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## Polish agriculture and food processing industry: Facts and prospects

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# Kieler Arbeitspapiere Kiel Working Papers

Kiel Working Paper No. 554

POLISH AGRICULTURE AND FOOD PROCESSING  
INDUSTRY - FACTS AND PROSPECTS

by

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## Introduction

Poland is a country which has contributed more than any other country to the ongoing political, economic and social transformation of Eastern and Central European countries. When the Solidarity - led opposition had won the national elections in June 1989 and formed the first non-communist government in September 1989, the new government moved swiftly to implement a radical reform programme. The Polish economy had to be stabilised and its institutions to be transformed into market-oriented ones, ruled by principles of competition and private ownership. By now, stabilisation and transformation has not been achieved fully. The Polish governments which followed the first non-communist one continuously strived for the reform of economic and social institutions although with different determination and intensity.

As to the effects of the reforms it was expected that Polish agriculture would respond rapidly to the new institutional setting by expanding its activities because agriculture was already private to a large extent. So it was commonly anticipated that private agriculture would - by following market signals - help to expand exports, production and employment. By that, the increasing problem of economy-wide unemployment would be smoothed. Even a recovery of the overall economy was supposed to be triggered out by a speedy developing agricultural sector.

The aim of the study is to discuss and to evaluate the response of the Polish agricultural sector and the food processing industry to the new circumstances. Their activities in the years 1985-1989 will be taken as a reference. Furthermore some conclusions concerning the future of agriculture and food processing will be drawn. Special attention will be given to achievements of the privatisation programme. Changes in the dynamics and the structure of production and foreign trade will be investigated. The paper begins with some observations concerning the place and role of the Polish agriculture and food processing industry in Poland's national economy.

## I. Importance of Agriculture and Food Processing in Poland's Economy: An Overview

Polish agriculture and food processing have always bulked large in the overall economy of Poland. However, their role has frequently changed. This was also true for the period before and after the reforms have started.

Polish agriculture accounted for about 10.5 of GDP in 1990, while it contributed 14.7 percent to the GDP in 1985. In 1991, it employed about 4.3 millions persons, respectively 27.4 percent of all employees in Poland, while six years earlier it employed 28.9 percent. The Polish food processing industry accounted for 9.2 of GDP in 1990 as compared to 11.1 percent in 1985 and it employed about 450 thousand persons in 1991, i.e. 2.9 of overall employment, compared to 526 thousand persons and 2.4 percent in 1985. In 1991, about 38.3 percent of the population lived in villages. Six years earlier the percentage of people living in villages amounted to 39.8. When unemployment increased after 1990 Poles increasingly intended to find a job in agriculture to move to villages.

The shares of agriculture and food processing industry in (gross) productive assets or in total investments of the overall economy changed from year to year. Generally, the shares of gross productive assets were similar to the shares of both sectors in total employment, whereas the shares of agricultural investments in overall investments was significantly below agriculture's share in GDP or employment. The involvement of agriculture in foreign trade was low compared to the contribution of agriculture to Poland GDP, at least up to 1990. This was due to many reasons to be discussed more deeply later on.

The importance of agriculture and food processing for Poland in general and its economic development in particular, might go beyond to what those shares suggest. Facts like the high self-sufficiency in food consumption (85-90 %), the many interlinkages between these sectors and other sectors of the national economy, agriculture's contribution to the preservation of natural environment etc. bulk



Table 1 - Share of Agriculture and Food Processing Industry in Poland's Economy, 1985-1991 (percent, current prices)

Specification	1985	1989	1990	1991
1. Gross Domestic Product				
Agriculture	14.7	14.6	10.5	.
Food industry	11.1	11.2	9.2	.
2. Employment				
Agriculture	28.9	26.6	26.8	27.4
Food industry	2.4	2.4	2.4	2.9
3. Gross productive assets				
Agriculture	29.4	27.8	26.8	26.0
Food industry	3.8	4.2	4.0	.
4. Investments				
Agriculture	21.8	19.1	17.6	6.4
Food industry	5.5	9.2	9.2	5.9
5. Imports <sup>a</sup>				
Agriculture	4.6	4.6	1.4	3.1
Food industry	6.9	9.1	6.7	10.4
6. Exports <sup>a</sup>				
Agriculture	3.2	4.1	4.3	6.6
Food industry	6.6	9.6	9.7	10.0

<sup>a</sup> Since 1990 private sector's activities included.

Source: Rolnictwo [1992, pp. 1-8] and Maly Rocznik [1992].

large in Polish politics. The above mentioned hopes that agriculture and food processing could play the role of a lokomotive in the process of transformation in Poland may be added to this catalogue.

## II. Privatisation of Agriculture and Food Processing Industry

### 1. Scope and Size of the Private Sector

Measured by economic indicators, the socialized part of agriculture and food processing in Poland was larger than the private sector of both industries until the end of 1989. The private sector was very small in Poland as compared to market economies, but it was large compared to other Central and Eastern European countries. Even some increase of private property was observed in the past (see table 2). However, as Breitkopf, Górski and Jaszczynski [1991, p. 20]

rightfully underline "extrapolating the trends in the respective growth rates of the private and public sectors in the years 1985-1989, it turns out that the private sector would attain a majority share in the formation of national income in over 50 years' time". The private sector was unsufficiently provided with capital as a factor of production and itself was hardly capable to provide capital for the privatisation of the public sector. Furthermore, private farming was highly dependent on the socialized sector for the purchases of inputs and services and for the sale of its produce, in particular, it depended on the quite inefficient food processing industry. All in all, the development of the private farming was negatively affected by these external and internal factors with evident implications for the overall economic development in Poland, its future prospects, political stabilisation etc. [Report, 1990].

There is no doubt that a major goal of the first Polish non-communist government was to privatise agriculture and food processing. However, in the beginning privatisation was defined quite different from what it commonly means. Just the Civil Code of Poland was altered in 1990. Provisions were supplemented, that turned state enterprises into private firms. As a result the division of agriculture (and some other sectors) into State and private firms vanished. The privatised agriculture and food processing industry comprise cooperatives, so-called agrarian circles - as were established in the 1950's in order to provide machinery services, fertilizer etc. -, and small private farms. Therefore, a major part of the Polish agricultural sector is privatised in a formal sense, but there is still a lot to do with respect to the privatisation of public ownership. More than 2 thousands of vertically and horizontally integrated agrokombinats have still to be sold.

The data presented in tables 2 and 3, clearly show that the food processing industry was by far more nationalised than agriculture. Since frictions which generally are caused by privatisation in the short run would be of minor importance in agriculture, this sector

was expected to show rapid expansion of production after liberalisation in 1989 and correspondingly to accelerate economy-wide growth.

At the end of the 1980's, a total of approximately 2 100 state-owned agrokombinats (PGR) were due for privatisation. These PGR's were established immediately after World War II. On average, each PGR cultivates arable land in the amount of 100 hectares in the western part and of 50 hectares in the central and eastern parts of the country. They cultivated about 18.4 percent of Poland's arable land. Another 4 percent of the arable land was cultivated by co-operatives. These organisations comprise agriculture cooperatives, agrarian circles, 1450 horticultural cooperatives, which buy and process the bulk of fruit and vegetables produced by private farmers, and about 320 dairy cooperatives which operate 700 milk processing plants and control most of the dairy industry in Poland. It was expected that the cooperatives would adjust to the conditions of a market economy rather smoothly. In January 1990, the Polish Parliament passed an amendment to the Cooperative Law, in order to restructure the cooperative sector fundamentally [Report, 1990, p. 136 and following].

In the second half of the 1980's agrokombinats employed about 2.7 percent of the total labour force in Poland, while the agricultural production cooperatives employed roughly 1.0 percent of the total labour force. Another 1.9 percent of Poland's labour was employed by various state owned establishments within the Polish agricultural sector. In all forms of privatised establishment employment decreased until the end of 1991.

Table 2 - Economic Establishments in Poland in 1989 and 1990 (number of units and %)

Specification	Year	Estab- lish- ments	Public Sector				Private Sector	
			Total	of which:			Total	of which estab- lished before 1989
				SOE's <sup>a</sup>	Works of SOE's <sup>b</sup>	Commer- cial Com- panies		
Number of Units								
Total economy	1989	872 881	15 451	7 337	4 633	1 224	857 430	826 533
	1990	1 217 839	15 906	8 454	3 940	1 383	1 201 933	1 167 824
	1991	1 542 523	17 008	8 228	3 450	1 385	1 493 701	.
Agriculture	1989	.	4 010	1 384	2 503	36	.	.
	1990	11 740	4 027	1 543	2 320	38	.	.
	1991	.	4 102	1 833	2 055	31	.	.
Food processing	1989	16 596	405	275	114	16	16 191	15 776
	1990	17 850	462	392	47	21	17 320	16 842
	1991	21 625	568	418	41	38	21 057	.
Establishments in the total economy = 100								
Agriculture	1989	x	26.0	18.9	54.0	2.9	x	x
	1990	1.0	25.3	18.3	58.9	2.7	0.6	0.3
	1991	x	24.1	22.3	59.6	2.2	x	x
Food processing	1989	1.9	2.6	3.7	2.5	1.3	1.9	1.9
	1990	1.5	2.9	4.7	1.2	1.5	1.4	1.4
	1991	1.4	3.3	5.1	1.2	1.4	x	x

<sup>a</sup> State-owned enterprises (SOE's) with a legal form of its own (incorporated units).  
<sup>b</sup> Plants of SOE's without a legal form (non-incorporated units).

Source: GUS [1992; pp. XX-XXI] and "Rzeczpospolita", No. 35, from 6.2.1992, Maly Rocznik [1992], p. 272-274]; own calculations.

Table 3 - Allocation of Arable Land in Poland with Respect to Forms of Ownership, 1985-1991 (thousands of ha and percent at the end of the respective year)

Specification	Thousands of ha				in percent			
	1985	1989	1990	1991	1985	1989	1990	1991
Agrokombinats <sup>a</sup>	3 506	3 482	3 459	3 477	18.5	18.5	18.4	18.6
Private farms	13 635	13 482	13 497	14 211	72.1	71.7	71.9	76.1
Cooperatives	667	674	662	674	3.5	3.6	3.5	3.5
Agrarian circles	79	64	74	70	0.9	0.3	0.4	0.4
Private allotments and establishments not yet definitely specified	1 027	1 103	1 092	242	5.0	5.9	5.8	1.3
Total	18 914	18 805	18 784	18 674	100.0	100.0	100.0	100.0

<sup>a</sup> State-owned agricultural enterprises - Panstwowe Gospodavszwa Rolne (PGR).

Source: Rolnictwo [1992, p. 80]; Maly Rocznik [1992, p. 195]; own calculations.

Table 4 - Employment in Polish Agriculture, 1985-1991

Years	Average employment based on working agreements			Members of cooperatives	Employment in private farms according to the census of Dec.7, 1988	
	Total	In agrokombinats			In thousands	Per 100 ha of arable land
	In thousands		Employees per 100 ha of arable land			
1985	811.7	475.9	13.5	165.8	.	.
1986	805.8	475.1	13.5	174.8	.	.
1987	798.0	474.8	13.5	183.8	.	.
1988	780.0	470.3	13.5	185.4	4 068.5	28.5
1989	758.0	441.3	12.6	176.4	.	x
1990	665.3	400.6	11.5	150.7	.	x
1991	513.8	.	10.0	.	.	25.0

Source: Rolnictwo [1992, p. 27], Maly Rocznik [1992, pp. 150 and 197].

Table 5 - Gross Value of Fixed Assets by Sector, Poland, 1985-1991 (billions of zlotys in current prices and percent)<sup>a</sup>

Specification	Billions of zlotys			percent		
	1985	1989	1990	1985	1989	1990
National economy	47774.1	105999.9	3384739.7	100.0	100.0	100.0
of which:						
Agriculture	9603.0	23361.3	779048.5	23.0	22.0	23.0
of which:						
Production	8813.6	21621.5	713962.1	21.1	20.4	20.8
of which						
Agrokombinats	1546.3	3966.2	134657.8	3.7	3.7	4.0
Cooperatives	316.2	788.4	23657.2	0.8	0.7	0.7
Agrarian circles	14.9	31.3	909.6	0.0	0.0	0.0
Private farms	6936.2	16626.0	549549.9	16.6	15.7	16.1
Services for agriculture	789.0	1733.7	64888.6	1.9	1.6	2.2

<sup>a</sup> At the end of respective year.

Source: Rolnictwo [1992, p. 126], GJS [1991, p. 263].

In the 1980's, agriculture held about 22-23 percent of the gross value of fixed assets of the overall economy. A great part of fixed assets (15-16 percent) was controlled by private farms. The respective share of agrokombinats was on the average 3.8 percent and increased in the second part of the last decade.

Statistical data on the private sector of the food processing industry are quite poor. Officially registered are only the numbers of private food processing enterprises and private sea fishing enterprises. The number of officially registered private enterprises in the food processing industry amounted to 15 640 in 1989, which is the latest reported year.

## 2. Strategy and Programme of Privatisation and Reprivatisation

The first decisions on privatisation in Poland were undertaken in 1989. In September 1989, the government embarked upon a general outline for the transformation of state assets into private ones. In July 1990, the "Privatisation Law for State-Owned Enterprises" was approved by the Polish Parliament, and in September 1990, the Ministry of Privatisation (MOP) was established.

According to the Act on State-Owned Enterprises (the Act on SOE's - for short), there are two main ways to privatise: a) privatisation through capitalisation (see table 1 in the annex) and b) privatisation through liquidation (see table 2 in the annex).<sup>1</sup> The privatisation process is to be controlled by the MOP which represents the Treasury.<sup>2</sup>

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<sup>1</sup> These problems are dealt with among others in: Bednarski [1991]; Iwanek, Wellisz, Bednarski [1991], Bednarski [1992].

<sup>2</sup> Details can be found i.a. in: MOP [1991a], MOP [1991b] and MOP [1991c].

The privatisation program which was designed and discussed in 1990 was finally approved by the Polish Parliament in February 1991. The main purpose of the program is to transfer, within three years, half of the state-owned assets into private hands, and to achieve, within five years, an ownership structure similar to that of Western Europe. The program was lively discussed in the public. Some ideas on alternative privatisation schemes were developed.

According to the current program, enterprises which have been commercialised can be transferred to private hands either by a) individual privatisation or b) by mass privatisation. Individual privatisation is performed by public offers, or by direct sales to domestic or foreign investors and is held appropriate for selected medium-sized or large enterprises which are financially sound. The latter group might comprise 500 enterprises. They should be privatised on a case by case basis. This method of privatisation envisages the possibility of sale to a group of foreign investors or to a single foreign investor. This is possible in cases where foreign capital, management and technology are found to be necessary. A swap of Polish debt for equity of privatized enterprise is also envisaged.

In view of the absence of adequate domestic capital resources and the relatively short-time period designated for the privatisation process, the government adopted additionally the so-called mass privatisation in February 1991. This scheme envisages privatisation by:

- a) offering shares to employees on preferential terms;
- b) free distribution of participation certificates (vouchers) to Polish citizens; and
- c) allocation of shares to pension funds and other financial intermediaries.

In the meantime the scheme of the mass privatisation was changed somewhat by the Parliament in September 1992 (see figure 3 in the annex).

As from August 1992, the Mass Privatisation Program (MPP) addresses about 400 SOE's which are to be privatised via a simplified administrative procedure. The procedure of evaluating the assets of each SOE's independently by specialized firms is omitted because it is rather costly and time consuming. It is provided that the participation certificates of these SOE's are distributed among (adult) Polish citizens. The certificates of certain companies which are to be selected by the MOP can be traded in the second half of 1993. Furthermore, about 5-10 National Wealth Management Funds (NWMF) shall be established in order to manage and control the development of those SOE's which are selected for privatisation. The MOP wants the MWMF's to be operated by Western managers. NWMF's shall be established as joint stock companies under the Polish Commercial Code. The structure of the proprietors of the companies which are privatised according to the MPP is as follows:

- a) 60 percent of the shares shall be allocated to the NWMF's; one leading shareholder shall keep a 33 percent stake and the remaining 27 percent shall be kept by some minor share holders;
- b) up to 10 percent shall be distributed among the employees;
- c) 30 percent shall remain in the hands of the MOP and shall be distributed later on.

According to the MOP, members of the NWMF's should be appointed by the President of Poland. Their managers (including foreign ones) should undertake necessary steps in order to increase the value of the stocks of the companies which are managed by them, and by early 1993, it should be possible to calculate both the value of companies which are selected for privatisation and the value of the



NWMF's. After the evaluation, the participation certificates of these funds shall be distributed among the adult Polish citizens. Each adult citizen should receive an equal stake in each of the NWMF's.<sup>1</sup> These shares can be traded on the Warsaw Stock Exchange after some time has passed. The MWMF's can borrow money, issue new shares and make new investments in Poland. Everybody, including foreign investors, has the possibility to buy shares in the NWMF's. It is provided that holding these shares will not result in any additional taxation.

An integral part of the program of privatisation in Poland is the so-called sectoral privatisation. It is not a privatisation instrument but a process of determining which method of privatisation and restructuring is the most appropriate for the companies of a specified sector. It is envisaged to investigate the sector as a whole, in particular, its internal and international linkages, its existing companies, and additionally the interests and requirements of potential investors. According to a special document prepared by the MOP<sup>2</sup>, the steps in sectorwise privatisation are as follows:

- a) the MOP establishes a contact with Polish companies and encourages them to prepare themselves for privatisation. In certain cases this might mean that the company directly applies for transformation into a private firm. The sectorwise approach comprises investigations of transformed and state-owned enterprises;

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<sup>1</sup> In the "Financial Times" of April 28, 1992, it was argued: "so much for the theory. In practice, the process has yet to get off the ground. Although the initial announcement attracted lively interest from some 50 potential fund managers, the launch date has repeatedly slipped as the government has hesitated to put it to parliament. At the end of March ... the UK's Knowhow Fund, which was funding the project, refused to provide another injection of cash unless it received a letter from Mr. Jan Olszewski, the prime minister, formally restating his government's commitment to the MPP... It remains to be seen how many western banks and fund managers are bold enough to wade into such shifting sands". See: Gowers [1992].

<sup>2</sup> See: MOP [1991a, pp. 97-98] and MOP [1991b, p. 11].

- b) coordination with other government agencies and ministries and preparation of terms of reference for the sector project;
- c) selection of a leading adviser who bears a full responsibility for subcontracting all professional services necessary to comply with the terms of reference of the sector project;
- d) the adviser conducts an analysis of the sector and develops a sector strategy and policy (phase I). At the same time the adviser analyses individual companies and prepares recommended actions with respect to privatisation and restructuring for each company (phase II).

The privatisation and/or restructuring actions are implemented by the adviser (in coordination with the MOP) through:

- a) liquidations;
- b) public offers for sale;
- c) trade sales;
- d) mass privatisation;
- e) pre-privatisation restructuring for an individual company and/or a whole sector;
- f) accompanying restructuring efforts;
- g) combinations of actions mentioned above.

In order to assist small- and medium-sized SOE's for which regular privatisation schemes and methods are not appropriate, the MOP has developed the so-called programme of privatisation through restructuring. According to the MOP "the purpose of the program is to increase the company's effectiveness and competitiveness. It combines two activities: the restructuring of companies in preparation for their sale, and the support of the sale itself. The restructuring element in the programme encompasses all spheres (organisation,

human resources, finance, product and technology) of a company. Sale means the transfer of at least 51 percent of the company's capital stock to private owners. The program will be carried out by qualified management specialists forming Management Groups. Individuals, as well as joint stock companies of the State Treasury, state-owned companies, and enterprises can participate in the program. Participation is on a voluntary basis. The Management Group will be rewarded for the conducting of the restructuring programme and of the sale through monthly salaries payed to the Executive Board, an annual bonus based on the current effects of the program and a commission for the sale of at least 51 percent of the company's shares" [MOP, 1991c, p. 9].

Until the end of 1991 the problem of privatisation of agrokombinats (PGR's) was not definitely solved. However, in January, 1992, the Treasury Land Agency (Agencja Wlasnosci Rolnej Skarbu Panstwa) has been created. The Agency is an institution constructed like the German Treuhandanstalt and its task is to acquire (gather until the end of 1993) the whole land of the agrokombinats within two years and to effectively and rationally manage it and to sell it. Hence, a representation of the Treasury has come into existence which controls the process of transforming agrokombinats into new, mainly private, economic units. Their organisational structure will be defined by the Agency. The Treasury Land Agency (TLA) is presently persuing the tasks as defined by the government. The TLA is responsible for the solution of the following problems:

- a) creation of conditions favouring a rational utilisation of the productive potential of agriculture owned by the Treasury;
- b) restructuring and privatisation of the Treasury's ownership of assets utilised in agricultural production;
- c) administering the Treasury's ownership;
- d) creation of new farms;

e) creation of new jobs; loss of jobs are expected due to the restructuring of the state-owned agriculture.<sup>1</sup>

The Agency faces many options to deal with the ownership of the diminishing agrokombinats. After having collected their land the Agency could sell it, lease it to private persons or legal units (e.g. to companies of commercial law), transfer completely or partly to companies etc. Land which is found economically unattractive for agricultural use might be set aside. It can be used for public forestry, conservation or building up the infrastructure (e.g. roads or kindergardens). When selling the land and assets of the agrokombinats the Agency is in a position to grant profitable conditions (e.g. long-term credits bearing interest rates lower than market rates). There are efforts to establish a system of internal and external credits (e.g. from the World Bank) by leasing the land and other assets of the agrokombinats.

According to the respective provisions, the production sphere is separated from housing and from social aspects. Flats (costs of which were earlier incurred by the agrokombinats) may be:

- a) sold together with farm buildings and land to the respective owners; or
- b) given as a gift to regional or municipal units, which should cover the operational costs of the flats (housing units).

Preferences are granted for the present and the retired workers of the agrokombinats when they decide to buy the flats. The preferences mean a reduction of the current market prices of the flats by 3 percent for each year a buyer has been working in the agrokombinat but not by more than 90 percent of the total value of the flat.

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<sup>1</sup> See: Olko-Bagienska [1992].

The separation of the non-productive assets is supposed to be rewarding for the agrokombinats. The agrokombinats which are under the control of TLA can thereby reduce their own operating costs and expenditures. However, on the other hand, they are facing demands for the increase of wages by those workers who bought the flats and are obliged to cover the costs of the flats.

The Treasury Land Agency is obliged to operate in a self-financing way. Its most important revenues are the following:

- a) proceeds from sales of land;
- b) proceeds from leases of land;
- c) revenues from the sale of services, e.g. supervision of properties on behalf of the Treasury.

In order to finance its expenditures the Agency may borrow short-term credits, and - after approval of the Ministry of Finance - also long-term credits. It may additionally issue bonds [Olko-Bagienska, 1992].

Problems of the acquisition of land and other assets in Poland by foreign persons<sup>1</sup> are regulated by the "Acquisition of Real Estate by Foreign Persons Act" of 24 March, 1990, and the "Act Amending the Land Economy and Expropriation Act" of 29 September, 1990. According to these acts it is possible for a foreigner to acquire a lease or tenancy of real estate without the need for a permit. However, for acquisition or perpetual (99 year) lease of state-owned real estate foreigners are required to obtain a permit from the Minister of Internal Affairs.<sup>2</sup>

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<sup>1</sup> A foreign person is defined as follow:  
 a) an individual who does not have a Polish citizenship;  
 b) a corporate body which is based abroad;  
 c) a corporate body based in Poland but controlled by an individual without Polish citizenship, or by a company based abroad (control means direct or indirect ownership of at least 50 percent of the company's share capital). See: MOP [1991a, p. 27].

<sup>2</sup> Foreigners are permitted to acquire privately-held real estate. See: MOP [1991c, p. 12].

The Solidarity's take-over of government and an amendment to the Polish Constitution that guaranteed private property rights initiated a rather hectic discussion on reprivatisation i.e. restitution of ante-communist property rights. A law was prepared which provided reprivatisation and defined the procedure of reprivatisation. Several drafts of a Reprivatisation Law came out in the meantime. They all provide for the settlement of claims of former owners of properties which have been nationalised by the State after World War II. However, the respective provisions of the various drafts are contradictory. The Polish Parliament has not yet finalised the discussion and decided which version of the law should be enforced.

One can divide the discussants [political parties, associations and private persons] on the restitution question into two parties. The one party denies that properties should be restituted. The other party (supported also to a great extent by the Office of the President of Poland) demands all private property seized under Communist rule to be returned to the original owners or to their rightful heirs. These views are presented and shared mainly by the advocates of the idea of eliminating wrongs done in the past. Among them are - what is quite natural - former owners and their families. They have prepared their own claims. According to reports of the MOP about 50 thousands claims for restitution of real estate and more than 500 claims for reprivatisation of businesses were outstanding at the end of 1991 [Iwanek, Wellisz, Bednarski, 1991, p. 13]. The other party is opposing to any restitution.

Restitution - within certain limits - has been advocated by the MOP representing the Solidarity-governments' point of view. The position is that the authorities of Poland have a responsibility to reconstitute certain properties taken over by the state in the period 1944-1960, namely:

- a) property which was placed under compulsory state management in violation of the legislation which was in force;

- b) agricultural land, forests and buildings belonging to it were taken over in violation of the law (including property taken over in order to force eviction and migration of Poles to other parts of the country);
- c) pharmacies; and
- d) property taken over under the Act of January 3, 1946, without compensation.

The total value of the claims covered by the present governmental program of restitution is estimated to amount to about 114-150 billions of Zlotys.<sup>1</sup> The governmental program does not address the well-known problems of "property beyond the River Bug" (i.e. in the region incorporated, after World War II into the former USSR) and property in Warsaw, nationalised under the decree of October 25, 1945. The subsequent Polish governments have generally declared that they would solve these problems but up-to-now no clear concept has been presented to the Parliament.

Three general forms of restitution are provided in the MOP program until now. These are:

- a) compensations to be paid in the form of capital vouchers exchangeable for stocks or shares sold by the Treasury or for enterprises (or parts thereof) undergoing privatisation under a liquidation scheme;
- b) granting preferential treatment and giving statutory guarantees to former property owners in purchasing stock or shares in enterprises which once belonged to them;
- c) transferring of real property to former owners being Polish citizen at their clear requests and only if such restitution is possible.

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<sup>1</sup> See: Breitkopf, Gorski, Jaszczynski [1991, p. 73] and Kwiecinski [1992, p. 6].

According to the present programmes of restitution, that is still lively discussed and partly quite bluntly criticized individuals living abroad can also be entitled to get the respective compensation if they acquire Polish citizenship and become Polish residents before the time expires, which is set for filing the restitution. All claims shall be ceased after that date. Entitled individuals might also be given compensation in kind, mainly as far as small, improperly utilised enterprises are concerned or in the case of property separated from an enterprise.

### 3. Up-to-Date Achievements of the Privatisation Programmes

Due to many reasons, the progress of privatisation in Poland has been rather slow up to now. Also privatisation in the agricultural sector and food processing industry made poor progress.

Table 6 - Number of Polish Enterprises Transformed into Treasury-controlled Companies in 1990-1992

Specification	Enterprises transformed by		
	30.06.1991	31.12.1991	30.04.1992
1. Poland total	162	309	443
2. Agriculture	1	1	1
3. Food processing	16	26	37
out of which:			
Joint-stock companies	14	20	26
Limited liability companies	2	6	8
4. Relation 2:1 in percent	0.6	0.3	0.2
5. Relation 3:1 in percent	9.9	8.4	8.4

Source: Dynamika Prywatyzacji [1991, 1992, various issues]; own calculations.

Of the about 9 thousands SOE's which are to be privatised only 1 agricultural enterprise has been transformed into a Treasury-controlled joint stock company until the end of April 1992, while 37 enterprises of the food processing industry were privatised during the same time. Some of these 37 enterprises were Treasury-controlled joint Stock companies, which were privatised by applying the capitalisation method, i.e. launching public offers of shares. The majority of these companies are almost completely privatised



and their stocks are now traded at the Warsaw Stock Exchange; e.g. confectionary enterprise "Wedel" and breweries "Zywiec" and "Okocim". Other methods of privatisation were applied in the food processing industry too. Some enterprises (e.g. meat processing firms in many Polish cities) were purchased by the employees in a leveraged buy-out (with the equity being fully paid up while the debts have to be paid off over five years). Other firms were sold to foreign partners, e.g. "Alima" (producing baby food) to the "Gerber Products Co." or "Srodki Odzywczce" (Food Products) in Gdansk to the "Dr. Oetker", or just turned into companies controlled by nationals and foreigners after private partners were invited to negotiate on a partnership. However, some enterprises of the food processing industry are still Treasury-controlled companies (commercialised ones), and they should be sold to private firms or private persons within two years.

Up-to-now more popular was the privatisation of assets of enterprises through their liquidation. This was the favoured approach in the case of agricultural establishments.

Table 7 - Number of Polish Establishments Privatised Through Liquidation, 1990-1992

Specification	State at:		
	30.06.1991	31.12.1991	30.04.1992
1. Poland total	343	950	1 169
2. Agriculture	41	174	211
3. Food processing industry	6	21	30
4. Relation 2:1 in %	12.0	18.3	18.0
5. Relation 3:1 in %	1.7	2.2	2.6

Source: as in table 6.

In 1992, agricultural establishments constituted almost 20 percent of all Polish enterprises which were transformed through liquidation. The liquidation was performed in four different ways, namely by sales of assets, transfer of assets, lease of assets and combinations of sale, transfer or lease (see Table 8).

Table 8 - Number of Liquidated Polish Agricultural Establishments by Method of Liquidation, 1990-1992

State at:	Under the 1991 Act					Under the 1990 Act					Under both Acts				
	Total	Way of liquidation				Total	Way of liquidation				Total	Way of liquidation			
		A	B	C	D		A	B	C	D		A	B	C	D
30.06.91	30	24	0	0	6	11	2	0	9	0	41	26	0	9	6
31.12.91	154	128	0	2	24	20	2	0	18	0	174	130	0	20	24
30.04.92	189	158	0	2	29	22	2	0	20	0	211	160	0	22	29
A - Sales of Assets B - Transfer of Assets C - Lease of assets D - Mixed solution															

Source: As in table 6.

Until the end of June, 1992, the MOP issued over 200 permissions to liquidate state-owned agricultural enterprises. These enterprises consisted of:

- a) production agrokombinats (95 at the end of June, 1992)
- b) machinery centres (51)
- c) amelioration enterprises (33)
- d) enterprises for mechanization of agriculture (15).<sup>1</sup>

A salient feature of the liquidation of Polish agricultural enterprises is the dominance of liquidation under the 1991 Act. It was estimated that most of the liquidated enterprises had been in a bad financial situation (73 percent of enterprises liquidated as of 30.06.1991 and 75 percent of enterprises which were liquidated during 1.7.1991 to 30.04.1992).

<sup>1</sup> See: Olko-Bagienska [1992, p. 3].

These enterprises consisted mainly of production agrokombinats (forming the largest group) machinery centres and amelioration enterprises.

What seems noteworthy, too, is that the decisionmakers of the Founding Bodies which performed the liquidation under the 1991 Act preferred the sale of assets as a way of liquidation while the Founding Bodies which acted according to the provisions of the 1990 Act preferred the leasing and/or tendering of assets. The assets of enterprises which were liquidated under the State Enterprises Act were mainly sold off through public auctions.

Table 9 - Number of Liquidated Enterprises of the Polish Food Processing Industry by Ways of Liquidation in 1990-1992

State at	Under the 1991 Act					Under the 1990 Act					Under both Acts				
	Total	Way of Liquidation				Total	Way of Liquidation				Total	Way of Liquidation			
		A	B	C	D		A	B	C	D		A	B	C	D
30.06.1991	1	1	0	0	0	5	0	0	5	0	6	1	0	5	0
31.12.1991	8	6	0	0	2	13	1	0	11	1	21	7	0	11	3
30.04.1992	9	7	0	0	2	21	1	0	18	2	30	8	0	18	4

A - Assets' sale  
 B - Assets contributed into company  
 C - Lease of assets  
 D - Mixed solution.

Source: As in table 6.

As shown in table 9 also some enterprises of the Polish food processing industry were liquidated under the 1991 Act [9 cases in 1991 and 9 cases in 1992]. While the privatisation of enterprises in the food processing industry was mainly performed under the 1990 Act, liquidation under the 1991 Act characterises the privatisation in agriculture.

SOE's which were transformed into stock companies and privatised through the sale of stocks or shares of stocks operate in different branches of the food processing industry. At the end of April 1992, 10 enterprises belonged to the meat processing industry, 8 enter-

prises to breweries, 4 enterprises to the potatoe processing industry, 3 enterprises to fruit and vegetable processing industry, and few enterprises belonged to the food concentrate industry. In general, enterprises which emerged after liquidation can largely be attributed to the same food processing industry which they belonged to before liquidation. Dairies are a major exemption. Some enterprises which came into existence after liquidation of SOE's are now operating in the dairy industry. The barely unaltered pattern of economic activities of companies which emerged out of different ways of privatisation can be attributed to the gradual implementation of the concept of sector-wise privatisation. The processing food industry proved more suitable for privatisation than other branches in this respect.

Due to internal and external factors, more precisely specified elsewhere [Glismann, Schrader, 1991; Misala 1992], progress of privatisation in Poland was rather slow. In particular, expectations on a fast expansion of foreign direct investment as a driving factor of privatisation was disappointing. Foreigners were blamed to have been too reluctant to invest capital into the Polish economy. This was documented in a report by the Minister of Internal Affairs. In 1991, it obtained 635 applications (of foreigners) for purchases of real estate and approved 604 of them. In the end, 586 foreigners have bought real estate in Poland. Among the 604 applicants which got a permit 416 were private persons, 163 were companies with foreign capital and 13 were foreign governments, embassies and consulates. The foreigners have bought first of all land. The whole area of land sold to them in 1991 amounted to 534 ha (0.003 percent of the total arable land in Poland), of which 265 ha was bought by joint ventures employing foreign capital. Citizens of Germany formed the largest group of applicants prepared to buy real estate in Poland (111 applications). In 1991, German citizen bought 24,2 ha land and 13 flats [Gadomski, 1992; Wirtschaftsreport, 1992].

### III. Development and Structure of Polish Agriculture and Food Processing Industry

#### 1. Agriculture

As noticed elsewhere [Raport 1990, p. 4], Polish agriculture differs significantly from agriculture in other East European countries. The following differences are treated as the most important with regard to the transformation from a Soviet-type economy to a market economy<sup>1</sup>:

- a) existence of a large private farm sector;
- b) capability to resist to unfavourable economic conditions and to survive;
- c) existence of an infrastructure in rural areas, foremost a road network and electricity supply, which is in relatively good shape;
- d) rapid emergence of institutional conditions which promote international competitiveness;
- e) geographical proximity to West Europe;
- f) high professional standards of farmers, especially younger ones, high abundance of technical knowledge, and a comparable sound crop husbandry.

The entrepreneurial capabilities of Polish farmers are put into question by Kwiecinski and Leopold [1991, pp. 3-4]. They argue that, after forty years of Communist regime the general attitudes of farmers towards a market economy are not much different from those of the non-agricultural population, and from a sociopolitical point of view can be described as follows:

- a) focus on survival rather than expansion and development;
- b) implementation of risk-minimalization strategies;
- c) lack of profit orientation;
- d) "acquired helplessness" and dependence on the state;

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<sup>1</sup> Some more aspects are addressed in the last chapter of this paper.

- e) preference for self-sufficiency over dependence on commodity and financial markets;
- f) inclination to exert political pressure to increase state-fixed procurement prices rather than improving farming efficiency;
- g) reluctance to privatize; and
- h) expectations that economic reforms will decrease rather than increase income disparities.

Aversion of Polish farmers to risks of the market and its forces is, however, shared by farmers in most western countries. Small wonder, that a majority of Polish farmers strongly resist to the liberalisation of foreign trade. As it seems, the opposition against foreign trade liberalisations is also strong among agrarian economists. Since farmers are well organized they are eager to exert pressure on politicians by protests and strikes.

Economic liberalisation of the Polish agricultural market started at the end of 1988 when the state monopoly on grains for livestock supplies was abolished. It continued in 1989, when the meat rationing system was abolished, the state-fixed retail food prices and procurement prices for farm products were abandoned and a system of free market prices introduced. However, the decisive move towards liberalisation was launched in January 1990 (the so-called program of Leszek Balcerowicz). Most agricultural and foods prices were set free and impediments to foreign trade in agricultural goods and foods reduced. It was expected i.a. that the reforms would allow relative prices of various commodities to align and, thus, would lead to an increase of economic efficiency and incomes. Furthermore, it was expected that a real devaluation of the national currency would rise prices of tradeables (in comparison with non-tradeables) and consequently would stimulate producers to export and to replace imports. This programme almost created completely new conditions for both consumers and producers overnight. Due to monetary, fiscal and income policies which appeared tight the resource's constrained-economy switched to a demand-constrained one. In other words, Poland embarked on a great historical experiment [Raport, 1990; Kwiecinski, Leopold, 1991; Wos, 1991].

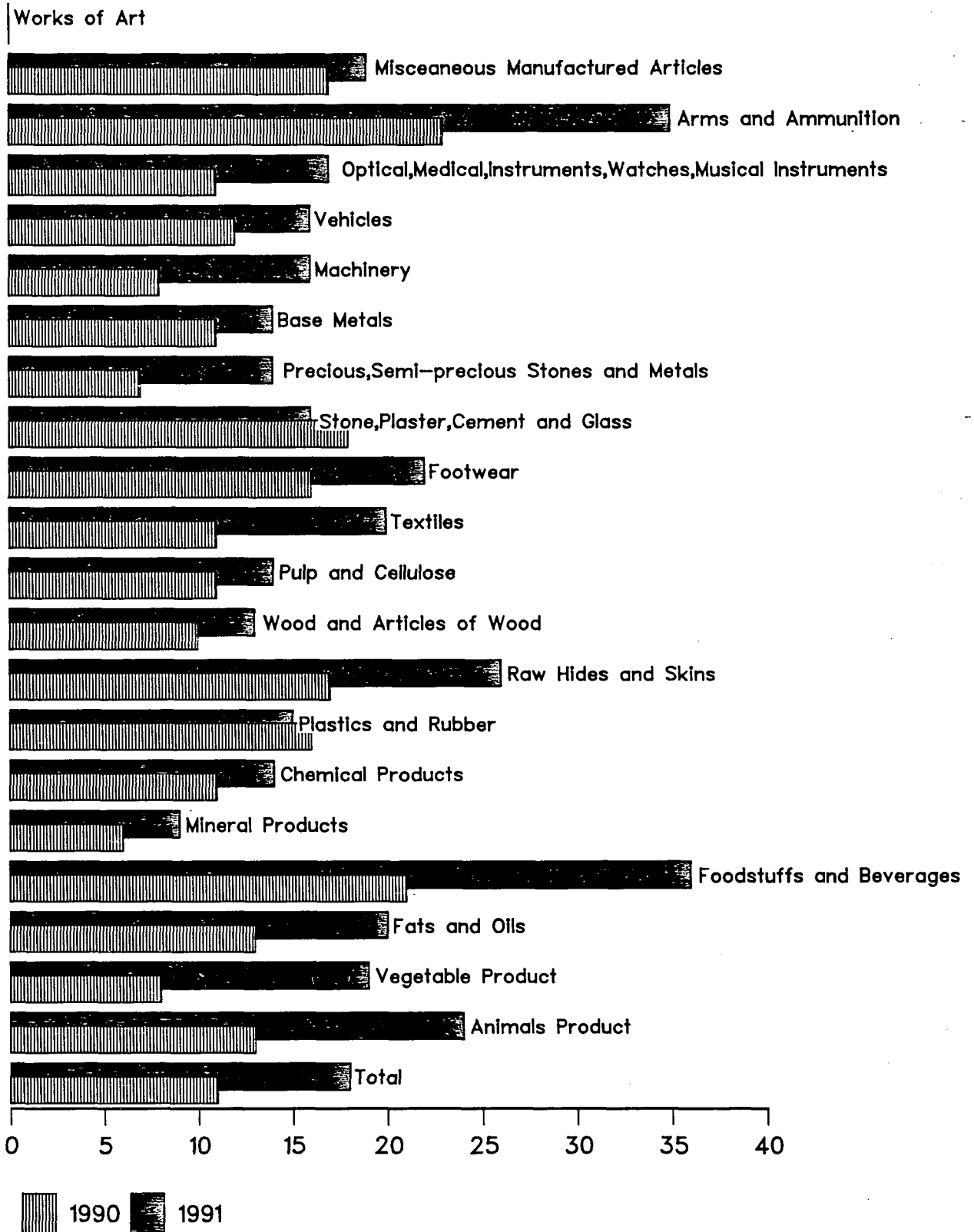
The economic reforms affected agriculture and the food processing industry in a number of ways. When prices of agricultural goods were set free agricultural input subsidies were reduced from about 1.3 percent of GDP in 1989 to 0.3 percent in 1990. Food consumption subsidies simultaneously declined from about 4 percent of GDP in 1989 to less than 0.2 percent in 1990. Additionally, subsidisation of agricultural credits was nearly abolished and agricultural export subsidies alike. There was a swingeing liberalisation of foreign trade. The new Customs Tariff which was introduced in 1990 can hardly be said to be in favour of agriculture. With the exemption of the tariff rate on "food stuffs and beverages" (20 percent) the tariff rates were below the average tariff rate of 11 percent as in the case of vegetable products or slightly higher as on animals products and fats and oil (see graph 1). Imports of agricultural inputs remained duty free.<sup>1</sup> Labour income was controlled and taxed. Only incomes of private farmers (which, by the way, had always to face hard budget constraint) were exempted from taxation. Moreover, agricultural inputs were exempted from the turnover tax, except for a 20 percent tax on spare parts for machinery [Raport, 1990; Kwiecinski, Leopold, 1991; Herer, 1991].

The first direct consequence of the economic programme from January 1990 was a fall of demand for agricultural products and foods in particular (by about 20 percent in 1990 and 10 percent in 1991). This led to a relative decrease of prices of agricultural products (i.e. in comparison with prices of other products), and to a decrease of farmers incomes. In 1990-1991, income disparity of private farmers was reported to have increased from 96 percent to 63 percent. The depression of agricultural incomes can be attributed also to the stickiness of prices in forward and backward industries. As the financial situation of state-owned enterprises in the downstream and upstream sectors (e.g. chemical industry or

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<sup>1</sup> The information on the 1990 tariff rates by sections of the CN was taken from: Janusz Piotrowski 1990. Own calculations of the tariff rates which were introduced by the "Taryfa Celna Importowa in 1991 were made according to the formula employed by Janicz Piotrowski.

# Poland's Customs Tariff Rates by the Sections of the CN 1990 and 1991





food industry), worsened due to higher interest rates, higher storage costs etc.; these enterprises made use of their monopolistic positions. Instead of lowering retail prices, improving quality and expanding the variety of products in order to encourage sales, enterprises of the forward sector restricted output, increased retail prices, restricted purchases from farmers and simultaneously attempted to lower the prices offered to farmers. In 1990, prices paid to farmers increased on average only 4 times, while prices for agricultural inputs increased 8 times. The phenomenon of a deterioration of the agricultural terms of trade was also observed in 1991. However, the situation changed somewhat in favour of agriculture in the first two quarters of 1992 (see table 10).

Table 10 - Retail Prices of Agricultural Inputs and Agricultural Products in Poland in 1989-1990

Specification	Period	Prices expressed in:				
		quintals <sup>1</sup> of wheat	quintals of rye	quintals of pork	quintals of veal and beef	hectolitres of milk
1 Tractor "Ursus" C-330	1989 IV	248	310	25.7	44.5	174
	1990 IV	421	604	36.4	65.4	440
	1991 IV	575	1012	41.2	81.7	378
	1992 I	499	889	40.6	67.8	311
	1992 II	433	803	45.5	60.8	323
100 kg of amonium fertilizer	1989 IV	0.62	0.77	0.06	0.11	0.43
	1990 IV	0.84	1.21	0.07	0.13	0.88
	1991 IV	2.16	3.80	0.15	0.31	1.42
	1992 I	1.76	3.13	0.14	0.24	1.10
	1992 II	1.47	2.73	0.15	0.21	1.10
100 kg of fodder for porks	1989 IV	1.26	1.57	0.13	0.23	0.88
	1990 IV	1.41	2.02	0.12	0.22	1.47
	1991 IV	1.66	2.92	0.12	0.24	1.09
	1992 I	1.51	2.69	0.12	0.21	0.94
	1992 II	1.34	2.48	0.14	0.19	1.00
100 litres of mineral oil for engines	1989 IV	2.16	2.70	0.22	0.39	1.52
	1990 IV	3.23	4.63	0.28	0.50	3.37
	1991 IV	4.11	7.24	0.29	0.58	2.70
	1992 I	3.83	6.82	0.31	0.52	2.39
	1992 II	3.90	7.23	0.41	0.55	2.91

<sup>1</sup> 1 quintal = 100 kg

Source: Rzeczpospolita" from 6.02.1992 and 4.08.1992.

In order to protect farmer's incomes and to stabilise markets of agricultural products an Agency for Agricultural Marketing (Agencja Rynku Rolnego) was created in May 1990. Its main activities are defined as follows:

- a) purchases of surpluses of basic agricultural product and foods on the internal market;
- b) sales of agricultural products and processed foods on internal as well as on international markets;
- c) gathering and management of reserves of purchased products;
- d) guaranteeing credits granted to farmers and enterprises involved in the purchase and storage of agricultural products and foods;
- e) overviewing of internal and international agricultural and foods markets, and forecasting;
- f) advising the government concerning the situation of agricultural and foods markets, as well as submitting proposals concerning necessary interventions [Kwiecinski, Leopold, 1991].

The Agency has started to fulfill the tasks immediately after its creation in 1990. Its activities are viewed upon with some criticism by private farmers and their association. The Agency claims that poor results are partly caused by a lack of experience, unreliable statistics, limited funds for market interventions and other forms of activities (in 1990, about 200 million US-Dollars), and limited storage capacities etc. [Kwiecinski, Leopold, 1991; Wozniak, 1992].

Since the mechanism of relative price adjustment did not work satisfactorily due to monopolistic behaviour of enterprises in forward and backward industries relative prices of agricultural goods and foods in Poland did not fully align with (higher) world market prices. Apart from the negative internal price changes agricultural growth potential was reduced by unfavourable external factors e.g., the protectionistic agricultural policies of western countries, collapse of the trade system of the former Council for Mutual Economic Assistance (CMEA), and deterioration of Polish-

German trade due to German unification. To be sure, internal impediments to agricultural growth were at work. First of all, half-hearted and inconsistent institutional reforms are the main cause of sluggish growth. To put it simply, the first and second Solidarity-governments thought to be forced to undertake some decisions not fully in accordance with the previously declared intentions to directly introduce a market-economy order. Price increases of some products were commanded as well as higher import duties, and some import quotas introduced. In 1991, the customs tariff rates on agricultural products and foods were raised stronger than tariff rates on other goods (see graph 1). The nominal tariff protection of agricultural goods and foods are now well above the average tariff protection. Hence, one can strongly assume that agriculture and food processing industry gets an effective trade protection.

Notwithstanding rising import protection fears were widespread that agricultural and food exports could grow excessively and would lead to an increase of domestic prices. Soft budgeting is not yet abolished. Heated protests of farmers and negotiations between the government and the farmers' lobby helped to prolong the soft budget constraints. This policy outcome diminished the credibility of reforms and its main representatives alike. Strikingly the exchange rate of the Zloty remained fixed relative to US-\$ till the end of May 1991, even though inflation in Poland was much higher than in the Dollar area. While consumers adapted demand quickly producers changed the structure of production rather slowly. Relatively great uncertainty on future demand and relative prices prevented a faster real adjustment. The government acted in order to lower market risks for producer by introducing prices for the main agricultural products (grains, milk, and butter). Minimum prices for these products were guaranteed, just in the same time when the European Communities started to reduce agricultural price support for major agricultural products. Poland would badly be advised if it repeated policies of the EC which proved wrong. In any case, private farmers (as well as managers of agrokombinats and cooperatives) are facing now higher internal prices.

While the past deterioration of agricultural terms of trade will be reduced the reluctance to invest are likely to remain. The sharp decrease of investments which was observed since January 1990 was attributed (according to A. Wos [1992]) to the lack of financial means. Agriculture was not able to continue the so-called extended reproduction. The financial standing of the agrokombinats and co-operatives was even worse than the standing of private farmer. This is an additional explanation for the modest progress of privatisation of Polish agriculture and for the ways that were chosen for privatisation. In the last months of 1991, 275 agrokombinats (out of about 2100) and 77 agricultural cooperatives (out of about 1200) were in such bad economic and financial position that banks rejected demands for new credits. The government responded to this development by creating the "Fund of Overcoming Agriculture's Debt" [Fundusz Oddluzenia Rolnictwa]. The results of its activities are rather limited up to now.

Farmers responded to the fall of their real incomes and to still existing investment barriers by reducing the factor intensity of agricultural production. They reduced net-investments and lending (in response to the drastic rise of interest rates of new credits) and reduced purchases of agricultural inputs (in response to the rise of non-agricultural input prices). The fall of demand for inputs deepened the recession in the upstream sectors of agriculture. Production of non-agricultural inputs for agricultural production was significantly reduced. The slump of production of fertilizers on previous year amounted to 37.0 percent in 1991 and in 1990. In case of the industrial feedstuffs the slump amounted to 29.9 percent in 1991 and 41.4 percent in 1990. The production of pesticides fell by 66.1 percent in 1990 and increased by 3.1 percent in 1991. The usage of fertilizers decreased by 42.1 percent in 1991 on 1990; the use of fertilizers amounted to 95 kilogrammes for 1 hectare in 1990, about 69 kilogrammes less than one year earlier. In the agricultural year 1990/91, the drop in consumption of other inputs, like high-protein feed and high-quality seeds, were similar.

In spite of the massive reduction of the use of non-agricultural inputs production declined only slightly in Poland. The decline was by far smaller than could have been expected. There was even an increase of the harvest of some crops in 1990 and 1991. Extraordinarily good weather conditions in these years might have contributed to the good harvest and the specific strategy of survival of farmers as well. Facing high political uncertainty, private farmers, as well as managers of agrokombinats and cooperatives, had hoarded non-agricultural inputs and made use of the inventories during 1990 and 1991. Additionally, they increased the area of arable land to some extent. [Kwiecinski, Leopold, 1991].

Table 11 - Dynamics of Gross Agricultural Production in Poland in 1986-1991 (constant prices, previous year = 100)

Specification	1986	1987	1988	1989	1990	1991
Total agricultural production	105.0	97.7	101.2	101.5	97.8	98.0
Agrokombinats	105.7	99.3	100.7	103.5	99.8	90.5
Cooperatives	107.6	102.5	101.6	102.9	101.3	97.6
Private farms	104.7	97.1	101.3	101.0	97.2	101.5
Vegetable production	106.3	98.0	99.7	102.8	100.1	96.1
Agrokombinats	106.7	99.3	97.6	110.1	104.2	.
Cooperatives	105.7	102.7	96.3	109.1	104.4	.
Private farms	106.3	97.6	100.3	101.0	99.0	.
Animal production	103.2	97.3	103.2	99.9	94.8	99.9
Agrokombinats	104.6	99.3	104.4	96.0	94.0	.
Cooperatives	109.4	102.2	106.4	97.8	98.5	.
Private farms	102.6	96.5	102.7	101.0	94.9	.

Source: Rolnictwo [1992, p. 194], GUS [1991, pp. 275-276], Maly Rocznik [1992, p. 197-199; own calculations.

The share of vegetable production in total agricultural production decreased during the 1980's. In the years 1989 and 1990 the share of vegetable production picked up and slumped again in 1991 (Table 11). The structure of Polish vegetable production changed only slightly. Cereals and potatoes rank first and second in crop production. Vegetables and sugar beets are taking the fourth and fifth rank. As could be expected, yields of the majority of crops dropped in Poland in 1990 and especially in 1991.

Table 12 - Structure of Vegetable Production at current prices in Poland, 1985-1991 (percent)

Specification	1985	1989	1990	1991
Cereals	32.2	26.7	38.1	30.7
of which 4 cereals:	28.7	23.5	34.3	30.0
Wheat	10.5	10.3	15.7	13.3
Rye	8.8	5.7	7.9	5.0
Barley	6.3	3.8	5.8	4.9
Oat	3.1	3.7	4.9	.
Potatoes	18.2	21.3	12.5	17.4
Sugar beets	4.2	12.2	6.3	4.9
Vegetables	10.7	12.4	13.5	12.5
Fruits	6.4	7.3	6.9	9.2
Hay	3.9	2.1	2.8	3.0
Other	24.4	18.0	19.9	22.3
Total	100.0	100.0	100.0	100.0

Source: As in table 11.

The decline of yields differed by crops and organisational form of agricultural enterprises. Due to the lack of machinery, private farms showed lower yields of cereals, fodder pulses, potatoes and oil plants than agrokombinats and cooperatives, while they harvested more sugar-beets, fodder-root crops and hay per hectare. Obviously private farms have a comparative advantage in labour-intensive harvesting.

Polish livestock production declined slightly after 1989 (Table 11). Cattle production was reduced in response to an increase of relative prices of foodstuffs for cattle which was not matched by an equal increase of producer prices. Prices of foodstuff used in the hog production, however, declined and profitability of production increased.

Table 13 - Yields by Crops, Poland, 1984-1991 (100 kg per ha)

Specification	Period	Average yields per ha	Divergence from average yields by sectors		
			State-owned enterprises	Cooperatives	Private farms
Cereals	1984-1989	29.9	5.9	1.7	-1.2
	1989	32.2	9.4	3.3	-1.9
	1990	32.8	11.7	4.4	-2.4
	1991	31.9	9.1	3.9	-2.0
of which 4 cereals	1984-1988	29.9	5.9	1.9	-1.3
	1989	32.7	9.3	3.2	-2.2
	1990	33.2	11.5	4.2	-2.8
	1991	31.9	9.1	3.4	-2.0
Wheat	1984-1988	35.8	7.6	4.3	-2.4
	1989	38.5	11.9	5.4	-3.6
	1990	39.6	13.9	6.9	-4.4
	1991	38.0	11.1	6.3	-3.7
Rye	1984-1988	25.4	3.2	0.0	-0.3
	1989	27.3	7.4	2.7	-0.9
	1990	26.1	6.7	1.6	-0.9
	1991	25.8	5.5	0.7	-0.8
Barley	1984-1988	32.7	2.1	0.2	-0.8
	1989	33.3	5.3	2.0	-1.7
	1990	35.9	7.5	3.7	-2.7
	1991	34.4	5.2	2.5	-2.1
Oat	1984-1988	27.2	5.7	1.2	-0.9
	1989	27.2	3.6	-0.7	-0.6
	1990	28.4	9.8	2.3	-2.2
	1991	27.3	7.6	2.8	-1.4
Fodder pulses	1984-1988	15.1	0.9	-0.5	-0.2
	1989	15.3	1.7	-2.5	-0.3
	1990	18.6	2.4	0.3	-1.1
	1991	.	.	.	.
Potatoes	1984-1988	183.0	17.0	13.0	-1.0
	1989	185.0	19.0	6.0	-1.0
	1990	198.0	5.0	2.0	-1.0
	1991	168.0	-15.0	-7.0	0.0
Sugar beets	1984-1988	337.0	-32.0	-12.0	7.0
	1989	340.0	-23.0	-10.0	4.0
	1990	380.0	-29.0	-20.0	5.0
	1991	316.0	-15.0	9.0	2.0
Oil plants	1984-1988	23.8	0.5	-0.2	-0.7
	1989	27.4	0.6	-1.8	-0.5
	1990	23.5	1.6	-1.7	-2.8
	1991	21.9	0.3	-0.5	-0.6
Fodder-Root Crops	1984-1988	452.0	-41.0	-38.0	5.0
	1989	442.0	-50.0	-63.0	5.0
	1990	472.0	-29.0	-32.0	2.0
	1991	433.0	-65.0	-77.0	4.0
Hay: Trefail	1984-1988	46.8	-8.8	-14.1	3.5
	1989	44.5	-9.7	-15.4	3.4
	1990	44.9	-11.1	-16.4	3.7
	1991	.	.	.	.
Hay: Meadow	1984-1988	61.5	-16.9	-18.5	4.8
	1989	56.9	-18.2	-21.3	5.0
	1990	59.6	-17.0	-22.6	4.8
	1991	54.1	-22.5	-24.1	6.1
Four Cereal Straws	1984-1988	36.7	7.3	1.4	-1.6
	1989	38.8	13.7	3.7	-3.1
	1990	39.2	14.6	4.5	-3.5
	1991	33.8	7.0	0.6	-1.5

Source: GUS [1991 and earlier issues]; Rolnictwo [1992] and Produkcja [1992], Maly Rocznik [1991, p. 205] and own calculations.

According to an analysis prepared by the Institute of Agriculture and Food Industry, Warsaw, the demand of Polish citizens increasingly shifted towards foods containing fat and carbohydrates rather than proteins since prices were freed. While the level of meat consumption was maintained the structure of consumption was changed. In particular, the consumption of pork was expanded while consumption of milk and milk products was reduced. The behaviour of consumers can be explained to a great extent by the cut of consumption subsidies and the concomitant rise of prices which affected prices of beef meat, milk and milkproducts or vegetable oils more than prices of other foods [Szot, 1991].

Table 14 - Structure of the Livestock Production in Poland, 1985-1991 (percent, current prices)

Specification	1985	1989	1990	1991
Livestock for slaughter	51.8	51.3	66.8	65.7
of which:				
Cattles	15.6	12.2	16.6	11.6
Calves	0.9	0.9	1.9	1.9
Pigs	27.2	31.9	38.5	43.3
Sheeps	1.5	0.9	1.2	.
Poultry	5.5	4.6	8.5	7.3
Milk	31.1	32.9	25.0	24.5
Eggs	8.3	5.9	1.2	7.4
Other	8.8	9.9	7.0	2.4
Total	100.0	100.0	100.0	100.0

Source: Rolnictwo [1992, p. 234], Maly Rocznik [1991, p. 199].

Among the production of various vegetables the production of livestock production dropped in 1990 and 1991, too. This drop in production occurred both in the private and public sector. The (physical) efficiency of production appears still higher in the public sector than in private farms. The reasons for the higher efficiency are by and large the same as they were in the past, namely, the superior machinery equipment, favoured access to credit markets and forward and backwards markets. In the case of vegetable production, farming practices very similar to those of the past century. These practices can be observed along with the most modern



techniques. The average size of private farms did not increase significantly since 1989. In 1992, the dominant size of a farm was 6.6 to 6.7 hectares notwithstanding of many announcements of policy-makers to increase the size of farms, and to modernise and privatise the agricultural sector [Niemczyk, 1991; Szemberg, 1992].

Table 15 - Production of Milk, Eggs and Wool in Poland, 1984-1991

Specification	Period	Total enter- prises	of which		
			State enter- prises	Cooperatives	Private farms
Milk (mill. of litres)	1984-1988	15554	2150	343	13160
	1985	15955	2143	252	13557
	1989	15926	2197	228	13499
	1990	15371	2011	204	13154
	1991	14201	.	.	.
Yield of milk per cow (litres)	1984-1988	2976	3665	3394	2881
	1985	2897	3567	3303	2808
	1989	3260	4021	3813	3156
	1990	3151	4035	3739	3042
	1991	3102	.	.	.
Eggs (millions)	1984-1988	8266	862	853	6511
	1985	8636	829	804	6976
	1989	8032	838	862	6307
	1990	7597	826	855	5884
	1991	6483	.	.	.
Yield of eggs per laying hen	1984-1988	149	204	218	139
	1985	146	192	214	137
	1989	156	207	217	145
	1990	157	208	227	145
	1991	157	.	.	.
Wool (tons)	1984-1988	16769	4946	1068	10656
	1985	17143	5118	1099	10822
	1989	15944	4880	924	10070
	1990	14783	4454	760	9511
	1991	.	.	.	.
Yield of Wool per sheep (kilogrammes)	1984-1988	3.6	3.9	3.5	3.5
	1985	3.6	4.1	3.5	3.5
	1989	3.7	3.8	3.5	3.7
	1990	3.6	3.7	3.3	3.7
	1991	3.5	.	.	.

Source: As in table 13.

Table 16 - Supply of Selected Livestock Products by Distribution Channels in Poland, 1989-1992 (Total supply = 100)<sup>a</sup>

Specification	Year	Official procurements	Free market	Farm households
Cattle for slaughter	1989	65	17	18
	1990	53	30	17
	1991 <sup>b</sup>	44	40	16
	1992 <sup>b</sup>	39	45	16
Pigs for slaughter	1989	66	19	15
	1990	51	33	16
	1991 <sup>b</sup>	44	43	13
	1992 <sup>b</sup>	40	47	13
other animals for slaughter	1989	84	13	3
	1990	68	29	3
	1991 <sup>b</sup>	53	44	3
	1992 <sup>b</sup>	38	58	4

<sup>a</sup> In post-slaughter weight.  
<sup>b</sup> Forecast.

Source: As in table 13 and Gonelak [1992].

Table 17 - Gross Production of Agriculture, Food Industry and Total Industry, 1986-1991 (constant prices, respective previous year = 100)

Specification	1986	1987	1988	1989	1990	1991
Agriculture	105.0	97.7	101.2	101.5	97.8	98.0
Food Industry	103.7	101.3	102.0	94.1	76.3	100.9
Industry total	104.4	103.4	105.3	99.5	75.8	88.3

Source: As in table 11.

Polish farmers responded to the new circumstances by increasingly selling more of their agricultural produce on free market rather than selling it to state agencies (see Table 16). However, self-sufficiency is still of great importance, and not only in the case of private farmers.

## 2. Food Processing Industry

Gross production in the Polish food industry expanded faster during the 1950 to 1988 period. Since 1988 food industry is no longer leading. Although the supply of agricultural goods increased in 1988 and 1989 the economic activity of the food industry slowed

down. In 1989, and especially in 1990, the slump of production in the food processing industry was comparable with the slump of production in the total industry (Table 17). While the production in the food processing industry was reduced by 23.7 % in 1989 and 1990, agricultural production dropped just by 2.2 percent. It can be assumed that the recession in the food industry has negatively affected agriculture. In 1991, the situation turned to the better, when production in the food processing industry expanded by more than 25 percent. The monopolistic position of many an enterprise of the food processing industry is still being used and, hence, producer prices of agricultural goods are depressed. According to Urban [1992], the share of prices of agricultural goods in the final prices of foods systematically declined after 1988. However, in contrast to what one would expect in a market economy the value added of the food processing industry did not increase. Quite simply, the enterprises of the monopolistic food processing industry responded to the new circumstances by depressing the prices of inputs, increasing prices of output and through reducing production.

Table 18 - Employment, Investment and Production in the Food Processing Industry, 1989-1991 (resp. previous year = 100)

Specification	1989	1990	1991
Employment	.	97.5	101.8
Investments (constant prices)	.	90.4	104.1
Production (constant prices)	94.1	76.3	100.9

Source: As in table 11.

Employment and investment in the food processing industry slumped in 1990, but less than production. In 1991, the food processing industry resumed the previous level of investment, employment and production. However, the recovery of economic activities of the food processing industry was less pronounced than the overall economic recovery in Poland. To be sure, differences in performance indicators between separate branches of the food industry can be identified (Table 19).

Table 19 - Structure of the Food Processing Industry by Employment and Production 1985-1991 (Total Food Processing Industry = 100)

Specification	Employment				Commercial Production			
	1985	1989	1990	1991	1985	1989	1990	1991
Meat processing	18.9	18.3	19.2		25.1	20.7	21.9	
Dairy processing	4.0	5.7	5.1		3.7	3.9	4.0	
Fish processing	4.7	7.0	6.4		1.6	3.3	4.1	
Milk processing	15.3	20.0	20.2		12.0	14.0	11.4	
Grain milling	6.2	6.2	6.2		4.2	4.9	5.7	
Baking	12.5	2.2	2.7		4.3	0.9	1.3	
Sugar beet processing	6.0	7.9	7.8		4.6	9.3	8.6	
Spirits industry	1.7	2.0	2.0		20.9	18.0	16.9	
Potatoe processing	1.2	1.6	1.5		0.9	1.4	1.0	
Fruit and vegetables processing	7.6	8.2	8.4		3.2	4.9	3.7	
Wine industry	1.9	1.3	1.4		2.3	1.6	1.2	
Breweries	2.6	3.6	3.6		3.1	3.9	4.6	
Oil processing	1.1	1.4	1.4		1.8	1.8	2.3	
Confectionaries	5.6	6.9	6.3		3.3	4.8	4.3	
Food concentrates	1.1	1.5	1.5		1.0	1.2	1.4	
Mineral water	3.3	0.1	0.1		1.2	0.1	0.1	
Tobacco processing	2.0	2.6	2.6		4.6	3.8	5.7	
Cooling and cold storage	2.0	1.8	1.8		1.1	0.6	0.8	
Other branches	2.3	1.7	1.8		1.1	0.9	1.0	
Total food processing industry	100.0	100.0	100.0		100.0	100.0	100.0	

Source: GUS [1991 and earlier issues].

Some branches of the food processing industry seem to have benefited from the deregulation, e.g. dairy processing, fish processing, mills, sugar industry, breweries, confectionaries expanded their share of employment and production. In contrast to these branches mineral water industry, baking industry, wine industry, spirits industry and meat processing had to cope with a decline in production and employment. The different performance of the various branches of the food processing industry can partly be explained by the shift in the structure of demand caused by the recession and the change of relative prices.

#### IV. Foreign Trade in Polish Agricultural Goods and Foods

##### 1. Involvement of Agriculture and Food Processing Industry in Foreign Trade

Until the end of the 1980's, international economic exchange played a minor role in the framework of the command system. To increase the openness of the country or its international competitiveness was no major task of central-planners. The right to export and to import was attributed to a state monopoly, which had to operate according to the central plan, given stable and mostly overvalued exchange rate etc. Given chronic shortages of goods, the international exchange of products was treated as a residual and simultaneously as a buffer bridging the gap between the actual level and structure of production and the level and structure of the actual demand of consumers. Goods were imported in order to reduce the internal shortages of goods. On the other hand, goods were exported in order to earn foreign currencies which were indispensable to the financing of imports. As a rule, exports were confined to those few goods where production exceeded consumption or priorities of the central planners were not jeopardised. Agricultural goods and products of the food processing industry were traded in accordance with these principles of the central planners. The share of imports of agricultural goods and foods in overall imports amounted to approximately 12 percent and the share of exports of these products in total exports to 10 percent in 1985 (Table 20).

A major objective of the economic program of January 1990 was to integrate the Polish economy into the world economy (through liberalization of foreign trade and introduction of the so-called internal convertibility of the national currency), and by that to link domestic prices more closely to the world market prices. This in turn, was expected to lead to a radical change of the role of imports and exports; international trade should shape the economy, stimulate growth, drive structural change, and - with imports pruning input costs - increase efficiency, and simultaneously hold monopolistic behaviour and practices of big companies in check. Also trade in agricultural products and foods was expected to contribute to growth and higher productivity.

The objectives of the program were set high. From the very beginning difficulties in implementing the programme and accomplishing the objective were unavoidable especially in the case of agriculture which was fully integrated in the liberalisation program.

Table 20 - Share of Agricultural Products and Foods in Total Trade, 1985-1991 (percent)

Specification	1985	1988	1989	1990	1991
	I M P O R T S				
Agricultural products	4.6	5.5	4.6	2.2	3.1
Foods	6.9	9.3	9.1	7.6	10.4
Together	11.5	14.8	13.7	9.8	13.5
	E X P O R T S				
Agricultural products	3.2	3.5	4.1	6.0	6.5
Foods	6.6	8.4	9.6	10.0	9.9
Together	9.8	11.9	13.7	16.0	16.4

Source: GUS [1991 and previous issues]; Informacje [1992, p. 23] and HZ [1992 and previous issues]; own calculations.

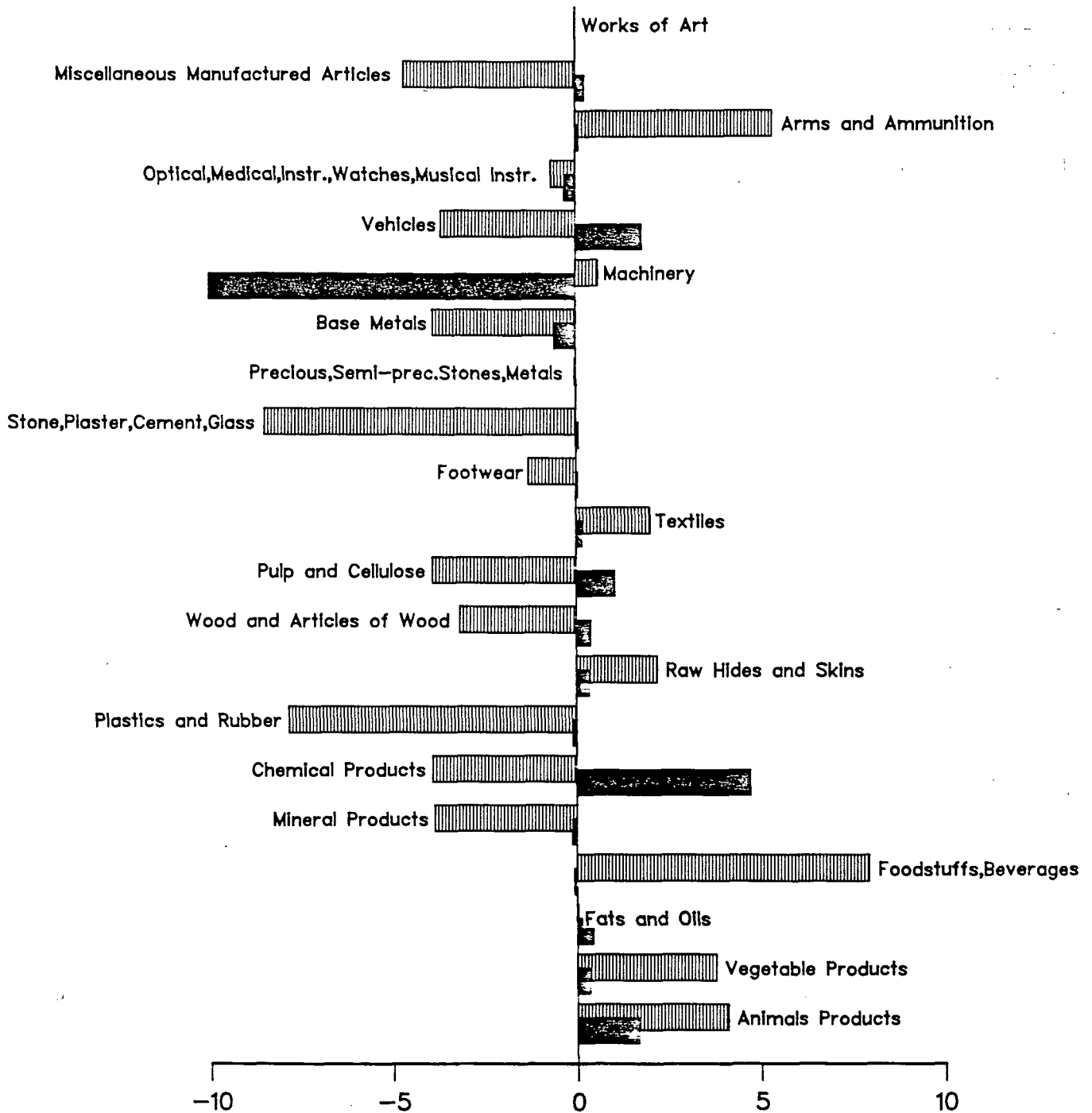
However, in order to prevent excessive domestic price increases after the strong devaluation of the national currency on the first day of January 1990 (from 6500 zlotys per 1 US dollar to 9500 zlotys per 1 US dollar), the government imposed some quantitative restrictions on exports of agricultural products such as meat, live animals, vegetable fats etc. These restrictions were declared only as short-living. However, trade interventions were strengthened during 1991. The government, faced with growing opposition of farmers to the influx of foreign foods (including foreign food aid), increased tariffs on import of agricultural products and foods twice from the rather low levels (of 0-20% before the end of April, 1991) to levels which are comparable to those applied by the European Communities (EC). These measures were officially advocated by pointing to the determination of the government to join the EC in the near future. The rise in import tariffs on agricultural pro-

ducts and foods dwarfed the rise in import tariffs on non-agricultural products (see Graph 1) and most probably raised the effective rate of protection in agriculture. There can be no doubt that this will have a detrimental effect on the adjustment of relative price and on the development of trade in the medium and long run.

From the data in table 22, the conclusion can be drawn that it was mainly the strong increase of private imports of vegetable crops, meat and vegetable products which induced the deterioration of the balance of trade in agricultural products and foods. On the other hand, the growing private exports of vegetable crops (mainly of raw and processed fruit and vegetables) are fully in line with the expectations of an expansion of agricultural exports. Anyway, as was outlined elsewhere [Report 1990, p. 94], there are good reasons to assume that "agricultural products are more competitive under free market conditions than processed products", at least in the short and medium term. In the Report [1990, p. 96] it is demanded that "in order to understand the evolution in trade and for future trade of Poland domestic supply and demand conditions need to be considered, in particular the functioning of the upstream and downstream sectors".

Poland's trade balance in real terms responded according to the governmental expectations only in 1990. Imports dwindled, and exports soared. Internal factors, such as interest rates, which changed from negative to positive, thus, increasing costs of stockholding and a decrease of food consumption due to the sharp fall in real income of households may have contributed to the change in the balance of trade. In 1991, the balance of (real) imports and exports of the Polish economy as a whole as well as of the food processing industry deteriorated. Exports fell below their levels in 1990 while imports were higher than in 1990. Agricultural exports, in sharp contrast, still grew in 1991. However, agricultural imports more than doubled in 1991 on 1990. The share of agricultural commodities in total imports increased in 1991 even though customs tariff rates laid on agricultural products were raised stronger than on the average (see graph 2).

# Comparative Changes<sup>1</sup> in Polands Customs Tariff Rates and in Importshares<sup>2</sup> by the Sections of the CN 1991 to 1990



<sup>1</sup> Calculated according to the formula :  
 $\Delta t_i - \Sigma \Delta t_i$  where:  $\Delta t_i$  = Change of tariff rate  
*i* = Section

<sup>2</sup> Calculated according to the formula :  
 $\frac{M_i, 1991}{\Sigma M_i, 1991} - \frac{M_i, 1990}{\Sigma M_i, 1990}$

▨ Tariff Rates

■ Importshares



Table 21 - Agrifood Trade and Total Trade (in constant prices), 1990 and 1991 (previous year = 100)

Specification	Imports		Exports	
	1990	1991	1990	1991
Agricultural trade	34.6	239.5	163.1	125.6
Trade of food stuffs	64.1	207.7	118.7	97.1
Total trade	82.1	137.8	113.7	97.6

Source: GUS [1991, Informacje [1992, p. 23].

During 1990 and 1991 the participation of the private sector in foreign trade increased drastically and, strikingly, the participation of private agents in trade in agricultural products and foods increased even more than on the average of the economy.

In Poland, central planners intended to import cereals and feed and agricultural inputs like fertilizers or pesticides) and to export foods. The food processing industry was treated as one of the most important suppliers of foreign (hard and soft) currencies.

Table 22 - Dynamics and Structure of Foreign Trade at Current Prices by Types of Ownership in 1990 and 1991 (percent)

Specification	Change in 1991 (1990=100)				Share in total trade 1991				Share of the private sector in total trade of Poland			
	Imports		Exports		Imports		Exports		Imports		Exports	
	A	B	A	B	A	B	A	B	1990	1991	1990	1991
Global trade	535.3	106.0	451.7	95.2	100.0	100.0	100.0	100.0	14.3	46.1	4.8	19.6
Meat products	599.8	131.0	484.8	82.2	4.1	1.8	8.2	4.6	28.8	65.0	6.8	30.2
Vegetable products	555.6	104.9	303.9	93.4	9.3	5.5	5.7	4.3	20.9	58.3	9.8	24.4
Vegetable crops	1039.0	90.0	710.2	100.9	1.6	0.7	3.9	2.3	13.3	63.9	5.6	29.6
Garden crops	526.3	95.0	218.2	53.9	0.6	0.4	4.7	0.1	58.4	88.6	67.8	89.5
Husbandry products	420.7	47.4	344.4	34.3	0.2	0.01	11.8	0.7	14.2	59.6	29.5	80.8
Forestry products	.	66.6	101.2	108.4	0.0	0.02	0.6	0.4	2.8	39.3	3.2	23.9

A - private sector defined as private persons, private companies, joint ventures with foreign capital and foundations  
 B - public sector defined as foreign trade companies (centres of foreign trade in the command system)

Source: Dziewulski [1992, p. 7].

## 2. Commodity Pattern in Trade of Agricultural Products and Foods

After 1989, as private agents became more and more involved in foreign trade, so the commodity pattern of Poland's trade changed substantially. On the one hand, the share of imports of tropical products (citrus fruit, coffee etc.) as well of confectionary, dairy products and fish products in total imports increased, and on the other hand, the share of exports of potatoes, raw meal, spirits and poultry increased in total exports. These changes in the product mix of imports and exports occurred mainly in trade with EC member countries which became the most important partners of Poland in recent years. In 1991, 64 percent of agricultural and food imports originated from the EC (compared with 40.9 percent in 1989) and 65.2 percent of agricultural and foods exports were designated for the EC (compared with 60.9 percent in 1989).

## 3. Balance of Trade in Agricultural Products and Foods

The balance of trade in agricultural products and foods was a major concern of central planners. Yet, also the democratic governments of Poland attribute great attention to this trade balance. High indebtedness and, thus, a low lending capacity deserves that the country does not run a trade deficit.

The balance of trade in agricultural products and foodstuffs and in many other products as well was usually negative until the mid of the 1980's. In order to overcome the problems of a negative balance of payments, the so-called strategy of self-sufficiency of the agrifood complex was formulated and introduced after 1986 [Gorzalak, 1991]. Its enforcement seems to have brought a late success. The Polish balance of trade in agricultural products and foods is positive since 1989. Yet, the export/import ratio decreased from 236.0 % in 1990 to 115.4 % in 1991.

Table 23 - Commodity Pattern of Poland's Trade in Agricultural Products and Foods, 1985-1991 (current prices, percent)

Specification	1985	1989	1990	1991
	I M P O R T S			
Agricultural products	100.0	100.0	100.0	100.0
of which:				
Cereals	55.1	41.5	12.0	
Tropical products and beverages	5.2	11.7	25.0	
Livestock products	12.0	13.5	14.3	
Others	27.7	33.3	48.7	
Processed food	100.0	100.0	100.0	100.0
of which:				
Meat industry products	18.3	19.0	11.4	
Bruised grain and oilcakes	21.8	26.4	13.0	
Oils and fats	11.2	8.3	6.2	
Others	48.7	46.3	69.4	
	E X P O R T S			
Agricultural products	100.0	100.0	100.0	100.0
of which:				
Crops	43.1	53.1	50.3	
Livestock	37.4	38.9	44.2	
of which:				
Cattle	10.1	23.6	29.2	
Horses	0.9	-	1.0	
Horses for slaughter	12.8	4.6	7.2	
Others	19.5	8.0	5.5	
Processed food	100.0	100.0	100.0	100.0
Meat, fresh, frozen, chilled	24.0	21.3	21.9	
Bacon	7.5	9.7	10.3	
Ham	0.5	0.3	0.2	
Preserved meat	11.4	7.1	5.8	
Milk products	2.5	2.0	2.5	
Poultry	6.1	7.8	6.6	
Eggs	3.9	5.7	4.6	
Processed Fish	0.0	0.3	0.1	
Confectionary and Spirits	13.4	12.6	15.0	
Preserved fruit and vegetables	13.6	14.9	18.6	
Others	18.6	15.9	13.6	
	24.3	27.5	24.3	

Source: Rolnictwo [1992, pp. 313-317].

The marked reduction of the trade surplus could be interpreted as a return to the normal. Yet, the overall trade balance deteriorated even stronger. Agriculture and the food processing industry of Poland might have suffered from macroeconomic imbalances. If the economy is stabilised, will agriculture and the food processing industry be an international competitive activity in Poland?

Table 24 - Export/Import Ratios in Poland's Trade in Agricultural Products and Foods, 1985-1991 (current prices, percent)

Specification	1985	1988	1989	1990	1991
1. Agricultural products	74.4	79.2	111.8	447.3	127.4
2. Processed foods	101.2	107.6	138.4	198.1	90.1
3. Together (1+2)	88.1	97.3	131.9	236.0	115.4

Source: See Table 23.

V. Economic Outlook for Agriculture and Food Processing Industry in Poland

Against the expectations of some reformers at the beginning of the reforms it turned out that the transformation of agriculture did not bring about a fast rise of its production and employment. However, if the development of the agricultural sector during the years 1990 to 1992 is compared with the development of the manufacturing industry in Poland results of reforms in agriculture appear reasonably successful.

Although weather conditions were rather unfavourable in 1992 - the draught in 1992 caused production to fall by about 9-11 percent [FTAI, 1992] -, and the sectoral terms of trade of agriculture deteriorated significantly, agriculture did not reduce employment. To be sure, agricultural income declined and investment was reduced but, again, in comparison with other sectors agriculture could cope with the challenges of stabilisation, external and internal liberalisation and privatisation. Adjustment pressure will remain in the years to come. As long as the overall economy does not recover and per capita income remain low consumption of agricultural goods will stay at its currently depressed level. The structure of the revealed preferences of household will mirror the depressed income level of Polish households. Thus, assessing the prospect of agriculture from the demand side of the internal market agricultural production is not expected to expand in 1993 or 1994 [Was, 1992]. The prospects for agriculture and the food processing industry are brightening up, if the time horizon is extended, let say for 8 to 15 years and the supply side as well as international competitiveness of agriculture and food-processing (relative to other tradeables) is taken into consideration.

Firstly, it is likely that the process of privatisation will continue in agriculture and in the food processing industry and will be finalised by the year 2000. This process will result in higher productivity and production. Secondly, an improvement in the agricultural terms of trade can be expected. Terms of trade are likely to rise c.p. due to demonopolisation and privatisation of forward

and backward industries. Thirdly, with progressing macroeconomic stabilisation price expectations of investors and producers are becoming more certain and real interest rates will fall, thus, permitting investments to be less costly and risky.

With reference to the three sectors hypothesis which is a centre piece of the theory of economic growth it was maintained elsewhere [Dicke, 1992], that the share of agricultural employment in total employment in Poland [and other Central and Eastern European countries alike] could shift upwards. The basic assumption underlying this assessment is that the per capita income in Poland valued at current exchange rates or at purchasing power parities revealed in markets is markedly below estimates made in the pre-reform area and will remain below its past (miscalculated) high level for some years to come. If one takes the per capita income estimated for Poland in the 80ies (at overvalued parities) and puts it into equations which one obtains from international cross-sectional analyses the share of agriculture in the total labour force fits well into the normal pattern. However, the theoretical values for the share of agricultural employment in total employment are well above the actual values, if they are calculated on the basis of per capita incomes at 1990 commercial exchange rates; these income figures are well below per capita income at conversion factors which were calculated by western researchers in the pre-reform area. Then one obtains employment shares which are well above the observed shares [Dicke, 1992]. This means that the present sectoral structure of employment in the Polish economy is heavily distorted to the disadvantage of agriculture. The cause of these deteriorations can be attributed to the central planners preference for the industrial, respectively military-industrial complex, and public services. Under market conditions and given the poor endowment with capital, supply factors are in favour of agriculture since it can be operated in a labour intensive way and has most probably a competitive edge on the national labour market compared to the mining or manufacturing sector.

The economic recovery of Poland's economy will come sooner or later and the factors normally shaping the structural change in market economies will be at work which means decreasing shares of agricultural GDP in total GDP etc. However, as to the speed of this direction of structural change any forecast must be highly vague since the basic for a forecast is sketchy. Hughes and Hare [1992] are arguing, that the specific post-socialist structures seem to be very rigid [highly inelastic] to market signals. Quick structural changes require not only inter-sectoral but also inter-regional shifts of labour which meet with some impediments as shortages of flats, and appropriate infrastructure, and lack of autonomy of regions in the fields of economic policy, taxation and public financing.

Table 25 - Structure of Employment in Poland, West Germany and 32 Comparator Countries<sup>a</sup> in 1989 [percentage points and thousands of employees]

	Structure of Employment			Deviations of the Structure in Poland in percentage points		Thousands of employees to be set free in Poland adjusting to the structure		% of employees to be shifted in total employment by sectors	
	Poland	Germany (West)	32 Comparator countries	From the structure of Germany	From the structure of 32 countries	West Germany	of the 32 comparator countries	when W-Germany's structure is assumed	when the structure of 32 is assumed
Agriculture and forestry	27.9	3.9	5.5	-23.4	-22.4	-4008.2	-3836.9	85.8	82.1
Mining	3.4	0.7	.	-2.7	x	-462.5	x	79.7	x
Industry	28.6	31.4	22.1	2.8	-6.5	479.6	-1113.4	9.8	22.7
Gas, Water and Electricity	2.5	1.0	0.8	-1.5	-1.7	-256.9	-291.2	59.4	67.4
Building	7.7	6.5	6.8	-1.2	-0.9	-205.5	-154.2	15.6	11.7
Services	30.5	56.6	63.3	26.0	32.8	4453.5	5618.3	76.6	96.6
Total	100.0	100.0	100.0	0	0	0	0	x	x

<sup>a</sup>The List of the Countries is specified in: Bode, Krieger-Boden [1990].

Source: Bode, Krieger-Boden [1990]; GUS [1990]; own calculations.

A boost of unemployment to hitherto unknown levels - by now already 13 percent of the labour force is registered unemployed - will strengthen political opposition against the transformation. On the other hand, with wage level falling agricultures's and food processing industry's competitiveness to bid for labour will be strengthened.

In the longer run, a shift of labour from agriculture and food processing to other sectors, especially to services can be taken for granted. However, it would be unreasonable to assume that such a shift is likely to occur in the short or medium term.

The endowment with capital per workers is rather low in Poland compared with West European countries. Therefore, the price of capital [interest rate] is compared to the price of labour (wages) higher in Poland than in West Europe. The price of land [the so-called land rent] related to the price of capital or labour is low, also, in comparison with the landrent in West Europe.

When the Polish economy begins to grow the capital intensity increases as soon as wages increase relative to the interest rates and substitution of labour for capital will ensue. As stated earlier, the take-off of Poland's economy has still to be waited for. Hence, for the capital/labour ratio or the capital/land ratio to rise some years have to pass. The catching up process requires substantial domestic saving and investments. Investments will overwhelmingly be of the capital widening type. Investments deepening the capital/labour/land ratio will hardly occur until 2000. Secondly, Poland is a country which is heavily indebted vis a vis foreign countries and has, therefore, a restricted capacity for importing capital. Thirdly, due to many reasons specified more precisely elsewhere [Glisman, Schrader, 1991; Misala, 1992], Poland is quite unattractive for foreign investors and, hence, foreign direct investment or import of private financial capital will be probably not substantial in the years to come. The Polish authorities will probably be forced to follow a policy of undervaluation of the national currency in order to yield a surplus in the trade



balance. This will mean an undervaluation also of factors of production such as land and (immobile) labour, especially unskilled labour. All these factors will benefit agriculture and food processing. Therefore, a substantial growth of Polish agriculture and - consequently - of the Polish food processing industry in the medium term is most probably. However, in the long run the changes in relative prices of factors of production and in patterns of demand will favour the non-agricultural segments of Poland's national economy and agricultural growth will slow down and employment shrinks again [Dicke, 1992].<sup>1</sup>

The high potential for medium-term growth has its roots in the comparative cost advantages of agriculture and of some branches of the food processing industry. Exports expansion and import substitution seem to be of crucial importance in the short and medium term. Whereas other parts of the tradeable sector - with the exception of labour intensive manufacturing industries - will be characterised by import expansion and low export activities. As shown in more detail elsewhere [Misala, 1992 b], there are some natural resources and natural resources'-intensive products with a high export potential at current prices but their relative prices will be undoubtedly increase after deregulation. To be sure, there is a potential for a successful competition in the field of Poland's human capital-intensive and technology-intensive products but it will take a lot of time until Poland catches up visibly in technology, quality of products etc. It cannot be expected that Poland's scientists and researchers can compete with their western colleagues on equal terms.

From an economic point of view, Poland's economy, particular, agri-

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<sup>1</sup> According to Grochowski [1990, p. 23] "the employment in the Polish agriculture can decrease in the next 20-25 years by about 1,2 - 1,6 millions of people. However, this shift should not lead to the depopulation and to the aging of peasants because there would be a danger of the demographic decline and of the emergence of socially and economically depressed regions".

culture and food processing should be open to national and international competition. The openness would ensure flexibility and responsiveness to market signals, and the exploitation of Poland's comparative advantages. However, as it seems advocates of openness do not find the support in the public or in the leading political circles which is necessary to bring about further steps towards external liberalisation. On the contrary, as the theory of political-economics tells us, co-operation of politicians, bureaucrats and the agricultural lobby will take place leading to a rise of protection. Guaranteed minimum prices for milk, rye and wheat were already introduced. Justification for these protective measures was being lent from the Common Agricultural Policy of the European Communities which Poland would like to join in the not so far future. Poland could even go a step further and completely overtake the agricultural market regime of the Common Agricultural Policy [CAP], including variable levies. Such a policy would bring about not only a lot of consequences for the development of Poland's agriculture and food processing industry but also for the rest of the economy which would suffer considerably.

According to the forecasts prepared in Poland at the end of 1980's an annual rate of growth of Poland's agriculture in the next 10-20 years could range between 7,8 % and 2,5 % [Grochowski, 1990]. If the transformation, including privatisation, progresses and the agricultural policy changes according to the announcements of the government, these estimates seem rather pessimistic. A protectionist agricultural policy could result in an increase of investments and production. Growth rates of production could be considerably higher in the next 10 years than those which were estimated by Grochowski in 1990 (1,8 to 2,5 percent per year).

The recent experience of the Polish food processing industry shows that acceleration of growth is possible if transformation and privatization progresses. It is plausible to assume that this sector of the Poland's economy will grow faster than the agricultural sector. As Niemczyk [1991, p. 108] puts it "in the conditions of market economy - the food industry will be interested in the

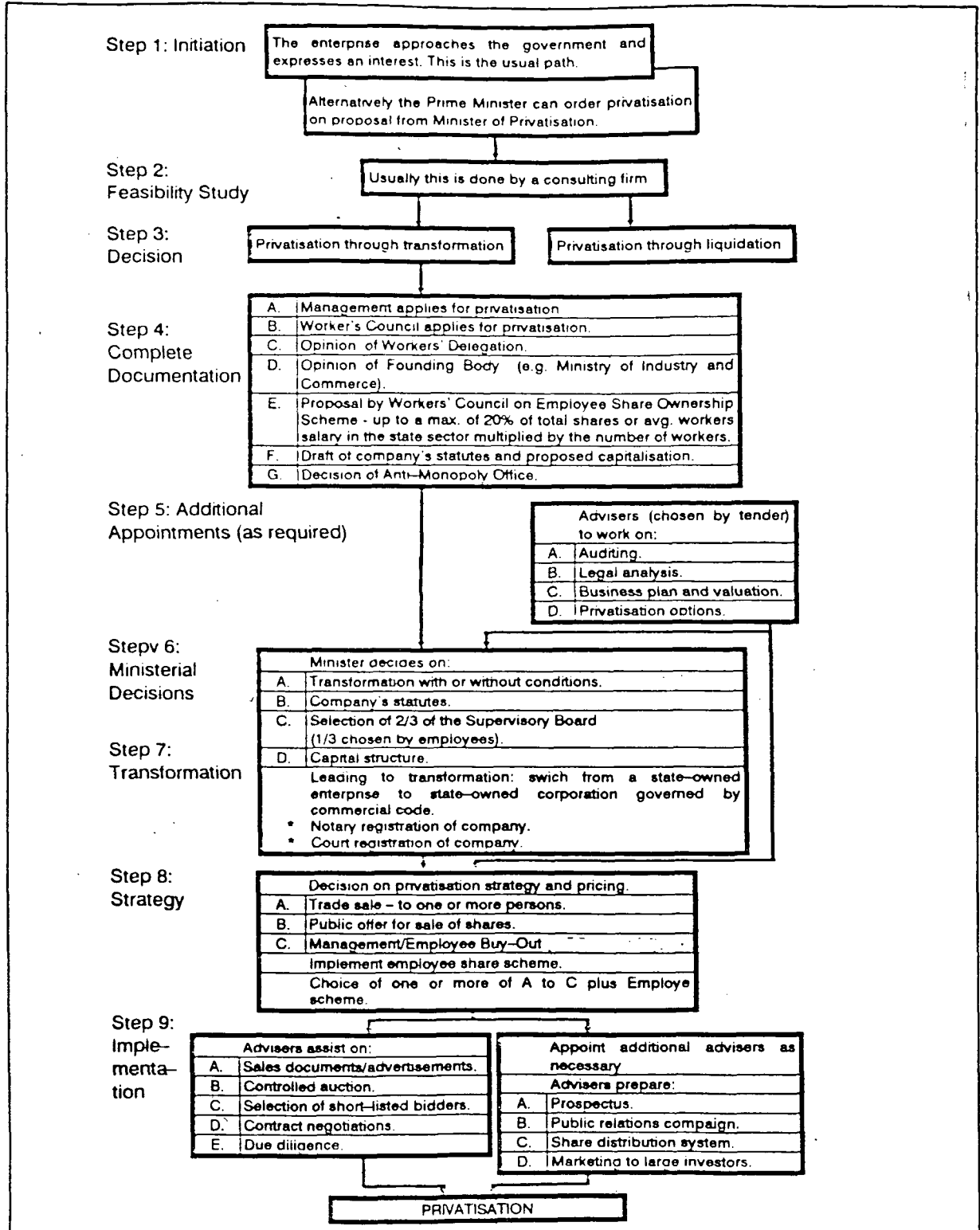
creation of the resource-base supplying enough products and of satisfactory quality. There will be interest to improve the technology of production. It is therefore to expect a better supplying of the farmers with more modern domestic and foreign means of production, as well as with the development and better equipment of magazines [including refrigerators and refrigerating plants], of purchasing centres and of transport infrastructure".

It is projected that the domestic demand for agricultural goods and foods will increase by a rate of 0,5 % to 1,3 % per year in the 1990's with a declining tendency due to a relatively low income elasticity of demand for foods, which will decline with rising income level. With the expected increase of GDP consumption of more processed and more expensive food items will increase, while demand for unprocessed agricultural products will decline [Report, 1990; Kwiecinski, Leopold, 1991].

Mainly due to the low level of income and due to the consumption habits formed in the past demand for primary products and for products with high cholesterol content is high in present Poland. However, with the rise of per capita income and with the progress of education and of technology in nutrition the situation will gradually change. Another factor modifying the structure of consumption is the probably decline of relative prices [including prices of products with high content of animal proteins]. Despite the expected rise of domestic consumption the export potential of Poland for agricultural goods and processed foods seems to be substantial. To exploit this potential Poland needs first and foremost a free access to the foreign markets.

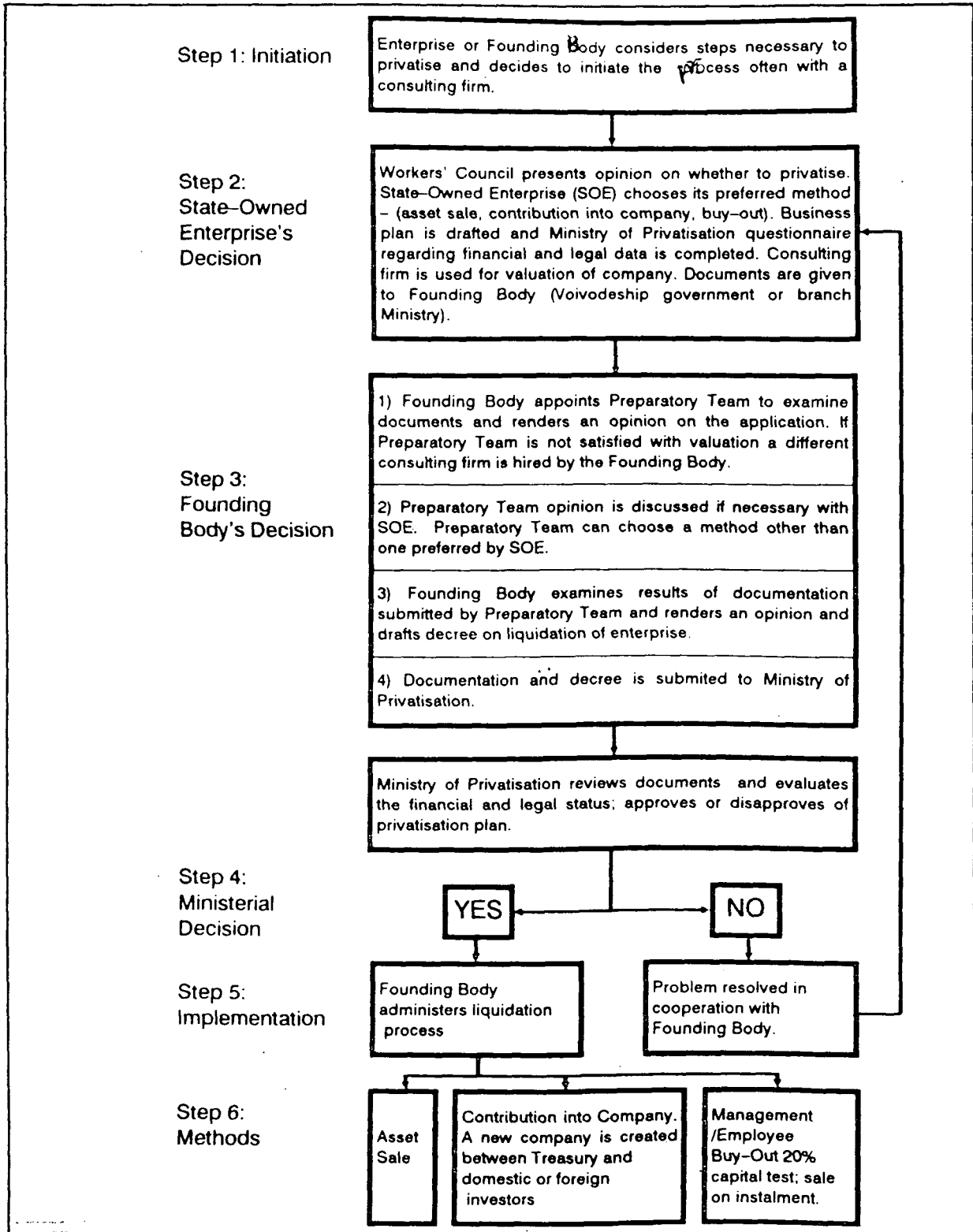
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Figure 1 - Privatisation Through Capitalisation (Transformation)



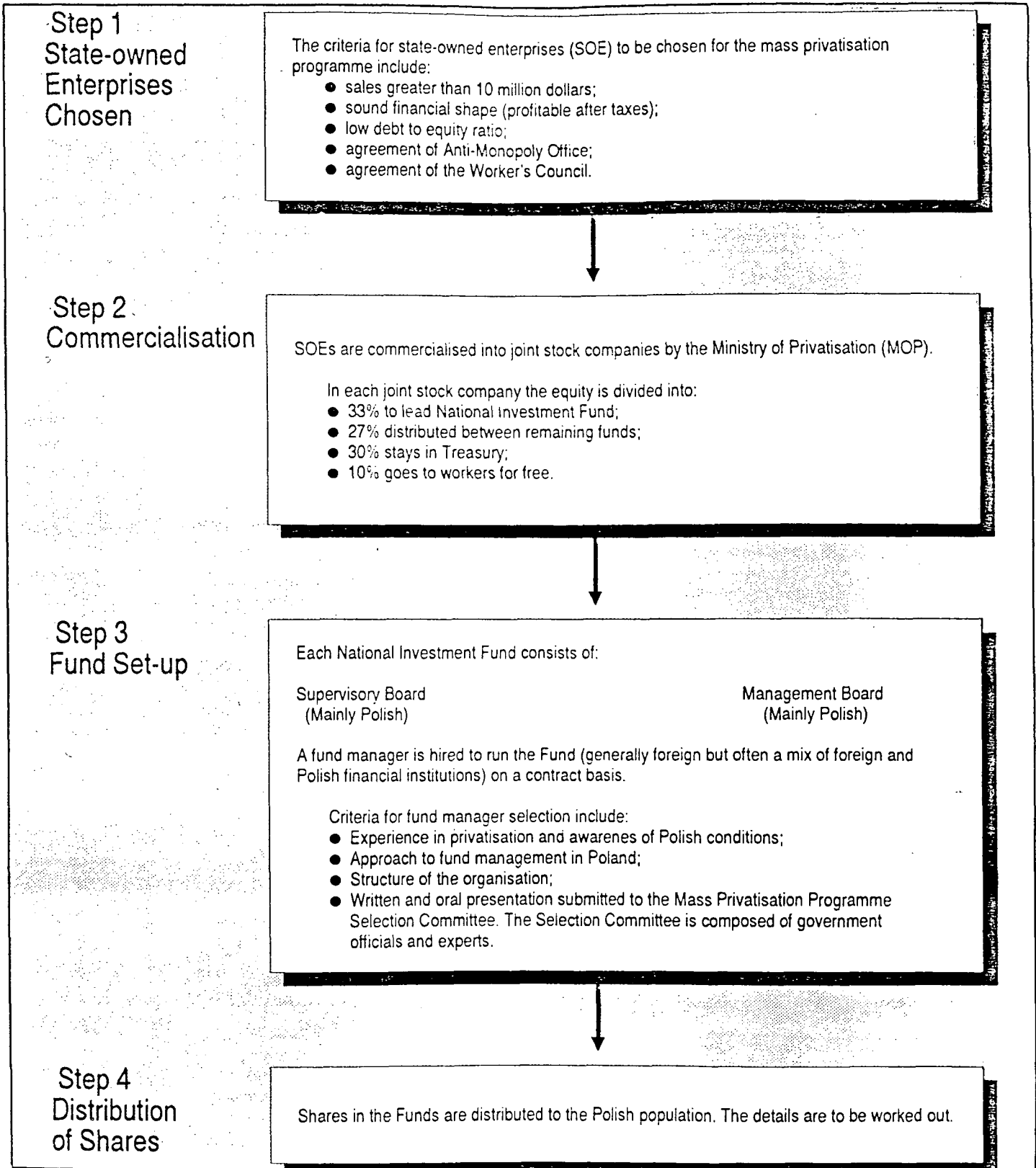
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Figure 2 - Privatisation Through Liquidation



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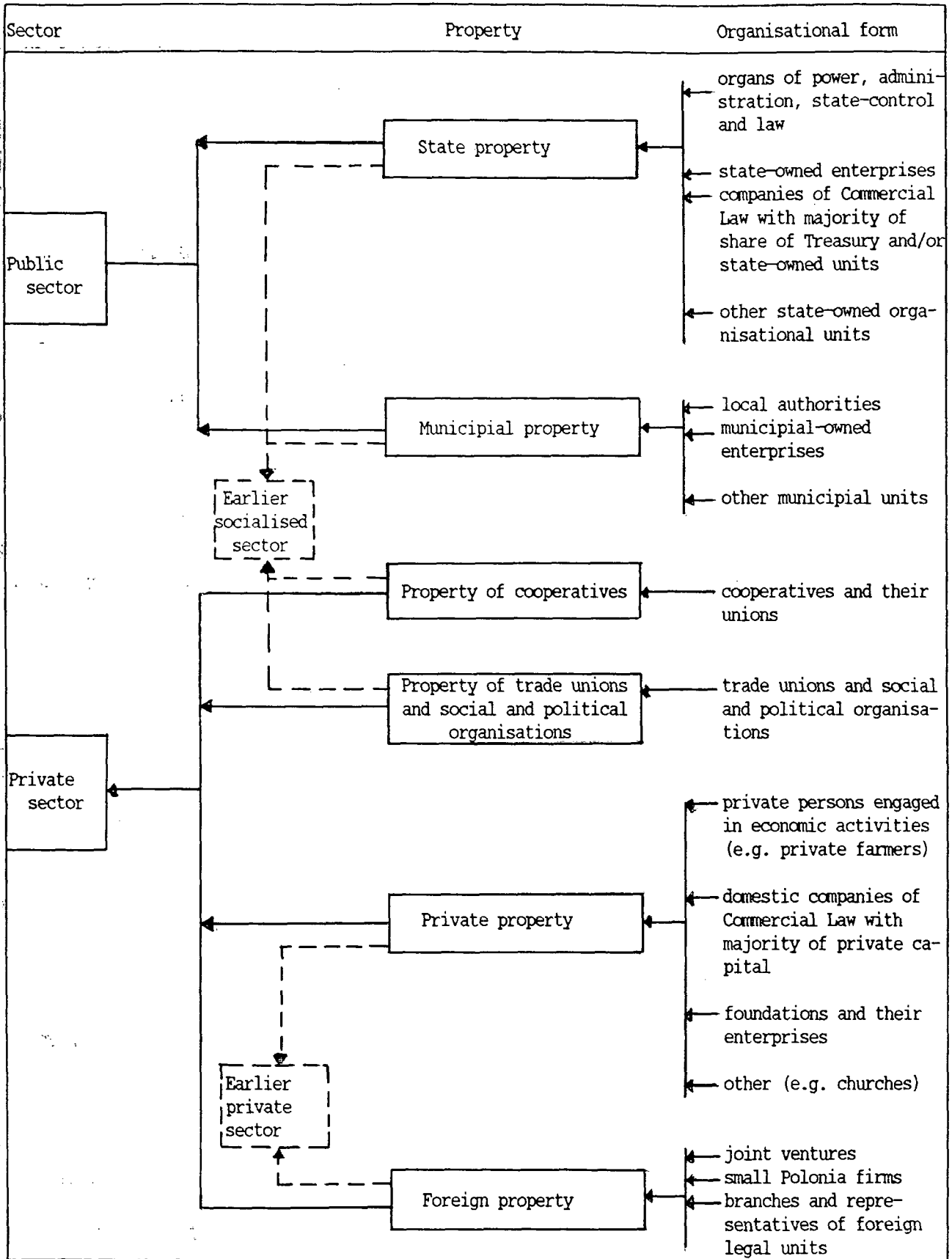
Figure 3 - The Structure of the Mass Privatisation Program



Source: Centre for Privatisation, Information Booklet, 1992.

Annex

Figure 4 - The new Organisation of the Polish Economy and of Data Collection in the Country



Source: GUS [1991; p. XIII].

## Annex

Table 1 - Quantity of the Issued Shares by the Main Polish Companies from the Agro-business Privatised Until 30.04.1992

No.	Name of the Company	Subjects possessing the shares	Quantity of the issued shares	Shares sold in 1991	Balance at the beginning of 1992	Shares sold in 1992	Shares to be sold
1.	ZYWIEC Joint-stock company	Public offer	1 540 000	1 540 000			
		Workers	240 000	240 000			
		Managers	200 000		200 000	200 000	
		Other	20 000		20 000		20 000
		TOTAL	2 000 000	1 780 000	220 000	200 000	20 000
2.	WEDEL Joint-stock company	Public offer	640 000	640 000			
		Workers	640 000		640 000	640 000	
		Treasury	640 000		640 000		640 000
		Active investors	1 280 000		1 280 000		
		TOTAL	3 200 000	1 920 000	1 280 000	640 000	640 000
3.	ALIMA Joint-stock company	Workers	326 170		326 170		326 170
		Farmers	340 000				
		Treasury	13 830		13 830		13 830
		Active investors	1 020 000		1 020 000		
		TOTAL	1 700 000		1 700 000	1 020 000	340 000
4.	OKOCIM Joint-stock company	Public offer	1 763 000			1 763 000	
		Workers	380 500		380 500	380 500	
		Farmers	5 500		5 500		5 500
		Managers	84 000		84 000		84 000
		Treasury	560 000		560 000		560 000
		Other	7 000		7 000		7 000
		TOTAL	2 800 000		1 763 000	380 500	656 500
5.	KOSZALIN BREWERY Joint-stock company	Public offer	66 700	66 700			
		Workers	46 000	46 000			
		Farmers	2 300		2 300		2 300
		Managers	46 000	46 000			
		Active investors	69 000		69 000	69 000	
		TOTAL	230 000	158 700	71 300	69 000	2 300

Source: Dynamika Prywatyzacji [1992, pp. 42-43].



## A n n e x

Table 2 - Value of Incomes from the Issued Shares and Costs of the Privatisation Process of the Main Joint Stock Companies Privatised in Poland Until 30.04.1992 (millions of zlotys at the end of April, 1992)

No.	Name of the Company	Incomes	Liabilities	Cost covered by the State budget
1.	ZYWIEC	154 886	11 114	6 504
2.	WEDEL	359 857	8 401	9 305
3.	ALIMA	33 170	92 648	-
4.	OKOCIM	125 116	35 776	2 760
5.	KOSZALIN	16 386	965	261

Source: Dynamika Prywatyzacji [1992, pp. 44-45].

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