	3.6	n.a.
Fibre flax	97.7	98.1	97.9	98.0	99.0	100.0	100.0	93.2	99.7	100.0
Potatoes	7.6	15.5	11.0	7.1	4.6	3.8	2.1	1.0	0.8	0.4
Vegetables	64.9	70.7	58.1	46.3	33.0	25.4	16.3	9.1	2.9	2.1

n.a.: not available.

—: none or negligible.

1. "All grains" are wheat, barley, rye, oats, maize, buckwheat, millet, unmilled rice and pulses.

2. "Seedcotton" is cotton before ginning.

Source: OECD Secretariat.

Annex Table II.12. **Selected NIS: livestock inventories, 1980-1998**

Thousand head, as of 1 January

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Belarus											
All cattle	6 735	7 556	7 166	6 975	6 577	6 221	5 851	5 403	5 054	4 855	4 802
<i>of which: Cows</i>	2 748	2 738	2 439	2 362	2 314	2 220	2 199	2 180	2 137	2 043	1 999
Hogs	4 437	5 012	5 204	5 051	4 703	4 308	4 181	4 005	3 895	3 715	3 686
Sheep and goats	564	670	510	445	424	381	323	284	262	214	186
Horses	234	230	219	217	212	215	215	220	229	232	233
Poultry	37 270	44 308	49 768	50 617	51 703	48 949	47 308	45 265	40 145	40 788	40 538
Kazakhstan											
All cattle	8 337	9 028	9 818	9 757	9 592	9 576	9 347	8 073	6 860	5 425	4 307
<i>of which: Cows</i>	2 908	3 148	3 327	3 367	3 490	3 623	3 687	3 354	2 972	2 547	2 110
Hogs	3 105	2 666	3 262	3 224	2 976	2 591	2 445	1 983	1 623	1 036	879
Sheep and goats	35 067	36 057	36 223	35 661	34 556	34 420	34 208	25 132	19 584	13 679	10 384
Horses	1 258	1 449	1 619	1 626	1 666	1 704	1 777	1 636	1 557	1 310	1 083
Poultry	47 500	52 300	59 300	59 899	59 932	52 733	49 838	32 716	20 810	15 378	15 982
Russian Federation											
All cattle	58 600	60 044	58 841	57 043	54 677	52 226	48 914	43 297	39 696	35 103	31 719
<i>of which: Cows</i>	22 200	22 000	20 760	20 557	20 564	20 243	19 831	18 398	17 436	15 874	14 620
Hogs	36 400	38 732	39 982	38 314	35 384	31 520	28 557	24 859	22 631	19 115	17 292
Sheep and goats	66 900	64 464	61 305	58 195	55 255	51 368	43 712	34 540	28 027	22 772	19 319
Horses	2 600	2 600	2 619	2 618	2 590	2 556	2 490	2 431	2 363	2 197	n.a.
Poultry	543 000	616 600	653 640	659 808	652 211	568 278	565 184	490 849	422 601	371 866	360 442
Ukraine											
All cattle	25 552	26 669	25 195	24 623	23 728	22 457	21 607	19 624	17 557	15 313	12 759
<i>of which: Cows</i>	9 289	9 000	8 528	8 378	8 263	8 057	8 078	7 818	7 531	6 972	6 265
Hogs	20 149	20 880	19 947	19 427	17 839	16 175	15 298	13 946	13 144	11 236	9 479
Sheep and goats	9 185	9 297	9 003	8 419	7 829	7 237	6 863	5 575	4 099	3 047	2 362
Horses	874	831	754	738	717	707	716	737	756	754	737
Poultry	221 900	251 300	255 120	246 104	243 121	214 582	190 481	164 864	149 748	129 449	122 381

n.a.: not available.

Source: OECD Secretariat.

Annex Table II.13. **Selected NIS: production of livestock products, 1980-1997**

		1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
Belarus											
Total meat (carcass weight)	000 tonnes	857	1 032	1 181	1 065	950	820	743	657	623	625
Beef and veal	000 tonnes	411	470	586	530	495	411	384	316	277	275
Pigmeat	000 tonnes	350	424	438	382	323	284	252	263	273	272
Mutton, lamb and goat	000 tonnes	4	8	8	6	5	6	5	4	4	4
Poultry	000 tonnes	87	124	142	141	121	113	97	69	64	63
Milk	000 tonnes	6 105	6 759	7 457	6 812	5 885	5 584	5 510	5 070	4 908	5 088
Wool (physical weight)	Tonnes	1 122	1 223	958	772	682	583	459	396	328	300
Eggs	Millions	3 035	3 363	3 657	3 718	3 502	3 514	3 400	3 373	3 441	3 500
Kazakhstan											
Total meat (carcass weight)	000 tonnes	1 069	1 133	1 560	1 524	1 258	1 312	1 207	985	855	n.a.
Beef and veal	000 tonnes	465	506	710	724	596	662	642	548	463	n.a.
Pigmeat	000 tonnes	195	185	275	274	217	194	158	113	110	n.a.
Mutton, lamb and goat	000 tonnes	231	221	285	270	243	275	252	206	167	n.a.
Poultry	000 tonnes	126	166	201	185	139	114	80	53	39	n.a.
Milk	000 tonnes	4 597	4 763	5 642	5 555	5 265	5 577	5 296	4 619	3 627	3 592
Wool (physical weight)	000 tonnes	104	98	108	104	97	95	75	58	45	41
Eggs	Millions	3 369	3 803	4 185	4 075	3 565	3 288	2 629	1 841	1 262	1 263
Russian Federation											
Total meat (carcass weight)	000 tonnes	7 427	8 487	10 112	9 375	8 260	7 513	6 803	5 796	5 336	4 811
Beef and veal	000 tonnes	3 274	3 572	4 329	3 989	3 632	3 359	3 240	2 733	2 630	2 338
Pigmeat	000 tonnes	2 579	2 960	3 480	3 190	2 784	2 432	2 103	1 865	1 705	1 565
Mutton, lamb and goat	000 tonnes	338	321	395	347	329	359	316	261	230	201
Poultry	000 tonnes	1 134	1 527	1 801	1 751	1 428	1 277	1 068	859	690	632
Milk	000 tonnes	46 823	50 169	55 715	51 886	47 236	46 524	42 174	39 241	35 819	34 066
Wool (physical weight)	000 tonnes	213	217	227	205	179	158	122	94	77	60
Eggs	Millions	39 539	44 277	47 470	46 875	42 902	40 297	37 473	33 830	31 902	31 884
Ukraine											
Total meat (carcass weight)	000 tonnes	3 500	3 918	4 358	4 029	3 401	2 815	2 677	2 294	2 113	1 844
Beef and veal	000 tonnes	1 556	1 740	1 985	1 878	1 656	1 379	1 427	1 186	1 048	922
Pigmeat	000 tonnes	1 315	1 436	1 576	1 421	1 180	1 013	916	807	789	694
Mutton, lamb and goat	000 tonnes	29	35	46	40	35	31	44	40	32	25
Poultry	000 tonnes	522	636	708	654	498	362	265	235	218	187
Milk	000 tonnes	21 112	23 039	24 508	22 409	19 114	18 377	18 138	17 274	15 821	13 700
Wool (physical weight)	000 tonnes	27	29	30	27	23	21	19	14	9	7
Eggs	Millions	14 606	16 645	16 287	15 188	13 496	11 794	10 154	9 404	8 763	8 246

n.a.: not available.

Source: OECD Secretariat.

Annex Table II.14. **Selected NIS: state procurement of livestock products as per cent of total production, 1980-1997**

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
Belarus										
Meat	73.9	77.5	90.1	88.3	84.2	79.8	72.6	57.5	57.2	57.0
Milk	63.7	72.0	82.8	80.1	69.0	66.0	58.7	49.1	50.1	57.8
Eggs	49.2	50.6	49.6	50.2	49.6	50.8	48.3	46.3	49.3	45.4
Kazakhstan										
Meat	68.0	68.6	51.2	49.6	35.8	29.3	16.6	7.0	n.a.	n.a.
Milk	50.3	55.9	58.4	52.7	40.5	37.1	26.4	14.0	n.a.	n.a.
Eggs	57.3	59.5	61.5	57.8	46.6	46.4	40.4	21.8	n.a.	n.a.
Russian Federation										
Meat	67.0	71.0	74.0	62.0	54.0	50.0	43.0	35.5	30.8	24.7
Milk	65.0	70.0	72.0	66.0	55.0	53.0	44.8	40.7	35.0	34.3
Eggs	67.0	70.0	71.0	65.0	57.0	60.0	54.5	54.3	52.7	49.2
Ukraine										
Meat	63.3	63.4	72.9	64.5	62.5	53.1	43.8	31.2	25.9	21.0
Milk	61.7	69.6	73.3	68.6	59.9	57.1	45.5	35.1	25.4	19.2
Eggs	56.0	58.9	53.7	49.9	41.0	37.1	27.0	22.0	17.4	12.3

n.a.: not available.

Source: OECD Secretariat.

Annex Table II.15. **Selected NIS: per cent share of household plots in production, 1980-1997**

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
Belarus										
Potatoes	52	49	54	65	72	75	85	87	84	85
Vegetables	48	33	33	55	70	73	76	77	81	81
Fruits and berries	91	94	91	96	92	93	95	95	87	90
Meat	28	26	14	15	17	20	22	26	28	25
Milk	34	31	24	26	32	35	36	40	41	40
Eggs	43	40	39	38	41	41	43	42	41	39
Wool	15	28	33	41	48	57	68	72	83	80
Kazakhstan										
Potatoes	55	51	54	61	67	71	78	86	85	85
Vegetables	35	26	34	38	38	56	62	68	70	69
Fruits and berries (without citrus)	56	56	56	79	47	66	57	72	64	80
Meat	34	32	33	35	44	50	62	61	66	71
Milk ¹	41	44	46	48	55	58	64	70	76	82
Eggs	38	33	32	32	37	39	42	39	45	46
Wool	19	24	27	30	37	35	46	50	53	68
Russian Federation										
Potatoes	65	61	66	72	78	82	88	90	90	91
Vegetables	33	25	30	46	55	65	67	73	77	76
Fruits and berries	46	48	51	65	69	69	77	77	79	80
Meat	30	26	25	37	35	40	43	49	52	55
Milk ¹	27	25	25	26	31	35	39	41	45	47
Eggs	27	23	22	22	26	27	29	30	31	30
Wool ¹	20	20	25	28	32	35	37	43	46	51
Ukraine										
Potatoes	75	67	71	78	85	85	92	96	95	97
Vegetables	27	25	27	39	52	56	65	73	82	82
Meat	34	33	29	32	35	41	44	52	58	63
Milk	27	26	24	26	32	36	40	45	52	60
Eggs	41	37	38	39	45	48	54	56	58	63

Notes: Per cent of physical volume of production.

Belarus data for production are divided into "kolkhozy and goskhozy" and "farms (khoziaistva) of the population." Household plot production is therefore increased by the amount of individual farmers' production for the years since 1989 when individual farms began to be established.

1. Data explicitly include contract sales to large farms.

Source: OECD Secretariat.

Annex Table II.16. **Selected NIS: food industry output, 1980-1997**

Thousand tonnes

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
Belarus										
Meat, including category I subproducts ¹	578	728	889	792	676	554	475	381	340	324
Sausage	135	173	217	210	220	196	164	141	150	151
Butter	100	126	159	137	99	87	74	65	62	72
Cheese	36	49	65	57	39	35	35	25	30	37
Whole milk products (in fluid milk equivalent)	1 043	1 334	1 776	1 652	1 448	1 387	1 275	801	747	812
Total canned goods (million standard cans)	596	660	789	728	625	597	465	310	317	365
of which:										
Dairy products	130	133	168	155	92	83	84	75	96	113
Meat	55	78	90	89	79	69	59	29	26	43
Fish and other seafood	7	5	5	5	5	4	4	4	5	9
Fruits and vegetables	404	443	525	478	450	439	318	203	191	202
Total sugar	298	335	347	335	233	153	144	140	226	352
of which: From sugar beet	110	146	161	154	122	122	128	128	132	147
Macaroni products	49	52	60	65	67	55	42	36	36	37
Bread and bakery products	1 632	1 648	1 583	1 547	1 507	1 494	1 345	1 037	992	939
Flour	2 727	2 914	3 091	3 013	2 188	1 886	1 698	1 417	1 393	1 062
Groats	189	217	229	229	166	136	92	73	59	96
Margarine	105	119	108	72	37	36	19	17	25	23
Vegetable oil	15	20	26	25	8	5	5	7	10	10
Table salt	n.a.	193	356	358	295	274	263	219	231	297
Confectionery goods	154	168	173	160	113	106	94	73	83	118
Vodka and liqueurs, million decalitres	8	7	9	11	12	14	14	15	12	13
Wine, million decalitres	13	12	7	7	3	1	6	6	9	13
Kazakhstan										
Meat, including category I subproducts ¹	608	665	899	846	633	609	412	273	173	120
Sausage	121	126	155	152	97	83	55	35	22	16
Butter	60	69	85	76	62	70	47	30	15	7
Cheese	24	29	35	33	23	23	18	12	9	6
Whole milk products (in fluid milk equivalent)	1 107	1 225	1 470	1 393	1 074	755	552	279	250	198
Total canned goods (million standard cans)	411	391	442	369	303	247	177	81	55	37
of which:										
Dairy products	n.a.	n.a.	1	1	2	2	1	0	0	0
Meat	144	156	132	130	105	87	65	38	13	4
Fish and other seafood	32	34	38	37	31	28	21	10	12	12
Fruits and vegetables	n.a.	119	173	133	114	78	52	18	18	n.a.
Total granulated sugar	272	337	319	307	213	164	97	97	120	142
of which: From sugar beet	159	150	88	66	127	101	48	30	31	13
Macaroni products	88	109	133	136	137	130	123	79	69	60
Bread and bakery products	1 405	1 499	1 291	1 351	1 518	1 591	1 508	853	631	538
Flour	1 833	1 963	1 962	2 014	1 970	1 940	1 960	1 575	1 593	1 476
Groats	332	350	364	363	342	313	254	141	87	88
Margarine	76	84	71	48	35	18	16	3	2	6
Vegetable oil	84	74	95	101	60	49	45	44	41	31
Table salt	1 058	963	1 074	995	964	763	527	313	230	36
Confectionery goods	202	221	259	214	144	113	78	29	40	49
Vodka and liqueurs, million decalitres	14	13	11	10	9	9	8	6	5	10
Wine, million decalitres	17	12	7	8	5	2	1	1	1	1
Russian Federation										
Meat, including category I subproducts ^{1, 2}	n.a.	5 334	6 629	5 815	4 784	4 099	3 282	2 416	1 937	1 464
Sausage	n.a.	1 944	2 283	2 077	1 547	1 493	1 545	1 293	1 296	1 139
Butter	n.a.	721	833	729	762	732	488	421	323	277
Cheese	n.a.	407	458	394	299	313	285	218	193	165

Annex Table II.16. **Selected NIS: food industry output, 1980-1997** (cont.)

	Thousand tonnes									
	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
Whole milk products (in fluid milk equivalent, million tonnes)	n.a.	18	21	19	10	8	7	6	5	5
Whole milk and cream powder	n.a.	170	231	175	75	48	18	n.a	n.a	n.a
Total canned goods (million standard cans)	n.a.	7 057	8 206	6 944	5 353	4 517	2 817	2 428	2 158	2 162
<i>of which:</i>										
Dairy products	n.a.	769	980	767	629	682	582	527	544	569
Meat	n.a.	547	545	478	558	488	352	348	380	287
Fish and other seafood	n.a.	2 204	2 335	1 982	1 332	918	591	574	471	467
Fruits and vegetables	n.a.	n.a.	3 060	2 712	2 222	1 913	834	645	560	564
Total granulated sugar	n.a.	3 642	3 758	3 426	3 923	3 918	2 736	3 155	3 284	3 765
<i>of which:</i> From sugar beet	n.a.	2 569	2 630	2 052	2 248	2 497	1 655	2 064	1 711	1 337
Macaroni products	n.a.	946	1 038	1 115	1 102	836	680	603	444	455
Bread and bakery products (million tonnes)	n.a.	19	18	19	17	15	12	11	10	9
Flour, ² million tonnes	n.a.	23	21	21	20	18	16	14	12	11
Groats, million tonnes	n.a.	3	3	3	2	2	2	1	1	1
Margarine	n.a.	822	808	627	560	438	278	198	200	222
Vegetable oil	n.a.	775	1 159	1 165	994	1 127	909	802	879	687
Table salt, million tonnes	n.a.	6	4	4	4	2	2	3	2	2
Confectionery goods	n.a.	2 268	2 869	2 641	1 829	1 746	1 530	1 372	1 262	1 347
Vodka and liqueurs, million decalitres	n.a.	161	138	154	152	157	125	123	71	87
Wine, million decalitres	n.a.	143	76	65	40	25	21	15	11	12
Ukraine										
Meat, including category I subproducts ¹	2 074	2 357	2 763	2 488	2 050	1 487	1 291	957	760	348
Sausage	686	768	900	852	758	500	437	277	213	161
Butter	336	390	444	376	303	312	254	222	162	109
Cheese	128	170	184	162	113	102	105	74	59	45
Whole milk products (in fluid milk equivalent)	4 888	5 687	6 432	5 709	4 112	2 801	2 220	1 293	915	517
Total canned goods (million standard cans)	3 488	3 978	4 836	4 239	3 760	3 457	2 017	1 444	1 012	933
<i>of which:</i>										
Dairy products	335	346	415	350	246	229	192	177	153	127
Meat	151	165	204	188	201	174	219	159	149	111
Fish and other seafood	240	292	352	320	197	90	80	86	111	106
Fruits and vegetables	2 763	3 175	3 865	3 381	3 117	2 964	1 527	1 022	599	589
Total granulated sugar	5 302	6 247	6 791	4 786	3 647	3 993	3 368	3 894	3 296	2 032
<i>of which:</i> From sugar beet	3 977	4 366	5 388	3 844	3 527	3 854	3 354	3 500	2 702	2 032
Macaroni products	309	330	360	365	350	340	253	223	172	124
Bread and bakery products	7 375	7 348	6 701	6 685	6 441	5 444	4 816	4 114	3 452	2 707
Flour	7 485	8 157	7 671	7 383	6 625	6 587	5 715	5 319	4 963	3 532
Groats	773	873	962	944	804	695	605	532	456	265
Margarine	264	276	289	267	249	173	106	109	89	84
Vegetable oil	941	846	1 070	1 004	858	803	634	696	705	412
Table salt	5 968	8 018	8 309	8 394	7 409	3 877	3 237	2 867	2 848	2 615
Confectionery goods	802	924	1 111	1 040	843	647	410	315	283	316
Vodka and liqueurs, million decalitres	35	29	31	34	37	40	36	38	24	26
Wine, million decalitres	55	49	27	27	21	14	12	14	12	7

n.a.: not available.

1. "Category 1 subproducts" are tongue, liver, lungs, and pigs' heads.

2. These data "include an allowance for production by small and joint enterprises, as well as processing enterprises that are part of non-industrial enterprises".

Source: OECD Secretariat.

Annex Table II.17. **Selected NIS: annual per capita food consumption, 1980-1997**

	Kilogrammes									
	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997 ¹
Belarus										
Meat and meat products	61	70	75	73	72	70	63	58	59	60
Milk and dairy products ²	369	399	425	415	396	384	378	363	364	370
Eggs (pieces)	294	315	323	320	305	306	302	294	295	297
Sugar	43	45	49	42	31	30	25	32	32	32
Vegetable oil	7	8	9	7	7	6	5	6	7	7
Potatoes	200	185	170	165	169	178	175	180	185	180
Vegetables and melons	77	81	78	78	76	78	79	82	86	84
Fruits and berries	30	60	38	35	37	43	38	37	38	36
Cereal products ³	140	131	126	126	119	122	120	120	120	121
Kazakhstan										
Meat and meat products	55	57	71	71	61	59	58	52	50	50
Milk and dairy products ²	273	260	304	304	270	260	251	229	211	188
Eggs (pieces)	207	218	221	207	175	170	143	97	70	69
Sugar	39	37	34	30	26	18	19	19	18	18
Vegetable oil	8	10	11	9	6	7	7	8	7	8
Potatoes	87	90	85	75	90	80	77	70	67	68
Vegetables and melons	81	86	74	63	62	50	54	56	52	55
Fruits and berries	26	36	25	27	17	10	10	11	10	9
Cereal products ³	n.a.	n.a.	102	103	153	180	203	185	185	200
Russian Federation										
Meat and meat products	62	67	75	69	60	59	57	55	52	51
Milk and dairy products ²	328	344	386	347	281	294	278	253	240	235
Eggs (pieces)	279	299	297	288	263	250	236	214	200	200
Sugar	47	45	47	38	30	31	31	32	34	32
Vegetable oil	9	10	10	8	7	7	7	7	8	n.a.
Potatoes	118	109	106	112	118	127	122	124	124	126
Vegetables and melons	94	98	89	86	77	71	68	76	75	74
Fruits and berries	37	46	35	35	32	29	28	29	28	28
Cereal products ³	126	119	119	120	125	124	124	124	127	128
Ukraine										
Meat and meat products	61	66	68	66	53	46	44	39	37	34
Milk and dairy products ²	331	350	373	346	285	264	256	244	230	210
Eggs (pieces)	239	276	272	256	227	206	183	171	161	148
Sugar	52	47	50	50	45	39	33	32	33	28
Vegetable oil	10	11	12	11	11	10	9	8	9	8
Potatoes	134	139	131	116	133	150	136	124	128	133
Vegetables and melons	115	124	103	103	89	90	84	97	92	91
Fruits and berries	40	50	47	37	38	40	27	33	35	40
Cereal products ³	146	138	141	143	143	145	135	128	124	128

Note: these figures are calculated by the relevant country's statistical agency based on a food balance and total population.

n.a.: not available.

1. Provisional.

2. In fluid milk equivalent.

3. "Cereal products" include flour, groats, and pulses. Bread and macaroni in flour equivalent.

Source: OECD Secretariat.

Part III

TABLES FOR PSE RESULTS

PRODUCER SUBSIDY EQUIVALENTS AND CONSUMER SUBSIDY EQUIVALENTS: CONCEPTS AND METHODS

The PSE is an indicator of the value of the monetary transfers to agriculture resulting from agricultural policies in a given year. Both transfers from consumers of agricultural products (through domestic market prices) and transfers from taxpayers (through budgetary or tax expenditures) are included. Five categories of agricultural policy measures are included in the calculations of PSEs:

- i) all measures that transfer money to producers through affecting producer and consumer prices simultaneously, such as support prices and trade measures (**Market Price Support**);
- ii) all measures that transfer money directly from taxpayers to producers, without raising prices to consumers (**Direct Payments**);
- iii) all measures that lower input costs with no distinction being made between subsidies to capital and those to other inputs (**Reduction in Inputs Costs**);
- iv) measures that in the long term reduce costs but which are not directly received by producers (**General Services**);
- v) finally, other measures, the main elements of which are **sub-national** (e.g., measures funded by state or provincial governments), and certain tax concessions (**other support**).

In the case of economies in transition however, it is important to bear in mind the specific characteristics of policies both during the pre-reform period and at the beginning of the transition period. In effect, in economies in transition, policies determining market price support before the reform consisted of the setting of fixed prices and margins at various points in the food chain, the state monopoly in agro-food trade and the setting of exchange rates. Thus it could be said that the relationship between domestic and external reference prices was largely meaningless and had little relation to real economic conditions at that time. On the other hand, at the beginning of the transition period, price gaps were highly influenced by macroeconomic conditions combined with slow adjustments of domestic prices to world market levels (the “transition inertia” which is not specific to the agricultural sector), as well as by marketing inefficiencies and deficiencies in infrastructure. In these circumstances, the all-embracing price gap method should not be interpreted as a result of agricultural policy alone, as its impact on the price gap may be negligible compared to the other factors.

In practice, PSEs for individual countries are rarely all-inclusive. Transfers associated with the underpricing of irrigation water, for example, and tax concessions, are often omitted for lack of data. Coverage of subnational measures is also in some cases incomplete. The PSE calculations include all the transfers that specifically result from agricultural policies. However, they exclude certain budget outlays on policy measures, such as subsidies specific to food processing and distribution sectors, outlays that are not specific to the agricultural sector (e.g. certain transport subsidies), outlays for stockholding, and budgetary payments associated with measures that result in the permanent withdrawal of resources from agriculture. In those cases in which it is not possible to allocate budgetary subsidies in categories ii) to v) to individual commodities, this is done according to the share of each commodity in total agricultural output.

In order to avoid double-counting in the calculation of aggregate and average PSEs, an estimate is made to account for the effects of the market price support element of agricultural policies in redistributing transfers within the agricultural sector. This is the **feed adjustment** to the PSE calculations. It is carried out for all livestock products to account for the effects of market price support for feed grains

and oilseeds and of taxes on processed feedstuffs in increasing the costs of animal feed to livestock producers. Transfers to producers before deduction of the feed adjustment is called the **Gross PSE**. Transfers to producers after deduction of the feed adjustment is called the **Net PSE**.

The PSE is expressed in three ways:

- **Total PSE:** the total value of transfers to producers;
- **Percentage PSE:** the total value of transfers as a percentage of the total value of production (valued at domestic prices), adjusted to include direct payments and to exclude levies;
- **Unit PSE:** the total value of transfers per tonne.

In algebraic form, these PSE expressions are written as:

Gross Total PSE: $Q \times (P - PWnc) + DP - LV + OS$

Net Total PSE: $Q \times (P - PWnc) + DP - LV + OS - FA$

Unit PSE: $PSE_u = PSE/Q$

Percentage PSE = $100 \times PSE/(Q \times P + DP - LV)$

where:

Q = volume of production;

P = domestic producer reference price (in practice, this may be a farm gate price suitably adjusted to include handling margins to the frontier where it is compared to the world or external reference price. In which case, the rate of assistance at the farm gate is assumed to be the same as that measured at the frontier and the above formulae for the Net and Gross PSE are simplifications);

$PWnc$ = world price (reference price) at the border in domestic currency;

DP = direct payments;

LV = levies on production;

OS = all other budgetary-financed support;

FA = feed adjustment (only for livestock products).

The CSE is an indicator of the value of monetary transfers to consumers resulting from agricultural policies in a given year. CSEs consist of the consumer transfer, which is usually measured through the same price gap calculation made for PSEs. In addition, there may be direct budgetary subsidies to consumers that are often employed to reduce the impact of high market prices that consumers pay to producers.

Two categories of agricultural policy measures are included in the OECD calculations of CSEs:

- i) transfers from consumers to producers due to market price support (**Market Transfers**);
- ii) budgetary transfers to consumers resulting from agricultural policies (**Other Transfers**).

Normally, "market transfers" are negative and are larger in absolute terms than "other transfers"; in such cases the CSE can be thought of as the implicit tax imposed on consumers by agricultural policies.

The CSE is also expressed in three ways:

- **Total CSE:** the total value of transfers from consumers;
- **Percentage CSE:** the total value of transfers as a percentage of the total value of consumption (valued at the implicit consumer price, see below) including transfers such as consumer subsidies;
- **Unit CSE:** the total value of transfers per tonne;

In algebraic form, these CSE expressions, as measured by the OECD, are written as:

Total CSE: $CSE = -Q_c \times (P_c - PWnc) + OT$.

Unit CSE: $CSE_u = CSE/Q_c$

Percentage CSE = $100 \times CSE/(Q_c \times P_c)$

where:

P_c = implicit consumer price (defined as the farm gate producer price, less unit market price support, plus unit market transfers. As these unit values are usually equal, the implicit consumer price usually equals the farm gate producer price);

Q_c = volume of consumption;

OT = budgetary subsidies to consumers resulting from agricultural policies.

There is thus a very close relationship between the values of PSEs and CSEs. All market price support policies that create a wedge between domestic and world prices raise consumer prices: a positive (negative) transfer to producers from consumers is equivalent to a subsidy (tax) to producers and a tax (subsidy) on consumers. Specific consumer subsidies from government budgets, such as food subsidies, paid in implementing agricultural policies, partly offset consumer taxes. Direct payments and other support, which are implemented through the budget, raise the effective price received by producers but they do not raise the price paid by consumers.

Annex Table III.1. **Estonia: aggregate Producer Subsidy Equivalents and Consumer Subsidy Equivalents, 1986-1997**

	Units	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996p	1997e
PSE													
Adjusted value of production	LC mn	1 358	1 350	1 325	1 398	1 662	3 166	2 105	2 928	3 000	3 509	4 358	4 528
A. Market price support	LC mn	1 127	1 088	1 014	993	1 284	2 361	-2 196	-1 064	-353	25	277	342
B. Direct payments	LC mn	16	19	55	57	77	84	45	2	0	0	0	0
C. Reduction of input costs	LC mn	90	97	60	75	13	21	22	20	19	23	36	46
D. General services	LC mn	34	34	33	34	34	60	53	96	90	146	95	69
E. Sub-national	LC mn	0	0	0	0	0	0	0	0	0	0	0	0
F. Other indirect measures	LC mn	0	0	0	0	0	0	0	0	0	0	0	0
Gross total PSE	LC mn	1 267	1 238	1 162	1 160	1 409	2 527	-2 076	-946	-244	195	408	457
Feed adjustment	LC mn	-198	-164	-99	-47	-214	-731	168	80	51	-87	-51	-71
Net total PSE	LC mn	1 068	1 074	1 062	1 113	1 195	1 796	-1 908	-866	-193	108	358	403
Net percentage PSE	%	79	80	80	80	72	57	-91	-30	-6	3	8	9
CSE													
Total value of consumption	LC mn	1 085	1 015	993	949	1 272	2 642	2 237	2 566	2 893	3 509	4 506	4 826
A. Market transfers	LC mn	-896	-817	-762	-685	-1 021	-2 081	1 877	874	248	16	-186	-290
B. Other transfers	LC mn	672	666	623	669	688	85	48	0	0	0	0	0
Total CSE	LC mn	-224	-151	-138	-16	-333	-1 996	1 925	874	248	16	-186	-290
Percentage CSE	%	-21	-15	-14	-2	-26	-76	86	34	9	0	-4	-6

e: estimate; p: provisional.

LC: Local currency. Roubles for 1986-1991, kroons as from 1992.

Source: OECD Secretariat.

Annex Table III.2. **Estonia: Producer Subsidy Equivalents by commodity, 1986-1997**

	Units	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996p	1997e
Wheat													
Gross total PSE	LC mn	11	7	2	2	14	78	8	-5	2	4	3	31
Gross unit PSE	LC/T	166	137	97	37	218	1 268	85	-47	28	65	33	309
Gross percentage PSE	%	82	79	66	32	77	92	6	-4	2	4	2	15
Maize													
Gross total PSE	LC mn	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.
Gross unit PSE	LC/T	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.
Gross percentage PSE	%	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.
Other grains													
Gross total PSE	LC mn	165	143	53	87	220	601	-107	-100	-38	103	119	118
Gross unit PSE	LC/T	205	173	127	96	253	702	-215	-147	-87	269	241	266
Gross percentage PSE	%	90	90	73	59	83	86	-26	-17	-11	20	13	15
Oilseeds													
Gross total PSE	LC mn	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	3	0	1	5	2	1
Gross unit PSE	LC/T	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	1 121	-142	178	857	207	130
Gross percentage PSE	%	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	43	-6	7	28	7	4
Sugar													
Gross total PSE	LC mn	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	2	1	2	-1	0	n.c.
Gross unit PSE	LC/T	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	2 152	894	1 668	-618	-897	n.c.
Gross percentage PSE	%	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	124	40	45	-39	-82	n.c.
Crops													
Gross total PSE	LC mn	176	150	55	89	235	679	-95	-105	-34	111	124	150
Gross percentage PSE	%	89	90	73	58	83	87	-17	-15	-8	18	11	15
Milk													
Net total PSE	LC mn	378	393	414	407	382	592	-624	-260	-104	173	390	427
Net unit PSE	LC/T	298	304	321	319	316	542	-678	-322	-134	245	578	599
Net percentage PSE	%	84	83	80	81	74	59	-76	-25	-9	12	22	22
Beef and veal													
Net total PSE	LC mn	251	254	260	255	294	295	-488	-315	-189	-248	-178	-209
Net unit PSE	LC/T	4 059	4 049	4 416	4 358	4 674	5 664	-10 757	-7 389	-6 094	-9 623	-8 073	-9 892
Net percentage PSE	%	84	84	87	86	79	59	-231	-53	-37	-57	-42	-52
Pigmeat													
Net total PSE	LC mn	176	196	239	246	185	166	-505	-118	124	-10	-47	-37
Net unit PSE	LC/T	1 796	1 903	2 271	2 374	1 945	2 202	-10 090	-3 411	4 142	-271	-1 486	-1 262
Net percentage PSE	%	59	65	75	79	53	27	-159	-30	22	-1	-7	-5
Poultry													
Net total PSE	LC mn	51	48	56	72	67	-13	-56	8	39	53	46	38
Net unit PSE	LC/T	2 452	2 358	2 514	2 848	3 097	-601	-5 478	1 607	5 930	9 225	10 711	8 534
Net percentage PSE	%	81	82	85	92	78	-12	-83	13	35	48	44	35
Eggs													
Net total PSE	LC mn	37	32	39	44	32	78	-139	-77	-29	29	23	33
Net unit PSE	LC/T	1 077	925	1 073	1 179	931	2 221	-4 886	-3 560	-1 302	1 332	1 216	1 812
Net percentage PSE	%	75	64	72	82	59	48	-103	-57	-15	14	9	12
Livestock production													
Net total PSE	LC mn	893	924	1 007	1 024	960	1 117	-1 813	-761	-159	-3	234	254
Net percentage PSE	%	77	78	81	82	70	47	-117	-34	-6	0	7	7
All products													
Net total PSE	LC mn	1 068	1 074	1 062	1 113	1 195	1 796	-1 908	-866	-193	108	358	403
Net percentage PSE	%	79	80	80	80	72	57	-91	-30	-6	3	8	9

e: estimate; p: provisional.

n.c.: not calculated.

LC: Local currency. Roubles for 1986-1991, kroons as from 1992.

Source: OECD Secretariat.

Annex Table III.3. **Latvia: aggregate Producer Subsidy Equivalents and Consumer Subsidy Equivalents, 1986-1997**

	Units	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996p	1997e
PSE													
Adjusted value of production	LC mn	2 446	2 463	2 938	2 953	2 831	5 398	39 608	230	230	235	256	254
A. Market price support	LC mn	1 875	1 837	1 986	1 909	2 114	5 019	-43 595	-102	8	2	3	9
B. Direct payments	LC mn	228	235	521	494	251	0	70	0	3	5	4	5
C. Reduction of input costs	LC mn	82	87	87	104	35	191	97	1	2	2	1	2
D. General services	LC mn	63	65	55	63	66	561	595	2	3	5	2	3
E. Sub-national	LC mn	0	0	0	0	0	0	0	0	0	0	0	0
F. Other indirect measures	LC mn	0	0	0	0	0	0	0	0	0	0	0	0
Gross total PSE	LC mn	2 248	2 225	2 649	2 570	2 466	5 771	-42 833	-99	17	14	9	19
Feed adjustment	LC mn	-118	-141	-98	-130	-284	-1 301	6 143	11	4	4	2	0
Net total PSE	LC mn	2 131	2 084	2 551	2 440	2 182	4 471	-36 690	-88	21	18	11	19
Percentage PSE	%	87	85	87	83	77	83	-93	-38	9	8	4	8
CSE													
Total value of consumption	LC mn	1 741	1 790	1 953	1 953	2 118	4 855	40 323	238	262	284	316	295
A. Market transfers	LC mn	-1 431	-1 445	-1 554	-1 477	-1 712	-4 526	34 659	61	-28	-9	-11	-20
B. Other transfers	LC mn	801	811	718	865	1 253	382	0	0	0	0	0	0
Total CSE	LC mn	-630	-635	-836	-612	-459	-4 144	34 659	61	-28	-9	-11	-20
Percentage CSE	%	-36	-35	-43	-31	-22	-85	86	26	-11	-3	-4	-7

e: estimate; p: provisional.

LC: Local currency. Roubles for 1986-1992, LVL as from 1993.

Source: OECD Secretariat.

Annex Table III.4. **Latvia: Producer Subsidy Equivalents by commodity, 1986-1997**

	Units	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996p	1997e
Wheat													
Gross total PSE	LC mn	20	28	24	31	63	208	-1 364	-5	-1	0	1	2
Gross unit PSE	LC/T	88	93	89	87	169	1 092	-4 108	-16	-6	-1	2	4
Gross percentage PSE	%	66	68	63	53	73	109	-34	-33	-11	-2	2	5
Maize													
Gross total PSE	LC mn	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.
Gross unit PSE	LC/T	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.
Gross percentage PSE	%	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.
Other grains													
Gross total PSE	LC mn	139	152	92	154	268	1 074	-2 396	-16	-2	-4	-1	2
Gross unit PSE	LC/T	116	122	111	130	224	987	-3 039	-18	-3	-8	-2	3
Gross percentage PSE	%	77	81	68	66	82	109	-30	-46	-8	-18	-2	5
Oilseeds													
Gross total PSE	LC mn	n.c.	n.c.	n.c.	n.c.	2	0	4	0	0	0	0	0
Gross unit PSE	LC/T	n.c.	n.c.	n.c.	n.c.	471	416	2 821	-28	-12	-24	-26	1
Gross percentage PSE	%	n.c.	n.c.	n.c.	n.c.	88	94	10	-25	-12	-25	-23	1
Sugar													
Gross total PSE	LC mn	22	21	47	35	32	106	675	2	3	3	3	5
Gross unit PSE	LC/T	539	510	907	753	642	2 563	13 464	83	106	105	110	123
Gross percentage PSE	%	94	95	96	90	87	110	41	45	56	55	52	57
Crops													
Gross total PSE	LC mn	182	201	163	221	365	1 388	-3 081	-19	-1	-1	3	9
Gross percentage PSE	%	77	80	73	66	80	109	-23	-35	-2	-2	4	11
Milk													
Net total PSE	LC mn	732	707	866	812	683	1 094	-14 524	-29	-5	-1	-3	-2
Net unit PSE	LC/T	374	355	439	411	361	629	-9 823	-25	-5	-1	-4	-2
Net percentage PSE	%	90	85	85	82	79	80	-126	-42	-7	-2	-4	-2
Beef and veal													
Net total PSE	LC mn	599	554	795	746	591	1 055	-10 635	-59	-16	-9	-4	-5
Net unit PSE	LC/T	4 541	4 162	5 844	5 786	4 727	8 005	-88 924	-548	-234	-195	-148	-185
Net percentage PSE	%	93	90	93	91	82	85	-228	-186	-44	-28	-19	-26
Pigmeat													
Net total PSE	LC mn	456	462	546	495	400	725	-5 771	14	33	16	5	7
Net unit PSE	LC/T	2 952	2 937	3 405	3 208	2 891	5 742	-57 425	212	612	259	135	179
Net percentage PSE	%	85	84	89	83	71	66	-77	27	55	31	16	19
Poultry													
Net total PSE	LC mn	97	103	113	106	84	53	-1 644	3	7	6	4	4
Net unit PSE	LC/T	2 399	2 416	2 675	2 491	2 083	1 601	-77 913	245	596	557	425	464
Net percentage PSE	%	78	79	84	81	67	30	-187	32	61	60	43	44
Eggs													
Net total PSE	LC mn	65	58	68	59	59	155	-1 035	2	3	7	6	7
Net unit PSE	LC/T	1 251	1 119	1 318	1 186	1 291	3 637	-31 069	83	140	289	236	266
Net percentage PSE	%	75	67	75	72	60	62	-69	18	27	47	33	36
Livestock production													
Net total PSE	LC mn	1 949	1 883	2 388	2 219	1 817	3 082	-33 609	-68	21	19	8	10
Net percentage PSE	%	88	85	88	85	76	75	-129	-39	11	10	5	6
All products													
Net total PSE	LC mn	2 131	2 084	2 551	2 440	2 182	4 471	-36 690	-88	21	18	11	19
Net percentage PSE	%	87	85	87	83	77	83	-93	-38	9	8	4	8

e: estimate; p: provisional.

n.c.: not calculated.

LC: Local currency. Roubles for 1986-1992, LVL as from 1993.

Source: OECD Secretariat.

Annex Table III.5. **Lithuania: aggregate Producer Subsidy Equivalents and Consumer Subsidy Equivalents, 1986-1997**

	Units	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996p	1997e
PSE													
Adjusted value of production	LC mn	3 564	3 561	4 001	4 005	4 623	9 477	71 305	2 514	2 388	3 491	4 738	4 670
A. Market price support	LC mn	2 940	2 923	3 239	3 027	3 793	-28 293	-95 457	-1 004	-557	-78	285	483
B. Direct payments	LC mn	97	24	42	44	10	0	2 780	3	29	113	173	212
C. Reduction of input costs	LC mn	0	0	0	0	0	82	420	9	51	22	8	20
D. General services	LC mn	552	134	241	248	56	285	1 714	56	124	96	157	124
E. Sub-national	LC mn	0	0	0	0	0	0	0	0	0	0	0	45
F. Other indirect measures	LC mn	0	0	0	0	0	0	0	0	0	0	0	0
Gross total PSE	LC mn	3 589	3 080	3 522	3 319	3 858	-27 926	-90 543	-936	-353	153	622	884
Feed adjustment	LC mn	-248	-251	-221	-186	-575	3 416	9 948	97	125	20	-42	-61
Net total PSE	LC mn	3 341	2 830	3 301	3 133	3 283	-24 510	-80 595	-838	-227	173	581	823
Percentage PSE	%	94	79	83	78	71	-259	-113	-33	-10	5	12	18
CSE													
Total value of consumption	LC mn	2 228	2 248	2 553	2 476	3 046	5 948	51 417	1 837	1 983	2 673	3 539	3 384
A. Market transfers	LC mn	-1 880	-1 849	-2 074	-1 899	-2 502	16 959	63 097	716	415	-14	-305	-434
B. Other transfers	LC mn	1 571	1 558	1 457	1 564	1 610	0	0	3	0	0	0	0
Total CSE	LC mn	-309	-292	-617	-334	-892	16 959	63 097	720	415	-14	-305	-434
Percentage CSE	%	-14	-13	-24	-14	-29	285	123	39	21	-1	-9	-13

e: estimate; p: provisional.

LC: Local currency. Roubles for 1986-1991, talonas for 1992, litas as from 1993.

Source: OECD Secretariat.

Annex Table III.6. **Lithuania: Producer Subsidy Equivalents by commodity, 1986-1997**

	Units	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996p	1997e
Wheat													
Gross total PSE	LC mn	75	69	73	74	252	-1 506	-5 369	-90	-64	-22	-5	64
Gross unit PSE	LC/T	117	92	85	64	213	-1 761	-6 437	-101	-117	-35	-5	57
Gross percentage PSE	%	81	66	62	44	75	-211	-64	-37	-43	-7	-1	10
Maize													
Gross total PSE	LC mn	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.
Gross unit PSE	LC/T	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.
Gross percentage PSE	%	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.
Other grains													
Gross total PSE	LC mn	259	232	172	181	495	-3 523	-5 895	-72	-95	-10	116	127
Gross unit PSE	LC/T	146	119	111	98	266	-1 551	-4 389	-42	-64	-8	74	76
Gross percentage PSE	%	89	78	70	59	82	-165	-49	-16	-28	-2	12	15
Oilseeds													
Gross total PSE	LC mn	17	9	17	23	20	-27	284	0	3	3	8	0
Gross unit PSE	LC/T	33 548	1 340	1 456	1 221	814	-2 078	35 549	-17	199	139	346	2
Gross percentage PSE	%	615	141	134	123	96	-115	62	-4	28	15	28	0
Sugar													
Gross total PSE	LC mn	75	50	81	68	59	-233	1 952	52	22	52	70	99
Gross unit PSE	LC/T	809	543	619	637	678	-2 406	28 074	515	409	601	637	717
Gross percentage PSE	%	127	98	98	95	88	-83	55	45	40	43	47	54
Crops													
Gross total PSE	LC mn	425	361	344	346	825	-5 289	-9 027	-110	-135	23	189	290
Gross percentage PSE	%	95	78	75	61	80	-168	-37	-13	-24	2	11	17
Milk													
Net total PSE	LC mn	1 086	881	983	970	896	-9 823	-31 636	-460	-346	-185	-45	-53
Net unit PSE	LC/T	356	282	306	300	284	-3 369	-13 067	-223	-182	-102	-25	-28
Net percentage PSE	%	100	81	82	80	76	-564	-176	-76	-62	-19	-4	-5
Beef and veal													
Net total PSE	LC mn	980	812	930	881	846	-3 840	-24 544	-392	-160	-88	-6	113
Net unit PSE	LC/T	4 190	3 548	3 858	3 933	3 661	-18 375	-108 603	-2 423	-1 380	-1 011	-75	1 357
Net percentage PSE	%	97	86	88	87	75	-174	-209	-83	-35	-17	-1	17
Pigmeat													
Net total PSE	LC mn	642	603	829	709	549	-3 382	-11 458	110	297	260	280	301
Net unit PSE	LC/T	2 802	2 432	3 372	2 837	2 278	-17 433	-73 925	1 225	3 618	2 800	3 163	3 380
Net percentage PSE	%	84	75	84	78	57	-205	-98	25	56	38	37	38
Poultry													
Net total PSE	LC mn	110	94	123	133	95	-699	-1 392	33	107	122	121	126
Net unit PSE	LC/T	2 443	1 909	2 328	2 326	1 698	-15 892	-43 500	1 492	4 449	4 677	4 809	5 088
Net percentage PSE	%	83	69	78	77	50	-214	-58	32	63	59	54	55
Eggs													
Net total PSE	LC mn	98	79	92	94	72	-1 478	-2 537	-19	10	41	42	47
Net unit PSE	LC/T	1 354	1 025	1 132	1 175	942	-19 859	-47 867	-512	231	907	922	994
Net percentage PSE	%	83	63	71	75	53	-363	-80	-23	8	27	21	24
Livestock production													
Net total PSE	LC mn	2 916	2 469	2 958	2 787	2 458	-19 222	-71 568	-728	-92	150	392	533
Net percentage PSE	%	94	80	84	81	68	-304	-152	-43	-5	6	13	18
All products													
Net total PSE	LC mn	3 341	2 830	3 301	3 133	3 283	-24 510	-80 595	-838	-227	173	581	823
Net percentage PSE	%	94	79	83	78	71	-259	-113	-33	-10	5	12	18

e: estimate; p: provisional.

LC: Local currency. Roubles for 1986-1991, talonas for 1992, litas as from 1993.

Source: OECD Secretariat.

Annex Table III.7. **Slovakia: aggregate Producer Subsidy Equivalents and Consumer Subsidy Equivalents, 1986-1997**

	Units	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996p	1997e
PSE													
Adjusted value of production	SKK mn	37 383	38 710	40 043	48 966	51 183	42 727	39 246	42 449	46 492	48 316	49 902	53 605
A. Market price support	SKK mn	15 563	13 936	11 297	15 102	15 831	10 885	5 255	8 770	8 886	3 709	-92	2 847
B. Direct payments	SKK mn	5 510	5 705	6 051	8 408	9 871	4 808	3 238	3 618	3 297	3 550	3 529	4 000
C. Reduction of input costs	SKK mn	1 185	1 135	1 085	1 021	876	1 000	1 901	1 894	1 529	2 032	2 671	4 498
D. General services	SKK mn	1 545	1 687	1 843	1 744	2 124	2 142	1 841	1 416	1 631	1 629	1 274	1 586
E. Sub-national	SKK mn	0	0	0	0	0	0	0	0	0	0	0	0
F. Other indirect measures	SKK mn	790	772	772	831	914	883	2 868	283	107	106	109	117
Gross total PSE	SKK mn	24 593	23 235	21 047	27 106	29 616	19 718	15 104	15 981	15 450	11 025	7 491	13 049
Feed adjustment	SKK mn	-954	-1 014	-88	264	-320	-1 010	126	-1 258	-1 217	845	1 839	491
Net total PSE	SKK mn	23 639	22 222	20 959	27 370	29 296	18 707	15 230	14 722	14 234	11 870	9 330	13 540
Percentage PSE	%	63	57	52	56	57	44	39	35	31	25	19	25
CSE													
Value of consumption	SKK mn	26 881	27 715	28 439	36 295	36 477	34 335	32 675	35 230	43 332	43 776	44 376	47 787
A. Market transfers	SKK mn	-12 665	-11 542	-9 429	-12 757	-12 859	-9 356	-3 929	-7 600	-9 120	-3 078	401	-2 537
B. Other transfers	SKK mn	4 558	4 752	4 705	8 889	4 680	0	0	0	0	0	0	0
Total CSE	SKK mn	-8 107	-6 790	-4 724	-3 869	-8 179	-9 356	-3 929	-7 600	-9 120	-3 078	401	-2 537
Percentage CSE	%	-30	-24	-17	-11	-22	-27	-12	-22	-21	-7	1	-5

e: estimate; p: provisional.

Source: OECD Secretariat.

Annex Table III.8. **Slovakia: Producer Subsidy Equivalents by commodity, 1986-1997**

	Units	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996p	1997e
Wheat													
Gross total PSE	SKK mn	1 209	1 314	1 035	421	1 146	2 048	756	1 467	1 789	-851	-1 620	151
Gross unit PSE	SKK/T	681	603	424	186	550	964	446	959	834	-439	-945	80
Gross percentage PSE	%	35	31	21	8	22	38	16	27	23	-13	-25	2
Maize													
Gross total PSE	SKK mn	733	1 175	703	1 126	576	789	929	801	381	359	57	507
Gross unit PSE	SKK/T	924	1 287	853	1 365	1 557	1 108	1 374	1 188	731	601	77	619
Gross percentage PSE	%	40	52	33	44	48	36	41	32	19	15	2	16
Other grains													
Gross total PSE	SKK mn	849	1 050	232	472	865	678	423	1 224	1 199	180	-404	583
Gross unit PSE	SKK/T	772	916	212	416	760	597	366	1 319	1 192	194	-487	581
Gross percentage PSE	%	41	48	11	17	31	27	16	40	36	6	-13	14
Potatoes													
Gross total PSE	SKK mn	95	-149	-214	735	774	1 301	1 753	2 018	1 756	901	1 729	1 546
Gross unit PSE	SKK/T	103	-186	-240	986	993	1 945	2 665	2 354	4 400	2 038	2 460	3 067
Gross percentage PSE	%	7	-12	-16	41	38	46	63	64	54	22	51	63
Oilseeds													
Gross total PSE	SKK mn	469	529	338	598	628	651	242	-11	25	238	203	286
Gross unit PSE	SKK/T	3 748	3 859	2 484	4 336	4 759	3 290	1 907	-88	166	1 035	817	1 082
Gross percentage PSE	%	66	68	44	62	67	53	33	-1	3	14	11	15
Sugar (refined equivalent)													
Gross total PSE	SKK mn	629	496	433	735	756	1 208	781	491	359	341	624	828
Gross unit PSE	SKK/T	3 705	3 082	2 718	3 917	4 684	7 000	5 212	3 574	2 966	2 286	2 908	3 979
Gross percentage PSE	%	77	72	62	62	64	75	71	51	37	31	38	49
Crops													
Gross total PSE	SKK mn	3 983	4 415	2 528	4 088	4 745	6 676	4 885	5 989	5 509	1 167	590	3 900
Gross percentage PSE	%	39	39	21	28	35	42	34	38	30	6	3	19
Milk													
Net total PSE	SKK mn	8 528	7 404	6 711	8 297	11 200	4 990	3 617	4 588	4 045	4 377	3 881	5 010
Net unit PSE	SKK/T	4 148	3 644	3 274	4 037	5 662	3 174	2 638	3 668	3 399	3 690	3 450	4 538
Net percentage PSE	%	84	74	65	69	80	60	53	56	48	48	45	53
Beef and veal													
Net total PSE	SKK mn	5 254	4 800	4 513	5 757	6 652	3 503	2 995	654	736	1 078	740	1 046
Net unit PSE	SKK/T	40 726	37 799	36 107	45 332	51 967	28 021	28 794	6 354	9 944	16 535	12 327	16 610
Net percentage PSE	%	82	76	73	76	73	57	57	14	16	23	19	24
Pigmeat													
Net total PSE	SKK mn	3 722	3 879	4 831	6 255	4 757	2 207	2 076	2 304	2 757	3 293	2 333	1 649
Net unit PSE	SKK/T	16 323	16 230	18 946	23 604	18 228	9 679	9 565	11 295	13 580	16 383	11 380	8 164
Net percentage PSE	%	56	55	64	62	48	27	25	25	26	29	20	14
Poultry													
Net total PSE	SKK mn	977	993	1 250	1 622	1 187	728	779	587	503	866	968	982
Net unit PSE	SKK/T	13 756	13 792	16 669	20 799	14 480	10 552	12 568	11 988	11 687	16 987	15 359	13 457
Net percentage PSE	%	52	52	62	66	48	35	38	31	28	40	35	30
Eggs													
Net total PSE	SKK mn	1 176	731	1 125	1 351	754	604	878	598	685	1 089	819	952
Net unit PSE	SKK/T	11 202	6 828	10 320	12 281	6 850	5 979	9 144	7 041	7 698	12 237	9 102	10 350
Net percentage PSE	%	58	36	53	60	34	25	38	25	24	41	27	29
Livestock products													
Net total PSE	SKK mn	19 656	17 807	18 431	23 282	24 550	12 031	10 345	8 733	8 725	10 703	8 740	9 640
Net percentage PSE	%	72	65	65	68	65	45	42	33	31	36	29	30
All products													
Net total PSE	SKK mn	23 639	22 222	20 959	27 370	29 296	18 707	15 230	14 722	14 234	11 870	9 330	13 540
Net percentage PSE	%	63	57	52	56	57	44	39	35	31	25	19	25

e: estimate; p: provisional.

Source: OECD Secretariat.

Annex Table III.9. **Russia: aggregate Producer Subsidy Equivalents and Consumer Subsidy Equivalents, 1986-1997**

	Units	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996p	1997e
PSE													
Adjusted value of production	Rb mn	78 143	81 397	97 292	108 827	123 494	179 000	1 951 493	13 027 592	30 418 696	99 511 587	139 669 782	145 893 500
A. Market price support	Rb mn	64 258	65 716	81 228	89 089	97 238	127 914	-3 088 397	-8 753 079	-13 597 948	-464 823	19 282 109	22 966 108
B. Direct payments	Rb mn	2 516	2 439	0	0	0	7 056	163 837	972 360	1 595 882	4 229 404	5 031 183	2 739 286
C. Reduction of input costs	Rb mn	14 086	13 760	12 156	11 917	12 740	2 819	322 848	2 248 841	4 015 115	7 886 987	14 397 249	6 958 171
D. General services	Rb mn	3 339	3 726	3 936	4 392	4 976	6 092	70 584	566 941	2 824 813	3 512 986	4 934 991	5 593 315
Gross total PSE	Rb mn	84 200	85 641	97 320	105 399	114 954	143 881	-2 531 128	-4 964 938	-5 162 138	15 164 553	43 645 532	38 256 880
Feed adjustment	Rb mn	-7 916	-6 464	-8 950	-11 657	-16 645	-35 510	491 193	1 536 343	2 554 532	5 487 054	627 341	-745 476
Net total PSE	Rb mn	76 284	79 176	88 371	93 742	98 310	108 371	-2 039 935	-3 428 595	-2 607 607	20 651 607	44 272 872	37 511 404
Net Percentage PSE	%	98	97	91	86	80	61	-105	-26	-9	21	32	26
CSE													
Value of consumption	Rb mn	89 980	92 990	120 457	132 754	142 441	214 167	2 011 414	13 540 025	34 601 823	118 951 694	165 957 717	169 372 522
A. Market transfers	Rb mn	-76 796	-77 427	-100 952	-109 211	-112 722	-160 979	3 393 414	9 397 705	15 156 309	-616 792	-30 255 986	-34 309 893
B. Other transfers	Rb mn	28 650	29 307	42 381	44 999	51 677	53 678	73 989	388 225	437 801	0	0	0
Total CSE	Rb mn	-48 146	-48 120	-58 571	-64 212	-61 045	-107 301	3 467 403	9 785 930	15 594 110	-616 792	-30 255 986	-34 309 893
Percentage CSE	%	-54	-52	-49	-48	-43	-50	172	72	45	-1	-18	-20

e: estimate; p: provisional.

Source: OECD Secretariat.

Annex Table III.10. **Russia: Producer Subsidy Equivalents by commodity, 1986-1997**

	Units	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996p	1997e
Wheat													
Gross total PSE	Rb mn	5 318	4 127	3 852	6 632	11 298	23 987	-384 265	-655 553	-1 238 613	-2 485 388	1 950 122	3 141 640
Gross unit PSE	Rb/T	112	112	97	151	228	617	-8 323	-15 054	-38 551	-82 519	55 850	71 097
Gross percentage PSE	%	90	88	74	76	82	86	-101	-31	-36	-22	9	11
Maize													
Gross total PSE	Rb mn	604	917	1 661	1 878	1 863	2 059	-11 725	-5 860	113 416	296 129	460 460	709 113
Gross unit PSE	Rb/T	353	239	436	403	760	1 046	-5 492	-2 401	127 148	170 385	423 217	265 486
Gross percentage PSE	%	111	106	103	100	104	90	-62	-4	50	31	46	36
Other grains													
Gross total PSE	Rb mn	6 563	6 195	4 474	6 702	12 321	17 155	-94 307	-684 823	-1 305 816	-2 948 080	2 555 230	2 519 880
Gross unit PSE	Rb/T	129	125	105	143	220	397	-1 810	-14 398	-29 813	-103 638	84 574	66 956
Gross percentage PSE	%	98	96	74	76	84	79	-16	-34	-34	-44	16	13
Potatoes (not included in the aggregation)													
Gross total PSE	Rb mn	2 376	5 120	5 367	7 433	7 889	34 132	-236 239	683 939	101 174	-9 081 544	31 408 590	25 490 668
Gross unit PSE	Rb/T	185	135	159	220	256	994	-6 163	18 166	2 991	-227 556	812 599	688 658
Gross percentage PSE	%	100	85	83	91	87	87	-67	32	1	-25	71	67
Sunflower													
Gross total PSE	Rb mn	640	1 205	973	1 797	1 236	1 849	-30 282	-299 156	-236 478	217 150	59 513	-259 443
Gross unit PSE	Rb/T	271	393	329	474	361	638	-9 737	-108 194	-92 627	51 702	21 524	-91 871
Gross percentage PSE	%	98	107	88	94	84	73	-55	-150	-36	6	3	-12
Sugar (refined equivalent)													
Gross total PSE	Rb mn	2 329	2 720	2 470	2 686	2 024	1 564	10 547	358 436	290 336	1 073 640	2 215 637	1 560 056
Gross unit PSE	Rb/T	737	705	745	716	631	706	3 924	119 983	164 574	457 675	1 522 837	995 988
Gross percentage PSE	%	117	116	106	98	91	75	16	59	37	39	72	57
Crops													
Gross total PSE	Rb mn	15 453	15 163	13 430	19 695	28 742	46 614	-510 031	-1 286 956	-2 377 155	-3 846 549	7 240 962	7 671 246
Gross percentage PSE	%	98	98	83	82	85	82	-46	-25	-27	-15	16	14
Milk													
Net total PSE	Rb mn	27 514	27 370	34 484	34 472	33 169	27 722	-519 272	-1 185 995	-1 326 974	13 792 456	18 232 144	15 685 976
Net unit PSE	Rb/T	527	518	632	618	595	534	-10 993	-25 492	-31 463	351 481	509 008	460 458
Net percentage PSE	%	106	103	98	95	91	64	-155	-44	-18	41	46	40
Beef and veal													
Net total PSE	Rb mn	17 863	19 530	22 231	22 451	22 906	23 171	-396 222	-1 224 416	-2 888 855	-3 633 502	808 703	-1 503 635
Net unit PSE	Rb/T	4 756	4 893	5 357	5 275	5 291	5 809	-109 092	-364 518	-891 622	-1 329 492	307 492	-643 129
Net percentage PSE	%	102	102	97	93	85	64	-202	-64	-62	-27	4	-9
Pigmeat													
Net total PSE	Rb mn	7 346	8 449	9 874	8 995	7 925	4 002	-328 938	164 317	1 359 305	4 682 512	6 207 131	4 879 385
Net unit PSE	Rb/T	2 375	2 589	2 905	2 571	2 277	1 255	-118 153	67 564	646 365	2 510 730	3 640 546	3 117 818
Net percentage PSE	%	78	84	80	69	55	20	-236	11	35	39	40	31
Poultry													
Net total PSE	Rb mn	4 261	4 897	4 942	5 182	3 578	3 267	-98 054	355 132	1 474 833	4 274 518	4 899 504	4 177 767
Net unit PSE	Rb/T	2 642	2 861	2 783	2 830	1 987	1 866	-68 665	278 099	1 380 930	4 976 156	7 100 730	6 610 391
Net percentage PSE	%	90	93	89	84	55	29	-131	40	63	72	69	60
Eggs													
Net total PSE	Rb mn	3 847	3 767	3 410	2 947	1 990	3 595	-187 417	-250 677	1 151 239	5 382 173	6 884 429	6 600 665
Net unit PSE	Rb/T	1 499	1 429	1 249	1 082	755	1 380	-78 633	-111 973	552 949	2 863 704	3 884 387	3 726 382
Net percentage PSE	%	80	76	68	60	40	33	-207	-28	35	59	54	50
Livestock products													
Net total PSE	Rb mn	60 831	64 013	74 941	74 048	69 568	61 757	-1 529 904	-2 141 638	-230 452	24 498 157	37 031 911	29 840 158
Net percentage PSE	%	98	97	92	87	78	50	-183	-27	-1	33	39	32
All products													
Net total PSE	Rb mn	76 284	79 176	88 371	93 742	98 310	108 371	-2 039 935	-3 428 595	-2 607 607	20 651 607	44 272 872	37 511 404
Net percentage PSE	%	98	97	91	86	80	61	-105	-26	-9	21	32	26

e: estimate; p: provisional.
Source: OECD Secretariat.

Annex Table III.11. **Producer Subsidy Equivalents: by country, 1986-1997**

	Units	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996p	1997e
Estonia													
Total PSE	LC mn	1 068	1 074	1 062	1 113	1 195	1 796	-1 908	-866	-193	108	358	386
Total PSE	US\$ mn	1 548	1 705	1 770	1 767	2 060	1 030	-151	-65	-15	9	30	28
Total PSE	ECU mn	1 578	1 479	1 498	1 604	1 622	833	-117	-56	-13	7	23	24
Percentage PSE	%	79	80	80	80	72	57	-91	-30	-6	3	8	9
Latvia													
Total PSE	LC mn	2 131	2 084	2 551	2 440	2 182	4 471	-36 690	-88	21	18	11	19
Total PSE	US\$ mn	3 088	3 307	4 252	3 873	3 762	7 708	-270	-130	37	35	20	33
Total PSE	ECU mn	3 147	2 869	3 598	3 518	2 963	6 236	-208	-111	31	27	16	29
Percentage PSE	%	87	85	87	83	77	83	-93	-38	9	8	4	8
Lithuania													
Total PSE	LC mn	3 341	2 830	3 301	3 133	3 283	-24 510	-80 595	-838	-227	173	581	823
Total PSE	US\$ mn	4 842	4 492	5 502	4 973	5 661	-704	-490	-195	-57	43	145	206
Total PSE	ECU mn	4 934	3 896	4 656	4 516	4 459	-570	-378	-166	-48	33	114	180
Percentage PSE	%	94	79	83	78	71	-259	-113	-33	-10	5	12	18
Czech Republic													
Total PSE	CZK mn	46 479	40 627	37 577	48 516	50 626	42 240	23 045	21 677	16 476	11 732	12 878	10 329
Total PSE	US\$ mn	3 567	3 003	2 686	3 379	3 446	2 729	1 039	832	586	442	474	327
Total PSE	ECU mn	3 635	2 605	2 273	3 068	2 715	2 208	803	710	494	338	374	286
Percentage PSE	%	70	61	55	55	54	51	30	27	21	15	14	11
Hungary													
Total PSE	Ft mn	94 040	90 816	88 450	83 206	84 750	46 563	55 697	72 450	116 903	98 541	102 099	122 747
Total PSE	US\$ mn	2 390	2 194	1 981	1 647	1 398	623	705	788	1 112	784	669	659
Total PSE	ECU mn	2 435	1 903	1 677	1 496	1 101	504	545	673	938	600	527	575
Percentage PSE	%	48	44	40	31	27	15	20	24	31	21	15	16
Poland													
Total PSE	NZl mn	80	64	112	77	-907	55	2 249	2 207	3 568	4 569	7 163	7 119
Total PSE	US\$ mn	3 572	2 301	2 508	450	-955	52	1 650	1 217	1 570	1 884	2 657	2 171
Total PSE	ECU mn	3 640	1 996	2 122	409	-752	42	1 275	1 039	1 324	1 441	2 094	1 895
Percentage PSE	%	42	28	27	5	-15	1	20	15	20	19	23	22
Slovakia													
Total PSE	SKK mn	23 639	22 222	20 959	27 370	29 296	18 707	15 230	14 722	14 234	11 870	9 330	13 540
Total PSE	US\$ mn	1 363	1 308	1 269	1 714	1 690	862	598	512	444	399	304	403
Total PSE	ECU mn	1 389	1 135	1 074	1 557	1 331	697	462	437	375	305	240	352
Percentage PSE	%	63	57	52	56	57	44	39	35	31	25	19	25
Russia													
Total PSE	Rb mn	76 284	79 176	88 371	93 742	98 310	108 371	-2 039 935	-3 428 595	-2 607 607	20 651 607	44 272 872	37 511 404
Total PSE	US\$ mn	127 140	131 961	147 284	156 237	125 877	62 061	-10 597	-3 679	-1 183	4 535	8 640	6 484
Total PSE	ECU mn	129 556	114 463	124 632	141 894	99 153	50 207	-8 187	-3 141	-997	3 469	6 807	5 661
Percentage PSE	%	98	97	91	86	80	61	-105	-26	-9	21	32	26
EU¹													
Total PSE	ECU mn	64 323	61 849	58 420	53 536	64 501	66 889	64 365	67 110	65 453	70 183	64 742	63 451
Total PSE	US\$ mn	63 124	71 304	69 037	58 947	81 886	82 681	83 310	78 611	77 633	91 742	82 181	72 682
Percentage PSE	%	50	49	46	40	47	47	47	49	48	49	43	42
OECD²													
Total PSE	US\$ mn	155 347	166 057	154 365	138 461	171 141	170 032	174 679	167 174	172 766	174 949	160 847	145 264
Total PSE	ECU mn	158 298	144 038	130 623	125 750	134 807	137 556	134 957	142 716	145 659	133 836	126 715	126 816
Percentage PSE	%	47	46	41	37	41	42	42	42	41	40	35	35

e: estimate; p: provisional.

1. EU-12 for 1986-1994, EU-15 for 1995; as from 1990 includes ex-GDR.

2. OECD does not include Czech Republic, Hungary, Poland, Mexico and Korea.

Source: OECD Secretariat.

LC: Local Currency.

Estonia: Roubles for 1986-1991, Kroons as from 1992.

Latvia: Roubles for 1986-1992, LVL as from 1993.

Lithuania: Roubles for 1986-1991, talonas from 1992, litas as from 1993.

Part IV

TABLES FOR OTHER COUNTRIES

Annex Table IV.1.1. **Brazil: grains – area and production**

	Area (1 000 ha)						Production (1 000 t)					
	1988	1996	1997	Variation (%)			1988	1996	1997	Variation (%)		
				(96/88)	(97/88)	(97/96)				(96/88)	(97/88)	(97/96)
Cotton seed	1 823	805	633	-55.8	-65.3	-21.3	2 436	1 003	832	-58.8	-65.9	-17.1
Peanuts	98	80	88	-18.4	-10.2	10.0	165	154	140	-6.7	-15.2	-9.1
Rice	5 961	3 917	3 597	-34.3	-39.7	-8.2	11 806	9 990	9 334	-15.4	-20.9	-6.6
Oats	115	161	195	40.0	69.9	21.4	131	220	214	67.9	63.7	-2.5
Barley	102	89	125	-12.7	22.6	40.6	126	223	246	77.0	94.8	10.1
Rye	2	6	9	200.0	330.0	43.3	2	7	8	250.0	280.0	8.6
Beans	5 765	4 945	4 825	-14.2	-16.3	-2.4	2 803	2 822	3 004	0.7	7.2	6.5
Castor seed	378	131	150	-65.4	-60.5	14.3	145	43	96	-70.3	-33.5	124.2
Maize	13 462	13 903	13 554	3.3	0.7	-2.5	24 750	32 185	34 611	30.0	39.8	7.5
Soybean	10 600	10 748	11 552	1.4	9.0	7.5	18 012	23 562	26 546	30.8	47.4	12.7
Sorghum	214	192	248	-10.4	16.0	29.5	289	336	436	16.3	50.9	29.8
Wheat	3 600	1 846	1 512	-48.7	-58.0	-18.1	5 746	3 359	2 450	-41.5	-57.4	-27.1
Brazil total	42 120	36 823	36 489	-12.6	-13.4	-0.9	66 411	73 904	77 917	11.3	17.3	5.4

Source: IBGE/CEPAGRO – LSPA, Ministry of Agriculture.

Annex Table IV.1.2. **Brazil: main crops – area, production and yield, 1990-1997**

		1990	1991	1992	1993	1994	1995	1996	1997
Cotton	Area (1 000 ha)	1 384	1 484	1 594	922	1 060	1 104	805	633
	Production (1 000 t)	1 775	2 037	1 863	1 127	1 350	1 441	1 003	832
	Yield (kg/ha)	1 283	1 373	1 169	1 222	1 274	1 305	1 246	1 313
Rice paddy	Area (1 000 ha)	3 945	4 127	4 687	4 421	4 415	4 376	3 917	3 597
	Production (1 000 t)	7 419	9 496	9 962	10 143	10 499	11 226	9 990	9 334
	Yield (kg/ha)	1 881	2 301	2 125	2 294	2 378	2 565	2 550	2 595
Coffee bean	Area (1 000 ha)	2 906	2 767	2 498	2 257	2 096	1 868	1 990	2 047
	Production (1 000 t)	2 926	3 051	2 587	2 555	2 613	1 858	2 686	2 339
	Yield (kg/ha)	1 007	1 102	1 035	1 132	1 247	995	1 350	1 143
Sugarcane	Area (1 000 ha)	4 271	4 211	4 201	3 863	4 345	4 565	4 827	4 877
	Production (1 000 t)	262 605	260 839	271 432	244 303	292 070	303 557	325 929	336 599
	Yield (kg/ha)	61 487	61 943	64 607	63 237	67 227	66 490	67 518	69 020
Beans	Area (1 000 ha)	4 680	5 443	5 150	3 886	5 469	4 996	4 945	4 825
	Production (1 000 t)	2 233	2 749	2 799	2 480	3 368	2 946	2 822	3 004
	Yield (kg/ha)	477	505	544	638	616	590	571	623
Maize	Area (1 000 ha)	11 391	13 110	13 389	11 868	13 748	13 960	13 415	13 554
	Production (1 000 t)	21 341	23 739	30 557	30 004	32 487	36 274	32 185	34 611
	Yield (kg/ha)	1 874	1 811	2 282	2 528	2 363	2 598	2 399	2 554
Soybeans	Area (1 000 ha)	11 481	9 618	9 436	10 627	11 514	11 658	10 736	11 552
	Production (1 000 t)	19 888	14 938	19 185	22 558	24 912	25 651	23 562	26 546
	Yield (kg/ha)	1 732	1 553	2 033	2 123	2 164	2 200	2 195	2 298
Wheat	Area (1 000 ha)	2 681	1 995	1 958	1 462	1 348	994	1 820	1 512
	Production (1 000 t)	3 093	2 921	2 796	2 153	2 092	1 534	3 359	2 450
	Yield (kg/ha)	1 154	1 464	1 468	1 473	1 552	1 544	1 846	1 620
Tobacco leaves	Area (1 000 ha)	272	286	343	372	319	292	304	346
	Production (1 000 t)	444	413	577	657	519	455	471	620
	Yield (kg/ha)	1 632	1 446	1 683	1 767	1 626	1 561	1 551	1 792
Orange	Area (1 000 ha)	910	981	987	799	896	856	976	979
	Production (1 000 t)	14 880	16 067	16 709	15 955	14 805	16 671	18 585	19 549
	Yield (kg/ha)	16 343	16 382	16 937	19 974	16 528	19 500	19 035	19 969
Cocoa	Area (1 000 ha)	663	667	731	733	698	738	684	724
	Production (1 000 t)	355	320	328	340	330	296	257	293
	Yield (kg/ha)	536	480	449	464	473	402	376	404

Source: IBGE/CEPAGRO – LSPA, Ministry of Agriculture.

Annex Table IV.1.3. **Brazil: agricultural trade balance**

US\$ million FOB

	Imports	Exports	Balance
1990	2 561	9 954	7 394
1991	3 163	9 142	5 979
1992	2 615	10 585	7 970
1993	3 685	11 235	7 550
1994	5 011	14 329	9 318
1995	7 053	15 892	8 839
1996	7 457	16 416	8 959
1997	7 054	18 586	11 532

Source: MICT/SECEX, Ministry of Agriculture.

Annex Table IV.1.4. **Brazilian agricultural exports – main products and markets**

Thousands US\$, FOB

Soybean complex (grains, meal and oil)									
	1990	1991	1992	1993	1994	1995	1996	1997	Total
European Union	1 923 719	1 494 832	1 935 517	2 104 777	2 814 534	2 360 077	2 699 301	3 703 926	19 036 683
China and Hong Kong	125 620	40 134	53 714	13 395	427 435	575 455	685 017	650 905	2 446 055
Japan	164 738	54 139	125 695	112 418	136 423	92 276	139 642	211 580	1 036 911
Asian countries ¹	47 878	10 952	43 289	33 183	41 917	82 948	136 264	142 645	539 076
Africa	58 628	31 151	15 262	57 286	78 986	33 946	89 456	67 932	432 647
United States	11 745	–	1 441	3 358	5 996	1 641	4 796	34 412	63 389
MERCOSUL	690	1 247	3 696	5 301	5 633	1 399	2 196	3 884	24 046
Others	521 361	398 258	517 113	745 622	624 160	672 684	701 228	914 060	5 220 106
Total	2 854 379	2 030 713	2 695 727	3 075 340	4 135 084	3 820 426	4 457 900	5 729 344	28 798 913
Coffee (grains and soluble)									
	1990	1991	1992	1993	1994	1995	1996	1997	Total
European Union	466 987	740 922	555 999	620 680	1 226 459	1 060 495	950 256	1 636 295	7 258 093
United States	344 561	361 952	232 051	239 424	445 200	379 654	306 405	462 836	2 772 083
Japan	109 304	138 776	103 041	129 764	249 241	246 245	226 564	300 449	1 503 384
MERCOSUL	14 672	30 057	32 157	44 167	76 060	105 423	91 120	109 188	502 844
Asian countries ¹	19 491	19 060	13 237	18 079	34 136	33 901	21 494	35 406	194 804
Africa	21 691	28 917	9 084	8 428	52 314	14 245	13 412	29 422	177 513
China and Hong Kong	519	459	482	754	1 175	1 627	2 086	1 417	8 519
Others	305 681	187 054	189 334	245 089	500 797	620 805	523 799	558 034	3 130 593
Total	1 282 906	1 507 197	1 135 385	1 306 385	2 585 382	2 462 395	2 135 136	3 133 047	15 547 833
Orange juice									
	1990	1991	1992	1993	1994	1995	1996	1997	Total
European Union	710 657	471 774	557 793	473 534	549 748	800 402	933 160	673 278	5 170 346
United States	622 655	282 567	362 350	266 915	290 723	133 734	282 880	194 174	2 435 998
Japan	35 603	25 657	51 435	39 119	87 285	80 247	88 407	65 235	472 988
Asian countries ¹	25 762	43 385	42 743	26 470	32 013	55 158	46 219	36 476	308 226
MERCOSUL	2	73	703	801	3 695	3 413	5 522	5 516	19 725
China and Hong Kong	628	447	475	476	1 086	877	2 888	3 034	9 283
Africa	13	2	117	1 060	17	34	141	6	1 390
Others	73 248	76 616	31 509	18 845	23 004	34 153	33 702	28 942	320 648
Total	1 468 568	900 521	1 047 125	827 220	987 571	1 108 018	1 392 919	1 006 661	8 738 604
Tobacco (leaves and manufactured)									
	1990	1991	1992	1993	1994	1995	1996	1997	Total
European Union	319 946	455 779	533 601	434 280	530 208	594 943	665 439	660 486	4 194 682
United States	126 704	153 744	225 611	187 616	156 973	142 042	304 904	229 696	1 527 290
MERCOSUL	8 500	17 614	43 151	88 131	110 666	177 789	225 252	273 138	944 241
Japan	15 750	24 064	26 357	25 996	45 393	52 776	6	73 941	264 283
Africa	29 496	25 906	27 914	41 200	30 984	38 719	12 135	24 268	230 622
China and Hong Kong	16 916	14 269	5 374	4 454	1 629	7 088	8 438	22 974	64 226
Asian countries ¹	7 752	6 512	8 529	6 270	4 989	3 736	7 869	13 218	58 875
Others	98 543	120 474	111 067	112 835	149 866	157 868	291 350	367 085	1 426 003
Total	623 607	818 362	981 604	900 782	1 030 708	1 174 961	1 515 393	1 664 806	8 710 222
Sugar									
	1990	1991	1992	1993	1994	1995	1996	1997	Total
Africa	193 446	223 269	336 886	338 734	238 465	701 123	649 548	578 456	3 259 927
United States	166 600	89 512	58 136	77 709	32 630	102 857	147 910	102 842	778 196
MERCOSUL	1	3 330	986	12 471	61 028	62 813	29 867	43 226	213 722
European Union	6 507	5 041	10 118	37 338	49 932	28 399	18 789	32 776	188 900
China and Hong Kong	–	–	–	–	–	134 517	520	10 096	145 133
Japan	–	–	–	–	–	–	66 856	3 157	70 013
Asian countries ¹	–	2 811	–	–	–	6 627	–	–	9 438
Others	159 306	117 757	193 295	320 423	610 150	883 124	698 004	1 000 771	3 982 831
Total	525 860	441 720	599 421	786 675	992 205	1 919 460	1 611 494	1 771 324	8 648 160

1. Taiwan, Korea Republic, Singapore.

Source: MICT/SECEX, Ministry of Agriculture.

Annex Table IV.1.5. **Brazilian agricultural imports – main products and markets**

Thousands US\$, FOB

	Milk products								
	1990	1991	1992	1993	1994	1995	1996	1997	Total
MERCOSUL	30 726	63 205	12 219	61 466	146 169	270 187	314 109	300 501	1 167 856
European Union	56 803	74 493	32 773	31 371	54 878	239 392	78 676	62 449	574 032
New Zealand	6 709	2 594	7 954	7 597	7 406	18 570	57 236	47 819	149 176
Poland	4 820	38 064	8 284	13 866	9 053	9 416	3 846	1 054	83 583
Australia	–	482	910	9 623	10 578	13 430	18 449	22 301	75 773
Czech Republic	725	21 082	3 913	11 685	12 616	13 141	3 323	101	65 861
Others	77 866	3 758	6 011	13 547	17 534	46 270	36 598	22 487	146 205
Total	177 649	203 678	72 064	149 155	258 234	610 406	512 237	456 712	2 262 486
	Wheat (wheat meal included)								
	1990	1991	1992	1993	1994	1995	1996	1997	Total
MERCOSUL	278 311	259 819	399 200	481 699	503 374	725 242	939 290	751 336	4 338 271
Canada	16 500	109 701	132 287	231 007	178 542	136 926	222 219	135 980	1 163 162
United States	–	69 232	14 767	–	2 264	22 408	185 438	38	294 147
European Union	–	2 443	–	1	90 283	22 381	18	566	115 692
Others	220	13 945	2	21 874	6 286	36 008	1 650	15	80 000
Total	295 031	455 140	546 256	734 581	780 749	942 965	1 348 615	887 935	5 991 272
	Cotton								
	1990	1991	1992	1993	1994	1995	1996	1997	Total
MERCOSUL	131 229	136 670	133 371	167 344	228 631	224 780	384 688	346 669	1 622 153
FSU ¹	–	24 522	63 774	45 911	161 216	142 686	167 227	131 738	737 074
United States	8 562	7 879	1 993	72 830	85 485	79 212	81 402	97 220	426 021
European Union	–	26	3 888	71 817	8 334	5 595	33 705	16 879	140 244
Others	16 576	9 309	10 224	293 682	78 940	100 169	196 648	224 888	913 860
Total	156 367	178 406	213 250	651 584	562 606	552 442	863 670	817 394	3 839 352
	Fisheries								
	1990	1991	1992	1993	1994	1995	1996	1997	Total
Norway	24 800	82 842	61 686	79 274	103 546	165 813	174 431	151 702	819 294
MERCOSUL	46 135	54 138	35 984	55 652	84 114	133 614	164 888	167 995	696 385
European Union	839	3 889	2 808	6 484	6 239	11 579	13 030	14 379	58 408
Others	98 808	32 271	15 193	32 601	34 881	60 598	69 748	64 887	310 179
Total	170 582	173 140	115 671	174 011	228 780	371 604	422 097	398 963	1 884 266
	Rice								
	1990	1991	1992	1993	1994	1995	1996	1997	Total
MERCOSUL	77 840	149 246	122 181	176 590	180 920	213 093	280 760	296 587	1 419 377
United States	18 837	93 210	9 432	2 062	41 673	38 026	1 421	2 082	187 906
Vietnam	–	48 154	5 596	16 856	49 359	14 854	19 760	6 283	160 862
Thailand	3 455	38 636	2 403	2 086	2 216	8 620	14	3 236	57 211
Others	37 988	17 045	9 588	8 136	29 196	4 662	457	1 598	70 682
Total	138 120	346 291	149 200	205 730	303 364	279 255	302 412	309 786	1 896 038

1. Uzbekistan, Turkmenistan, Azerbaijan and Russian Federation are included since 1993.

Source: MICT/SECEX, Ministry of Agriculture.

Annex Table IV.2.1. **China: total crop production, 1986-1997**

Million tonnes

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997 ¹	1997/1996 % change
Total Grains	391.5	403.0	394.1	407.6	446.2	435.3	442.7	456.5	445.1	466.6	504.5	492.5	-2.4
<i>of which:</i>													
Paddy rice	172.2	174.3	169.1	180.1	189.3	183.8	186.2	177.7	175.9	185.2	195.1	206.1	5.6
Wheat	90.0	85.9	85.4	90.8	98.2	96.0	101.6	106.4	99.3	102.2	110.6	128.1	15.9
Maize	70.9	79.2	77.4	78.9	96.8	98.8	95.4	102.7	99.3	112.0	127.5	116.2	-8.8
<i>of which: North-east</i>	22.6	25.5	25.2	20.6	33.4	32.3	32.2	32.6	32.4	35.2	38.0	n.a.	n.a.
Soyabeans	11.6	12.5	11.7	10.2	11.0	9.7	10.3	15.3	16.0	13.5	13.0	n.a.	n.a.
Cotton	3.5	4.2	4.1	3.8	4.5	5.7	4.5	3.7	4.3	4.8	4.2	4.3	2.4
Oilseeds	14.7	15.3	13.2	13.0	16.1	16.4	16.4	18.0	19.9	22.5	22.1	21.5	-2.8
Sugar crops	58.5	55.5	61.9	58.0	72.1	84.2	88.1	76.2	73.5	79.4	83.6	93.6	12.0
<i>of which:</i>													
Cane	50.2	47.4	49.1	48.8	57.6	67.9	73.0	64.2	60.9	65.4	66.9	78.8	17.8
Beet	8.3	8.1	12.8	9.2	14.5	16.3	15.1	12.0	12.5	14.0	16.7	14.9	-11.2
Sugar	5.3	5.1	4.6	5.0	5.8	6.4	8.3	7.7	5.9	5.6	6.4	n.a.	n.a.

n.a.: not available.

1. Estimates.

Source: Statistical Yearbook of China, 1987 to 1996.

Annex Table IV.2.2. **China: oilseed production, 1986-1997**

Million tonnes

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997 ¹	1997/1996 % change
Total oilseeds	14.7	15.3	13.2	13.0	16.1	16.4	16.4	18.0	19.9	22.5	22.1	21.5	-2.8
<i>of which:</i>													
Groundnut	5.9	6.2	5.7	5.4	6.4	6.3	6.0	8.4	9.7	10.2	n.a.	n.a.	n.a.
Rapeseed	5.9	6.6	5.0	5.4	7.0	7.4	7.7	6.9	7.5	9.8	9.2	9.5	3.7
Sesame	0.6	0.5	0.4	0.3	0.5	0.4	0.5	0.6	0.5	0.6	n.a.	n.a.	n.a.
Sunflower	1.5	1.2	1.2	1.1	1.3	1.4	1.5	1.3	1.4	1.3	n.a.	n.a.	n.a.
Soyabeans	11.6	12.5	11.6	10.2	11.0	9.7	10.3	15.3	16.0	13.5	13.0	n.a.	n.a.
Cotton seed	6.0	7.2	7.1	6.4	7.7	9.7	7.7	6.4	7.2	7.5	n.a.	n.a.	n.a.

n.a.: not available.

1. Estimates.

Source: Statistical Yearbook of China, 1987 to 1996.

Annex Table IV.2.3. **China: livestock production, 1986-1997**

Million tonnes

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997 ¹	1997/1996 % change
Total red meat	19.2	19.9	21.9	23.3	25.1	27.2	29.4	32.3	36.9	42.7	47.7	41.2	-13.7
<i>of which:</i>													
Pork	18.0	18.3	20.2	21.2	22.8	24.5	26.4	28.5	32.0	36.5	40.4	n.a.	n.a.
Beef	0.6	0.8	1.0	1.1	1.3	1.5	1.8	2.3	3.3	4.2	5.0	n.a.	n.a.
Mutton	0.6	0.7	0.8	1.0	1.1	1.2	1.3	1.4	1.6	2.0	2.4	n.a.	n.a.
Poultrymeat	1.9	2.2	2.7	2.8	3.2	4.0	4.5	5.7	7.6	9.4	10.8	n.a.	n.a.
Total meat ²	21.1	22.2	24.8	26.3	28.6	31.4	34.3	38.4	45.0	52.6	59.2	53.5	-9.5
Eggs	5.6	5.9	7.0	7.2	7.9	9.2	10.2	11.8	14.8	16.8	19.5	n.a.	n.a.
Total milk	3.3	3.8	4.2	4.4	4.8	5.2	5.6	5.6	6.1	6.7	7.4	n.a.	n.a.
<i>of which: Cow's milk</i>	2.9	3.3	3.7	3.8	4.2	4.6	5.0	5.0	5.3	5.8	6.3	6.6	5.4

n.a.: not available.

1. Estimates.

2. Total meat includes red meat, poultrymeat and rabbitmeat.

Source: Statistical Yearbook of China, 1987 to 1996.

Annex Table IV.2.4. **China's monthly grain prices, 1995-1997**

Yuan per tonne

	Free market prices				State procurement prices			
	Paddy rice		Wheat	Maize	Paddy rice		Wheat	Maize
	Indica ¹	Japonica			Indica ¹	Japonica		
1995	1 853	1 970	1 688	1 580	1 055	1 127	1 080	855
January	1 770	1 800	1 490	1 380	1 025	1 117	1 054	830
February	1 800	1 770	1 530	1 420	1 068	1 088	1 044	824
March	1 780	1 900	1 620	1 500	1 039	1 086	1 048	829
April	1 860	1 940	1 710	1 560	1 009	1 107	1 140	855
May	1 850	2 150	1 750	1 610	1 084	1 136	1 061	847
June	1 851	2 053	1 732	1 619	1 033	1 104	1 087	880
July	1 927	2 017	1 731	1 636	1 044	1 168	1 099	850
August	1 875	2 040	1 728	1 646	1 046	1 118	1 085	879
September	1 880	1 984	1 718	1 647	1 048	1 118	1 084	878
October	1 903	2 056	1 737	1 635	1 049	1 116	1 098	859
November	1 912	1 907	1 755	1 672	1 104	1 216	1 098	884
December	1 826	2 020	1 756	1 638	1 112	1 152	1 057	846
1996	1 709	1 986	1 741	1 487	1 313	1 373	1 312	1 058
January	1 757	1 991	1 757	1 557	1 007	1 178	1 065	824
February	1 803	1 955	1 767	1 558	1 008	1 122	1 065	841
March	1 777	2 018	1 790	1 583	1 170	1 157	1 110	863
April	1 794	2 068	1 798	1 584	1 336	1 280	1 191	933
May	1 769	2 170	1 809	1 535	1 275	1 296	1 218	929
June	n.a.	2 032	1 770	1 468	n.a.	1 330	1 392	1 068
July	1 741	1 988	1 763	1 538	1 411	1 438	1 435	1 167
August	1 749	2 004	1 759	1 484	1 454	1 464	1 445	1 168
September	1 656	1 962	1 698	1 479	1 473	1 537	1 440	1 213
October	1 629	1 968	1 669	1 444	1 439	1 537	1 440	1 213
November	1 568	1 851	1 671	1 365	1 427	1 561	1 461	1 234
December	1 556	1 823	1 640	1 253	1 447	1 571	1 466	1 240
1997	n.a.	2 525	1 461	1 156	1 346	1 553	1 462	1 234

n.a.: not available.

1. Good quality Indica paddy rice.

Source: Department of Market Information, Ministry of Agriculture.

Annex Table IV.2.5. **China's monthly meat prices, July 1995-June 1996**

Yuan per kg

	Pork	Beef	Chicken
1995			
July	11.21	15.31	9.78
August	12.61	15.53	10.48
September	13.31	15.74	10.81
October	13.04	15.84	10.92
November	12.83	15.72	10.72
December	12.32	15.64	10.46
1996			
January	11.61	15.75	10.56
February	11.36	16.18	11.59
March	11.68	16.21	11.46
April	11.38	15.82	11.42
May	11.41	15.66	11.22
June	11.44	15.48	11.47

Source: *Prospects on China's Market, Vol. II, Agriculture and Agricultural Products*, China Planning Publishing House, 1996.

Annex Table IV.2.6. **Urban household annual purchase of selected food products**

	Kg per capita					
	1985	1990	1993	1994	1995	1996
Grain	135.0	131.0	98.0	102.0	97.0	94.7
Vegetable	144.0	139.0	121.0	120.7	116.5	118.5
Edible oil	5.8	6.4	7.1	7.5	7.1	7.1
Pork	16.7	18.5	17.4	17.1	17.2	17.1
Beef and mutton	2.0	3.3	3.4	3.1	2.4	3.3
Poultry	3.2	3.4	3.7	4.1	4.0	4.0
Fresh eggs	6.8	7.5	8.9	9.7	9.7	9.6
Aquatic products	7.1	7.7	8.0	8.5	9.2	9.3
Liquor	7.8	9.3	9.7	10.0	9.9	9.7

Source: China's Statistical Yearbook.

Annex Table IV.2.7. **Rural household annual consumption of selected food products**

	Kg per capita					
	1985	1990	1993	1994	1995	1996
Grain (unprocessed)	257.0	262.0	266.0	261.0	258.9	256.2
Wheat and rice	209.0	215.0	221.0	212.0	210.7	210.8
Vegetable	131.0	134.0	107.0	107.9	104.6	106.3
Edible oil	4.0	5.2	5.7	5.7	5.8	6.1
Red meat	11.0	11.3	11.7	11.0	11.3	12.9
Poultry	1.0	1.2	1.6	1.6	1.8	1.9
Fresh eggs	2.1	2.4	2.9	3.0	3.2	3.4
Aquatic products	1.6	2.1	2.5	2.7	3.1	3.4
Liquor	4.4	6.1	6.5	6.0	6.5	7.1

Source: China's Statistical Yearbook.

Annex Table IV.2.8. **China's foreign trade on selected agricultural products, 1995-1997**

	Million tonnes								
	Exports			Imports			Trade balance		
	1995	1996	1997	1995	1996	1997	1995	1996	1997
Grain	0.64	1.24	8.33	20.40	10.89	4.17	-19.76	-9.65	4.16
of which:									
Wheat	0.00	0.00	0.00	11.59	8.25	1.86	-11.59	-8.25	-1.86
Maize	0.11	0.16	6.61	5.18	0.44	0.00	-5.07	-0.28	6.61
Rice	0.05	0.27	0.94	1.64	0.76	0.33	-1.59	-0.49	0.61
Soybean	0.40	0.19	n.a.	0.30	1.10	n.a.	0.10	-0.91	n.a.
Edible oil	0.50	0.47	0.82	3.53	2.64	2.75	-3.03	-2.17	-1.93
Cotton	0.02	0.00	0.00	0.74	0.65	0.75	-0.72	-0.65	-0.75
Sugar	0.48	0.66	0.38	2.95	1.25	0.78	-2.47	-0.59	-0.40
Aquatic products	0.61	0.64	0.72	0.69	0.88	0.99	-0.08	-0.24	-0.27
Fresh vegetables and fruits	1.98	1.36	n.a.	n.a.	0.05	n.a.	n.a.	1.31	n.a.

n.a.: not available.

Source: China Custom Statistics.

Annex Table IV.2.9. **China's tariff and non-tariff measures on selected agricultural commodities**

Commodity	Basic tariff rates		Actual preferential rates used in 1996 (%)		Non-tariff regulation measures ¹
	Preferential	Ordinary	Quota	Non-quota	
Wheat	150	180	1	114	I, II, III, IV, V
Maize	150	180	1	40	I, II, ² IV, V
Rice	150	180	1	114	I, II, III, IV, V
Soybean	150	180	3	114	I, IV, V
Rapeseed	50	80	12	40	IV,V
Cotton	3	8	3	n.s.	I, III, IV, V
Sugar	30	40	30	n.s.	I, III, IV, V
Fertilizer	5	11	5	n.s.	I, III, IV, V

n.s.: not specified.

1. Non-tariff measures are noted as follows: I: trade license; II: special registration; III: quota; IV: commodity inspection; V: quarantine.

2. This regulation is not applicable to the imported maize used as seed.

Source: Management measures on foreign trade in China, *The People's Press*, 1996, Beijing.

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