

AGRICULTURAL POLICY ANALYSIS PROJECT, PHASE III

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**THE IMPACTS OF
ECONOMIC POLICY
REFORMS ON
AGRIBUSINESS
DEVELOPMENT
IN POLAND**

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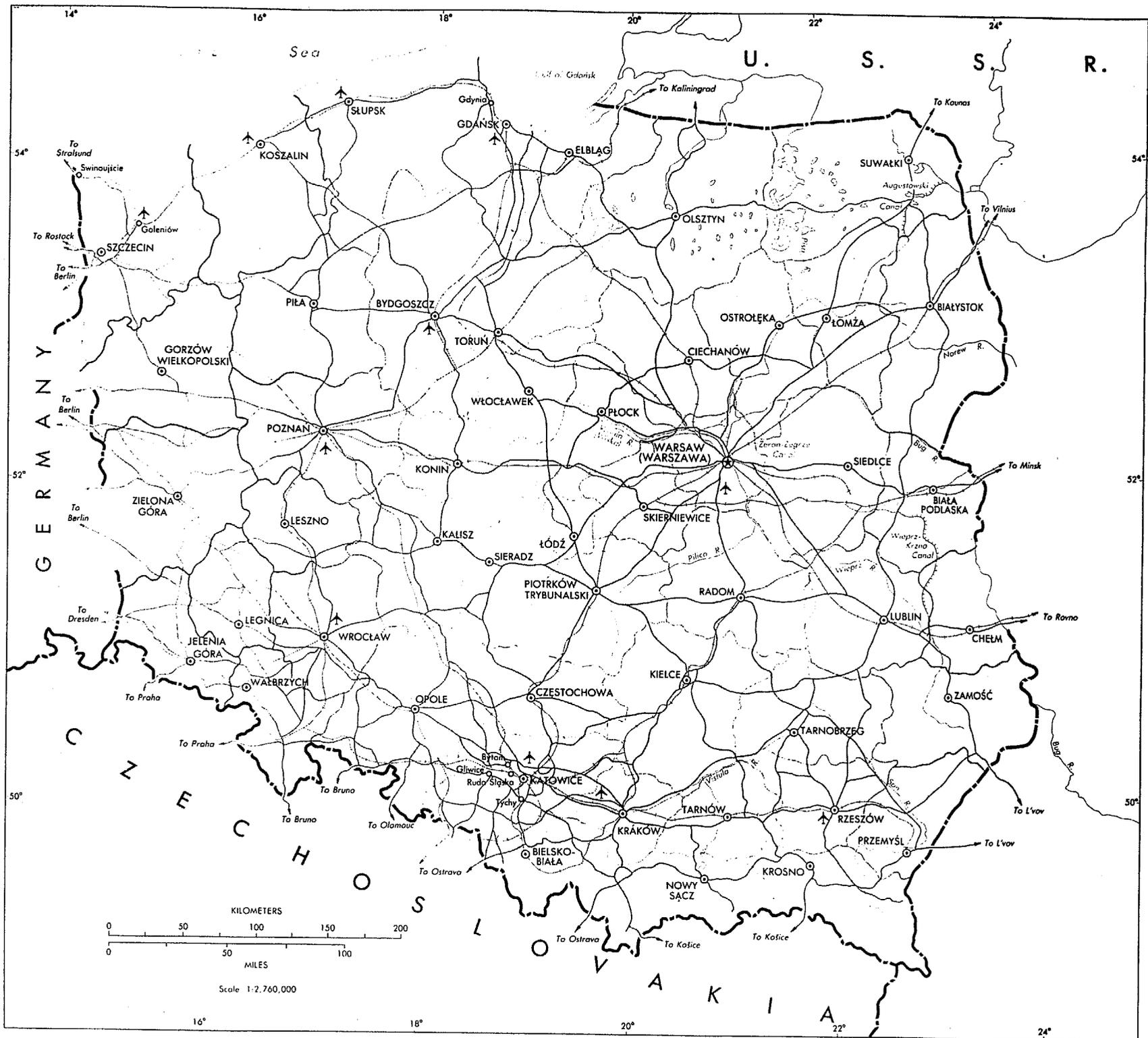
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ACRONYMS and ABBREVIATIONS

ARR	Agency for Agricultural Markets (Poland)
CAP	Common Agricultural Policy
CEFTA	Central European Free Trade Association
CIS	Commonwealth of Independent States
CMEA	Council for Mutual Economic Assistance
EBRP	Enterprise and Banking Sector Restructuring Program (Poland)
EEC	European Economic Community
EFTA	European Free Trade Association
EPA	Environmental Protection Agency
EU	European Union
FDI	Foreign Direct Investment
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GSMP	Grain, Storage and Marketing Project
GUS	Main Statistical Office (Poland)
IFC	International Finance Corporation (World Bank)
IMF	International Monetary Fund (World Bank)
MPP	Mass Privatization Program
MT	metric tons
NIFs	National Investment Funds (Poland)
NIS	New Independent States
OECD	Organization for Economic Cooperation and Development
PSL	Polish Peasants' Party
SLD	Union of the Democratic Left (Poland)
SOEs	State Owned Enterprises
VAT	Value Added Tax
VOCA	Volunteers for Cooperative Action
WTO	World Trade Organization
zl	<i>zloty</i> (Polish currency)



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PREFACE

This report is the final product of a series of work orders to the Agricultural Policy Analysis Project, Phase III (APAP III). The work began in July, 1995, when USAID/ENI Bureau commissioned a desk study to look at constraints to agribusiness development in Poland and Bulgaria. The Bureau subsequently requested that APAP III expand the desk study and conduct fieldwork (although delays in the overall Agency budgetary process caused delays in getting the funding approved). In the meantime, events in Bulgaria forced the cancellation of the fieldwork there, while in Poland the Mission requested that the scope of work include an analysis of agricultural marketing policies related to grain storage that would assist in USAID's support for a warehouse receipt scheme. Because of the additional changes made in the terms of reference, ENI issued a new work order focused exclusively on Poland except for finalizing the desk study on Bulgaria which is included here as Annex E.

ACKNOWLEDGMENTS

This report was commissioned by the USAID's Bureau for Europe and NIS, Office of Enterprise Development, to Abt Associates through the Agricultural Policy Analysis Project, Phase III (APAP III). The authors extend their appreciation to Charles Uphaus, Chief of the Agriculture and Agribusiness Division, and Steve Sposato for supporting the effort and ensuring that the assignment met the needs of both the Bureau and the Mission. The report was conducted on the basis of desktop research in Washington initially, then interviews with private sector firms, government agencies, foundations, and donors in Warsaw and in cities and towns throughout Poland. Special thanks go to USAID Mission staff, Mark Kraczkiewicz and Magdalena Wyganowska, who provided guidance on the fieldwork in Poland, and the staff of Land O'Lakes and VOCA, who assisted in identifying firms to interview.

The primary author of the report is Charles Stathacos of Abt Associates, who conducted the fieldwork and wrote up the major findings concerning both agricultural policy impacts (Section 3) and agricultural marketing policies (Section 4). Gary Ender, the original task manager, had completed during the desktop phase some analysis which is used in both sections. Eric Gemmen updated the background sections originally done during the desktop phase by Caroline Brearley, and Jeff Chenard and wrote additional background on the current agricultural and agribusiness conditions in Poland (Section 3). Mark Wenner wrote the assessment of economic policies and impacts on agribusiness in Bulgaria (Appendix E). Charles Stathacos reviewed and edited the Bulgaria section, incorporating the comments of Monika Koubratova, Ph.D. (Chief, Financial and Trade Policy Department for Bulgaria's Ministry of Agriculture), who was in Warsaw attending a workshop at the Ministry of Agriculture.

A draft report was sent to the ENI Bureau and the Mission for their review and comments, and the authors have incorporated their suggestions in this final report.

EXECUTIVE SUMMARY

This report seeks to identify and catalogue how economy-wide and sectoral policies promote or inhibit private agribusiness development in Poland. An agribusiness is defined as any enterprise that is involved in the production, processing, marketing, and distribution of agricultural commodities. For this report, the emphasis will be placed on non-farm activities--namely food processors.

Economic Reform in Poland

In the seven years since the fall of communism, the Polish economy has undergone significant restructuring. And after more than six years of reform, a market economy is now in place and, set to deliver its fifth consecutive year of strong growth, is even thriving. Still, Poland's economic transformation is by no means complete. Market mechanisms in many sectors--including agriculture--are underdeveloped, and several policy problems--such as privatization and social security reform--remain unsolved. Poland is now faced with the choice of whether to take the necessary steps in hopes of attaining a low-inflation economy with a smaller state presence that promises to utilize national resources and wealth more efficiently, or to cease the reform program and live with the economy that it has.

The failure of the communist government to collectivize Polish agriculture in the 1950s led to a situation where the predominance of arable agricultural land remained in private hands. But while Polish agriculture was primarily private, government policy ensured that it was not overly successful. Polish farmers were forced to operate in an economy completely dominated by the state sector and driven by non-market forces such as administered pricing and distribution. The result was that the private agricultural sector grew to display the same patterns and demonstrate the same deficiencies as the rest of the state-dominated economy.

Agricultural Reform in Poland

Agricultural reform began in Poland at the end of 1988, when the communist government began what can at best be described as a piecemeal reform process. In that year, the Law on Economic Activity opened new sectors of the economy to private entrepreneurs, and the state abolished its monopoly on grains and livestock supplies. In August of 1989 the government abolished the meat rationing system, froze subsidies on food products and industrial feed, and replaced fixed retail food and procurement prices with free market prices. The partial reform proved ineffectual because agricultural input prices remained fixed at below-market levels and the rest of the economy, including agricultural related sectors and agribusinesses, remained dominated by state-owned monopolies.

As Poland's economic recovery began to take hold in 1993 and 1994, the impact of the reform process began to be felt in the agricultural and related sectors. While the reform process

has not had as large an impact on the agricultural input sectors, there is some restructuring occurring there as well.

After more than eight years of restructuring, current conditions are good in the agricultural and agribusiness industry (i.e., the food industry). Industry revenues increased 10.2 percent (inflation adjusted) in 1995. Current production in the food industry is 35 percent higher than in 1992. Nevertheless, agribusinesses in Poland still face many important constraints.

Impacts on Agribusiness Development in Poland

How economic policies and current conditions interact determines whether the environment for agribusinesses is favorable or unfavorable. Based on field interviews with 14 Polish agribusinesses in addition to discussions and meetings with other agribusiness operators, this study found that current policies and conditions were:

- ▶ *very favorable* in input markets and in infrastructure and other public services;
- ▶ *generally favorable* with respect to exchange rate policies, monetary policies, the legal and regulatory environment, financial and capital markets, and agricultural and food processing policies;
- ▶ *either very favorable or very unfavorable* with respect to trade and commercial policies; and
- ▶ *generally unfavorable* with respect to both fiscal policies and access to equity financing.

Respondents cited high taxes and the lack of access to the Warsaw Stock Exchange as being the most visible constraints to profitability and expansion of their agribusinesses.

Agricultural Marketing Policies

In 1990, the Government of Poland created the independent Agency for Agricultural Markets (ARR) to stabilize agricultural markets and prices, with the objective of guaranteeing minimum levels of income to providers while protecting consumers from price hikes on food staples. The intervention activities of the ARR are focused on grains, meats and dairy products--some of the most important sources of income for farmers. However, one very important commercial (oilseed) crop--rapeseed--is not included in any of the marketing support programs.

The ARR intervention activities are, by design, aimed at supporting the market price mechanism, rather than replacing it. The ARR, in effect, assists the emerging private sector with agricultural marketing while attempting to minimize expected disruptions during the transition period. However, as long as non-market concerns weigh heavily and influence the method by which the ARR sets minimum prices and conducts supply management (by selling and purchasing grain), farmers and traders will have little incentive to invest in storage and distribution, and modernization of the marketing chain will slow. Part of the problem is that there exists no licensed warehousing system issuing uniform warehouse receipts, which would serve as collateral

for borrowing and provide the foundation for the development of forward contracts and futures trading in agricultural commodities. USAID is funding a pilot project for a licensed warehousing system (known as the Grain Storage and Marketing Project--GSMP), in which Volunteers for Cooperative Action (VOCA) is assisting 27 grain elevator operators to issue guaranteed, negotiable warehouse receipts to depositors who want to participate. The project is also assisting with warehousing legislation that is expected to be passed sometime in 1997. The success of the GSMP is a critical factor in making the grain marketing system in Poland more efficient.

The ARR intervention program operates as a series of steps taken over the course of the agricultural season, beginning before the harvest period. The program consists of four major steps: 1) setting prices before harvest (March-April); 2) authorizing purchases and storage; 3) authorizing imports; and 4) selling stocks. The intervention purchase price is set near the low point of the market price fluctuation in order to support a price floor. The ARR ensures that this price level corresponds to a calculated average cost of production and allows for a margin of profit to be taken by producers.

The rapeseed sector is uncontrolled and functions differently than grains due to the production conditions, as well as the nature of the commodity and its uses. However, production levels are influenced by the ARR programs, mostly due to the incentives for producers to shift out of rapeseed to other crops. With Polish rapeseed production falling and prices rising, imported rapeseed has become very competitive. Some analysts at the Ministry of Agriculture attribute the decline in rapeseed production to the farmers planting of wheat to benefit from the wheat pricing support that the government provides through the ARR.

The transition period for liberalizing grain marketing presents some complex challenges for policy makers. The legal context and financial risks inherent in grain marketing and risk management are not yet well understood. The participation of the ARR and VOCA in the GSMP is a crucial step in getting grain markets more market-oriented and efficient. But basic agricultural marketing policies will need to change. The policy reforms needed to achieve marketing improvements in the agribusiness sector will be difficult to implement as long as uncompetitive firms and farmers are protected. Policy makers are resisting the implementation of market-oriented measures due to the potential social consequences of greater competition on producers and processors. On the other hand, the ARR must be careful of future budgetary outlays, especially given the scenario of a large surplus of production, pushing prices downward and forcing intervention purchases.

All agribusinesses interviewed in this study agreed that Poland's accession to the EU is inevitable. Consequently, the ARR is reportedly in the process of changing its by-laws to comply with EU regulations. The need to adopt to international standards is perhaps an opportunity to re-align agricultural policies to a less direct interventionist approach.

Recommendations for Polish Agricultural Marketing

- ▶ **ARR operations need to be more transparent to the market, especially in the way prices are set. ARR participation in the GSMP should continue as a step in extending grain marketing responsibilities to the private sector.**
- ▶ **The ARR should consider the policy options that permit a gradual withdrawal from direct intervention in markets, relying more on indirect approaches (e.g., loan supports).**
- ▶ **The Polish government should consider targeted safety net programs to accompany new market-oriented policies. By avoiding broad interventions, costs of the program and negative impacts on the market are reduced.**

1. INTRODUCTION

This report seeks to identify and catalogue how economy-wide and sectoral policies promote or inhibit private agribusiness development in Poland, paying particular attention to the dairy, grain, and meat processing subsectors--all of which show significant growth potential for domestic markets and possess comparative advantages for international markets. The grain marketing system will be analyzed in order to better understand: 1) agricultural pricing policies, 2) market intervention in the form of commodity management programs, and 3) how laws and regulatory procedures affect warehousing operations and distribution systems.

An agribusiness is defined as any enterprise that is involved in the production, processing, marketing, and distribution of agricultural commodities. This definition encompasses farm enterprises; the producers and distributors of agricultural machinery and inputs such as fertilizer, seeds, feed concentrate, and pesticides; and marketing agents, brokers, truckers, food processors, grain storage facilities, meat packers, and food wholesalers and distributors. For this report, the emphasis will be placed on non-farm activities--namely food processors. Constraints faced by small- and medium-sized agribusiness enterprises will also be highlighted.

This report is organized in the following manner. Section 2 provides an overview of recent economic and political developments in Poland, with particular emphasis on the scope, depth, and performance of agribusinesses. Section 3 provides a conceptual framework for understanding how economy-wide policies and conditions for doing business affect and shape the performance of agribusiness sectors, in general; and--using the results of field interviews--the section also offers insight into how economy-wide policies are impacting Polish agribusinesses, in particular. Section 4 summarizes the impact of grain marketing policies on the storage and distribution of wheat and rapeseed. Appendix A contains tables of recent economic and agricultural statistics in Poland and graphs depicting the salient dynamics of Poland's economic and agricultural reform. Appendix B exhibits the questionnaire used for the field interviews of Polish agribusinesses. Appendix C consists of a table summarizing the results of these field interviews. Appendix D outlines past and present USAID support for the development of the financial sector in Poland. Appendix E contains an assessment of economic policies and impacts on agribusiness in Bulgaria. And Appendix F investigates the feasibility of utilizing a method of disaggregation and reclassification of National Accounts data to determine the real size of the agribusiness sector in Poland and Bulgaria.

2. POLAND'S ECONOMIC TRANSITION AND THE DEVELOPMENT OF THE AGRIBUSINESS SECTOR

2.1 Political and Economic Reform in Poland

In the seven years since the fall of communism, the Polish economy has undergone significant restructuring. Poland's transition began in earnest on January 1, 1990 with the introduction of Finance Minister Leszek Balcerowicz's economic reform program. Known also as "the Big Bang" or "Shock Therapy," the Balcerowicz Plan had three basic elements:

- ▶ to control inherited inflation and new inflationary trends stemming from price liberalization and currency devaluation through nominal wage controls and a convertible currency pegged to a fixed basket of foreign exchange;
- ▶ to support these efforts with tight monetary policy, including the elimination of the system of rationed credit at negative real interest rates; and with tight fiscal policy, through a decrease in the budget deficit which would be financed by treasury bonds and loans from commercial banks; and
- ▶ to support rational relative prices and competition through abolishing restrictions on trade.

The forcefulness of the plan and the magnitude of the transition threw Poland into a deep recession. The processes of restructuring and reform caused immediate drops in output and real wages, high levels of unemployment, spiraling inflation, and tremendous personal suffering. Despite the initial negative impact of reform, Poland strived towards integration into the world economy, rapidly assuming a place in the developed world. This would prove to be one constant through Poland's transition from communism: despite changes in government and questions of implementation, Poland's basic commitment to economic reform never wavered.

The first two years of the Balcerowicz Plan, 1990-1991, proved to be the most difficult for Poland. The government of Tadeusz Mazowiecki, formed in September 1989, succeeded in launching many of the crucial aspects of reform. The primary goals of the program were stabilization, restructuring and privatization, development of the private sector, and reform of Poland's financial systems. The success of the Balcerowicz Plan rested on quickly achieving macroeconomic stabilization, since it depended on real relative price signals and international trade to orient producers and consumers to the new market environment. With the inflation rate stabilized at a manageable level, the plan assumed policy makers would then be able to turn their attention to privatization, restructuring and private sector development. Inflation, however, proved immensely difficult to control and, as a result, the second tier of the program--especially privatization and market infrastructure development--was delayed.

The year 1990 ended with an inflation rate of 586 percent. GDP had declined by 11.6 percent and average real wages were down 24 percent from the previous year. Unemployment

remained low at 3.5 percent, a sign that economic restructuring and reallocation of resources was far from complete.¹ (See Table A.1 in Appendix A for these and following years' figures.) Partly because of the economic recession and partly due to a split within the ruling Solidarity party, the Mazowiecki government fell in the autumn. In December Lech Walesa, who earlier in the month had been elected president, named Krzysztof Bielecki his Prime Minister. Bielecki retained Balcerowicz as Finance Minister, signifying his commitment to the reform process.

Significant decentralization of economic control also occurred in 1990. Passage of the Local Self-Government Act of March 1990 gave municipalities the ability to privatize small retail establishments and made them significantly more responsible for local operations. Partially responsible for the rapid rate at which small and medium retail establishments were privatized, the Local Self-Government Act was also indicative of the type and scope of changes occurring throughout Polish society in 1990.

The second year of the economic reform process, 1991, was a year of mixed results for Poland. The inflation rate was brought down dramatically to the level of 70 percent--high compared to OECD country levels but respectable relative to other economies in transition. The continued high rate of inflation and the government's inability to decrease public expenditures led to the IMF's controversial decision to withdraw its support for the Polish transformation plan. Privatization began in June and was very effective in shifting the majority of small retail establishments into private hands, though most large enterprises remained in the state sector. The private sector share of GDP grew 14 percentage points (to 45 percent) in 1991, following an increase of 7 percentage points in 1990. The process of integrating into the world economy picked up speed as well. Partly due to the demise of the Council for Mutual Economic Assistance (CMEA) trade bloc and partly because of political preferences, Polish trade in 1991 shifted dramatically away from Poland's former CMEA partners and toward the OECD, and the European Community (EC) in particular. By the year's end Poland had successfully negotiated with the Paris Club to have roughly half of its international debt to public lenders forgiven, and had signed an Association Agreement with the EC that outlined future trade liberalization and established a protocol for eventual Polish admission into the community.

In 1992 the economic restructuring program began to pay off as GDP increased 2.6 percent. The output growth was led by the industrial sector, which more than made up for the dismal performance in the drought-ridden agricultural sector. The expected rise in restructuring-induced unemployment also appeared, as the official unemployment rate climbed to 13.6 percent. Although the private sector continued its strong growth and at least 120,000 small businesses had been privatized by the end of the year, privatization of the large state-owned enterprises (SOEs) was again delayed. Inflation continued to be problematic, but began to stabilize at about 5 percent a month. During 1992 fiscal discipline again began to weaken, as the Olszewski government proved incapable of making the difficult choices necessitated by economic reform, leading to

¹ Unless otherwise noted, figures from Economist Intelligence Unit and PlanEcon.

larger budget deficits and increasing inflationary pressures on the economy. Following the no-confidence vote that ended Olszewski's tenure in June, the government formed by Hanna Suchocka brought the budget deficit in line quickly, resulting in an overall inflation rate for 1992 of 43 percent.

The government also began to face the disarray into which its financial sector had fallen in 1992. The government started an Enterprise and Banking Sector Restructuring Program (EBRP) which was to address the significant arrears many enterprises had accumulated. The EBRP was also intended to assist both businesses and banks in rectifying their cash flow problems, which had been exacerbated by the high inflation rate of the previous years of reform. This program was also the start of the government's efforts to both regulate and establish appropriate supervisory procedures for banks.

Poland's economic recovery continued in 1993, generating the highest GDP growth rates--3.8 percent--of any East Central European country in transition. Output growth was led by strong sectoral performances in industrial production, construction and services. Unemployment remained high at 16 percent, but restructuring continued at a strong pace. The private sector's share of employment grew to 61 percent in 1993, up from 34 percent in 1990. Modest progress was made in reducing inflation to OECD levels, as the rate for 1993 came in at 35 percent, down from 43 percent in 1992.

Even though a strong recovery was underway, years of economic uncertainty and disruption were beginning to take their toll on the population. Interest groups more successfully dulled the edges of the often painful policy measures that are necessitated by reform, and citizens began to support parties that promised to ease the pain of transition. The Suchocka government, highly dedicated to reform and fiscally responsible, lost a no-confidence vote in May of 1993. Walesa dissolved parliament and the ensuing elections in September gave an alliance of two parties with communist roots--the Union of the Democratic Left (SLD) and the Polish Peasants' Party (PSL)--an absolute majority in the *Sejm*. Despite fears by some that the new government under the PSL's Waldemar Pawlak would derail the reform process, the Pawlak government proved to be moderate in its policy. The most damaging of the Pawlak government's policies was in relation to the privatization process, which it successfully stalled for most of its tenure. Otherwise, economic restructuring and development proceeded apace with new private enterprises expanding into new sectors at home and into new markets abroad.

The year of 1994 was characterized as a year noted more for political than economic uncertainty. Disputes between President Walesa and the Pawlak government erupted over all levels of domestic, international, and economic policy. Despite the political instability and policy disagreements, the Polish economy continued its strong recovery. GDP increased by 5.2 percent and real wages increased (0.5 percent) for the first time since the start of the transition. The Pawlak government resisted the spending pressures which had undone the Olszewski government and kept its budget deficit for 1994 under 3 percent of GDP. Inflation was beginning to level off, coming in at 32 percent. Agricultural output was down 9 percent due to another, albeit less

serious, drought; and unemployment continued to be high throughout 1994, averaging 16 percent. Poland was also able to reach another debt restructuring agreement, this time with the London Club, which decreased its hard-currency debt to commercial banks by \$6.4 billion to \$7.98 billion. By the end of 1994, Poland's total gross hard currency debt had decreased to \$42.2 billion. In 1994 Poland was also able to sharply reduce its trade deficit through increasing exports to Western Europe.

In 1995, the economic recovery continued as Poland achieved high growth (7 percent), further reductions in inflation (4 percentage points, down to 28 percent), and increased expansion of domestic and foreign investment (19 percent). Poland paid back its IMF loans and received an investment grade credit rating. Agriculture production in 1995 increased for the first time since the initiation of the reform period (13 percent).

Poland's government changed yet again in 1996, as Aleksander Kwasniewski defeated Lech Walesa in the presidential election; the ruling coalition remained the same, however. Poland's economy continued to grow at a strong rate (6 percent), but the economic highlight of the year occurred in July, when Poland exhibited its progress in economic reform by joining the OECD. Investment and consumer spending grew, in part due to a continued rise in real wages (4 percent). While both exports and imports grew at a slower rate (6 percent and 15 percent, respectively) than they did in the boom year of 1995 (34 percent and 31 percent), these rates are still very strong. With surging domestic demand driving imports, Poland's balance of trade deficit was over US\$14 billion--three times that of 1995. Inflation declined seven percentage points but still remained high, around 21 percent. Failing, but well-subsidized, state-owned firms played a significant role in dampening enterprise profitability in 1996 after profits made a strong showing in 1995.

2.2 Current Economic Conditions in Poland

After more than six years of reform, Poland's market economy is in place and, set to deliver in 1997 its fifth consecutive year of strong growth in GDP, is even thriving. Poland boasts a strong stock market relative to other economies in transition, a convertible currency backed by high international reserves (more than \$18 billion as of mid-1996), and a blossoming export sector that is even beginning to regain markets in the eastern NIS. Yet Poland's transformation is by no means complete. Market mechanisms in many sectors, including agriculture, are underdeveloped and several policy problems, such as privatization and social security reform, remain unsolved. Recently there have even been several causes for concern over the health of the Polish recovery and the status of continued reform. Poland must now choose whether to take the necessary steps in hopes of attaining a low-inflation economy with a smaller state presence that promises to utilize national resources and wealth more efficiently, or to cease the reform program and live with the economy that it has.

At present, Poland is experiencing a period of sustained economic growth. After a 5 percent growth rate in GDP for 1994, growth reached a high point in 1995 at 7 percent, and was 6 percent in 1996 (World Economy Research Institute 1996). While the early Polish economic recovery was driven by consumption, recent growth is driven by trade and inward investment, evident through the increases in industrial production and construction. Industrial output increased 12.1 percent in 1994 (overtaking 1990 levels), 9.4 percent in 1995, 7.9 percent in 1996 and is forecasted to reach 8.8 percent in 1997 (The Economist Group 1997a, 30).

Polish exports increased 20.5 percent in dollar terms in 1994 and showed an explosive 34.4 percent increase of exports in 1995, representing a total value of US\$23 billion. At the same time, imports increased to \$25 billion in 1995, causing a higher trade deficit in 1995 than in 1994. Both exports and imports grew at relatively modest rates in 1996 (6.0 percent and 14.6 percent, respectively) and are expected to continue to grow at strong rates in 1997 (10.8 percent and 13.7 percent, respectively) (*ibid*).

In a surprising development, Polish trade is now expanding in the eastern NIS at rates higher than with EU and OECD countries. Still, in 1995, 70 percent of Polish trade was with OECD countries, of which 60 percent is with EU countries, and nearly 30 percent with Germany alone. After a consistent decline since the CMEA collapse in 1991, exports to the CIS and Baltic States jumped 40 percent, with sales to Russia alone increasing 68 percent. Polish trade enterprises benefit from linguistic and cultural similarities in the East, and the political apprehension of dealing with that area of the world has subsided as the transition continues.

While accounting for only 10 percent of Polish exports (compared to 60 percent to the European Union), this renewed trade with the East is particularly important for Poland's agricultural and agribusiness sectors. Processed foods, including soft drinks, juices, confectionaries and frozen goods, are the driving force behind Poland's export success in the East, and Russia is now the country's biggest export market for foodstuffs (*ibid*).

Perhaps the most commonly cited reasons for Poland's growth and strong export performance have been the vibrant private sector (which now accounts for an estimated 67 percent of GDP) and the spirit and intelligence of Poland's new entrepreneurs. *Business Central Europe* reported that the entrepreneurship of Poland's private businesses was the main reason for the surge of trade with the CIS and Baltic states, where currency instability and payments problems have scared off less bold exporters.

In addition to the strong recovery in industrial production and exports, Poland's economy has also been buoyed by higher rates of investment. The relative improvement in the financial situation of enterprises (net profit margins grew from 1.7 percent in 1994 to 2.0 percent in 1995) combined with changes in the tax treatment of investment expenditures created incentives for increased investment. Growth in fixed investment was 9.2 percent in 1994, and it more than doubled in 1995, to 19.0 percent. Foreign direct investment has also increased dramatically, reaching \$2.3 billion in 1995, compared with \$1.3 billion in 1996. Investment in Poland has

benefited from Moody's June 1994 decision to upgrade Polish debt to an investment grade rating. Moody's cited the country's vibrant GDP growth and a debt-to-export ratio of 15.4 percent--down from 59 percent thanks to the London Club restructuring agreement and high export growth (The Economist Group 1995). U.S. companies are leading the way in investment, as they comprise over one-quarter of all foreign investment in Poland. Poland's capital markets are also blossoming. Several large fund managers, including U.S.-based Templeton and Poland's own *Fidelia*, are beginning to set up mutual funds to compete with Pioneer, the U.S.-based fund that has enjoyed enormous success in Poland. The 1996 boom in the Warsaw stock market was partially a result of increased demand for shareholdings as several new funds sought to purchase a limited amount of shares.

Two currency reforms were also introduced in 1995: 1) the introduction of new *zlotys* in January, which replaced the old *zlotys* at the rate of 1:10,000; and 2) a revision of the exchange scheme for the *zloty*. Instead of being rigidly pegged to the value of a basket of currencies (which includes the U.S. dollar and the *Deutsche Mark*, among others), the *zloty* is now allowed to float within a 7 percent band around the value of that basket².

One of Poland's most important economic challenges has been containing inflation. After an above-target rate of 32 percent in 1994, inflation in 1995 was 28 percent, and is currently around 21 percent. The decline in inflation has no doubt been hampered by the Summer 1995 increases in controlled prices and the government decision to revalue retirement benefits and increase public employees' wages. Food prices, which are held artificially high by import protection, have also acted as one of the largest sources of inflationary pressure.

One of the driving forces behind Poland's inflation rate, the government budget deficit was thought to be under control in 1994 when it was kept to a low 2.7 percent of GDP. High social expenditures in the first quarter of 1995, however, resulted in a budget deficit of 2.9 billion zlotys (\$1.2 billion), an amount that was one-third of the total amount planned for the entire year. Nevertheless, the overall government budget deficit was again 2.7 percent of GDP in 1995 and came in at 2.8 percent of GDP in 1996.

Two main policy hurdles, the implementation of a mass privatization plan and a reform of the social security system, must also be overcome. The first, mass privatization, appears to be successfully under way after being launched in November 1995. The implementation waited four years due to a lack of political consensus; as a result, the Pawlak government was roundly criticized by foreign observers for not moving faster on privatization. The plan is slated to restructure and privatize 512 large and medium-sized enterprises with a combined book value of well over \$2 billion. The plan is unlike the previous Czech and Russian plans in that it is centered on 15 National Investment Funds (NIFs), which in July chose enterprises from the privatization pool. Polish citizens can then purchase shares in the NIFs, which will be quoted on the Warsaw

² This exchange rate scheme is referred to as a "managed float".

stock exchange. The NIFs--all but one of which has contracted with foreign and domestic consulting firms to provide technical and managerial advice--are charged with maximizing the value of their portfolios and thus would have a strong incentive for closing and liquidating the inefficient, loss-making firms that they drafted. Therefore, privatization should help reallocate resources in the economy to more efficient uses, as well as increasing activity on the Warsaw stock market and involving millions of Poles in the reform process. In the NIF program, the group of companies representing the food industry sector ranks first among all sectors, as measured by total sales. Nevertheless, major sectors still in state-controlled hands are the oil and gas, chemical, power generation, ship building, and telecommunications industries.

Table 2.1: Enterprises Included in Poland's Mass Privatization Plan

	Number of Companies	Percent in total ^A	Sales (million <i>zlotys</i>)	Percent in total ^B
Total	512	3.3	12,816	8.1
Metallurgy	8	11.9	465	5.0
Electro-engineering	150	7.5	3,284	15.8
Chemical	42	9.4	2,078	20.9
Mineral	43	8.0	845	21.4
Wood & Paper Processing	33	5.5	809	16.8
Light Industry	67	5.2	1,439	23.9
Food	62	4.7	1,965	8.3
Construction	69	2.7	1,108	10.0
Transport	9	0.7	182	1.8
Commerce	16	0.3	400	0.7
Other branches of industry	13	4.6	241	17.1

Source: OECD

The outlook for the second major policy problem, the reform of the state social security system, does not appear as promising. At present, the social security system accounts for 20 percent of government expenditures. To support such high outlays the government has been forced to levy a 48 percent social security tax on wages, one of the highest of its kind in the world. Realizing that reform is essential to long-term balanced budgets, Poland's new Finance Minister, Marek Belka, has promised to overhaul the social security system.

Poland's recovery, while strong, has also been unevenly distributed. Unemployment, which has been falling since the 16.0 percent figure in 1994 and closed at 13.5 percent in 1996 (its lowest level since November 1992), continues to display strong regional disparities. Geographically, economic reform has hit northwestern and northeastern areas harder, with the large state farms in western Poland floundering. In Warsaw the unemployment rate was 7.5 percent, while some regions in the north reported rates as high as 30.5 percent. Although some experts believe that nearly half of those persons registered as unemployed are actually working in the unofficial "grey economy" (which amounts to 15-18 percent of GDP), the continuance of high levels of unemployment is nevertheless significant--not only because of the excess strain placed on the government budget but also because a large number of workers are not taking part in the recovery. Their misfortune in the transition could easily be transferred into active opposition against further reform. For those who are employed, however, real wages rose as a whole by 0.5 percent in 1994, but increased 3.4 percent in 1995 and 4 percent in 1996. A few agribusinesses who participated in our survey (the results of which are described in Section 3) have realized the comparative advantage of doing business in depressed areas, and have transferred production to areas in Poland where unemployment is high, thus saving on wages. But for many people in Poland, long-term unemployment has meant that the current phase of economic recovery has not yet fulfilled its promise.

In addition to the economic challenges mentioned above (inflation, mass privatization reform, and reform of the social security system), other challenges and constraints face the Polish economy. Large government budget deficits and high inflation have coupled to raise interest rates, hindering access to credit. And businesses face high tax rates and ever-changing tax codes. Section 3 of this report will address these economy-wide challenges and constraints, and profile how Polish macroeconomic and trade policies have impacted its agribusiness sector.

2.3 Agricultural and Agribusiness Reform in Poland

The failure of the communist government to collectivize Polish agriculture in the 1950s led to a situation where the predominance of arable agricultural land remained in private hands. That situation prevailed throughout the communist period due to the incompatibility of the government's long term goals: full collectivization of the agricultural sector and high levels of agricultural production. As the communist government realized during the 1950s, attempts to collectivize the sector would disrupt food production enough to imperil their own hold on power. Polish agriculture, therefore, remained primarily private, but government policy ensured that it was not overly successful. As the Polish experience demonstrates, while private land ownership is a necessary condition for a successful, modern agricultural sector, it is not sufficient. Polish farmers were forced to operate in an economy completely dominated by the state sector and driven by non-market forces such as administered pricing and distribution. The state restrained private agriculture by frustrating farmers' attempts to enlarge their holdings or to attain access to farm machinery and credits. Farmers were also denied immediate access to domestic and international markets, and were faced with state-owned monopolies up and down the production chain. The

result was that the private agricultural sector grew to display the same patterns and demonstrate the same deficiencies as the remainder of the state-dominated economy.

Agricultural reform began in Poland at the end of 1988, a year and a half before the initiation of the Balcerowicz Plan, when the communist government began what can be at best described as a piecemeal reform process. In 1988, the Law on Economic Activity opened new sectors of the economy to private entrepreneurs and the state abolished its monopoly on grains and livestock supplies, although both the food subsidy system and the meat rationing system remained intact. In August of 1989, the government abolished the meat rationing system, froze subsidies on food products and industrial feed, and replaced fixed retail food and procurement prices with free market prices. Again, the partial reform proved ineffectual because agricultural input prices remained fixed at below-market levels and the rest of the economy, including agricultural related sectors and agribusinesses, remained dominated by state-owned monopolies.

With the implementation of the Balcerowicz Plan in January of 1990, the agricultural and agribusiness sectors were exposed to a new policy environment and new, rapidly changing market conditions. The economic liberalization and fiscal constraint that the Balcerowicz Plan imposed forced dramatic cuts in government subsidies and ended export promotion programs. The government also imposed temporary export quotas on some agricultural products in an attempt to curb increases in domestic food prices by forcing farmers to sell their products in the domestic market. The Polish market proved an extremely difficult place in which to operate, however, as inflation both decreased the real incomes of consumers and increased the storage and transport costs to farmers.

The policy of freeing prices before the economy was rid of monopolies proved disastrous for farmers. Agriculture-related businesses on both the input and output side of the process continued to be controlled by state-owned enterprises, which, although mostly broken into separate entities at the end of 1989 and during the early phase of the Balcerowicz Plan, retained considerable monopoly and monopsony power at the local level. Given the market conditions and the loose regulatory environment in 1989, 1990, and 1991 the food distribution and processing enterprises reacted by restricting output and increasing retail prices, while decreasing purchases from farmers in an attempt to procure produce at lower prices. The result was a glut in the agricultural markets. Input/output price relations had changed dramatically to the disadvantage of farmers. (In 1990, prices paid to farmers increased on average four times, while prices for agricultural inputs increased eight times.) Farmers responded by decreasing their purchases of agricultural inputs (fertilizer and pesticide sales dropped 63 percent and 54 percent, respectively; sales of high-grade feed and seeds experienced similar drops). Instead, farmers fell back on inputs that had been stockpiled over previous years, utilizing inputs more efficiently, and adapting the structure of their production to the new price realities (*ibid*). Therefore, even with the dramatic drops in purchases of agricultural inputs, agricultural production in 1990 decreased by only 1.4 percent from 1989, a performance that benefited from good weather. The trend continued in 1991 with decreases in crop production of 2.8 percent and in livestock production of 0.4 percent. Production declines were compounded by a severe drought in 1992, which resulted in decreased

crop production of 21 percent and a fall in livestock production of 4.4 percent over the previous year's already depressed figures.

The government responded to the agricultural crisis with several policies. In early 1990 nearly all export quotas were abolished as part of the trade liberalization program. In March of 1990 the government introduced preferential interest rates for medium-term agricultural credits. And after severe pressure from the farmers' lobby, the government allocated budgetary funds for assistance to the agricultural sector. Farmers received US\$47 million in soft loans, dairies received US\$82 million for modernization, and mills received US\$73 million in soft credits for grain storage. The government also created the Agency for Agricultural Markets (*Agencja Rynku Rolnego*--ARR) in order to help stabilize the agricultural markets, to protect farmers' incomes, and to maintain Poland's food reserves. The ARR also received US\$90 million in budget outlays in 1990 to purchase some of the agricultural produce surplus. The ARR's market intervention activities center on maintaining minimum prices for basic foodstuffs and flattening price fluctuations. This strategy tends to deprive various actors of the economic gains afforded by storage and by exploitation of the price changes typical of agricultural products during the course of the year. The government resorted to even more drastic attempts in 1991 to help relieve the glut of agricultural products when it increased import tariffs on food and agricultural products from the previously liberal level (0-20 percent) to more restrictive levels comparable with those of the EEC (from 20 percent on most of the cereals to 40 percent on sugar and milk products). Poland later agreed to decrease those tariffs over time as part of its trade agreements in late 1991 and 1992.

Poland's agricultural trade remained relatively stable throughout the early transition despite the collapse of CMEA, the opening of the domestic market, and competition with subsidized OECD products. Agricultural imports remained at approximately 12 percent of all imports from 1986 to 1993 (except for in 1990 when the figure dropped to 7 percent). Agricultural exports actually increased from the range of 10-12 percent in 1986-1988 to 14-17 percent in 1990-1992. Poland's agricultural trade surplus declined dramatically in 1992, however, with the decrease in exports associated with the drought. 1993 saw yet another 20 percent decline from the already low 1992 figure for agricultural exports. By 1994 agricultural exports had rebounded, increasing 24.4 percent over 1993, while in 1995 showing a further increase of 20.4 percent over 1994 (FAPA 1996). Agricultural export figures in 1996 will be down due to weather-related production problems. But in spite of climatic variability, the future appears promising for Polish agricultural and processed food exports. The Polish government has succeeded in signing three separate trade agreements that should increase opportunities available to agricultural importers and exporters. The first was an Association Agreement with the European Community in December 1991; the second a free trade agreement with the European Free Trade Association (EFTA) in December 1992; and the third a free trade agreement with the Czech Republic, Hungary, and the Slovak Republic also in December of 1992. All three involve decreasing or eliminating tariffs and increasing or eliminating quotas for agricultural and related products over the next decade. These agreements and Poland's renewed trade successes in the NIS point to a healthy future for Polish agricultural exports.

As Poland's economic recovery began to take hold in 1993 and 1994, the impact of the reform process began to be felt in the agricultural and related sectors. As noted above, the state had played a dominant role in both agricultural input industries and agricultural processing industries. The reform process and the development of a private economy have changed the situation both upstream and downstream from the agricultural sector. The development of independent private enterprises and the privatization of some SOEs has weakened the monopoly position of the SOEs in the downstream processing sector. The private sector now accounts for 90 percent of trade in fresh retail food. The share of state-owned food processing enterprises of total processed food production has decreased to less than 50 percent, and those remaining enterprises operate at only 60 percent of their production capacity and suffer from overemployment and high fixed costs.

While the reform process has not had as large an impact on the agricultural input sectors, there is some restructuring occurring there as well. Many rural cooperatives that were once the primary providers of agricultural services are now in the process of self-liquidation and are being replaced by private suppliers. The OECD has estimated that private enterprises contribute over 50 percent of the services provided to agriculture (Portugal 1995). The agricultural and agribusiness sectors remain in a precarious position in their transition, however. The socialized marketing structure has collapsed in many rural areas, and has not yet been replaced by a private system. Even the inefficient socialized distribution system was better than no system at all. The OECD has marked the slow development of a wholesale trade network as cause for particular concern. A great deal of progress, however, has been made. Farmers can now procure fertilizers, plant protection chemicals, construction materials, veterinary products, and machinery from private sources. They can also choose between machinery produced domestically, in Russia, or in one of several Western countries. They can also buy used machinery on the secondhand market that has developed to meet the growing demand.

2.4 Current Agricultural and Agribusiness Conditions in Poland

Agriculture has long been an extremely important part of the Polish national economy. Its share of employment has held steady during the transition period at 26 percent, approximately the same percentage as in 1950. Agriculture's contribution to GDP has shrunk, however, from 13 percent in 1986 to 6 percent in 1996. These statistics indicate two things: a) labor productivity in agriculture is lower than in the rest of the economy, and b) fluctuations in agricultural markets would directly affect more than one-quarter of the Polish population.

The latter factor is somewhat mitigated by the fact that a considerable majority of Poland's 15 million rural residents derive their income from combining work on farms with work outside the agricultural sector. This situation is necessitated partly because of the small size of Poland's farms, which is perhaps the most obvious legacy of the communist period. The average private farm in Poland in 1989 was only six hectares (among farms larger than one hectare), as compared to the 1987 average of 13.2 hectares for the 12 countries that made up the EEC (Kwiecinski and

Leopold 1993). Half of all private farms ranged in size from one to five hectares, while only 8 percent were larger than 15 hectares (see Table A.7 in Appendix A).

While the past seven years of restructuring the Polish economy has resulted in significant structural and functional changes in agriculture and agricultural processing, today conditions are good for the agriculture and agribusiness industry (i.e., the food industry). Industry revenues increased by 10.2 percent (inflation-adjusted) in 1995. Current production in this sector is 35 percent higher than in 1992, and its level approximates that at the end of the 1980s. Three-quarters of the output comes from private farms, one-quarter from state farms. And having lost its dominant position in food processing, the state sector only accounts for 30 percent of the food processing industry.

The largest sub-sectors of the food processing industry are meat processing, grain processing, dairy, fruit and vegetable processing, fats and oils, confectionery, sugar, brewing and malting, distilling, food concentrates, and refrigeration. Current conditions in each of these sub-sectors are outlined below³. Some sub-sectors have embraced reform more than have others. The production of juices, concentrates, and frozen foods is rapidly being privatized, and overall production is soaring as a result. But the grain and milling sub-sectors have been the slowest to adopt free-market conditions, due primarily to limited privatization and foreign investments. Overall, there are approximately 10,500 companies in the food processing industry: 260 state-owned, 6,250 civil partnership companies, almost 3,400 trading companies and over 500 co-operatives.

2.4.1 Meat Processing

Together, the meat and poultry industries comprise the largest share of the entire farm and food processing sector. The meat industry accounts for approximately 14 percent of the total output of the farm and food processing sector while the poultry and egg industry accounts for 2 percent. This sub-sector is comprised of 70 state-owned enterprises (80 percent meat, 20 percent poultry), 600 commercial law companies and co-operatives, and 7,000 firms owned by private individuals and civil law companies. The vast majority (94 percent) of these enterprises employ up to six persons, while only three percent employ more than 50 persons. Meat processing enterprises, in particular, employ more than 120,000 persons, 72 percent of whom work in large firms (employing more than 50 persons).

The financial status of enterprises in the meat, poultry and eggs industry is improving and profitability is on the rise. Almost 60 percent of businesses are economically and financially stable. Firms owned by individuals (43 percent of all enterprises) tend to report the highest profitability. Net profits of strong enterprises are about 5 percent of turnover. The majority of

³ Data for the profiles of these food industry sub-sectors comes from the Polish Ministry of Agriculture and Food Economy, 1996.

businesses are characterized by high financial fluidity. The investment risk in the meat processing sub-sector is rated as medium.

In 1995 sales in the meat processing industry increased 14 percent. Production was 8 percent higher than in 1994 and 8 percent higher than in 1990. Cold cuts and canned meats account for 80 percent of the output of meat processing plants; the output of smaller businesses is dominated by fresh meat and cold cuts. In 1995 poultry meat processing firms sold 70 percent of their output in the form of carcasses and 30 percent in processed forms. In 1995 Poland exported 69 thousand tons of meat valued at \$181 million and 71 thousand tons of cold cuts and other meat products valued at \$142 million. These were mainly pork, poultry meat, and its products. The surplus in the meat and meat products trade reached \$181 million in 1995.

2.4.2 Grain Processing

Poland is the largest producer and consumer of cereals in Central and Eastern Europe. Between 1990-1995, grain harvests ranged from 19.9 to 28.0 million tons. Production of wheat ranged between 7.4 and 9 million tons, while consumption varied between 7.9 and 9.2 tons. With a population of more than 38 million and annual consumption of flour products averaging 120 kg per capita, Poland has a very large market potential.

The capacity of the cereal milling industry is about 6-6.5 million tons annually and the capacity of the feeds industry is about 9 million tons per year. However, current production is not even approximating this capacity, as production is only 50 percent of capacity in feeds, 60 percent in mills, and about 20 percent in oats flakes enterprises.

A considerable improvement in the condition of milling firms since 1994 shows that this sub-sector is pulling out of crisis. A strong impact on the market has been made by a group of firms which modernized their production and built distribution networks for their merchandise. Poland has 248 mills for wheat and rye with a unit capacity of 50-300 tons per day. These mills tend to be located near bigger urban centers. Oat flakes are produced in 9 enterprises with total capacity of about 350 tons per day. There are also more than 2,400 small mills with unit capacity of about 30 tons per day, which produce flour for local markets, filling in gaps existing here and there.

Until 1990, the biggest feed producers were state-owned enterprises and co-operatives. After 1990, many feeds enterprises were closed, others concluded joint-venture agreements with foreign firms (Central Soya, Cargill), and some other enterprises were privatized. Soon many new producers of feeds and feed components appeared on the market, and now more than 1,300 firms operate in this sub-sector. Despite a drop in feeds production, caused by the shrinking of livestock herds and structural changes, the past four years have seen a breakthrough in the feeds industry. Many renowned firms, offering a wide range of products, have appeared on the Polish market. This stiffer competition forced many companies to modernize their machinery and equipment. Along with the flow of foreign capital, new management and marketing solutions

started to be used. Feed firms also began to appreciate the benefits of close cooperation with livestock producers, because if these producers expand their business, demand for the industrial feeds increases.

Changes in the organization of cereal trade introduced in recent years have reduced risk in the business. The opening of commodity exchanges and the planned introduction of futures and forward transactions on the Warsaw Board of Trade are the factors that stabilize the market and make it function more effectively (see Section 4). The flow of capital will be improved when warehouse receipts are introduced. The fast expansion of market structures both facilitates the activity of firms linked with agriculture and satellite businesses and reduces the cost and risk of business operations.

Liberalization of trade within the Central European Free Trade Association (CEFTA) opens the markets of the member countries and makes it easier for firms which have a good standing in Poland to penetrate CEFTA markets. When Poland joins the EU, firms with large and high-tech processing capacity, offering quality products, will have even better conditions to expand. On the one hand, they have the advantage of lower investment costs in Poland and on the other, they have time to strengthen their foothold on the ready markets of Central and Eastern Europe and affluent markets of Western Europe. Large and relatively modern storage facilities as well as the vast domestic market encourage investment in the milling sub-sector.

Poland's fast economic growth in the past few years and rising real incomes of the population create conducive conditions for the consumption of highly processed cereal products. Indeed, it seems to be an opportune time for foreign firms to enter the Polish market now that production in the grain processing industry is not at capacity, the existing storage space is large and sub-sector itself shows signs of recovery.

2.4.3 Dairy

Currently, 450 firms are involved in commercial milk processing in Poland. The majority are dairy co-operatives (300) and private firms (100). In all, the milk processing sub-sector employs more than 70 thousand persons. The average profitability in the dairy industry is 0.7 percent.

Before 1989, government subsidies stabilized prices of dairy raw materials and products. Low prices for dairy produce combined with shortages of meat and fat products encouraged high consumption of dairy products. The introduction of market principles into agriculture and the food economy together with the abolishment of subsidies caused major changes in milk production and consumption of dairy products. Following a switch to the market economy, dairies encountered competition from new small milk processing enterprises as well as a mass flow of imported dairy goods, some of which had not been produced in Poland before. Indeed, competition from imported goods and foreign firms has forced through changes both in the range of dairy goods available as well as in packaging, the quality and taste of milk. Since 1990, co-

operative firms have been aided by the Polish government to sustain and develop milk production as well as to introduce new processing technologies. As part of this industrial policy, a new quality standard for milk is to be introduced within the next two years, requiring dairy plants to install modern laboratory equipment.

Foreign investors have shown major interest in the Polish dairy sub-sector. Firms with foreign capital participation generally have a strong position, with an increasing market share and solid financial results. An attractive feature of the Polish dairy sub-sector is the emergence of new markets in Central and Eastern Europe as well as competitive prices of Polish products compared with goods produced by EU member countries.

While the demand for dairy products and the supply of milk fell in 1990-95, output of highly processed dairy products such as milk drinks and ice cream has nevertheless increased significantly. The major producers of basic dairy goods are dairy co-operatives, while the production of yogurt, ice cream, and flavored cheese is largely in the hands of private firms. Output of butter has declined, but it remains an important product of the Polish dairy sub-sector.

Thanks to the introduction of modern technologies, the quality of dairy products has improved and their range has been broadened. Continued modernization processes will require further investment outlays, but the fundamental role of milk and dairy products in Poland's diet will guarantee that this sub-sector will always be given priority by the government.

2.4.4 Fruit and Vegetable Processing

The Polish fruit and vegetable processing industry is well developed. About 270 firms are engaged in fruit and vegetable processing in Poland. Sixty percent of these employ more than 50 workers. Two enterprises have an output of more than 40,000 tons, seven produce between 20 and 40 thousand tons, and more than 30 firms produce 10-20 thousand tons. The largest firms account for 50 to 60 percent of the total output of the industry, about 90 percent of juice and soft drink production, 70 percent of fruit and vegetable concentrates production, 45 to 50 percent of frozen fruits and vegetables and 30 percent of traditional processing output. Of enterprises employing more than 50 persons:

- ▶ 25 percent are state-owned firms, accounting for one-quarter of the total output value;
- ▶ 13 percent are co-operatives, accounting for 3 percent of the total value; and
- ▶ 72 percent are private firms, accounting for over 70 percent of the total output value.

There also exist over 1000 local enterprises (fruit and vegetable processing and soft drink producers) operating in the fruit and vegetable sub-sector representing various forms of ownership. The majority of the businesses in Poland's fruit and vegetable processing industry do not specialize in production, but turn out a wide range of fruit and vegetable products. Large firms more intensively produce fruits and vegetables, fruit and vegetable concentrates, and juices and soft drinks.

A one-year program to restructure 21 firms in the fruit and vegetable processing, freezing and wine industries was completed in June 1996. Now the government is preparing to privatize seven food-processing plants, which are currently owned by the State Treasury. The original intent of the financial, operational, and organizational restructuring program was to increase the firms' value and then privatize them for a better price. The total market value of the first five soon-to-be-privatized companies is estimated at US\$12-14 million, with sales totalling \$35 million (Dabrowski 1996).

About 1.2 million tons of fruit--approximately 60 percent of the total harvested--were processed industrially in 1995. The resulting production consisted of 800 thousand tons of fruit preserves and semi-processed products, including juices and soft drinks. The large volume of production of fruit concentrates and frozen fruit is caused by external demand, while the growth in the production of juices and soft drinks has been stimulated by domestic demand and is a result of seeking out new profitable lines of business. Vegetable processing is the lesser-developed branch in this sub-sector. In 1995, about 450 thousand tons (approximately 10 percent of the total harvested) were processed. Production included about 300 thousand tons of vegetable preserves.

For a few years the fruit and vegetable industry was a loss-making sector but in 1995 it started to generate profits, which improved its financial fluidity. Financial difficulties experienced by this sub-sector had made it high-risk, discouraging foreign investors. Recently, however, the situation has improved.

2.4.5 Fats and Oils

Twelve enterprises are engaged in processing oil plants, oil seeds and vegetable fats, of which eight have large processing plants accounting for about 98 percent of domestic output. Firms employing more than 50 persons have a total workforce of approximately 6,000 persons. Six of these enterprises are commercial law companies, and they account for over one-half of the industry's total sales. Two are state-owned companies, and account for 15 percent of total sales. Two are Treasury-owned companies and account for 30 percent of total sales. In 1995, 45 percent of this sub-sector was the processing of oil-bearing seeds (mainly rapeseed), 30 percent of this sub-sector was the production of vegetable fats, 18 percent was the production of various kinds of margarine, and seven percent was the production of edible oils.

2.4.6 Confectionery

The confectionery industry, which produces candies, chocolate, pastry and other confections, is a thriving segment of the food processing industry. In 1995, the output of confectionary valued \$1.1 billion and accounted for about 7 percent of the total output value of the food processing industry. In 1995, output totaled 115 thousand tons of candies (26 percent of the sub-sector), 147 thousand tons of durable pastry (33 percent), 60 thousand tons of chocolate bars (13 percent), 90 thousand tons of chocolate confections (20 percent), and 35 thousand tons of other confections (8 percent). Of the businesses in the confectionery sub-sector, 77 employ

more than 50 workers, 25 employ between 5 and 50, and five employ more than 1,000 persons. Sixty percent of the firms are private, around 35 percent are co-operatives, and around 6 percent are state-owned enterprises. State-owned enterprises account for only 14 percent of the value of sold income in the group of enterprises employing more than 50 persons. The ten largest firms control almost 60 percent of the market. Privatization of this sub-sector is nearing an end. The confectionery industry has attracted major attention of foreign companies, which have invested \$325 million and have made investment pledges exceeding \$600 million, totalling almost \$1 billion.

2.4.7 Sugar

The sugar industry accounts for about 5 percent of the total value of farm and food processing. Since 1991, sugar consumption has grown from 0.7% to 1.3% annually, but it remains below the level of the late 1980s. The sugar industry in Poland owes its specific character to agricultural policy which sets its output at a level sufficient to meet domestic consumption. Because sugar production costs are high in Poland, world sugar prices are lower than domestic prices. According to long term forecasts world sugar prices will continue to decline until the end of this century which means that Poland will be unable to export sugar without government subsidies.

2.4.8 Brewing and Malting

Beer and malt are produced by 35 companies in Poland. Together, they operate a total of 75 breweries and 54 malt houses and employ 15,200 persons. Although there are many small businesses in the sub-sector, the market is dominated by six large breweries which account for 60 percent of beer sales. The ownership structure of the brewing industry is as follows:

- ▶ 28 private commercial law companies, with a 75 percent market share;
- ▶ five State Treasury owned companies in the process of privatization and a 21 percent market share;
- ▶ two state-owned companies with an approximately 4 percent market share.

The brewing and malting industry is in good economic and financial condition, with average profitability of 6.5 percent. Good firms report net profits of 7 to 10 percent of net revenue.

2.4.9 Distilling

The state controls the production and trade of high wines, vodkas and other alcoholic drinks. The Polish Ministry of Finance supervises production and trade, controls prices on products containing less than 30 percent of alcohol by volume, and applies duties based on alcoholic strength and volume. High wines are presently manufactured by over 900 agricultural distilleries (either leased from the state or privately owned) and by industrial distilleries (owned

by four "Polmos" enterprises and one sugar plant) that produce high wines from molasses. Of the 40 firms in the industry, 30 employ more than 50 persons. The major producers are 25 "Polmos" enterprises, which make more than 80 percent of total rectified spirit and more than 90 percent of vodka and other alcoholic drinks. There is also a number of small producers of alcoholic drinks, which are either private or co-operative businesses, some are owned by foundations or foreign enterprises. They make alcoholic drinks either in their own enterprises or commission production from state-owned firms. Some state-owned enterprises cooperate with foreign firms in bottling and marketing products. The private sector has only a 2 percent market share. A program for privatizing the distilling industry is being discussed. About 6,200 persons are employed in this sub-sector. The financial and economic state of the distilling industry is rated as good, with net profitability of about 7 percent of net income. But because of high duties and government-controlled prices, foreign firms show little interest in this sub-sector of Poland's food industry.

2.4.10 Food Concentrates

Poland's food concentrates industry produces concentrated meals, soups, cakes, desserts and drinks, cereal coffee, baby food and spices. These products are highly processed, made from semi-products supplied by the food industry plants which carry out preliminary processing of farm produce.

The concentrates industry is one of the fastest growing sub-sectors of food processing. In 1995 it produced more than 270 thousand tons of concentrates, 46 percent of which is baby food, 13 percent spices, 9 percent dinner concentrates, and 4 percent cereal coffee mixes. The value of sold production amounted to about \$500 million and accounted for 3 percent of total sold output of the food processing industry.

The concentrates industry includes 17 firms employing more than 50 persons and about 10 businesses employing 5 to 50 workers. The industry is wholly privatized and the ownership structure is 82 percent private firms and 18 percent co-operatives. The sub-sector is dominated by six large firms which manufacture a wide range of concentrates. Together, these six firms have almost 80 percent of the market. The remaining firms tend to specialize in the production of one type of concentrates. The industry attracts a large interest from foreign companies, which have invested about \$100 million.

Having grown fast in recent years (production is currently growing at 15 percent annually), this sub-sector is in good economic and financial condition, with net profits exceeding 5 percent of the value of sold output. In order for the food concentrates industry to continue to grow, however, expansion of marketing is needed, particularly promotion and advertising, distribution channels and market studies. Investment is also needed, especially in the modernization and purchase of new technological lines for raw materials processing and manufacture of final products, high capacity packaging lines, and installations reducing pollution and noise in production rooms.

2.4.11 Refrigeration

In Poland, multi-purpose cold stores house perishable foods such as: butter, lard, eggs, fruit and vegetables, ice cream, food preserves, and other products. Cold storage is currently the best technique of preserving food, reducing the use of other, more expensive methods. In Poland, like in other Central European countries, many cold stores have started production of frozen fruit, vegetables, and ice cream. Poland accounts for 18 percent of the world output of frozen fruit and its per capita production is one of the highest in the world. Poland's performance as a producer of frozen vegetables is less impressive--it accounts for 1.5 percent of world output.

2.5 Conclusion

There has been a great deal of success in the transformation of the agricultural and agribusiness sector, particularly in the development of new private enterprises and in export performance. Nevertheless, many challenges remain. Among these are: privatization of cooperatives and of processing enterprises must be completed; access to credit must be improved; market information should be increased and wholesale markets developed further. These are only some of the challenges that the agricultural and agribusiness sectors in Poland face. Section 3 of this report will identify and expand on these sectoral and other, economy-wide policy challenges and constraints and offer recommendations for expediting their removal.

3. POLICY IMPACTS ON AGRIBUSINESS DEVELOPMENT IN POLAND

3.1 Introduction

The initiation since 1989 of tremendous economic, political, and social changes has resulted in great progress for Polish agribusinesses. Today, almost 8 years later, there are now in place many improvements in the business and policy environment that are favorable to agribusiness development. However, Polish agribusinesses still face important constraints, many of which are of particular concern to individual agribusinesses.

In order to analyze their impacts on agribusinesses, we have categorized economic policies and conditions as follows: (1) macroeconomic and trade; (2) legal and regulatory; (3) input markets; (4) financial and capital markets; (5) infrastructure and energy; and (6) agriculture and food processing. How these policies or conditions interact determines whether the environment for starting and/or expanding an agribusiness is favorable or unfavorable. For example, policies on exchange rate levels may cause an under- or over-valuation of the *zloty*, which then affects the competitiveness of Polish goods in foreign markets. Fiscal policies, especially tax policies, can create either incentives or disincentives for agribusinesses. To encourage agribusiness development, policy makers and advocates for businesses must identify and understand the most inhibiting external constraints in a given commodity sub-sector or in the economy in general.

This section documents and prioritizes the constraints facing Polish agribusiness firms and explores whether market-oriented policies have induced agribusinesses to become more competitive and efficient. It is based primarily on structured field interviews with 14 agribusinesses in addition to discussions and meetings with other agribusiness operators, government officials and advisors to agribusiness-oriented projects and activities. The interview scored responses of agribusinesses to policies or conditions on a scale of -2 (unfavorable or unfair) to +2 (favorable or fair) with 0 considered neutral or not applicable. The results are summarized in Table 3.1.

Table 3.1: Summary of ENI Poland Agribusiness Study Interviews

	Policy Area	+2	+1	0	-1	-2	Avg. Score
Macro-economic	exchange rate	2	4	6	1	1	+0.36
	fiscal	1	3	1	5	4	-0.57
	monetary	7	2	3	1	1	+1.00
	trade & commercial	1	6	2	2	3	0.00
Legal and Regulatory	property rights	6	3	2	2	0	+0.92
	business laws	5	6	0	4	0	+0.86
	labor & safety laws	4	6	2	2	0	+0.86
	environmental laws	7	3	3	1	0	+1.14
Input Markets	labor/human capital	8	5	0	1	0	+1.43
	raw materials	7	4	1	1	1	+1.07
	intermediate materials	10	2	2	0	0	+1.57
	energy	1	1	0	0	0	+1.50
	equipment	9	0	2	0	0	+1.55
Financial and Capital Markets	access-working capital & investment loans	7	3	1	2	1	+1.00
	access-trade finance	4	1	8	0	0	+0.69
	access-equity	2	0	5	3	3	-0.38
Infrastructure and Energy	roads, rails, ports	7	2	1	1	2	+1.00
	electricity	10	2	1	1	0	+1.50
	water	11	2	1	0	0	+1.71
	telecommunications	11	2	0	0	1	+1.57
Agriculture and Food Processing	R&D services	6	2	3	2	1	+0.71
	grades and standards	6	4	1	0	3	+0.71
	labelling and quality	5	5	3	0	1	+0.93
	minimum pricing	2	3	4	2	3	-0.14

3.2 Macroeconomic and Trade Policies

Macroeconomic and trade policies (exchange rates, fiscal, monetary, and trade) have wide and far-reaching effects on the environment for agribusiness. These policies affect important macroeconomic variables—aggregate demand, inflation rates, interest rates, and credit supply—which in turn determine the business climate. Credible, stable, and rational economic policies create favorable conditions for sustained private sector economic growth and expansion.

3.2.1 Exchange Rates

Since 1989, the Polish monetary authorities have taken a number of steps to create an open international trading regime. These include devaluing the *zloty* and making it convertible, and giving businesses access to foreign exchange. Given that the exchange rate is the price of foreign currency in domestic currency units, under- or over-valuation of that currency affects businesses by creating distortions in the relative costs of tradeable goods. For example, overvaluation makes imports cheap (relative to domestically produced commodities) and exports less competitive; while undervaluation makes imports expensive (and domestic products relatively cheaper) and exports more competitive in foreign markets. The exchange rate should reflect the level of interest rates, confidence in the currency, and the value of the external debt. Poland's present exchange rate policy is characterized as a "creeping" devaluation—that is, devaluing the *zloty* monthly by a fixed annualized target rate. This has created stability and predictability for businesses who can operate more efficiently and with less volatility.

From the interviews conducted, six firms indicated that exchange rate policies were favorable, prudent and beneficial to business, while six others were unaffected (as their companies serve only domestic markets). However, two companies involved in international trade felt that the *zloty* was overvalued and that it subsequently had a negative impact on their operations; imported products were relatively cheaper, making competition stiffer. Poland's new policy of a managed float allows for some government intervention in setting exchange rates, a necessary measure to prevent disruptive speculation and to maintain a stable investment planning environment.

Exchange Rate Policies

Favorable: 6

Neutral: 6

Unfavorable: 2

3.2.2 Fiscal Policies

Fiscal policies regulate a government's expenditure patterns and tax revenue generation systems. Governments must finance public expenditures through levying taxes and applying user fees for different services. The methods and rates by which taxes are imposed influence savings and investment by individuals and businesses. Overly burdensome taxes result in cheating,

avoidance, or evasion, which can, in turn, lead to regressive and distortionary impacts in the economic environment.

In Poland, tax rates on businesses are high, making it difficult for firms to become profitable and competitive in the long-run. The tax rate for firms is 40 percent of profits, applied on top of a 48 percent social security tax on wages and a 20 percent income tax on employee wages. Agribusinesses interviewed indicated that taxes are the most critical policy constraint they face. Small and medium-sized agribusinesses complained that the tax collection system imposes an inordinate burden: dealing with red tape is very costly in terms of time, as it cannot be spread over a large staff or a large production base. Agribusinesses must also devote resources to ensuring that they keep up with the ever-changing tax regime in Poland. During the transition, Poland has instituted several tax reforms with the goals of: 1) making the indirect value-added tax (VAT)--which is levied at rates of 0%, 7%, and 22%, depending on the product--its main source of revenue, and 2) preparing the system for eventual entry into the European Union. The government also plans to reduce corporate income tax rates sometime in 1997.

The size of the government budget deficit is a critical policy issue for Poland, especially given the goal of eventual EU membership. Continued high deficits will absorb too much of the available domestic credit and crowd out private investment. Currently, agribusiness firms need credit for capital expenditures (especially to finance modernization of plant and equipment) and for working capital (especially important for new enterprises). One major complaint cited by agribusiness firms concerns both the lack of fiscal discipline and the lack of transparency in the budget process, which force continued high tax rates to finance high levels of public sector expenditures. In response to the fiscal indiscipline, the central bank adheres to a strong monetary policy to counteract some of the potentially inflationary macroeconomic effects.

Fiscal Policies

Favorable: 4

Neutral: 1

Unfavorable: 9

3.2.3 Monetary Policies

Monetary and credit policies are those government actions that determine the rate of money supply growth, interest rates, and allocation of credit. The specific instruments include (but are not limited to): printing of money, setting of reserve rates, setting of discount or interbank loan rates, purchasing and selling of bonds, credit quotas, and the setting of fixed interest rates. The major focus of monetary and credit policy in Poland is to maintain low rates of inflation and to channel credit into productive uses. The challenge facing the government is to determine how to control the money supply while the Polish banking system continues to develop (and while informal commercial channels still flourish). In addition, the government must encourage and facilitate the allocation of direct credit to the private sector while existing state-owned, or

partially-owned enterprises enjoy preferential credit access based on their established relationships with credit institutions.

Inflation is a key macroeconomic concern of agribusinesses. After surviving the hyperinflation of 1990, firms are very aware of the importance of containing inflationary tendencies. Most firms interviewed were satisfied with the success of the central bank in reducing the absolute level of inflation and in moderating inflationary expectations by creating less variability in the monthly inflation rate. A few agribusiness firms cited high interest rate levels as a problem, but all understood the need for tighter money. In the past, inflationary pressure on Poland's economy came from the government printing money as a method of last resort to balance its books (addressing a problem caused by running a large government budget deficit). Currently, however, the tighter monetary policies adopted by the central bank, while at odds with the Ministry of Finance's fiscal policies, are now reaping benefits in terms of monetary stability. The result of this monetary stability--and hence more predictable inflation--is that businesses can make better pricing and investment decisions.

Monetary Policies

Favorable: 9

Neutral: 3

Unfavorable: 2

3.2.4 Trade and Commercial Policies

Trade policy consists of import tariffs and quotas, export subsidies, and export taxes. High tariff barriers and extensive import bans and quotas protect local producers but tend to encourage inefficient and high cost production. Extensive use of export bans and quotas benefits local consumers of the said good and adversely affect local producers. Export subsidies encourage export production but are highly distortionary and are considered an unfair trading practice. In 1990, Poland undertook a unilateral trade liberalization, and the resulting import competition led to diversification in food products. Some domestic processors, especially dairy cooperatives, held on to their markets, while a significant number of uncompetitive operations closed down. As high levels of imports continued to affect vulnerable local producers, pressures for protection mounted. The government reimposed tariffs in 1991, and agriculture in general is now protected at a fairly high level. Nevertheless, all agribusinesses interviewed felt that Poland stood at a disadvantage with respect to European imports due to the high levels of support provided by the European Union under the Common Agricultural Policy (CAP). But one dairy processor pointed out that not all Polish products even needed protection, and that some products (e.g., skim milk powder) are exported at competitive prices. Another dairy processor cited the example of the market for cheese products in the Former Soviet Union, where Poland is competitive now that the European Union reduced its subsidies on cheese in July of 1996.

In order to protect grain producers (and to provide a cushion for farm employment and profits), the government imposed a duty of 25 percent on grain imports. While the policy is

technically still in force, the actual application of the duty was suspended in July of 1996 (the suspension is now extended until March of 1997). The decision to suspend the duty came in response to production shortfalls in 1996, which forced the government to open up the market to imports of wheat. Short supplies were expected to increase food prices unless imports were allowed. Grain trading firms interviewed reported that farmers at harvest did not want to sell at the prices offered by the government's agricultural marketing agency, ARR. With imports that came in September-December, trading companies were able to fill their grain elevators and meet the demand of bakers for grain. However, the farmers who had kept their grain at harvest and stored it on-farm had no one to whom they could sell. The method by which ARR intervened in the market (by imposing and then suspending duties) was cited as an example by some trading firms of why it is impossible to have forward contracts in Poland. With such uncertainty in timing and level of duties, no trading company could risk making a forward sale of grain to a baker. This leaves spot market purchasing as the only viable option.

The common belief shared by all agribusinesses interviewed was that entry to the EU was inevitable and that government efforts on trade should focus on how to comply with EU regulations. The GATT membership that Poland signed required the elimination of new variable levies, the binding of tariffs, and a change in the way reference prices are calculated. The Poles are aware of these requirements and welcome full membership in GATT, the WTO, the OECD, and the EU. Some agricultural products are currently protected by Polish tariffs and have been excluded from the EU Association Agreement while modifications to the EU's Common Agricultural Policy are considered. Agricultural products are included in the GATT agreement. In early 1995, the government adjusted its VAT to allow companies which import items for further assembly and then export the finished product to qualify for tax rebates. No agribusinesses visited during the field study discussed taking advantage of this allowance.

Under the new economic regime Poland is quite open to foreign investment. Foreign individuals and corporations may own 100 percent of firms and repatriation of profits are permitted, although land purchases are restricted. This restriction, of course, is a delicate issue involving a tradeoff between potential income and employment benefits on the one hand, and the control of Polish land by foreigners on the other. Poland has not been as successful as others in the region (e.g., Hungary) in attracting foreign direct investment (FDI). This trend appears to be changing recently, however. In the first quarter of 1995 Poland attracted \$274 million in FDI, up from \$168 million in the first quarter of 1994. And FDI should increase further in light of Moody's recent decision to upgrade Poland's debt to an investment grade rating. Poland's uncertain political situation could, however, dampen this growth in FDI. Political shifts are always carefully watched by potential foreign investors, as they often bring important policy changes that could have significant effects on investments. In this respect the upcoming presidential election may be a temporary barrier for FDI.

Trade and Commercial Policies

Favorable: 7

Neutral: 2

Unfavorable: 5

3.3 Legal and Regulatory Environment

In Central and Eastern European economies, creating the legal and regulatory environment in which private sector development can occur ranks as one of the areas deserving intense and immediate attention. Transactions costs soar in an economy without clear and enforceable property rights and without transparent rules. In the transition from a "planned" to a "market" economy, many of the auxiliary market institutions have to be in place and an acceptance of a common set of "competitive rules for market behavior" must reside in order to realize the much-awaited "market efficiency gains".

Since the reform, Poland has passed or amended laws in the areas of contractual obligations, foreign investment, bankruptcy, and monopoly; however, putting in place the necessary administrative and judiciary machinery for implementing those laws has occurred at a much slower pace. An effective legal framework will exist only when the administrative institutions can enforce the laws and expediently resolve the disputes that will inevitably appear, and when the majority of the public accepts the findings of the administrative bodies and respects the laws.

3.3.1 Property Rights

Property law in Poland can be complex, especially for urban areas. Formerly, the land of state-owned agribusinesses, all land in Warsaw, and much other urban land was social property. Some of this land is now being privatized, although the process is staggered, as many laws are not well understood. One agribusiness interviewed complained that the progress in streamlining property rights has been slow. For example, in a sale of state-owned land, land is first assigned to a government department; then it is transferred to one of the newly created municipal governments; then it has to be inventoried, titled, and have all disputes resolved--which may involve restitution issues. Only then can sales be made to individuals or investors. Thus, obtaining land for use in conjunction with an investment can be complicated. For this reason, it is somewhat fortunate that only about 20 percent of agricultural land was public (state farms)--much of which consists of areas won from Germany after the war (north and west), so restitution issues on agricultural land may not be that significant.

Unlike other East European countries, much of the agricultural lands in Poland were never nationalized; thus a small private property class persisted throughout the communist era, accounting for about 80 percent of arable land. The remaining agricultural land was organized into state farms, which are now privatized. The break-up of the old agrarian structure has bred

much uncertainty and is limiting modernization and new farm investment. Until the process is further advanced, output will lag and new productivity gains will be slow to materialize. At present, low returns associated with agriculture make investment in agriculture an unattractive proposition: not because of issues of land ownership, but rather because of low productivity due to the small average size of land plots. All the agribusinesses interviewed recognized the importance of farm size and felt that consolidation of holdings was inevitable and indeed necessary for Poland to integrate into the EU.

Property law *per se* was not cited as a serious constraint by any of the agribusiness firms interviewed, except for some problems in property leases (affecting retail food operations). Currently, landlords resist agreeing on fixed rate leases because of uncertainties about inflation and because of limited access to reference information about potential tenants (and their ability to pay). In addition, their rights as landlords are also uncertain because of the gaps in the legal code.

Property Rights

Favorable: 9

Neutral: 2

Unfavorable: 2

3.3.2 Business Laws

The success of Polish agribusinesses in achieving growth and efficiency in operations depends on what kind of enabling environment for businesses is created by laws that govern contracts, investment and bankruptcy, property, and antitrust (competition). Business laws and policies affect the number of new businesses created by Poles, the rate of privatization of State Owned Enterprises, and the level of foreign direct investment. Before reforms began in 1989, Poland had the benefits of having good commercial laws in place. Poland's Civil Code contains a well-developed and usable set of contract laws; the basic laws were enacted in 1964 and were significantly amended in 1990 to remove language pertaining to socialism. The 1938 Commercial Code remains the basis framework for transactions. In 1988, the government passed the Law on Economic Activity, which deregulated investment and opened new sectors to private entrepreneurs.

Since the 1989 reforms, the government has continued work on passing new business laws or amendments intended to facilitate private sector initiatives. These include commercial laws specifying the control and governance of joint stock companies, limited partnerships, and sole proprietorships; the registration of foreign companies; establishment of rules governing foreign investment and repatriation of profit; and clarification of contractual law. Most of the agribusinesses interviewed agreed that the legal framework for business was solid and that recent changes were positive.

The legal issues that are of special concern to agribusinesses are related to contract enforcement and bankruptcy. Agribusinesses interviewed cited as an issue their inability to resolve payment disputes through the court system. Unreliable suppliers are therefore not penalized and legal recourse is problematic. According to agribusiness managers, the problem with commercial law concerns its implementation--that is, the enforcement of existing laws by the courts. One firm complained that the validity and sanctity of contracts is not understood. In this case, trust in commercial dealing then becomes paramount, forcing businesspeople to trade only with established, reliable partners. Another firm criticized loopholes in the bankruptcy law that make it too easy for firms to declare bankruptcy in order to avoid paying off debts. To make matters more difficult, there are serious disincentives to legal recourse for settling disputes. For example, courts require a deposit of 12 percent of the value of a dispute by the plaintiff. While this deposit is repaid later, there is no inflation adjustment and no interest paid. This excessive use of escrow constitutes an implicit bias against small firms.

The most pressing needs in Polish business law are for revamped bankruptcy and competition laws. During the communist era, soft budget constraints persisted and state owned enterprises never had to file for bankruptcy. Consequently, bankruptcy laws do not reflect current legal thinking and make filing for bankruptcy extremely complicated and costly--legal loopholes notwithstanding. Laws in most industrialized Western countries allow for reorganization as well as for liquidation, and they remove the stigma of bankruptcy (in absence of criminal intent or malfeasance) after a reasonable length of time. Bankruptcy law is an implicit recognition of the risk-taking inherent in capitalism, but given the socialist tradition in Poland, there is limited judicial experience with bankruptcy proceedings. Another problem that banks (and entrepreneurs) have faced is the lack of a central asset registry. This makes lending more difficult because there is insufficient information to clearly define the ownership of an asset, so collateral is not as secure as it should be. This problem will be addressed through the law on collateral that was signed into law in December, 1996.⁴ The lack of a collateral law is a major constraint on bank lending and the development of futures markets, which require that loans be made on the basis of warehouse receipts for stored grain (as collateral).

Business Laws:

Favorable or Fair: 11

Neutral: 0

Unfavorable or Unfair: 4

3.3.3 Labor, Safety Laws and Environmental Laws

The government has made progress in revising labor laws to adjust for the needs of companies operating in a market economy (i.e., the legal regulation of employee relations). Legal

⁴ The "Law of 6 December 1996 on the Registered Pledge and the Pledge Registry" was signed into law on December 19, 1996 by President Kwasniewski and goes into effect January 1, 1998.

provisions that govern the terms and conditions of work contracts and the negotiation of collective agreements are being formulated and revised with international standards in mind (ILO and EU). Regulations on product safety and grade and standards are all under some review or scrutiny. In some cases (e.g., milling), the Polish food safety standards are actually more strict than those in European countries and the U.S. Overall, agribusinesses interviewed considered the Polish labor and safety laws to be strict, but fair and transparent in terms of both the actual regulations and their enforcement. One firm complained that workers were overprotected and unions had too much power, while another felt that there were too many regulatory agencies involved in different aspects of labor regulation and food safety.

Dating from the communist era, Poland has extensive labor legislation, governing hours, labor classifications, benefits, wages, promotions, etc. In view of the influence of the Solidarity movement, labor unions are a political and social force in the reform period, advocating better wages and job security. As a result, they are consulted in the privatization process of SOE's and the setting of wage guidelines.

Prior to the reform, few if any environmental regulations existed; and if they did, they were often ignored. Since the reforms in 1989-90, an awareness of the negative consequences of environmental pollution has increased and the government is making great efforts in inciting firms to implement improved polluting abatement or prevention measures. While the social costs of the dislocations wrought by the initial shock of economic reforms overshadowed concern for environmental protection, good programs are nevertheless in place to assist firms in meeting new, environmental standards. For example, several agribusinesses interviewed had installed scrubbers in their coal-burning units used for different aspects of processing or energy generation. The Polish EPA reimbursed companies for the costs of installing certain environmental improvements to reduce smokestack emissions and improve sewage and wastewater treatment. Managers are aware that inattention to environmental problems can reduce export competitiveness in the medium- to long-term, as products must increasingly be produced under stricter environmental standards. The great concern in Poland to meet EU standards provided a strong incentive for firms to upgrade their facilities with new technologies that are more environmentally friendly. Only one firm interviewed felt that environmental regulations were a negative factor on business operations

Labor and Safety Laws

Favorable or Fair: 10
Neutral: 3
Unfavorable and Unfair: 1

Environmental Laws

Favorable or Fair: 10
Neutral: 2
Unfavorable or Unfair: 2

3.4 Financial and Capital Markets

In order to grow and operate effectively in a market economy, agribusinesses typically need credit (i.e., working capital and investment loans), trade finance, and equity capital. Well-functioning financial systems allow firms and individuals to obtain credit on reasonable terms and to benefit from savings instruments and equity investments (stock markets, etc.). In Poland during the communist era, banks were passive suppliers of credit to the public sector, while small and medium-scale firms relied on cash from savings and informal sources. The major banking reforms⁵ began in Poland in 1989 when the government created nine state-owned banks to provide credit to newly-formed private enterprises and formerly state-owned businesses under privatization. By 1991, many other smaller banks were licensed, and international banks had come to Poland and concluded joint ventures with Polish banks. Banks were now charged with evaluating (and assuming) risks and assessing creditworthiness of firms, tasks which they previously had a limited capacity to deal with due to the lack of experienced staff available. Very quickly, banks discovered that many new enterprises took out loans they could not pay back, leaving the banks with a high level of bad debts and non-performing assets. Agribusiness firms are now penalized by the failures of other firms, as banks have become reluctant to lend based on the experience of their reform-period lending spree. In addition, because of their general inexperience in loan appraisal and their general perception that agribusiness investments are high risk, banks have imposed very high collateral requirements (200-300 percent coverage) from new borrowers.

3.4.1 Access to Working Capital and Investment Loans

With the adoption of macroeconomic stabilization policies, credit policy in the reform period has been necessarily restrictive. Many newly created firms are experiencing difficulty accessing loans due to a combination of factors: limited creditworthiness, limited availability of loanable funds, and high real interest rates. Established firms, while less risky than start-up activities in most cases, face high interest rates that make many investment/expansion options unprofitable. In short, the banking system is going through the same kind of radical changes that the rest of the economy is experiencing. The challenge is to successfully serve customers, while at the same time comply with regulations imposed by the government to ensure that the banking system remains sound.

The development of credit unions throughout Poland could help address the problem of the shortage of investment capital for agribusinesses. Since 1992, 110 credit unions have been

⁵ Important legislation or institutional arrangements related to banking system reform includes: The 1988 Banking Law and subsequent amendments; the Law of the National Bank of Poland in 1992; the setting up of the Central Clearing House; the 1993 Bank Restructuring Program (for eventual privatization of state-owned banks); and the 1994 law on restructuring the Bank of Food Economy (to consolidate some of the 1,600 cooperative banks).

founded, consisting of over 50,000 members and US\$12.6 million in assets. The credit unions operate according to western principles and charge market interest rates. They are predominantly enterprise-based, but professional credit unions are also beginning to appear. At present, most credit union loans are short-term and are generally used for household repairs, consumer purchases, or emergency situations. As credit unions expand, the prospect that their services could be used by farmers and agribusinesses for short-term loans brightens as well (*Central European 1995*).

Unexpectedly, most of the agribusinesses interviewed did not cite access to working capital and investment loans as a critical constraint to their development. The smaller firms either rely on family and friends or internally-generated investment capital. In fact, they are hesitant to take on debt even at conservative levels, and they do not fully understand the benefits they acquire with a line of bank credit in terms of growth and profitability. Three firms felt that high interest rates and collateral requirements were too high and subsequently rated access to credit as a constraint. Under socialism, state-supported firms in agriculture, agro-industry, and agro-services received low-interest credit. In the reformed system, private firms face market rates of interest which banks allocate to them as borrowers according to their creditworthiness.

Credit allocation remains a problem for many new small- and medium-scale firms that do not have a credit history and that do not understand financial information requirements. Furthermore, even though deposits are growing and banks want to shift their focus from investing in securities to extending credits, marketing programs for attracting new customers are weak and many potential borrowers are resistant to certain practices such as cosigner requirements (Campion and Pieper 1996). Lenders need to improve their procedures and to accommodate creditworthy businesses, while borrowers need to understand the importance of complying with basic financial reporting requirements--that is, doing the paperwork to qualify for credit. One program that addresses these problems is the Polish American Enterprise Fund, which has become the largest source of credit for SMEs in the country and also provides training for bankers.

Access to Working Capital and Investment Loans

Favorable or Fair: 10

Neutral: 1

Unfavorable and Unfair: 3

3.4.2 Access to Trade Finance

The most common instrument of trade finance is the letter of credit, but other instruments such as documentary collections, bankers' acceptances, export insurance, and export guarantee funds all have their roles. In particular, large commercial banks and specialized export-import banks usually offer these services. Since the onset of the reform, exports have fallen, largely due to contraction of demand in the CMEA bloc. Agribusinesses interviewed did not report access to trade finance as an impediment to production and exports. Nevertheless, these instruments and the development and spread of sophisticated banking services will be needed in the medium- to

long-term, when export demand increases for Eastern European products. Access to trade finance was cited as a constraint by some agribusiness firms interviewed, one of which cited the high cost of letters of credit, in particular. Letters of credit are not available from banks in Poland on the usual terms. At present most of these must be collateralized with cash, automatically excluding many competent firms from developing export markets for their products.

Access to Trade Finance

Favorable or Fair: 5

Neutral: 8

Unfavorable and Unfair: 1

3.4.3 Access to Equity Financing

Most agribusinesses have limited access to stock market equity financing, except for the very large trading and food processing firms that are listed and traded on the Warsaw Stock Exchange (WSE), such as Agros and Rolimpex. Both of these firms have benefited from the boom in the WSE, which was created in 1991 as a new and fledgling exchange with very small total volume and value of shares traded. Then in 1993, the value of the WSE took off and market capitalization reached US\$45 billion, and then declined in 1994, only to climb again in 1995 to US\$60 billion. By June of 1996, Poland's stock exchange soared to US\$100 billion in capitalization with an average trading volume of almost \$50 million per day. The success of the exchange will give formerly state-owned, medium-sized agribusiness the opportunity of obtaining capital through the listing of 15 NIFs (National Investment Funds) in 1997, which will further bolster the expansion of equity financing for the exchange as a whole.

The privatization program has attracted some equity investment from foreign investors, or government- and donor-supported investment or venture capital funds. Since 1991, 160 firms were sold through capital privatization, 1,054 were liquidated and taken over by employee-created companies, and 512 were assigned to participate in the Mass Privatization Program (MPP). The MPP is centered on 15 National Investment Funds (NIFs), which have been established as joint stock companies and will be managed by Polish and international investment banks and management firms. Each fund will have a 33 percent share in 27 or 28 of the 413 SOEs that have been included in the first round of privatization, and a 1.9 percent share in all of the remaining SOEs. The remaining SOE shares will be retained by the state (25 percent) and distributed among employees (15 percent). The NIFs will carry out the restructuring, or even liquidation, of the SOEs, so that the value of each NIF is maximized and resources tied up in the SOEs are allocated to their most efficient user. All adult Polish citizens are entitled to purchase for a nominal fee a universal share certificate which can later be redeemed for NIF shares. Purchasing of shares began in November 1996 and NIFs will be listed and traded on the Warsaw stock exchange in 1997. Benefits to agribusinesses remain to be realized and depend on the quality of the management of the NIF in which they are participating.

Some of the most significant sources of investment have come from special programs such as the Polish-American Enterprise Fund or the IFC or from venture capital funds such as the Pioneer Fund. In one case, the IFC and the Pioneer Fund jointly invested in a meat processing plant in Poznan (POZMEAT). Some venture funds such as CARESBAC-POLSKA SA focus on small- to medium-scale firms; however, the size of most equity investments is at least several million U.S. dollars. One agribusiness interviewed pointed out that venture funds typically look for very big projects and that, as a result, it is difficult for small- to medium-scale firms to obtain \$1-2 million in financing for capital improvements. Another firm had absolutely no idea where to begin to get equity investment. Finally, one state-owned meat processing firm reported that while it is now included as a firm listed in one of the 15 NIFs, it does not yet understand what advantages may accrue to the company. Overall, agribusiness firms interviewed either do not have access to formal equity investment or do not understand the benefits and risks.

Access to Equity Financing

Favorable or Fair: 2

Neutral: 5

Unfavorable and Unfair: 6

3.5 Input Markets

3.5.1 Human Capital and Labor

The level of educational attainment and technical ability in Poland is high. Literacy is over 90 percent and much of the work force was employed in industry and manufacturing as an outcome of the "forced industrialization drives" of the communist period. Since the reform began, the greatest human resource need is Western-styled business administration and management techniques, marketing, and accounting. The government has focused its efforts on adding new university curriculum, conducting workshops, and supporting study tours to the West with the goal of developing a critical mass of managers and professionals and workers who have a new outlook and skill set.

Also important is the role and performance of the former socialist elite who possess a network of contacts and a knowledge of how the old system worked. Some of these elite have successfully adjusted to the needs of the market economy and are making significant contributions to assisting in the reform process. Others, however, have used their power and influence to continue extracting special privileges and favors, thereby eroding the effectiveness of private sector development.

According to agribusinesses interviewed, the quality of the managers and workers is high, and there is a large pool of well-trained engineers and technicians available. Some skill areas are lacking or require on-the-job training. Agribusinesses reported that they are especially in need of individuals with marketing skills and are therefore aggressively hiring newly graduated business

students to build up their marketing programs. Only one firm rated labor and human capital as a problem: a medium-sized meat processor who felt more skills training was needed.

Labor and Human Capital

Favorable: 13

Neutral: 0

Unfavorable: 1

3.5.2 Raw Materials and Intermediate Capital Goods

Raw materials and intermediate capital goods are most directly affected by government pricing policies and the ownership structure at the relevant stage of extraction or processing. Previously, the state set transfer prices for materials. Often those prices had no resemblance to true economic costs. In the reform period, prices for the most part have been completely liberalized. The result for the farm sector is that input prices have risen faster than output prices. For food processing firms, inputs are the materials required to produce their final product, which include first and foremost the basic agricultural commodities (milk to produce cheese, grain for flour, and meat for sausages). In addition, other major inputs to the food manufacturing process include energy and water, food ingredients and flavorings, and packaging materials and containers. Major capital investments in building and equipment represent important fixed assets. Agribusinesses require access to quality raw materials and intermediate capital goods at reasonable prices, which sometimes are directly affected by government pricing policies and the ownership structure at the relevant stage of extraction or processing. Agribusinesses interviewed had very few problems with access to quality raw materials and no problems in purchasing intermediate materials or equipment. One milk processing firm complained about the quality of raw milk available and attributed the problem to the fact that small dairy farmers do not use (and cannot afford) cooling tanks. The second firm that expressed problems with access to raw materials was a meat processing firm which felt that government intervention in the marketing system raised prices.

Raw Materials

Favorable: 11

Neutral: 1

Unfavorable: 2

Intermediate Materials and Equipment

Favorable: 12

Neutral: 2

Unfavorable: 0

3.6 Infrastructure and Other Public Services

Public goods and the individuals who provide services that depend on the existence of these are important factors in the efficient functioning of markets. The provision of public goods clearly benefits businesses and lowers transaction costs. For example, the better the road, port, and telecommunications, the lower the transaction costs for businesses and hence the higher the profits, *ceteris paribus*.

Agribusinesses interviewed mostly praised improvements made since the beginning of the reform period and did not cite infrastructure problems as serious constraints. They generally agreed that Poland's infrastructure is sufficient and improving. The transportation network—roads, ports, and the rail system—did not receive any particular criticism. However, three firms mentioned the lack of many types of specialized handling equipment like refrigerated trucks and rail cars and terminal facilities that could increase their capacity to operate efficiently and allow them to expand their business. One firm cited the inability of the communications system to provide the necessary capacity to accommodate modern commercial needs such as electronic mail transmissions of invoices and data. However, most firms were confident in the ongoing government efforts to make improvements and modernize lines.

Roads, Railways, and Ports

Favorable: 9

Neutral: 1

Unfavorable: 3

Electricity, Water, and Telecommunications

Favorable: 12

Neutral: 1

Unfavorable: 1

3.7 Agricultural and Food Processing Policies

Polish agribusinesses rely on government expenditures on the research and development of agricultural production and food processing techniques, of improved grades and standards, and of quality and labelling requirements. Depending on the commodity, government policies affect the cost structure and profit margins of agribusinesses by providing subsidies and other forms of support. The most obvious and direct economic policies that affect agriculture are pricing policies. In the wake of transition, farm constituencies in Poland protested and lobbied against price liberalization. Input prices far outstripped the increases in output prices due to monopsonistic market structures and the collapse of export demand. In order to bolster producer incomes, various price, marketing, and subsidy interventions are made by the government, either through the Agricultural Modernization and Restructuring Program or through the Agricultural Marketing Service (ARR).

3.7.1 Research and Development Services in Agricultural Production, Agricultural Technology, Food Processing

Agribusinesses argue that research conducted by public institutions provides an invaluable service to individual producers and private firms. They cite the high quality of Polish research and development services and understand the important contribution that existing efforts make to the agriculture and food processing sector. However, the government has cut back funding for agricultural research and food technology development, thereby limiting the degree to which research results can help producers and firms become more efficient and commercially viable. Often, important research cannot easily be conducted by private individuals or firms because of the scale and long-term nature of such undertakings. Three agribusinesses cited research policies as a constraint on the growth of their operations.

Research and Development Services

Favorable: 8

Neutral: 3

Unfavorable: 3

3.7.2 Grades and Standards, and Quality and Labeling

Poland needs improved grades and standards to improve the efficiency and competitiveness of a food marketing system. When quality and size are recognized and rewarded, Polish producers bring to market the "desired grade" in the largest quantity possible and then hopefully maximize their returns. For some products, such as grains for milling, the Polish grades are known to millers who pay a premium for quality. The standards used (which apply to cleanliness and safety aspects) are in some cases stricter than Western countries. Processors benefit from consistent grades and high standards because the quality of manufactured foods depends on the quality of the raw materials. Price differentials for quality encourage the production and marketing of good products. Given the long-term potential for Poland to expand into export markets--especially within the European Union--compliance with the requirements of new markets is an important issue. Processors are aware that they will need to adjust to the grades and standards concerning food safety, quality, presentation, and packaging, which may be more stringent--or just different--from Poland's. Several agribusinesses interviewed felt that Polish grades and standards for many products were either outdated or not implemented and therefore represented a constraint on market development.

Grades and Standards

Favorable: 10

Neutral: 1

Unfavorable: 3

3.8 Conclusion

Several market-oriented policies have proven to be critical successes in improving the overall business environment in Poland and in making Polish agribusinesses more competitive and efficient:

- ▶ In 1988, the Polish government passed the **Law on Economic Activity**, which regulated investment and opened new sectors to private entrepreneurs. Most of the agribusinesses interviewed agreed that the legal framework for business is solid and that recent changes have been positive.
- ▶ **Devaluing the zloty** and making it convertible and giving businesses access to foreign exchange has created stability for agribusinesses, who can now operate more efficiently and with less volatility.
- ▶ **Tighter monetary policies** adopted by the central bank (involving higher interest rates) have brought about monetary stability, which in turn has allowed all businesses to make better pricing and investment decisions.
- ▶ Poland's unilateral **trade liberalization** in 1990 and the resulting import competition led to diversification in food products. This move toward free trade--together with an allowance of foreign ownership--has cleared the way for recent increases in foreign direct investment (FDI).

Other market-oriented policies have been slower to affect agribusinesses, or have had a negative impact on their competitiveness and efficiency:

- ▶ Since the advent of reform, Poland has passed or amended laws in the areas of contractual obligations, foreign investment, bankruptcy, and monopoly. However, putting in place the necessary administrative and judiciary machinery for implementing those laws has occurred at a much slower pace. How this will effect Polish agribusinesses remains to be seen.
- ▶ While some formerly social property is now being privatized, the break-up of the old agrarian structure has nevertheless bred much uncertainty and is limiting modernization and new farm investment. At present, Poland is experiencing rather low productivity due to the small average size of land plots. Consolidation of holdings appears to be inevitable and indeed necessary for Poland to integrate into the EU.
- ▶ In spite of the establishment of the Warsaw Stock Exchange (in 1991) and the Mass Privatization Program, many agribusinesses do not have access to formal equity financing or simply do not understand the benefits or risks.

- ▶ Several agribusinesses felt that Polish grades and quality standards for many products were either outdated or simply not implemented, and therefore represent a constraint on international market development.

Based on responses to the field interviews with the 14 agribusinesses, the greatest constraints to agribusiness development in Poland are (in descending order):

- ▶ fiscal policies (namely high taxes);
- ▶ access to equity financing;
- ▶ minimum pricing (addressed in the next section); and
- ▶ trade and commercial policies.

The overall conclusion is that Poland has experienced great success in advancing market reforms, but more work needs to be done in the actual implementation of policies. Past and ongoing efforts of USAID (see Appendix D) are on-target in addressing constraints that affect agribusiness development and growth. This study revealed three visible areas of potential further assistance:

- ▶ policy reform implementation;
- ▶ agricultural trade association development; and
- ▶ marketing and export promotion.

4. AGRICULTURAL MARKETING POLICIES

The Impact of the Agency for Agricultural Markets (*Agencja Rynku Rolnego*—ARR) Intervention Activities on Grain Marketing and Storage

In 1990, the Government of Poland created the Agency for Agricultural Markets to stabilize agricultural markets and prices, with the objective of guaranteeing minimum levels of income to producers while protecting consumers from price hikes on food staples. The ARR was conceived as an independent institution, reporting to the Prime Minister rather than the Minister of Agriculture, in order to allow it to be more objective in making market-related decisions. The intervention activities of ARR are aimed at stabilizing markets and are focused on grains, meat and dairy products, which are some of the most important sources of income for farmers. The intervention activities for other products (sugar, potatoes, honey, wool) is marginal. One important commercial crop, rapeseed, an oilseed crop, is not included in any of the marketing support programs, which rapeseed buyers attribute to the fact that it is produced almost exclusively on large farms that were formerly state-owned. This section will discuss the impact of the ARR intervention activities on grain marketing and storage, with some reference to rapeseed and other agricultural products (meat and dairy).

The ARR's intervention activities in agricultural marketing are significant and range from importing wheat in order to hold down price increases due to production shortfalls, to selling frozen hog half-carcasses to help reverse stagnation in meat prices. The ARR intervention activities are by design aimed at supporting the market price mechanism, rather than replacing it. One policy analyst noted that the ARR assists "the emerging private sector with agriculture marketing while attempting to minimize expected disruptions during the transition period. As yet, there are few alternative marketing channels in the agriculture sector, particularly for grains; and, hence, for the moment there is no orderly way to withdraw the ARR from the market without disrupting trade." (Lacroix and Varangis 1996, 38). It is not an easy task for policy makers to induce a more rapid transition to private sector marketing and storage of agricultural commodities when government intervention in buying and selling remains the primary force behind procurement and pricing. However, as long as non-market concerns weigh heavily and influence the method by which ARR sets minimum prices and conducts supply management (by selling and purchasing grain), farmers and traders will have little incentive to invest in storage and distribution, and modernization of the marketing chain will be slow.

Ideally, market-induced increases in post-harvest grain prices would allow farmers and grain traders to cover their costs of storage and make a profit, as is the case in the U.S. However, in Poland, there is no licensed warehousing system issuing uniform warehouse receipts, which would serve as collateral for borrowing and provide the foundation for the development of forward contracts and futures trading in agricultural commodities. At present, risk management for agricultural commodities is only being conducted by international trading companies. At the request of the ARR, USAID is funding a pilot project for a licensed warehousing system (known as the Grain Storage and Marketing Project-GSMP), in which Volunteers for Cooperative Action

(VOCA) is assisting 27 grain elevator operators to issue guaranteed, negotiable warehouse receipts to depositors who want to participate. The agreement between the ARR and VOCA provides for ARR collaboration in the project and VOCA's assistance in implementation. The VOCA project director, Joe Allen, has extensive private sector grain marketing experience. His staff include the VOCA project coordinator, Iwona Nurzynska, and Adam Rytelewski, the senior project consultant who has previous work experience with the ARR. A functioning licensed warehousing system requires legislation that dictates conformity of the system with the commercial code and spells out delegated authority for licensing procedures. The VOCA project is assisting with warehousing legislation that is expected to be passed sometime in 1997 (it is now in committee). In the meantime, the pilot licensing scheme relies on a contract between farmers, elevator operators, and banks in lieu of having the legislation govern procedures. The project is also assisting in creating an indemnity fund that would provide insurance against warehouse defaults. The fund requires initial seed capital to become operational and would become self-sufficient through the fees collected on warehousing transactions.

The success of the GSMP is a critical factor in making the grain marketing system in Poland more efficient. At the same time, the ARR will have to make corresponding changes in the method and scope of its intervention activities in order to minimize its budgetary exposure, foster competition among agricultural marketing enterprises, and encourage the development of free commodity markets.

4.1 ARR Pricing Policies and Grain Marketing

Governments the world over—both developed and developing—intervene in their agricultural sectors, so it is not surprising that Poland is concerned with volatility of agricultural markets. Poland's level of subsidies to agriculture is much reduced from pre-reform levels and proportionately lower than many other countries. As noted earlier, government intervention remains a key factor in grain marketing in Poland with the objective of stabilizing prices. Recent developments in the grain market in Poland and the response of the ARR illustrate how the government influences price levels.

In 1995, grain prices climbed due to increasing demand of grain for feed, including wheat (an increase of 350,000 tons as shown in Table 1 below). Higher world prices due to decreased world production and supply pushed up import prices, which in turn stimulated increases in domestic grain prices. ARR responded by suspending the 3-month mandatory storage period and allowing grain from authorized storage to enter the market. The ARR imported 200,000 tons of wheat and sold off 600,000 tons of its own stocks in order to increase market supply and stabilize prices.

Table 4.1: Wheat: Area, Yield, Production, Trade, and Price, 1993-1996

	1993/94	1994/95	1995/96	1996/97
Carryover ('000 MT)	232	584	435	932
Area ('000 hectares)	2477	2407	2407	2453
Yield/MT	3.33	3.18	3.6	3.44
Production ('000 MT)	8243	7659	8668	8425
Import ('000 MT)	500	786	956	1100
Total Stock ('000 MT)	8975	9029	10059	10457
Domestic Use ('000 MT)	8358	8523	8987	8887
- Consumption	4330	4250	4260	4265
- Seed	607	602	674	676
- Industrial Use	10	14	10	16
- Feed	2991	3302	3650	3450
- Losses	420	355	393	490
Export ('000 MT)	33	71	140	600
Price (zloty/MT)	241	268	370	N.A.

Source: Ministry of Agriculture, 1996 Situation and Outlook Report: Grain, Annex 1, Table 3, p. 24.

The mechanism of market stabilization is aimed at minimizing price fluctuations in real terms, which, due to double-digit inflation, must be distinguished from nominal prices. Agricultural prices, when determined by supply and demand factors, fluctuate on the basis of seasonality. The ARR monitors and analyzes the market situation and attempts to make their intervention purchases or sales timely. The ARR intervention purchase price is set near the low point of the market price fluctuation in order to support a price floor. The ARR ensures that this price level corresponds to a calculated average cost of production and allows for a margin of profit to be taken by producers. However, the method by which the calculations intervention prices using minimum prices as a reference is not transparent.

Table 4.2: Minimum Prices for Wheat, Rye, and Milk, 1993-1997 (estimated), 1996 Costs of Production for Wheat (zloty per kilo), and Forecast Market Prices for 1997

	Minimum Prices		
	Wheat	Rye	Milk
1992	135	70	.02
1993	200	140	.23
1994	240	170	.25
1995	315	200	.40
1996	400	280	.50
1997	500-520	340-360	.55-.56
1996 Costs of Production	321	N.A.	N.A.
Market Price Forecast for June 1997	670-720	430-460	.55-.58

Source: ARR

The ARR intervention program operates as a series of steps taken over the course of the agricultural season, beginning before the harvest period. A description of the major steps is given below, with particular attention paid to grain marketing in 1996.

1. Setting Prices Before Harvest (March-April): Before harvest, the ARR sets minimum prices (wheat and rye in March; milk in April), based on the consensus reached by the ARR Council (farmers' groups, trade, and government agencies). The government gives final approval on minimum prices and intervention prices are set at a level higher (15-20 percent). The 1996 intervention prices were set at 520zł/MT for wheat and 340zł/MT for rye.

2. Authorizing Purchases and Storage: The ARR authorizes approved elevators to purchase at intervention price, who get loans from their banks which the ARR subsidizes. ARR pays storage services at the rate of 5zł/MT/month. This year, due to poor production, farmers were not selling at the intervention price or even at higher prices (600zł/MT), and grain companies turned to imports.

3. Authorizing Imports: If necessary, the ARR will stimulate or discourage imports through trade measures. This year ARR imported grain through international trading companies and suspended duties to allow all firms to import. This triggered a high volume of imports, and supply in the country was high as of December 1996. Farmers who now want to sell their grain cannot because elevators are full and they would like to see the removal of the duty suspension.

4. Selling Stocks: Typically, the ARR begins to sell their stock in around mid-January. The lead time provided for the announcement of the actual date that sales will begin is seven days.

Rapeseed

The rapeseed subsector is uncontrolled and functions differently than grains due to the production conditions, as well as the nature of the commodity and its uses. However, production levels are influenced by the ARR programs, mostly due to the incentives for producers to shift out of rapeseed to other crops. As Table 3 shows, rapeseed production fell dramatically in the 1996 season from the previous year, from almost 1.4 million tons in 1995 to less than 600,000 tons in 1996. Area in production declined from 606,000 hectares to 330,000 hectares, while yields were down from 2.27 MT per hectare to 1.8 MT per hectare. With prices increasing to 770 zł per MT in 1996, over a 40 percent increase from the previous year in nominal terms (high in real terms, when taking into account inflation levels of between 20-25 percent for 1996), imported rapeseed became very competitive. Analysts at the Ministry of Agriculture attribute the decline in production to climatic problems, although one commodity trader reported that farmers planted wheat to benefit from the pricing support that the government provides through the ARR.

Table 4.3: Rapeseed: Area, Yield, Production, Trade, and Price, 1993/94-1996/97

	1993	1994	1995	1996
Beginning Stock ('000 MT)	53	63	59	78
Area ('000 hectares)	348	370	606	330
Yield/MT	1.71	2.04	2.27	1.7-1.8
Production ('000 MT)	594	756	1377	560-590
Import ('000 MT)	17	5	1	50
Total Stock ('000 MT)	664	824	1437	688-718
Domestic Use ('000 MT)	568	756	949	653-685
- Processing	525	700	850	612-642
- Seed and Losses	43	56	99	41-43
Export ('000 MT)	33	9	410	10
Price (zloty/MT)	382.8	617.3	546.5	770

Source: Main Statistical Office, Poland (GUS)

4.2 Price Seasonality and Grain Storage

The grain storage capacity in Poland is approximately 3,000,000 MT, including facilities owned by the ARR and private firms. Rolimpex is the largest private operator on the domestic grain market with over a dozen elevators and silos for a total capacity of 450,000 MT of grain, or 15 percent of the total elevator capacity in Poland.

Outside of the ARR supported programs, there is little incentive for a private grain trader (or a farmer, for that matter) to store grain without the expectation that it can be sold in the future at a higher price that covers storage costs and a reasonable profit. By fixing minimum prices for basic foodstuffs, a strategy that flattens price fluctuations, there are no economic gains afforded by storage and exploitation of the price changes that are otherwise typical and natural for agricultural products during the course of any year. Trade policy measures, that is, the suspension and re-application of quotas on food imports such as wheat, typically are taken without much advance notice to grain traders. For example, in December, 1996 grain traders cited the uncertainty regarding the date of the return to import quotes (which had been suspended earlier

in the year) as a good example of why they could not go into forward contracts. While grain traders face such disadvantages, they benefit from their participation in the ARR intervention program, under which risks are greatly minimized with ARR providing guarantees and paying all fees related to handling and storage.

There are two kinds of purchase made by ARR: for intervention, and for the strategic reserve. The ARR provides up-front funding for purchases that are under the strategic reserve. If necessary, the ARR will transfer the "title" of stored commodities from intervention purchases to strategic reserve. The total amount of grain stored in the strategic reserve is reported to be a state secret which adds even more uncertainty to private sector expectations of future price movements and calculations of how to operate in the market.

In order to increase grain supply when prices are rising, the ARR expedites the volume of grain entering the grain market from their storage or authorized storage by private firms. In order to manage the buying, selling, and storage of grain, ARR has in place rules and procedures that regulate who is authorized to store, periods of storage, and payment terms. However, depending on the market situation, under certain circumstances, the ARR will waive their rules. For example, in 1995, because of shortages, ARR suspended the usual mandatory 3-month storage period until mid-November to allow authorized storage elevators or processing plants to use or sell at free market prices 400,000 thousand tons of wheat and 290,000 thousand tons of rye. From the beginning of 1996, ARR sold the grain it had purchased and stored under the previous year's program and since mid-May purchased and sold 200,000 tons of imported wheat. By August 1996, 626 000 tons of grain were sold, including 428 000 tons of wheat. The ARR program supplied about 75-100 thousand tons of grain per month in order to satisfy about 40 percent of the needs of industrial mills.

The sales from the ARR stocks from January to August increased market supply by 30 percent and moderated any surge in grain prices that would have occurred without ARR intervention. Throughout 1996 intervention activities continued, and the level of ARR procurement to replenish fixed reserves was substantial. The ARR reserves were low because of intervention sales in the first half of the year, which had continued in July and August because of delayed harvest. The ARR procurement for a fixed reserve was first attempted at the set intervention prices of 480 zl/ton for wheat and 336 zl/ton for rye. But market prices at the time were about 500-530 zl/ton for wheat and 336-340 zl/ton for rye. In order to obtain high quality grain for consumption in the fixed reserves, the ARR was obliged to purchase at market prices in August. The decision was based on the provision in the ARR annual activities program (as approved by Ministry Council Decision No. 78/96) that permitted ARR to purchase grain for state reserves at market prices under certain circumstances. Even at market prices, ARR was only able to purchase 84,000 tons of grain due to low domestic grain supply. As prices climbed higher, the ARR was obliged to stop purchasing locally and turned to imported grains to continue the replenishment of the fixed reserve.

4.3 Competition in Grain Markets

Competition in grain markets is increasing as new businesses are forming to trade agricultural commodities, especially with the increased activity on commodity exchanges. Since not all the commodity exchanges record their turnover, and some trading companies operate at a significant level in the informal market, the level of trade is difficult to estimate. On some commodity exchanges, the activities of brokers are not formally recognized. For the first half of 1996, the turnover of the 10 largest exchanges was 415 million zł. In the third quarter, the level of trading activity increased when the ARR intervened in the meat and grain markets in response to rising prices in the market. By October, the situation stabilized. The total value of goods traded on commodity exchanges in 1996 is at 1-1.2 billion zł., mostly agricultural products.

The commodity exchanges are playing an increasingly more important role in meat and grain markets, in a large part due to the participation of the ARR. Table 4 shows the largest commodity exchanges in Poland, the number of brokers operating, and the ARR share in transactions.

Table 4.4: The Largest Commodity Exchanges in Poland

Exchange	No. of Brokers	Turnover (million <i>zlotys</i>)	ARR Share of Turnover
Olsztyn	13	105	75%
Poznan	34	92.7	83%
Szczecin	18	55	80%
Warsaw	32	37.4	90%
Eastern (Lublin)	13	36.2	90%
Malopolska	12	23.7	100%
ROL-PETROL	8	22.9	0%
Opole	6	18	90%
Gdansk	3	13.6	0%
Bialystok	10	10	0%

Source: Krajewski 1996

Grain traders interviewed indicated both satisfaction with the volume of business generated by the ARR and frustration at not being able to trade forward contracts and futures. One commodity exchange director emphasized that the ARR program provides a cushion of insurance for traders, especially new ones, who are just beginning to understand the dynamics of pricing throughout an agricultural season. Many traders would like to see a gradual withdrawal of the ARR from direct marketing functions to a more indirect role that leaves the private sector to perform the bulk of the marketing and storage needs.

4.4 Potential for the Development of Forward Contracts, Options, and Other Enhancements to Commodity Marketing

Because of uncertainty regarding the timing and extent of ARR's intervention in commodity marketing, the full development of forward contracting, options and futures trading is not yet possible in Poland. This is because minimum prices and purchases and sales are determined administratively (according to ARR's interpretation of underlying market forces) rather than allowing market forces to determine intervention levels. The ARR needs to implement an intervention system that enables market-driven price fluctuations to occur (reflecting underlying supply and demand conditions) and thereby minimize market distortions. Since traders are uncertain of when and how the ARR will intervene, they cannot, for example, sell a forward contract for delivery of wheat to a flour mill in

March. If the ARR sells high volumes onto the market in March, the price decline causes the flour mill to lose money since they have locked in at a price much higher than the new market price. Hedging is not possible because of the lack of futures markets, and even with a futures market, no one would take the offsetting position given the inability to take a calculated risk (due to uncertainty and lack of transparency in government actions).

Even without the changes in the intervention mechanisms, the ARR is active in the commodity exchanges referred to earlier. The ARR intervention is confined to the spot market buying and selling, although they have begun to sell physical options contracts. As many of the brokers are new entrepreneurs and have limited experience with forward contracting and futures contracts, the selling by ARR of options contracts (where ARR absorbs the downside risk) exposes traders to the dynamics of more sophisticated commodity exchange mechanisms. The experience of the Poznan Exchange (Gielda Poznanska) is illustrative, where in June, 1995 and February, 1996, the ARR sold options for the purchase of frozen beef half carcass. The buyers anticipated higher prices that would allow them to sell the options at a profit. Since meat prices did not increase as the buyers of the contract expected, it did not pay to execute the options and buyers lost the premium they paid (a relatively small loss and risk). However, the buyers of February options made handsome profits, gaining 200-400 within several months by exercising their options to sell.

It was clear for us that after two years of stagnation of meat prices and the approach of "pig's hole", meat will be getting more expensive. When the collapse of supply was apparent in June the prices of options increased. We sold them to the meat processing companies with huge profit, said Tomasz Rokitka, chief of KRAK-BROKERS (Krajewski 1996).

The ARR had sold the options at a low price based on market expectations that were not realized. The ARR losses totalled 1.5 million zl., providing very high annualized profits (over 9000%, or 2531% in 103 days), considered the best short-term investment in Poland in 1996 (*ibid*). The trading experience for brokers is considered instructive and helps the commodity exchanges in marketing their operations, according to the director of the Poznan exchange. However, there are clear budgetary implications for ARR taking on all the downside risk in transactions.

Forward Contracting

There are several interesting cases of forward contracting that emerged through interviews with traders and agribusinesses. In one case, the director of a mill in Krakow explained how he has developed agreements with a group of farmers from a particular region near Krakow to deliver their rye production according to specifications agreed-on before planting. The flour mill/bakery relies on this system of forward contracting in order to guarantee consistent delivery of needed quantities of a quality rye. The a group of smallholder farmers (working 5-20 hectare plots) from the region organized themselves to produce a specific variety and quality of rye for the mill. The mill then pays a premium price for this rye and executes a forward contract to purchase the rye. If yields are lower in a particular season, there is a negotiated provision to pay higher prices. A second case of forward

contracting is in Poznan, where a group of wheat farmers negotiated a forward contract with a broker on the Poznan exchange. The farmers who participated benefitted from the arrangement this year because they contracted to deliver in August at a price fixed during planting time. The price agreed to was lower than many farmers expected at the time but in return they obtained a guaranteed buyer. This turned out to be very fortuitous as by August, 1996 significant quantities of imported wheat had arrived and storage facilities were full. While producers who had held on to the production now wanted to sell and were having difficulties doing so, the farmers with forward contracts delivered at a good price. The director of the Poznan exchange expects this kind of forward contracting between brokers and producers to become more popular as the private sector broadens its participation in grain marketing. With functioning futures markets, brokers and traders can then hedge their trades.

4.5 Conclusions and Recommendations

The transition period for liberalizing grain marketing presents some complex challenges for policy makers. The legal context and financial risks inherent in grain marketing and risk management are not yet well understood. Many agribusinesses and grain traders depend financially on the continued participation of the ARR in the marketing system with the objective of price stabilization. Although significant storage capacity exists in Poland, with the lack of certainty and transparency of the ARR interventions in the market, private sector operators cannot store in anticipation of recovering their costs and making a profit. Furthermore, without a licensed warehousing system and corresponding regulatory framework, the grain trade will continue to rely almost exclusively on inefficient spot market transactions. The concept of a forward contract is new and knowledge of risk management through the use of futures contracts is limited to those in large grain companies who have used hedging as a business tool for their international transactions. The participation of the ARR and VOCA in the Grain Storage and Marketing Program (GSMP) is a crucial step in getting grain markets more market oriented and efficient. But basic agricultural marketing policies will need to change. The policy reforms needed to achieve marketing improvements in the agribusiness sector will be difficult to implement as long as uncompetitive firms and farmers are protected. Policy makers are resisting the implementation of market-oriented measures due to the unforeseen social consequences of greater competition on producers and processors.

On the other hand, the ARR must be careful of future budgetary outlays, especially given the scenario of large surplus of production pushing prices downward and forcing intervention purchases. Resources allocated to marketing support takes away from investment in research and development in order to modernize and achieve productivity gains. As in any system where the government expends funds on recurrent programs to support prices or farmers' incomes, ARR operations—which run at a loss—are using funds that could have been used to address other long-term structural problems in agriculture.

All agribusinesses interviewed agreed that Poland's accession to the EU is inevitable. A strong majority of the Polish population supports Poland's entry and both the public sector and private agribusinesses companies are aware of the need to adapt to EU standards. ARR is reportedly in the

process of changing its by-laws to comply with EU regulations, although details were not available on the nature of the changes. The need to adapt to international standards is perhaps an opportunity to re-align agricultural policies to a less direct interventionist approach.

Recommendations:

- ▶ **The ARR operations need to be more transparent to the market, especially the way prices are set. The ARR participation in the GSMP should continue as a step in extending grain marketing responsibilities to the private sector.**
- ▶ **The ARR should consider the policy options that permit a gradual withdrawal from direct intervention in markets, relying more on indirect approaches (e.g., loan supports).**
- ▶ **The Government should consider targeted safety net programs to accompany new market-oriented policies. By avoiding broad interventions, costs of the program and negative impacts on the market are reduced.**

APPENDIX A

STATISTICS ON POLAND AND ITS AGRICULTURAL AND AGRIBUSINESS SECTORS

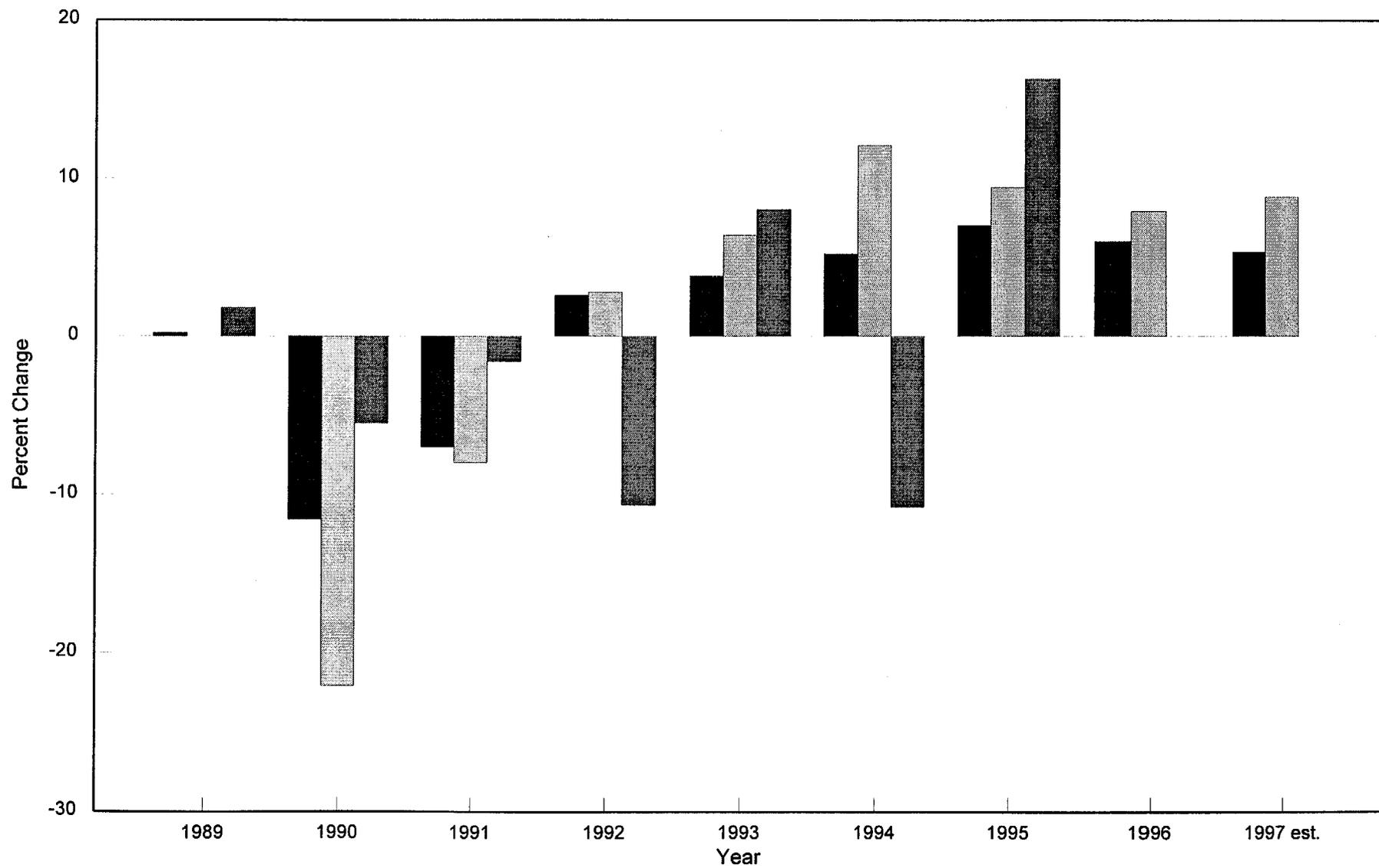
Table A.1

Poland's Economic Indicators

	1989	1990	1991	1992	1993	1994	1995	1996	1997 est.
GDP, percent change	0.2	-11.6	-7.0	2.6	3.8	5.2	7.0	6.0	5.3
Industrial output, percent change		-22.1	-8.0	2.8	6.4	12.1	9.4	7.9	8.8
Agricultural output, percent change	1.8	-5.5	-1.6	-10.7	8.0	-10.8	16.3		
Unemployment, percent	1.5	3.5	11.9	13.6	16.4	16.0	14.9	13.5	13.5
Average real wages, percent change	9.0	-24.4	-0.3	-2.7	-2.9	0.5	3.4	3.9	
Personal consumption, percent change	-1.3	-11.7	7.5	3.5	4.8	3.0	4.5		
Private sector share of GDP	28.4	31.4	45.3	47.0	52.1		55		
Private sector share of industrial production	16.2	17.4	24.3		23.0				
Private sector share of employment, excl. agriculture		12.3	28.3	32.7	34.1				
Private sector share of employment, incl. agriculture	47	34.1	54.1	58.5	60.6		63		
Inflation, percent change	251.1	585.8	70.3	43.0	35.3	32.2	27.8	21.2	18.1
Budget deficit, as percent of GDP		0.2	3.8	6.0	2.8	2.7	2.7	2.8	2.8
Gross hard currency debt (US\$billion)		48.5	48.4	47.0	47.2	42.2	43.0	44.6	47.4
Reserves, excluding gold (US\$billion)		4.5	3.6	4.1	4.1	5.8	14.8	18.2	
Gross fixed investment, percent change	-2.4	-4.4	-4.5	2.8	2.9	9.2	19.0		
Exports (US\$billion)			14.9	13.2	14.1	17.1	22.9	24.3	26.9
Exports, percent change (in value)		6.2	4.0	-11.5	7.3	21.9	33.8	6.0	10.8
Imports (US\$billion)			15.3	15.9	18.8	18.9	24.7	28.3	32.2
Imports, percent change (in value)		-8.3	61.1	1.0	18.4	14.5	30.7	14.6	13.7
Trade balance (US\$billion)	0.240	2.214	0.051	0.512	-2.293	-0.896		-0.5	-1.0
Population (millions)	37.963	38.119	38.309	38.418	38.505	38.581	38.609	38.659	
% Urban	61.4	61.7	61.9	62.0	62.0	62	62		
% Rural	38.6	38.3	38.1	38.0	38.0	38	38		

Sources: Economist Intelligence Unit, PlanEcon, The Economist Group, World Economy Research Institute, Polish Agency for Foreign Investment, European Commission, International Monetary Fund, OECD

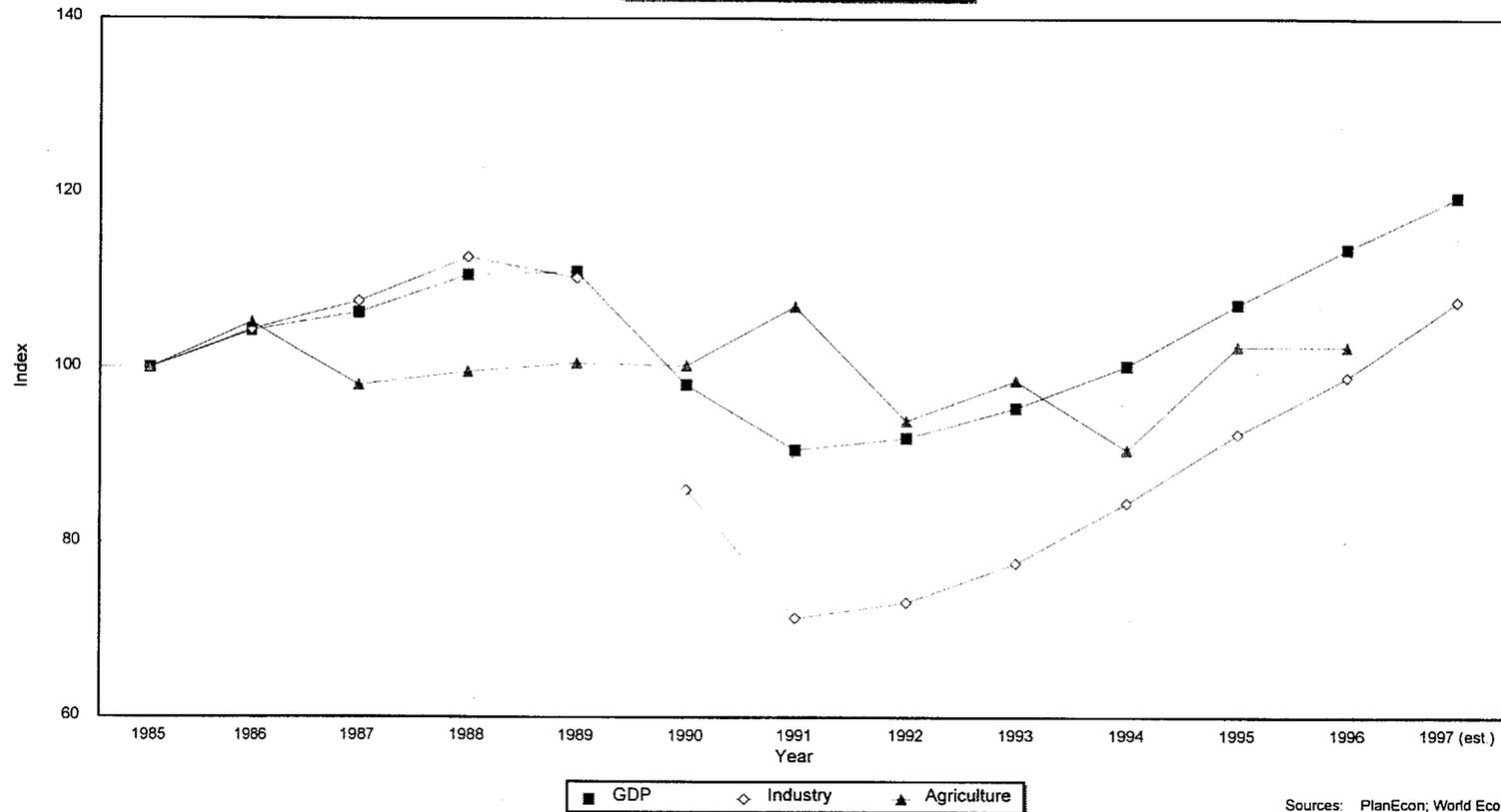
Figure A.1
Changes in Poland's GDP, Industrial Output, and Agricultural Output



■ GDP, percent change ■ Industrial output, percent change ■ Agricultural output, percent change

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Figure A.2
Poland's Production Indices



Sources: PlanEcon; World Economy Research Institute; OECD

Table A.2
Poland's Production Indices
(1985=100)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997 (est.)
GDP	100.0	104.2	106.3	110.6	110.9	98.0	90.6	91.9	95.4	100.2	107.2	113.6	119.5
Industry	100.0	104.3	107.6	112.6	110.2	86.0	71.3	73.1	77.6	84.5	92.4	98.9	107.6
Agriculture	100.0	105.2	98.0	99.5	100.5	100.2	107.0	93.9	98.5	90.6	102.4	102.4	

Sources: PlanEcon, World Economy Research Institute, OECD

SS

Figure A.3
Poland's Consumption and Investment Indices

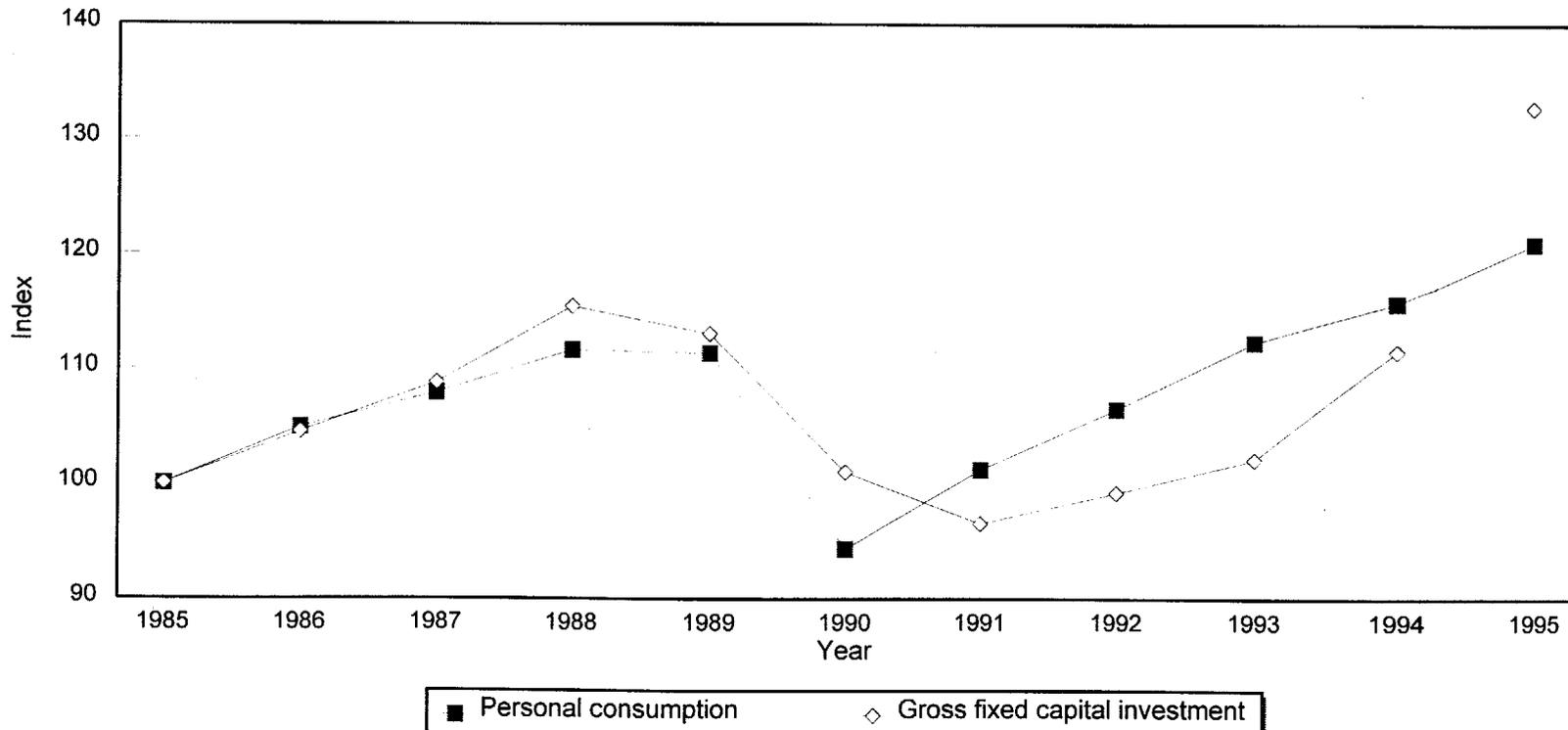
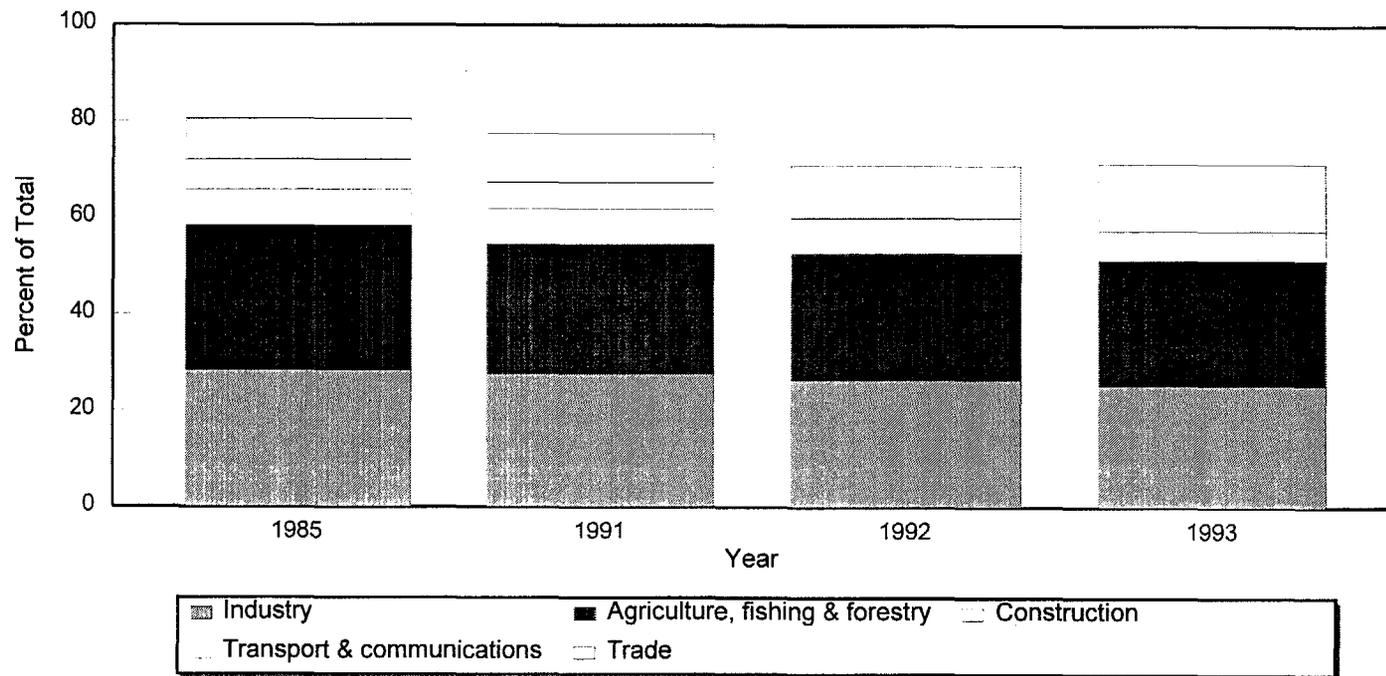


Table A.3
Poland's Consumption and Investment Indices

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Personal consumption	100.0	104.9	107.9	111.6	111.3	94.3	101.2	106.5	112.3	115.7	120.9
Gross fixed capital investment	100.0	104.5	108.8	115.4	113.0	101.0	96.5	99.2	102.1	111.5	132.7

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Figure A.4
Employment in Poland, by Economic Sector



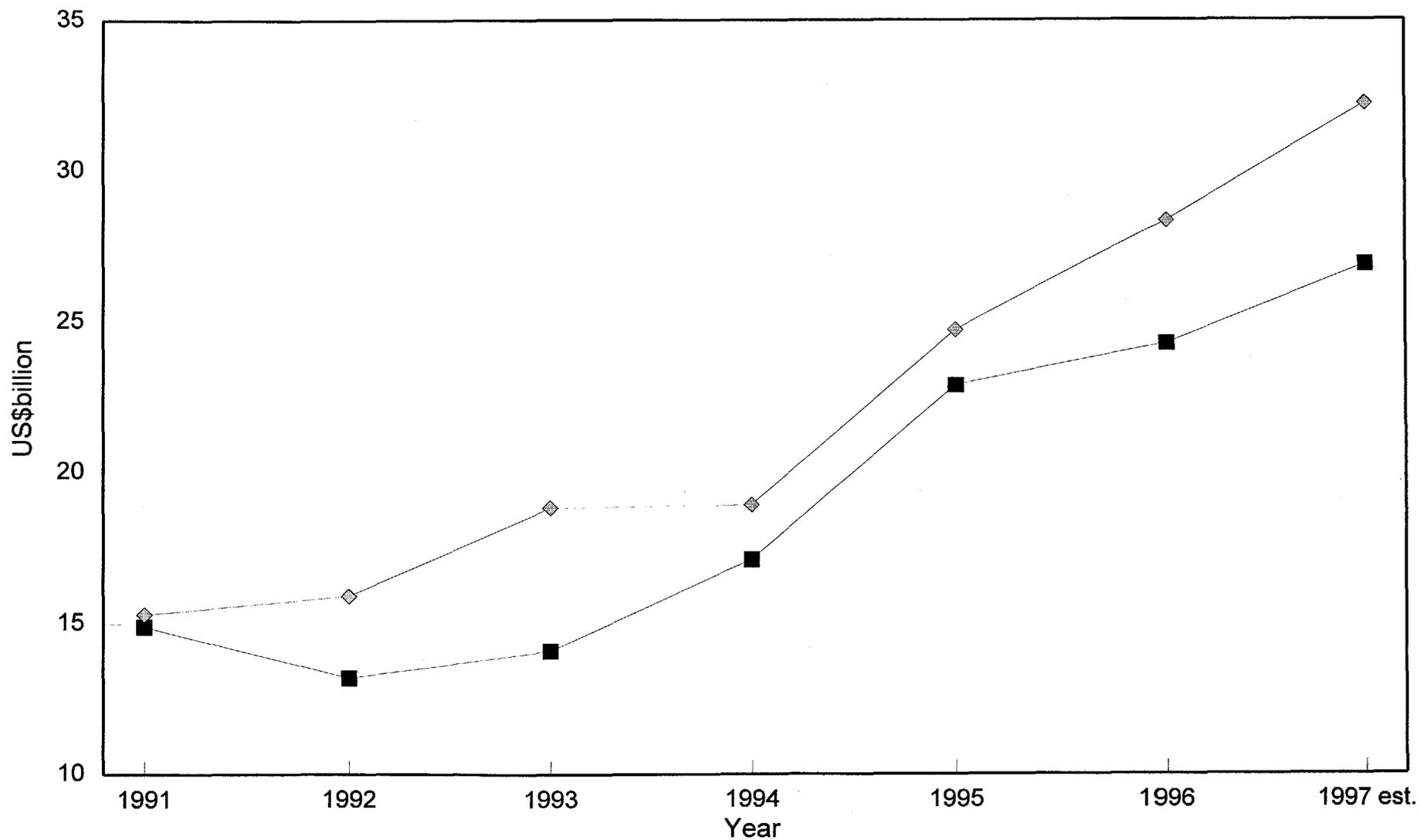
Source: EIU Country Report, 1994-95

Table A.4
Employment in Poland, by Economic Sector

Percent of total	1985	1991	1992	1993
Industry	28.4	27.7	26.5	25.4
Agriculture, fishing & forestry	29.9	26.8	26.2	25.8
Construction	7.5	7.3	7.3	6.2
Transport & communications	6.2	5.5	5.5	5.5
Trade	8.5	10.2	10.9	13.9

EIU Country Report, 1994-95

Figure A.5
Poland's Exports and Imports



■ Exports (US\$billion) ◆ Imports (US\$billion)

88

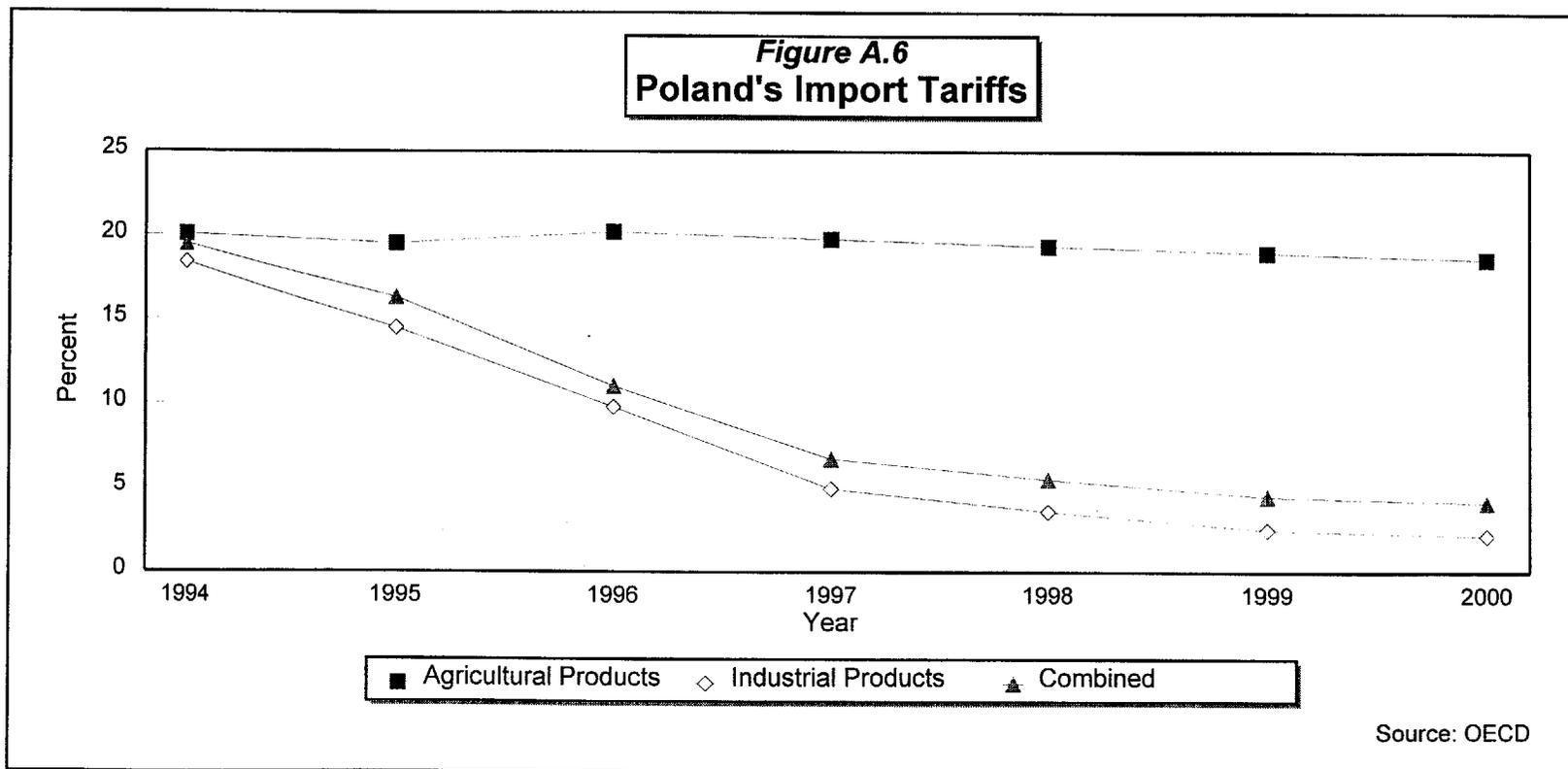


Table A.5
Poland's Import Tariffs

(beginning of year; weighted average customs duties in percent)

	1994	1995	1996	1997	1998	1999	2000
Agricultural Products	20.04	19.52	20.17	19.77	19.37	18.98	18.6
Industrial Products	18.38	14.49	9.78	4.92	3.58	2.5	2.15
Combined	19.48	16.3	11.03	6.7	5.47	4.48	4.12
of which: Import Surcharge	6	5	3	0	0	0	0

Source: OECD

Table A.6
Poland's Agricultural Indicators

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Structures										
Share in civilian employment, percent	30.0	29.4	28.8	27.8	28.0	26.0	26.2	26.1	26.6	26.5
Share in GDP, percent	12.8	11.0	12.1	11.8	7.1	6.2	6.7	6.6	6.2	6.6
Number of pensioned farmers (millions)	1.1	1.2	1.3	1.4	1.5	1.8	2.0	2.0	2.0	2.0
Total Agricultural Land (million hectares)	18.8	18.8	18.7	18.7	18.7	18.7	18.7	18.6	18.6	18.6
Public sector, percent	18.8	18.7	18.8	19.7	20.0	20.0	19.8	16.4	12.8	10.2
of which: state farms, percent				18.7	18.6	18.6	17.7	13.9	10.0	7.3
Share of state farms in total value of output, percent			16.9	16.2	17.9	15.5	11.6	8.3	5.6	4.5
Number of farms										
State farms	1,271	1,240	1,226	959	1,112	1,409				
Co-operative farms	1,833	1,767	1,760	1,786	1,783	1,721	2,172	2,149	2,093	2,061
Private farms	2,260,000	2,235,000	2,168,000	2,143,000	2,138,000	2,138,000	2,144,000	2,149,000	2,030,000	2,048,000
Average farm size (hectares)										
State farms	2,636	2,696	2,731	3,490	2,924	2,305	1,786			
Private farms	6.0	6.1	6.2	6.3	6.3	6.3	6.3	6.2	6.7	6.7
Production										
Total final output, percent change	6.3	-4.6	2.8	1.8	-5.5	-1.6	-10.7	8.0	-10.8	16.3
Crops, percent change	11.4	-7.8	1.5	5.9	-4.9	-4.6	-24.8	47.7	-23.8	27.6
Animal Products, percent change	3.5	-2.7	3.5	-0.5	-5.8	-0.1	-4.0	-11.5	-0.4	9.8
Wheat (million tonnes)	7.502	7.942	7.582	8.462	9.026	9.270	7.368	8.243	7.658	8.668
Rye	7.074	6.817	5.501	6.216	6.044	5.900	3.981	4.992	5.300	6.288
Coarse grains*	10.460	11.301	11.421	12.280	12.944	12.641	8.613	10.182	8.805	10.949
Potatoes	39.037	36.252	34.707	34.390	36.313	29.038	23.388	36.270	23.058	24.891
Sugarbeet	14.217	13.989	14.069	14.374	16.721	11.412	11.052	15.621	11.676	13.309
Cow milk	15.778	15.531	15.632	16.404	15.832	14.443	13.153	12.639	12.222	11.642
Rapeseed	1.298	1.186	1.199	1.586	1.206	1.043	0.758	0.594	0.756	1.377
Beef	0.748	0.750	0.727	0.675	0.793	0.651	0.492	0.408	0.373	0.373
Pig meat	1.720	1.702	1.784	1.819	1.841	2.011	2.069	1.975	1.736	2.008
Performance										
Wheat yields (100 kg/ha)	37	37	35	39	40	38	31	33	32	36
Rye yields (100 kg/ha)	26	26	24	27	26	26	20	23	22	26
Coarse grains* yields (100 kg/ha)	30	31	29	31	33	32	22	27	24	29
All agricultural and food products**										
Share in total exports, percent	9.1	10.5	9.8	11.4	11.1	7.9	13.5	11.1	11.6	9.3
Share in total imports, percent	11.3	11.7	13.1	12.5	7.0	4.4	11.3	11.2	10.3	9.6
Trade balance (\$US million)	-167	-30	-298	255	915	465	-19	-536	-224	-426

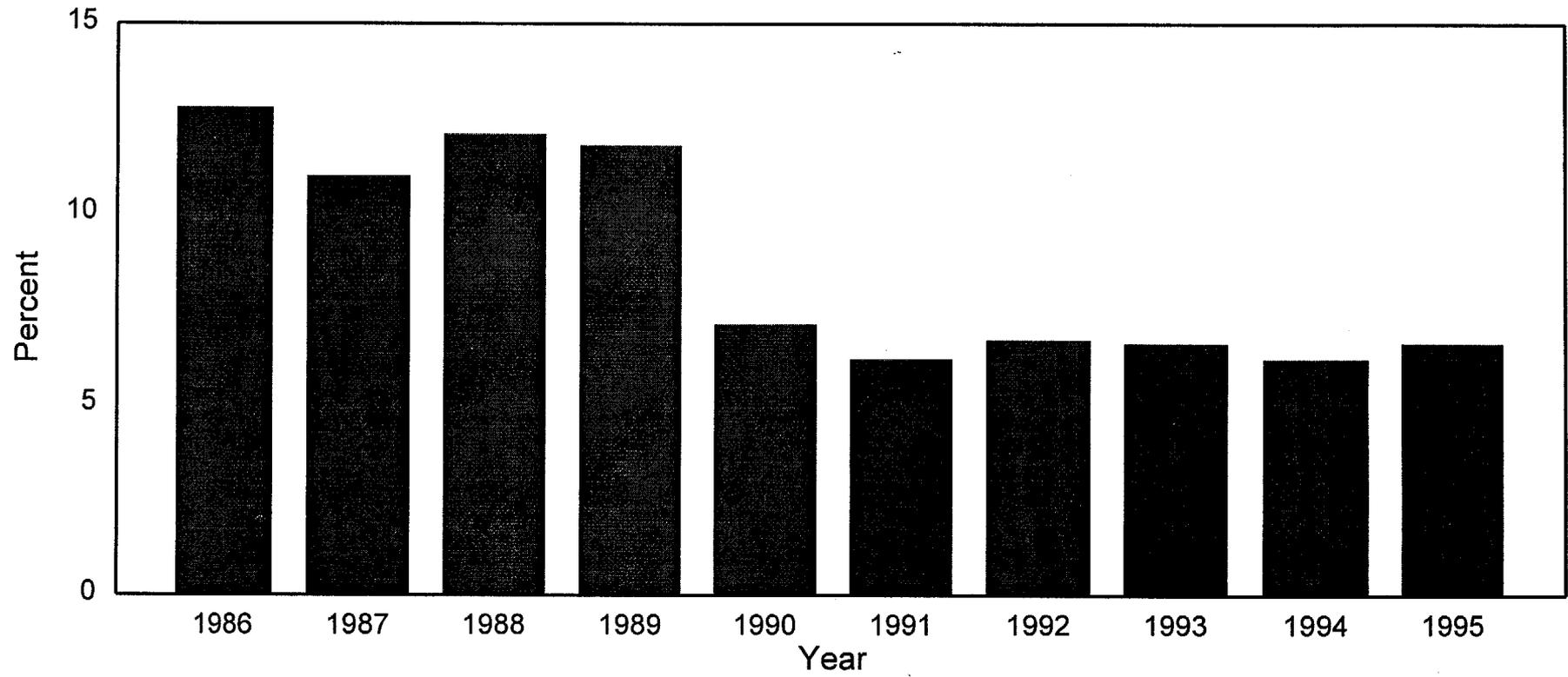
* All grains less wheat and rye

** Customs basis, excluding unrecorded reports exports and imports.

Source: OECD

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Figure A.7
Agriculture's Share of Poland's GDP



■ Share in GDP, percent

Figure A.8
Public Sector Share of Agricultural Land

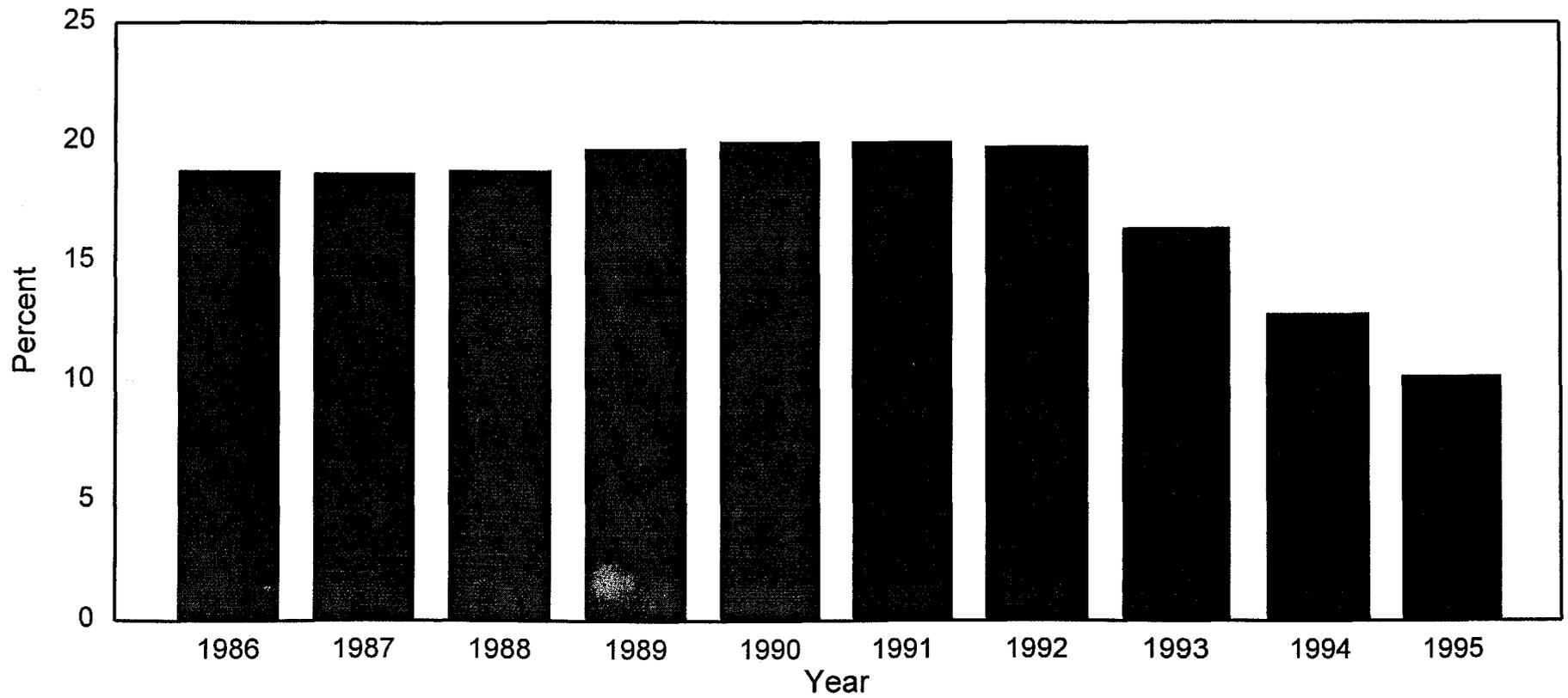
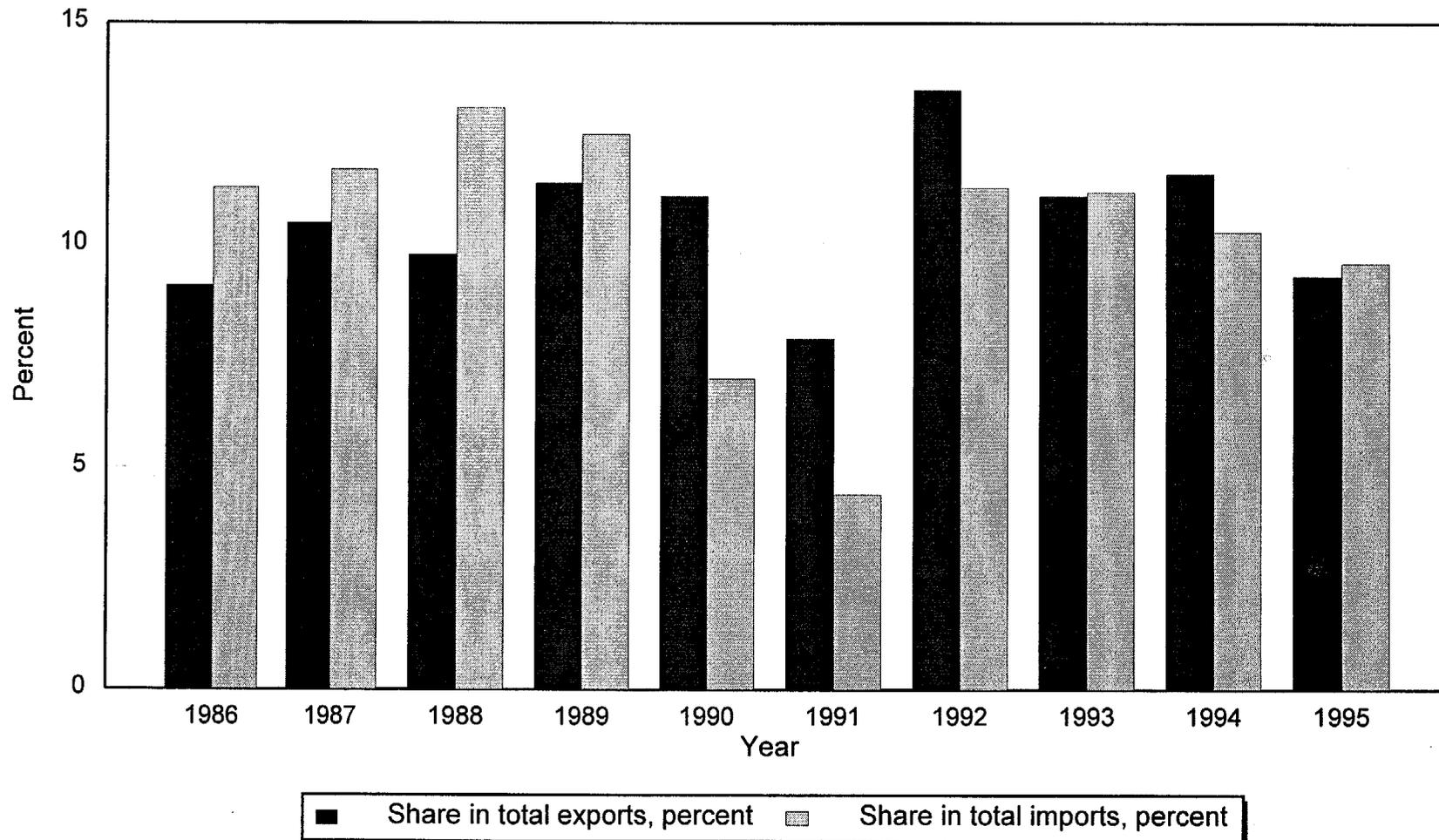
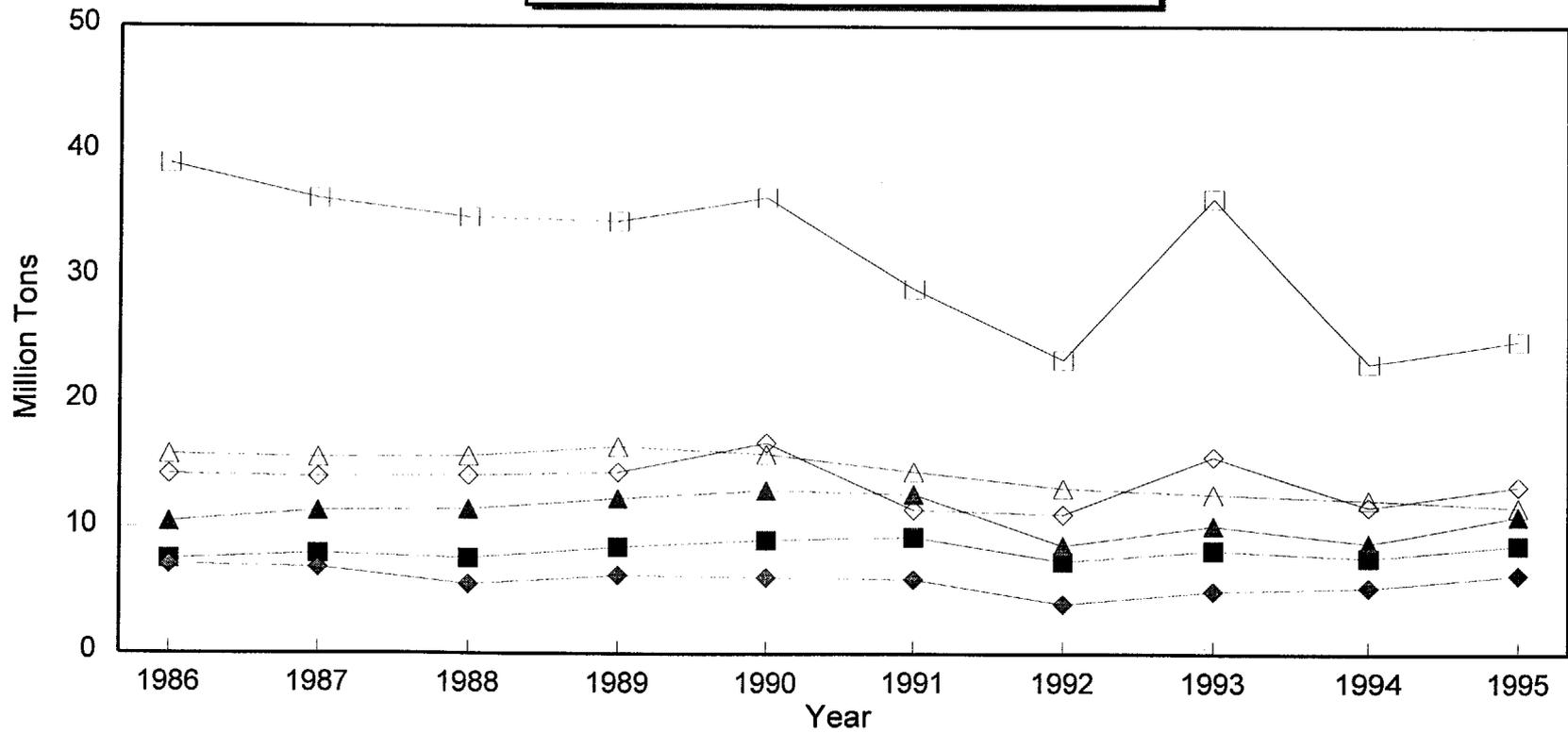


Figure A.9
Agriculture's Share in Polish Trade



63

Figure A.10
Production of Leading Crops

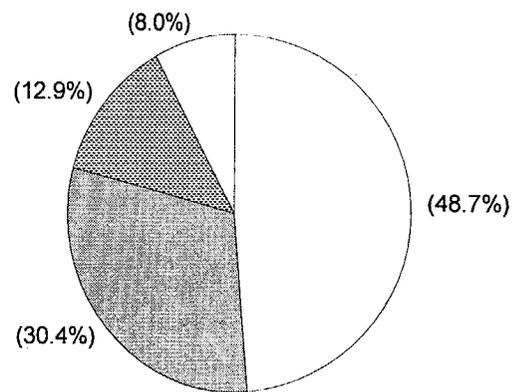


Wheat (million tonnes)
 Rye
 Coarse grains*

Potatoes
 Sugarbeet
 Cow milk

64

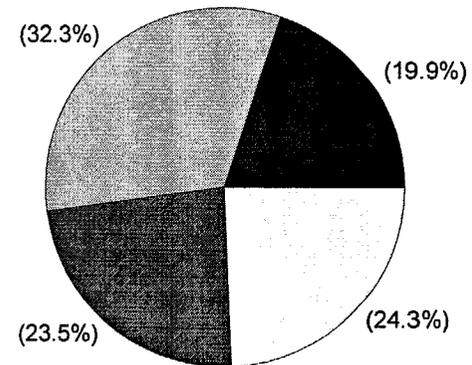
Figure A.11
Number of Farms in Poland, 1989



1-5 5-10 10-15 Over 15

Source: Institute of Agriculture and Food Economics, Warsaw

Figure A.12
Area of Farms in Poland, 1989



1-5 5-10 10-15 Over 15

Source: Institute of Agriculture and Food Economics, Warsaw

APPENDIX B

QUESTIONNAIRE FOR CONSTRAINTS TO AGRIBUSINESS STUDY

**ENI Agribusiness Study
Interview Guide:**

Country: *POLAND*

Objective: To assess how economy-wide and sectoral policies promote or inhibit private agribusiness development in Poland (with an emphasis on identifying and prioritizing key constraints). Particular attention will be given to the dairy, meat, and grain subsectors.

Name:	_____
Organization:	_____
City/Country:	_____
Phone:	_____
Org. Type:	_____
Date:	_____

(Q. 1 and 2 are general categorization/classification questions to start conversation and may be eliminated due to time/space constraints.)

1. How would you classify your organization? An agricultural.....

___ producer ___ processor ___ distributor ___ other (Specify.)

What is/are your primary market/(s)..... (May check more than one.)

___ local ___ national ___ international ___ other (Specify.)

2. How long has _____ (organization) been operating in Poland and in what form (e.g. state-run, former state-run, employee-owned, joint-venture, wholly-owned subsidiary)?

3. As an agricultural **producer / processor / distributor**, what has been your greatest challenge to successful business operation in COUNTRY? Your second greatest challenge? Could either or both of these challenges been avoided or mitigated by better local or national

policies? How?

[For the next series of questions, I would like you to rate reform in specific policy areas in terms of how important it is to the successful operation of your organization's COUNTRY operation. The following scale will be used: "+2" equals "very important", "+1" equals "important", "0" equals "neither important or unimportant", "-1" equals "unimportant", and "-2" equals "very unimportant".]

4. As a **producer / processor / distributor**, how would you rate the impact of the following policies or conditions?

Level	Policy Area	vimp imp neither unimp vunimp					Comments/Key Issues
		+2	+1	0	-1	-2	
Macro-economic	exchange rate						
	fiscal						
	monetary						
	trade & commercial						
Legal and regulatory	property rights						
	business laws						
	labor & safety laws						
	environmental laws						

5. As a **producer / processor / distributor**, how would you rate the importance of:

Market	Policy Area	vimp imp neither unimp vunimp					Comments/Key Issues
		+2	+1	0	-1	-2	
Input Markets	labor/human capital						
	raw materials						
	intermediate mat'ls						
	energy						

Financial and capital markets	access-working capital & invest.loans						
	access-trade finance						
	access-equity						

7. As a **producer / processor / distributor**, how would you rate the importance of:

Subsector	Policy Area	vimp imp neither unimp vunimp					Comments/Key Issues
		+2	+1	0	-1	-2	
Infrastructure & Energy	roads, rails, ports						
	electricity						
	water						
	telecommunications						
Agriculture & Food Processing	R&D services						
	grades and standards						
	labelling & quality						
	minimum pricing						

8. What are some of the coping mechanisms your company has used to deal with the idiosyncrasies of Poland's changing market(s)?

9. Are you in favor of Poland's accession to the European Community?

THANK YOU.

APPENDIX C

SUMMARY OF POLAND AGRIBUSINESS STUDY INTERVIEWS

	Policy Area	2	1	0	-1	-2	Avg. Score
Macro-economic	exchange rate	2	4	6	1	1	+0.36
	fiscal	1	3	1	5	4	-0.57
	monetary	7	2	3	1	1	+1.00
	trade & commercial	1	6	2	2	3	0.00
Legal and Regulatory	property rights	6	3	2	2	0	+0.92
	business laws	5	6	0	4	0	+0.86
	labor & safety laws	4	6	2	2	0	+0.86
	environmental laws	7	3	3	1	0	+1.14
Input Markets	labor/human capital	8	5	0	1	0	+1.43
	raw materials	7	4	1	1	1	+1.07
	intermediate materials	10	2	2	0	0	+1.57
	energy	1	1	0	0	0	+1.50
	equipment	9	0	2	0	0	+1.55
Financial and Capital Markets	access-working capital & investment loans	7	3	1	2	1	+1.00
	access-trade finance	4	1	8	0	0	+0.69
	access-equity	2	0	5	3	3	-0.38
Infrastructure and Energy	roads, rails, ports	7	2	1	1	2	+1.00
	electricity	10	2	1	1	0	+1.50
	water	11	2	1	0	0	+1.71
	telecommunications	11	2	0	0	1	+1.57
Agriculture and Food Processing	R&D services	6	2	3	2	1	+0.71
	grades and standards	6	4	1	0	3	+0.71
	labelling and quality	5	5	3	0	1	+0.93
	minimum pricing	2	3	4	2	3	-0.14

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APPENDIX D

USAID SUPPORT FOR THE DEVELOPMENT OF THE FINANCIAL SECTOR

One of the foremost constraints on agribusiness development in Poland is the underdeveloped nature of the financial sector. The underdeveloped financial sector compounds the key problem inherited from the previous socialist economic system: an antiquated capital stock that made most enterprises very inefficient. In any economy, banks play a key complementary role to that of other enterprises: they channel savings to potential investors. Under socialism, this role may have been "abused" to provide almost unlimited credit to SOEs, but the function was still there. In the reformed economy, bankers must learn to judge potential loans on the basis of their expected risks and rewards. Entrepreneurs must learn to develop business plans and to present them to bankers. These learning processes are being facilitated by many types of credit and technical assistance programs that have begun operating in Poland over the past few years. The following table show some of the programs that USAID/Warsaw has supported.

Name of Program	Activities
VOCA: Farmer to Farmer May 24, 1991-September 1998	Really agribusiness-to-agribusiness: meat and other processing, mushroom production, wide variety of technical activities, technical assistance, skilled volunteer works one to one with individual or company, some university staff work with coops on business plans
ACDI: Agribusiness Exchange Program September 3, 1991-September 1998	VOCA identified training, ACDI carries out short-term training in agribusiness management, organization, production, processing. Training often includes a trip to US to visit (often courtesy USDA) farms, banks, processors, including dairy producers.
Land O' Lakes: Free Market Cooperatives September 27, 1991-December 31, 1994	Dairy: work with coops to improve production capability, export markets, market development; helped with transition from centralized organization of coops to more voluntary democratic current system
ACDI: Technical Assistance to Cooperative Banks August 29, 1991-June 27, 1995	Modeling exercise turned into a project. To assist development of a private system of cooperative banks and to promote cooperative bank capacity to provide financial services to rural communities. Assists in privatization of local cooperative banks. Projects have worked to improve skill levels in local and regional banks. Thirty-seven local bank presidents have received intensive training in the US.
American Breeders' Service: Modernization and Privatization of Animal Breeding Station in Olecko March 26, 1992-December 1995	Modernization and privatization of the animal breeding and artificial insemination station in Olecko. ABS will provide long-term training and technical assistance to improve finance, management, marketing and sales operations. Focuses on eastern Poland, where most small dairy farms are, to privatize the AI service.

Name of Program	Activities
USDA Agribusiness Linkage Program (AgLink)	AgLink provides financial and administrative support for US visits by managers of overseas companies and for their training within a US agribusiness company. AgLink focuses on small and medium sized privatized companies with entrepreneurial managers and owners.
VOCA: Regional Agribusiness Development May 24, 1991-September 1998	Same as Farmer to Farmer above, (different contract or funding mechanisms).
USDA Technical Assistance Program June 1990-March 1996	ES, NASS, ERS working with Government to develop extension, statistics, Situation and Outlook reports on grains, dairy, and livestock and poultry production
VOCA: Grain Markets Development	Improved warehouse management system and grain distribution network conducive to forward sales and futures trading;
Gemini: Small and Medium-Sized Business Development September 17, 1991-September 30, 1995	Advises GOP on small and medium-sized business development, including identifying solutions to constraints on availability of credit to the private sector. Has produced assessments of construction and agribusiness sectors and identified constraints to growth of those sectors. Assisted GOP in development of policy to support SME growth.
IRIS: Legal and Regulatory Reform September 25, 1992-June 30 1995	IRIS assists institutional reform of legal and regulatory constraints to small business development. Main accomplishment has been the formation of a coalition of Polish academics, government leaders, and business associations to draft a new collateral law, a key component to a modern commercial banking system. Has also worked on bankruptcy law, land registration reform, and technology commercialization issues.
Kenan Institute: MBA Executive Corps September 1991-September 1995	Provides private businesses in Poland with in-house business development assistance from recent US MBA graduates. Corps members stay with the firm for one or two years and assist in areas of general management, marketing and finance.
International Executive Service Corps March 1991-September 1995	IESC recruits retired US executives and technical advisors to further the development of successful businesses worldwide. As of September 1994 209 specific technical assistance programs ranging from three weeks to three months had been completed in Poland. The IESC directs its activities at private Sees and will not assist SOEs unless they are in the privatization process.
US Department of the Treasury: Bank Reform/ Financial Advisory Services September 1991-September 1995	Provides short and long-term advisory services to governmental and commercial institutions in the financial sector. Advice has been given in areas of tax policy, external debt management, bank restructuring and privatization.

Name of Program	Activities
Financial Services Volunteer Corps September 1991-September 1995	FSVC is a non-profit organization comprising professionals from investment banks, law and accounting firms, and commercial firms who volunteer services to promote the development of financial markets. In Poland the FSVC has assisted the Ministry of Privatization on trading and distribution issues related to the mass privatization program; assisted the Polish Securities Commission in regulation of securities trading; trained members of the Polish Commodities Exchange; helped the Warsaw Stock Exchange develop its administrative and organizational capacities.
Private Sector Business Support Activity	In the start-up phase with ACDI as the implementing organization.

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APPENDIX E

ASSESSMENT OF ECONOMIC POLICIES AND IMPACTS ON AGRIBUSINESS IN BULGARIA

The Government of Bulgaria (GOB) and various international donors have sponsored several subsector studies in the agricultural sector and are moving forward with a variety of programmatic efforts aimed at improving economic efficiency and strengthening institutions. These activities include economic policy reform guidance, privatization, development of analytical and statistical capability, investment promotion, agricultural marketing improvements, and training. However, while general development efforts since 1990 have helped agribusiness, the set of policies that affect agribusiness have generally not been examined as a group.

The specific objectives of this country study are to:

- . Provide an organized inventory of policies affecting agribusiness in Bulgaria.
- . Provide a preliminary assessment of the impacts of these policies on selected variables (employment in agribusinesses, foreign trade, investment in agribusiness, and technology transfer)
- . Suggest alternatives or modifications of existing policies to improve the policy environment for agribusiness.
- . Provide recommendations that would be useful in designing an agribusiness development project.

The inventory method can also be customized with regard to its commodity coverage. In addition to providing a broad assessment, commodity subsectors can also be analyzed. In the case of Bulgaria, the USAID Mission chose the following areas for additional attention based on high growth potential in a fully reformed policy setting: (1) Fruits and (2) Vegetables.

E.1 Description and Impacts of Macroeconomic Policies

E.1.1 Exchange Rate Policies

The Bulgarian lev became convertible in 1991 when a free floating exchange rate system was adopted. All importers have the right to purchase foreign exchange from commercial banks at the current market rate in quantities necessary for specific transactions. Exporters can either keep their foreign exchange earnings in foreign currency denominated accounts or sell them on the local foreign exchange market. The only real currency control applies to nationals traveling abroad. There are limits as to the amount of foreign exchange that can be purchased. The openness of the exchange rate system brings transparency but given the uncertainty in other parts of the economy, agents operating with foreign exchange face considerable risk. After the massive devaluation in 1991 in the move from a multiple to a unified exchange rate system, the lev started to appreciate in real effective terms due

to high domestic inflation. The result was declining export competitiveness. Then in 1994, the lev depreciated nearly 80 percent in nominal terms (40 percent in real terms) as a result of deteriorating balance of payments and inconsistent government economic policies. The correction was needed, but the abrupt fall was quite disruptive and represents serious weaknesses in the management of fiscal and monetary policies. By the end of 1994, the trade balance improved, moving from a target deficit in 1993 to a slight surplus in 1994. This development allowed foreign reserves to build-up and drove a slight nominal appreciation in the lev. (PlanEcon Report, June 16, 1995).

Policy	Impact on Agribusinesses	Ranking
Free-Floating, Market Determined Exchange Rate and Limited Currency Controls	Encourages "rent-seeking" behavior and increases transaction costs thereby reducing profits and funds available for investment.	Favorable (+2)
Appreciating Real Effective Exchange Rate	Adversely affects export competitiveness, namely by allowing foreign demand which translates into less exports and possibly less employment, if substitutions can not be made.	Unfavorable (-1)

E.1.2 Fiscal Policies

In 1994, the Government of Bulgaria had a public deficit equivalent to 7 percent of GDP, a figure much reduced from 12.1 percent of the previous year but above targets set by the budget law and the amount desired by the IMF. The shortfall between revenues and expenditures, forced the Central Government to finance the deficit by creating money. A soft monetary policy accommodated fiscal indiscipline, resulting in inflationary pressures.

In 1991, the government introduced tax reform. The tax burden on enterprises was reduced compared to early years of the reform. For example, profit tax rates which had varied from 15 to 95 percent were replaced by a flat 40 percent rate. (See Economic Transition and Industrial Restructuring in Bulgaria). In addition, turnover tax rates were made uniform and neutral (three basic rates of 0%, 10%, and 22%) which had the effect of diminishing the indirect tax burden. (Ibid). Farmers are exempt from income tax. In order to improve revenue generation and broaden the tax base, a Value-Added Tax (VAT) was introduced in April of 1994. The VAT spurred a one-time increase in retail prices at its introduction, but further effects need to be studied empirically.

Reductions in expenditures occurred as well. Virtually all subsidies were eliminated, falling from 15.5 percent of GDP in 1989 to 1.5 percent in 1992. Public investments also fell markedly from 5.5 percent of GDP in 1989 to 2.0 percent in 1991. Reduced expenditures on maintenance of public

infrastructure and on research and education had an effect on agriculture and agribusiness, but the precise magnitude of the effect is difficult to estimate.¹

Policy	Impact	Ranking
Unsustainable Public Deficit	Creates deficit financing pressures that usually contribute to high inflation rates and crowd out private sector investment.	Unfavorable (-1)
VAT	Broadens revenue base and promises to help restore fiscal balance but requires a higher level of bookkeeping and auditing.	Favorable (+1)
Reduced Expenditures on Infrastructure, Social Services, and Research/Extension	Lower maintenance of public infrastructure increases transport costs and lower expenditures on social services and education may or may not reduce worker productivity. Estimate requires empirical analysis.	Neutral to Unfavorable (0 to -1)
Corporate, Income, and Turnover Tax Structure	In Bulgaria farmers are exempt from income and profit taxes and privatized agribusinesses are subject to a flat 40% profit tax. Turnover tax rates are more uniform since 1991. The combined changes make for a transparent system and lower the direct and indirect tax burden compared to the early years of the reform.	Favorable (+1)
Investment Tax Credits	Five-year tax holidays exist for joint venture firms investing in the country.	Favorable (+1)

E.1.3 Monetary Policies

As a result of the large public deficit, the monetary authorities have attempted to pursue a restrictive monetary policy in order to counter inflationary pressures in the economy. Since financial and capital markets are rather undeveloped, the principal instruments of monetary policy have been

¹ Reductions in subsidies and support payments occurred but will be addressed more explicitly in the section on sectoral policies.

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credit ceilings and the central interest rate.² Credit ceilings were introduced as an element in the IMF-World Bank inspired stabilization program of 1991 as a direct means of controlling the growth in money supply. An upper limit on commercial lending is set for each commercial bank for the year and when exceeded the bank is faced with a higher reserve requirement. The other instrument is the setting of the central interest rate by the Central Bank. Since commercial banks are highly dependent on refinancing from the Central Bank, this rate in effect sets the floor on retail lending rates. Monetary authorities have had mixed successes in attaining macroeconomic equilibria. The money supply growth rate was cut in 1991-2 but commercial banks preferred government short term securities to loans thus crowding-out of private investment occurred. The high nominal interest rates of 65-94 percent resulted in substantially positive real interest rates that were a barrier to economic activity, but at the same time helped to reduce inflationary pressures. (PlanEcon, June 16, 1995) Also, the inherited monetary overhang from the communist era was absorbed in the sense that M1 expansion was negligible despite massive open inflation.³

Under the communist system, agriculture was a favored sector and received generous credit allocations. In the reform period, the financial system is slowly undergoing changes and there are no longer generous sectoral credit allocations. However, a large number of State-owned agribusinesses are technically insolvent and have non-performing loans.

Policy	Impact	Ranking
High Real Interest Rates	Very positive real interest rates can be contractionary.	Unfavorable(-2)
Excessive Money Supply Creation	High rates of growth in money supply (greater than real increase in GDP) contribute to inflation.	Unfavorable(-2)
High Reserve Requirements	High reserve requirements in general restrict credit. In case of Bulgaria, a tier system exist where commercial banks that violated their allocated ceiling face even higher requirements. Result is that credit is further restricted.	Unfavorable (-1)

² Because capital markets are very underdeveloped and the international creditworthiness of Bulgaria is low, debt financing, i.e. the issuing of long term government bonds, and foreign borrowing are not viable alternatives. To finance its deficit, the central government has to either print money, borrow from the domestic banking system, and issue short term securities (90-180 day notes).

³ Much of the involuntary savings were absorbed in the privatization of apartment flats. Tenants used savings to purchase their own flats from the government.

Policy	Impact	Ranking
Credit Ceilings	Necessary direct instrument for control of money supply because of undeveloped financial system, but results in private sector crowding out.	Unfavorable (-2)

E.1.4 Trade and Commercial Policies

Bulgaria liberalized its trade regime early in the reform period but reversed itself by late 1991 and early 1992. The rationale for intervention was to moderate the rise in domestic food prices, especially wheat, a staple food, and to assure an available supply of cheap feed grains for the livestock sector. The export restrictions dampen further investment in these crops. An economically more rational but politically and administratively more difficult policy would be to liberalize agricultural commodities but target support to vulnerable consumer groups.

Policy	Impact	Ranking
Export Ban (brewing barley, maize, unfermented tobacco)	Reduces potential farmer income and production incentive.	Unfavorable(-2)
Export Quota (Wheat--350,000 tons & feed barley--200,000 tons)	Reduces aggregate potential farmer income.	Unfavorable(-2)
Export Tax (Cattle, pigs, and sheep; wheat and feed grain seeds; sunflower seeds, sunflower oil, soya meal and cake; and wool)	Reduces producer incentives.	Unfavorable(-2)
Import Licensing (meat, dairy products, beer, wine, bottled alcoholic drinks, milk powder, tobacco and tobacco products)	Offers some protection to local producers but may encourage inefficient, high cost production.	Unfavorable(-1)
Import Tariffs on Agricultural Products	Zero duties exist for the import of live breeding animals, meat, wheat, seed potato, oils, fats, raw materials for phosphate fertilizers, agricultural machinery, spare parts; key components for manufacture of veterinary medicine, and hides. All these items are important to agricultural producers and constitute staples for urban consumers. Since the country is import dependent in most of the about cases, no undue adverse effect is caused.	Favorable (+2)

Policy	Impact	Ranking
Import Tariffs on Processed Food Products	Zero duties on milk powder for baby food. Assured and adequate nutrition for infants is high social priority and given lack of local industry, the trade openness causes no adverse effect.	Favorable (+2)
Import Quota (Ice cream 1,200 tons)	Protects local ice cream producers but may encourage inefficient production and limits consumer choice.	Unfavorable(-1)

With regards to the performance of the food processing in trade, the subsector has been able to reoriented its trade to the West since the disintegration of CMEA and increase its share in export trade but not as much as other manufacturing activities due to quality control and packaging problems (see Economic Transition and Industrial Restructuring in Bulgaria). Bulgarian processed food items, with the exception of wines, compete abroad largely on the basis of cost. In order to improve quality, entire production processes will have to be revised, investments made in newer technology, and the workforce retrained.

E.2 Description and Impacts of Business Laws and Regulations

E.2.1 Real Property Rights

In Bulgaria as of July 1995, some 45 percent of farm land has been restored to pre-1946 owners or their heirs. The remaining land is in the process of adjudication but can be cultivated on a yearly lease basis for land liquidation committees. Redistribution of residential and commercial property located in urban areas has been more complicated and has occurred at a much slower pace, especially in cases where the State sold property to tenants or large industrial estates now exist. Original owners will probably receive financial compensation in lieu of possession. Determining "fair value" in a speedy manner is the issue. Frequent changes in the regulatory framework for rural land restitution have confounded both administrators and petitioners. Other problems encountered in the implementation of the radical land reform program include: (1) insufficient government funds to pay for land surveys and other administrative chores; (2) lack of qualified staff and sufficient equipment; (3) large number of claimants living in distant parts of the country; (4) disputes arising from over claiming; (5) conflicts resulting from separation of land restitution and the distribution of non-land assets of collective farms; and (6) conflicts from the imposition of excessive government imposed compensation fees for improvements such as irrigation and drainage infrastructure, buildings, and tree orchards resulting, in some cases, in the destruction of the asset in order to avoid payment.

As a result of the decollectivization and land reform efforts, a variety of farm ownership and modes of farm organization are emerging. The new agrarian order includes: (1) small family owned and operated farms; (2) private production cooperatives; (3) associations; (4) corporate farms; (5)

household plots to supplement off-farm employment; and (6) excessive rental and sharecrop tenancy (Bulgaria: Performance of Agriculture since 1990, World Bank Report, August 17, 1995).

The general unprofitability of farming and the outstanding balance to be restituted plus unresolved land disputes helps to explain the sharp downturn in agricultural output and the dormancy of the land market. The low returns to agriculture and uncertainty reduce the availability of raw materials to agroindustries. The high rates of inflation also give incentives for land holding as opposed to active sales that could lead to land consolidation and farms with economy of scale. Thus, the ongoing land reform process, whether disruptive in the short-run, should bear fruit in the medium- to long-term.

In the case of urban property, the Government passed an uncontroversial law in 1991 restituting certain small shops and business premises to original owners. (See Bulgaria Evolving Legal Framework for Private Sector Development, The World Bank, 1992). In February, 1992, the Restitution of Nationalized Real Property Law passed the Parliament, allowing for the transfer of residential properties from the State to original owners or, in lieu of complications, adequate compensation.

Policy	Impact	Ranking
Land Restitution Acts (1991-92)	Creates long-term incentive for productivity-enhancing investments in agriculture and permits development of an active land market in both rural and urban areas.	Favorable(+2) **long-run but highly disruptive in short-run
Decollectivization	The liquidation and distribution of nonland farm and financial assets to members of collective farms can help enhance productivity in the new agrarian order. However, the liquidation process in the early years of reform was chaotic and subject to malfeasance. The Land Law of 1995 imposed regulations to make the process more equitable and transparent. However, much of the equipment is not appropriate for small plots.	Favorable (+1)

E.2.2 Business Laws

Commercial laws that exist are more or less adequate in theory but their administration and enforcement in many instances is wanting, especially in the area of anti-monopoly regulation. A large part of the explanation for weak administration, is that free market norms of behavior, patterns of

trust, and private market institutional arrangements are just evolving. In this vacuum, personal friendships and positions of power can blunt and shape the administration of rules. Below is a summary of the principal business laws and their implications for agribusiness development.

Policy	Impact	Ranking
Land Use Rules (Zoning)	The pattern of land use inherited from the communist era resulted in inefficient land use, i.e. high rise residential developments far from the urban core and choice agricultural land converted to industrial use. Zoning laws have not changed. Active development of a land market is being awaited as well as new zoning ordinances.	Neutral (0)
Land Registration	Registration of transfers of urban properties has been well maintained throughout the socialist era. In the rural areas, due to frequent changes in state-controlled cooperatives, the records are in greater disarray. As privatization progresses, incentives for an accurate rural as well as urban system should emerge. At present, the disarray in rural records slows the land restitution process and creates investment uncertainty.	Unfavorable(-1)

Policy	Impact	Ranking
<p>Intellectual Property Rights (Patents, Trademarks, and Copyrights)</p>	<p>The 1968 Patent Law is in force and needs modification for a private sector economy. During the socialist period all inventions belonged to the State. Although the country has been a signatory to the 1883 Paris Convention for the Protection of Industrial Property since 1923, a Bulgarian law with substantive patent protection is needed. The 1967 Law on Trademarks and Industrial Designs protects trademarks for 10 years and is renewable. Limited protection is also provided for non-registered trade marks with long standing usage. Unlike the patent law, the trademark law needs little substantive overhaul. With regard to copyright protection, Bulgaria has both a strong domestic law and is a 1971 signatory to the Berne Convention which protects literary, scientific, and artistic works for 50 years. The conventional includes computer software, which is the most controversial subject of international copyright protection.</p>	<p>Favorable(+ 1)</p>
<p>Contract Law</p>	<p>The Law on Obligations and Contracts dating from 1950 still governs contract law.(need to verify) The law reflects generally accepted civil law concepts of contract(security interests, negotiable instruments, bills of exchange, etc.) but is quite weak on bankruptcy which was concerned irrelevant given state ownership of most enterprises. In 1991, a new draft of the bankruptcy was presented law would allow only for liquidation and not reorganization. Given the disruptions that would result from liquidating weak Bulgarian enterprises, a softer approach is recommendable.</p>	<p>Favorable(+ 1)</p>

Policy	Impact	Ranking
Anti-Trust, Anti-Monopoly Regulations	On May 2, 1991, the National Assembly adopted the Law for the Protection of Competition that regulates both monopolies and unfair competition. Although the law is vague in its wording and vigorous enforcement has been lacking, it is a start in the right direction.	Favorable(+1)
Company Law	The Commercial of Law of 1991 is fully satisfactory for the demands of a market economy and replaces Decree 56 of 1989 which as a transitional piece of legislation. The new law recognizes five types of companies: (1) joint-stock; (2) limited liability; (3) limited partnerships; (4) partnerships limited by shares; and (5) general partnerships. The ownership rights, obligations, governance structures for each type are specified.	Favorable(+2)
Foreign Investment	On January 16, 1992 the Law on the Business Activity of Foreign Persons and the Protection of Foreign Investment was adopted. The new law is quite liberal and foreign investment can be organized under any of the forms sanctioned by the Commercial Law or civil partnerships; furthermore foreign ownership shares are not limited, and no pre-investment approval is needed except for the production and trade of armaments and in the case of banking and insurance. Foreigners receive national treatment in all areas except ownership of arable land.	Favorable(+2)

Policy	Impact	Ranking
Tax Incentives	Decree 56 of 1989 establishes five year tax holidays for companies with foreign participation that operate in high technology industries, agriculture, food processing, and tourism. This law discriminates domestic investment but given the slow pace of privatization it is not clear who are more likely to invest in food industries, foreign joint ventures or domestic investors.	Favorable(+1)

E.2.3 Privatization of Agribusinesses

As of March 1995, there were 530 agroindustries and service enterprises (Bulgaria: Performance in Agriculture Since 1990, World Bank Report, August 1995). Only 58 of that number had been fully privatized and another 85 were in the process (ibid).⁴ Presently, the Ministry of Agriculture and the Agency for Privatization are responsible for privatization of these enterprises. However, the process has been very slow due to the power of managers and labor unions and political concerns about rapidly rising unemployment. Recently, private banks have become a driving force in quickening the pace of privatization by aggressively enforcing loan repayment obligations and forcing declaration of bankruptcies.

Nonetheless, the slow pace of privatization has permitted the persistence of monopolistic markets. Some erosion of monopoly power is occurring as in the case of wholesale and retail food marketing, but less so in the farm input production and food processing subsectors. The new firms to emerge full one of three strategies. Either they are "niche players", competing in markets that the SOE's are not serving, "strategic partners", colluding with SOE's and acting as part of a vertically integrated industry, or "wholly integrated entities serving small rural markets". Given the power of the SOE's in mobilizing resources and exploiting networks of contacts, newly formed enterprises can not often compete head to head, especially in activities with high capital entry requirements. Thus, most new firms find it more convenient to serve niches or to control all phases of production, processing, marketing, and distribution in order to cope with the endemic uncertainty in the economy and monopolistic competition.

⁴ State-owned livestock operations and agroindustries include specialized poultry farms, hog farms, cattle farms green houses for early vegetables and flowers, fresh water fisheries, farms for certified seeds, grain and feed mills, and farm enterprises.

Policy	Impact	Ranking
Law on Privatization 1992	The process is necessary and inevitable but the pace of execution has been slow due to frequent changes in political leadership, the countervailing power of labor unions, and very rigid guidelines. Given the scarcity of domestic capital and the unattractiveness of Bulgaria to foreigners due to low international creditworthiness and other business risk factors, the law needs reform.	Unfavorable(-1)

E.3 Description and Impacts of Input Market Policies

E.3.1 Labor and Human Capital Policies

Like other countries in Central and Eastern Europe, Bulgaria during the reformist era has inherited strong and pervasive labor unions. Extensive rules and regulations govern the workplace. Labor laws cover minimum wages, maximum hours, extra pay, work breaks, leave policy, grievance procedures, transfer and severance procedures. The largest change in labor relations since the collapse of the socialist system has been the elimination of resident and travel permits. In the old system, the party and the union had to grant such permits in an attempt to control rural-urban migration and to ration housing. Currently, surplus labor conditions reign. In the reformist era, labor unions have sought to protect existing jobs resulting in an excessive number of employees available for the task to be completed. This redundancy reduces efficiency and thwarts the introduction of cost-saving innovations. This is particularly the case in worker-managed collectives and SOE's.

In terms of human capital development, Bulgaria is well endowed with educational and research institutions (primary, secondary, post-secondary, and research institutes). The percent of adults holding post-secondary degrees is less in comparison with that of western industrial countries but higher than most developing countries (Need specific figure). The largest challenge in the reform period has been to reform the curricula to introduce market-oriented economics, western-style business management, and to encourage risk-taking and competition. Nevertheless, Bulgaria has a well developed technical cadre that could help develop the food processing industry. Compared to other Central and Eastern European countries in 1987, Bulgaria ranked third behind Czechoslovakia and Romania in number of science and engineering graduates per million (635), and third in number of research scientists per million (5,641). (see SRI International, 1991).

Policy	Impact	Ranking
Labor Code 1992	Extensive rules and regulations prevented easy introduction of cost-saving innovations in unionized workplaces during the socialist era. Recently the labor code was changed (1992) but much of the socialist legacy remains. Significant changes in the Code allow the firing of redundant personnel and reduces unemployment compensation. These rates fell from 44% of the average wage in 1990 to 28.4% in December 1992. These latter two changes help to create a more fluid labor market and encourage the unemployed to retrain and to take jobs in different fields with greater demand. However, labor unions remain powerful forces to be reckoned with and find much protection in the Labor Code.	Unfavorable(-1)
Educational Policies	Extensive infrastructure exists and levels of formal education and concomitantly literacy is high. Curricula is being revised to reflect western thought and modern developments. Greatest need is for well trained managers.	Favorable(+1)

E.3.2 Raw Materials and Intermediate Products

Since 1990/91, the prices of most raw materials and intermediate capital goods that agribusinesses would use have been liberalized (fertilizer, farm equipment, chemicals, machinery, etc). The exceptions are basic food items (wheat, fresh milk, cheese, meat, butter, eggs, pasta, sausages, sugar, white beans, lentils, rice, potatoes, baby food, sausages, and yogurt) that were subject to retail ceiling prices in an effort to moderate the price rise in food staples. The imposed ceiling prices, however, did not have the intended effect. Food prices continued to rise, keeping pace with the general pace of inflation in the economy between 1991-1995. Thus, while the retail ceiling should have imposed price ceilings back through the distribution and marketing chain, this does not seem to be the case.

E.3.3 Energy

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Energy prices (gasoline, diesel, heating oil, and electricity) have been set by the government and revised upward periodically since the start of the reform. Nonetheless, the current prices are below world price levels. Since government monopolies dominate the gas and oil sector as well as utilities, the setting and enforcement of prices has been relatively easy. The rationale for the continued subsidization compared to world prices was that the alternative of full liberalization would have been too destabilizing and disruptive.

Policy	Impact	Ranking
Energy Subsidies	Lowers the cost of production and consumption but does not encourage conservation or cost-saving innovations.	Favorable(+1) ***Short-run but unfavorable long-term

E.4 Description and Impacts of Financial and Capital Market Policies

In 1990 the Bulgarian financial system consisted of the National Bank of Bulgaria (NBB), the State Savings Bank (SSB), the Bulgarian Foreign Trade Bank (BFTB), eight specialized commercial banks (SCB), fifty-nine common commercial banks (CCB), and two private common commercial banks. Except for the two private banks, the banks were either owned by the NBB, the BFTB, or public sector enterprises. Despite being universal banks, the entire system was characterized by (1) segmentation in size of deposits, assets, capital, and areas of specialization; (2) a highly concentrated structure in which the three largest banks coexisted with many small banks; (3) heavy reliance on the NBB for credits (since the SSB had surplus funds, the lending depended inter-alia on transfers via the NBB for lending purposes); (4) conflict of interest in ownerships in that insolvent SOE's were principal shareholders and continual recipients of bail-out loans; (5) inadequate capital given their high volume of non-performing loans, (6) small number of branches per inhabitants underserving many areas; (7) failure to create loan loss provisions and classify loans; and (8) weak management (Issues in Reforming Financial Systems in Eastern Europe). Clearly, reform of the financial system is key to renewed economic growth and private sector development.

In 1991, the Law of the Bulgarian National Bank (BNB) was passed and established the BNB as an independent Central Bank. In addition, a two-tiered banking system was initiated. A year later, the law on Banks and Credit Activity passed. The new laws aim to encourage mergers, privatization of banks, and increased competition. To date, the pace of financial market reform and privatization has been slowed to due to an unclear strategy of how to deal with non-performing loans which in turn reduce the net worth of the bank.

E.4.1 Access to Credit

Due to restrictive monetary policies (high interest rates and credit ceilings), credit to the private sector has been scarce and costly. Most new firms are active in the retail and service sectors where

own savings and supplier credit are the principal means of finance. Several donor-financed agencies, such as the Small Enterprise Fund, have been functioning but have limited funds and, therefore, limited outreach.

E.4.2 Access to Trade Finance

No formal institution offers export credit. The lack of export credit and insurance complicates the export drive. Trade financing is handled informally. Commercial banks extend credit to customers secured by 3 month promissory notes and then refinance the loan amount in foreign exchange with the Central Bank. Because of the scarcity of funds, export production orders cannot be filled causing the level of exports to contract. The commodity group that seems to have been most affected is industrial machinery and equipment. Export share of machinery and equipment fell 32 percent between 1989 and 1992 and import share dropped 9.2 percent in the same period.

E.4.3 Access to Equity Financing

No stock market or over-the-counter security exchange exist in Bulgaria, making the raising of capital through the issuance of common stock difficult. Most newly formed private enterprises either have foreign participation (in the case of larger firms), depend on self or family financing (in the case of smaller firms), or access donor-sponsored equity financing programs.

Policy	Impact	Ranking
Restrictive Credit Policy	Makes private business sector expansion difficult.	Unfavorable (-1)
Underdeveloped Capital Markets	Make equity financing difficult for business expansion.	Unfavorable (-1)
Lack of Trade Financing	puts exporters at a disadvantage vis-a-vis foreign exports.	Unfavorable (-2)

E.5 Description and Impacts of Infrastructure Policies

E.5.1 Roads, Rails, Ports, and Irrigation Facilities

Bulgaria has an extensive and fairly well maintained transportation grid. Main weaknesses lie in rural feeder road systems and in the poor maintenance of the irrigation system that theoretically serves 25 percent of arable land. The lack of cost recovery and the disruptions caused by land reform and decollectivization has permitted the decline of the system. Currently, a fraction of the 25 percent of irrigable land is actually irrigated.

E.5.2 Market Facilities

Wholesale market facilities are sorely lacking in Bulgaria and their absence contributes to some extent to the monopsonistic power food processors enjoy. Market information about the availability and price of commodities is also not widely distributed, especially for fruits and vegetables.

E.5.3 Water

Bulgaria has adequate water resources for its current and near term future industrial, agricultural, and consumptive needs.

E.5.4 Telecommunications

Telecommunications services in larger cities are adequate, but international communications and services in rural can be improved.

Policy	Impact	Ranking
Transportation Grid	Roads, rails, ports, and river shipping are adequate but may not be appropriately financed.	Favorable (+2) **Short-term Financing and maintenance are needed for the long-term
Irrigation	Irrigation system is in disrepair, reducing land productivity.	Unfavorable(-2)
Water	Adequate	Favorable(+2)
Telecommunications	Can be improved not a critical problem.	Favorable(+1)

E.6 Description and Impacts of Sectoral Policies

E.6.1 Sectoral Pricing Policies

Since 1990, the Ministry of Agriculture has tried to maintain a modest system of protection for agricultural producers justified on the grounds of the price scissors farmers faced and the protection enjoyed by Western European farmers who are now competitors in several markets. The main elements are guarantee procurement prices for cereals, small capital grants and credit subsidies, and crop insurance. In June 1995, the National Assembly approved the Law for Protection of Agricultural Producers which sets agricultural pricing policy and establishes an extra budgetary fund, "State Fund Agriculture" (SFA) to finance the various interventions.

The goals of the Law are to (1) increase labor productivity; (2) maintain incomes of people permanently engaged in agriculture; (3) preserve land fertility and genetic potential of livestock; and (4) expand export markets. Each year the Minister of Agriculture by July 31 is to propose guaranteed prices for basic commodities (wheat, maize, sugar beet, potatoes, milk, veal, lamb and pork, after

consultations with national producer organizations). Prices are based on average production costs plus a profit margin and cannot exceed 85 percent of average lev export price for the last three years. Prices apply only to the limited quantity approved by the Government for purchase. In other cases, the Government proposes to maintain prices for certain farm products via trade regulations. Target prices for these products are set by the Minister. If average market price falls below 80 percent of the target price, the Council of Ministers, upon recommendation of the Minister of Agriculture, may change the export or import regime of the said products. In order to maintain the support schemes, the Ministry of Agriculture maintains an agricultural information system on crop production, market trends, and farm incomes. The information is disseminated free of charge to producers and other interested parties.

E.7 Provision of Research and Development Services in Agricultural Production, Agricultural Technology, and Food Processing

With regards to human capital endowments in the food and agriculture sector, Bulgaria has 38 agricultural and food technology research institutes and 14 experimental stations under control of the Academy of Agricultural Science (Bulgaria: Performance of Agriculture Since 1990). Since 1990, budgets have shrunk dramatically due to inflation and the research programs have become, for the most part, either duplicative, irrelevant, or poorly executed. Unfortunately, no public agricultural extension program exists.

Policy	Impact	Ranking
Guaranteed Procurement Prices for basic commodities and tobacco	Provides a production incentive to farmers by assuring a profit margin. The difficulty arises, however, that the Government due to budgetary constraints can not adequately defend prices.	Neutral (0)
Trade Regulations	See section on Trade Policy	
Agricultural Information System	Informs farmers about market conditions.	Favorable (+2)
Capital grants and credit subsidies	Helps offset some of the adverse effects of sharp input price increases and scarce credit. The fund is small however and favoritism and rent-seeking can emerge.	Neutral(0)
Public Agricultural Research and Extension	Research program is not responsive to emerging private sector needs and public extension is non-existent, making the transition to profitable, market-based farming more problematic.	Unfavorable (-2)

APPENDIX F

FINDING THE REAL SIZE OF THE AGRIBUSINESS SECTOR

The Feasibility of Utilizing a Method of Disaggregation and Reclassification of National Accounts Data to Determine the Size of the Agribusiness Sector in Poland and Bulgaria

One of the most important problems that those who study agribusiness face is the lack of information on the real size of the sector and the impact it has on the economy of the country in question. This lack of information is rooted in the organization of the statistical systems employed by countries and international organizations. The United Nations System of National Accounts for All Economic Activities that most countries utilize to measure the performance of different sectors of the economy are delineated in such a manner that agribusiness activities end up divided into each of the different accounts. Subsequently, policy makers often focus on the delineated sectors, such as manufacturing, mining, or energy, and give agribusiness, which does not have its own delineated category, only secondary consideration. In an attempt to provide more accurate information on the size and role of agribusiness in a national economy, earlier studies¹ have used a method that disaggregates national accounts data and reclassifies the data according to the share involved in agribusiness. In this way, the size of the agribusiness sector in a national economy more clearly emerges.

This annex establishes what data is necessary for a disaggregation and reclassification of Polish and Bulgarian national accounts data, using the methods employed in the APAP II Technical Report "The Contribution of Agribusiness to National Income and Employment in Jordan" (Ouedraogo and Hyson 1993) as a base, to find the true size of the agribusiness sector in each economy. Comments have been added as to the availability of the necessary data. In addition, areas of potential difficulty arising from the special situations of the Polish and Bulgarian transition economies are identified.

F.1 Applicability and Availability of National Accounts Data for Poland and Bulgaria

The most important data for the disaggregation and reclassification analysis are the national accounts statistics. Only in 1991 did Poland and Bulgaria switch their statistical accounting systems from one based on Net Material Product to one based on the United Nations System of National Accounts (SNA). National accounts statistics are available through the UN for both countries in the *National Accounts Statistics: Main Aggregates and Detailed Tables* (United Nations 1994). The most recent version of this handbook, published in 1994, has national accounts statistics for Poland for 1991 and Bulgaria for 1992. The data available for Poland and Bulgaria from the *National Accounts*

¹ For example, see Ouedraogo, Ismael and Rosemary Hyson. 1993. "The Contribution of Agribusiness to National Income and Employment in Jordan." *APAP II Technical Report No. 131*. Bethesda, MD: Abt Associates Inc.

Statistics is not as precise as that available for countries that have used the SNA system for a longer time. The adoption of the SNA system at a time when each country was initiating its economic reform program has also had a negative effect on the availability of SNA statistics. Therefore, a significant amount of supplemental data will have to be utilized to perform the analysis. Some supplemental data for the years in question (1991 for Poland, 1992 for Bulgaria) is readily available in the United States; other data, such as personal interviews and some sectoral data, will have to be acquired in-country.

Appropriate supplemental data for both countries has been located in several publications. The UN's *International Yearbook of Industrial Statistics* has useful data on both countries for both 1991 and 1992 (United Nations 1995). The Food and Agriculture Organization (FAO) of the United Nations can provide detailed agricultural statistics. Available at the Library of Congress are statistical yearbooks published by the governments of Poland and Bulgaria that are good sources of supplemental data for the analysis. Poland's Central Statistical Office publishes a *Concise Statistical Yearbook (CSY)* in English (available for 1991 at the Library of Congress) that provides statistics on the economic activities of many of the SNA sectors. The *Yearbook* is also available in Polish (*Rocznik Statystyczny*) at the Library of Congress for 1993, and contains a section entitled *Rachunki Narodowe* (National Accounts) that is well organized and should be a very useful supplement for the purposes of the proposed analysis. The most useful supplemental material for Bulgaria is the *Statistical Reference Book for the Republic of Bulgaria* (available for 1992 at the Library of Congress).

F.2 Using the National Accounts and related data for the proposed analysis.

National accounts statistics are divided into nine sectors. For the disaggregation and reclassification analysis, each sector must be dealt with individually and must be combined with supplementary data from either sectoral statistical publications or from personal interviews. The goal is to find the share of agribusiness activity in each sector. For some of the sectors, the necessary information is manipulated by equations to produce an agribusiness share. Other sectors, such as agriculture, are more straightforward. The following is a brief summary of the necessary data for the disaggregation and reclassification of each of the nine sectors.²

F.2.1 Agriculture

The agricultural sector does not need to be disaggregated because 100 percent of the sector is involved in agribusiness activities. The information in the *National Accounts Statistics* is sufficient.

F.2.2 Mining

² The summary of the necessary data for the disaggregation and reclassification of national accounts statistics is based on the methods employed in the Ouedraogo and Hyson study.

The share of agribusiness activity in this sector is the value added from the mining of fertilizer over the total value added from mining. National accounts statistics and data from the CSY for Poland are sufficient.

F.2.3 Manufacturing

The share of agribusiness activity is 100 percent in food, beverage, and tobacco activities; in textiles the share of agribusiness is equal to the proportion of natural fibers used; in wood products the share of agribusiness in furniture and upholstery also depends on the proportion of natural ingredients. The information in the *National Accounts Statistics* yearbook combined with data from Poland's CSY is sufficient for these calculations. The chemical subsector, however, is a special case, as it includes both outputs that require agricultural products for raw materials, such as soap, and inputs to agriculture and agroindustry such as fertilizer. The data in the *National Accounts Statistics* is insufficient, but the CSY provides a concise breakdown of production in the chemical sector which should be of some assistance. The Jordan study resorted to contacting manufacturers of agribusiness products and industrial specialists directly to calculate the percentage of agribusiness products in the total output in the category, which was used as a proxy of the agribusiness share in this activity. The same strategy could be applied to Poland and Bulgaria to supplement the CSY data.

F.2.4 Energy

The data available in the national accounts and in the available supplementary materials has proven insufficient for this section of the analysis. UN publications on energy usage are also of no assistance. The Jordan study utilized an *Industrial Survey* provided by the Jordanian government, which gave data on expenditure by activity in the industrial sector and total output of both electricity and water. A similar document will have to be acquired, perhaps from the statistical offices in the respective countries, or from the appropriate ministry or governmental organization.

F.2.5 Construction

Data for the purchase of construction sector services, such as new buildings, additions, and improvements, by the agricultural, mining, and manufacturing sectors served as a proxy for the agribusiness share of construction. This data is available for Poland in the CSY.

F.2.6 Trade, Hotels and Restaurants

Two methods are required to calculate the share of agribusiness activity in this sector. For wholesale and retail trade activities, the Jordan study utilized national data accounts, which provided the value added from trade by type of good. This data was combined with the agribusiness shares developed for the production of agricultural and industrial goods. The share of agribusiness for each trade category was then multiplied by value added for trade. Summing up the agribusiness trade across the different categories and then dividing by total value added for wholesale and retail trade yielded the respective share of agribusiness activity for these subsectors. The Bulgarian and Polish national

accounts data unfortunately do not distinguish between subsector activities for this sector. Of the supplemental information acquired, only the CSY is of some assistance, distinguishing between wholesale and retail trade activities and providing some information on "catering establishments" and "employee canteens." For the agribusiness share of wholesale and retail trade, more precise data will have to be acquired in-country, and then the method used in the Jordan study can be applied to Poland and Bulgaria. For the restaurant and hotel subsector, a 100 percent share should be applied to restaurants. A proxy is derived for hotels from food and beverage services, including catering, restaurants, and room service. The Jordan report interviewed hotel managers, who estimated that food and beverage services amounted to approximately 25 percent of all hotel revenues. The same approach can be employed for Poland and Bulgaria.

F.2.7 Transportation, Storage and Communication

Data similar to the type utilized in the Jordan study, which listed the amount spent on transportation, storage, and communications by each activity in the mining and manufacturing sector, is not available in the National Accounts Statistics or supplemental publications. The appropriate statistical information will have to be acquired in-country. The Jordan study again obtained data from the government-published *Industrial Survey*, which listed the amount spent on transportation, storage and communication by each activity in the mining and manufacturing sectors. There was no data available for the agricultural sector. The *National Accounts Statistics* do not provide that type of data by subsector for Poland and Bulgaria. The CSY also does not arrange its data in such a method. Thus, data on transportation, storage, and communication services will have to be acquired in-country.

F.2.8 Financing, Insurance, Real Estate, and Business Services

The Jordan study assumed that these activities provided services to different sectors in proportion to those sectors' shares of the rest of the economy. Therefore, a proxy for the share of agribusiness activity for real estate, financial services, and leasing of machinery and equipment can be derived from the proportion of agribusiness in other sectors of the economy to total GDP. The necessary data for this calculation is available in the *National Accounts Statistics*.

F.2.9 Community, Social and Personal Services

The authors of the Jordan study included government services, non-profit private services, and household-provided services. Value added in this sector was not measured from value of output but from factor payment (compensation of employees and depreciation). The share of agribusiness in government services was approximated by the proportion of compensation of employees in activities linked to agribusiness, including the Ministry of Agriculture, agricultural vocational training programs, faculties of agriculture at universities, the provision of infrastructure and other services to agribusiness in cities, and other government-funded activities. In Jordan, the share of agribusiness activity was zero for household activities, and the only non-profit activities contributing to agribusiness were associations and labor unions concerned with agribusiness related activities. The percentage of these associations' activities which focus on agribusiness is assumed to reflect the relative importance of agribusiness

activities in the economy, and therefore the proportion of agribusiness in industrial activities over total GDP is the proxy used for the share of agribusiness in business and labor organizations. Statistics on employee compensation and agribusiness-related associations and unions are not available in any of the publications mentioned above. This information will have to be acquired in-country, perhaps from the government statistical service or the appropriate ministry. When acquired, the same proportional methods applied in the Jordan study can be employed here to yield the share of agribusiness activity in the sector.

F.3 Conclusion

Although a good deal of the data necessary for the proposed disaggregation and reclassification analysis is available in the United States, the recent adoption of the SNA by both Poland and Bulgaria, combined with the statistical collection difficulties associated with the transition, has resulted in a situation where some data has proven difficult to find. Therefore, it is necessary to do some research in Poland and Bulgaria. The following is a summary of what data remains to be acquired, organized by national account sector.

- ▶ Manufacturing: interviews must be conducted with manufacturers of agribusiness products and industrial specialists to calculate the percentage of agribusiness products in the total output of chemical manufacturing.
- ▶ Energy: statistics that give the expenditure on energy by activity for agriculture, manufacturing, and mining.
- ▶ Trade, hotels, and restaurants: informational surveys must be conducted to find out the percentage of total hotel revenue derived from food and beverage services.
- ▶ Transportation, storage, and communication: data on amount spent on these services by activity in the agricultural, manufacturing, and mining sectors must be acquired.
- ▶ Community, social, and personal services: employee compensation and depreciation statistics for agribusiness-related government activities (Ministry of Agriculture, agricultural vocational training, agricultural faculties at universities), and from agribusiness-related unions and associations must be acquired.

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