



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

Polish Agriculture:  
Organisational Structure and Impacts  
of Transition.

Jarka Chloupkova

# **Polish agriculture: Organisational structure and impacts of transition**

By:  
Jarka Chloupkova

The Royal Veterinary and Agricultural University  
Department of Economics and Natural Resources\*

## **Abstract**

Agriculture represents an important political and economic issue in the stage of the EU enlargement. This is especially true for Poland, since it has the largest agricultural sector. The paper outlines the changes of agricultural policies and their impacts on the organisational structure. Further, it examines how the credit, land and tax policies, as well as exports, rural development and social measures and the existence of cooperatives affect the sector's performance.

The article concludes that despite positive changes achieved in Polish agriculture, there are still problems, which can act as an obstacle for EU membership. Most of current problems stem from the lack of reforms to change the unviable small-scale farming structure that is responsible for depressed competition. Furthermore, due to the special treatment of private farmers, there is an overabundance of labour, especially of part-time farmers. This is the reason why results of the overall performance of the sector are low.

Unless structural change is taking place, and well-tailored agricultural policies are in place, Polish agricultural sector will continue to suffer from its depressed competitiveness. Attempts at agricultural reform must be addressed from a broad socio-economic perspective and must include structural transformation with prospects of alternative employment.

---

\* *The author would like to thank Prof. Niels Kærgård, Karsten Kyed and participants of the Øresund seminar, March 20<sup>th</sup>, 2002 for valuable comments on earlier versions of the paper.*

## 1. Introduction

The forthcoming enlargement of the European Union (EU) poses a range of questions for both sides - the Central and Eastern European countries (CEEC) as well as the EU. Agriculture is deemed to be one of the pivotal issues in this process. In this regard a large discussion is taking place; some sources praise, while others criticise the agricultural situation in CEEC.

Although some features are common to all the applicant countries, each of their agricultural sectors is unique by its size, importance, structure, etc. On one hand, there is the Czech Republic, with its relatively small contribution to the total GDP and employment. On the other hand Poland is the largest and most populous of CEEC, its population is estimated at 38.8 millions (European Parliament; 1995). The total agricultural area of Poland is 18.3 mil. ha and thus represents 58.5% of the Poland's total area (European Commission; 2001). The agricultural area of Poland is about 31% from the total CEEC-10 or 14% from the EU. Agriculture plays an important role in Polish economy, after all, the name Poland is derived from "polians" that means the dwellers on the field. Thus, Poland with its sheer size of agriculture and unfavourable structure is often a subject of long discussions, especially these with relation to the EU enlargement.<sup>1</sup> This is why the Czech agricultural sector cannot stand as a representative CEEC example, nor can Poland.

Furthermore, Poland, due to its historical heritage of an abundance of small and highly fragmented private farms, has a considerably different agricultural structure than many CEEC, including the Czech Republic. In order to illustrate the diversity of their agricultural sectors, this paper aims to "put more light" on the complexity of agricultural problems in Poland, which is, together with the Czech Republic, Hungary, Slovenia, Estonia and Cyprus, considered as the frontrunner for EU accession.<sup>2</sup>

In order to thoroughly examine the agriculture sector in Poland, this paper is structured as follows. After description of the agricultural sector under the communist regime, agricultural policies during the transition process and the effects of transitions are described. In order to improve the efficiency of Polish agricultural sector, many advocates (i.e. FAO; 1994) promote the idea of cooperation. This is why a separate section deals with agricultural cooperatives in Poland. Similarly, sections on credit, land and tax-related policies not only sketch their main objectives, but also list why in some instances the act counterproductively in respect to the restructuring of the agricultural sector. Since the rural areas affect a considerable part of the Polish population, an attention is given to the issue of rural development and social measures, especially in the light of regional and structural policies. Chapter on export is chosen as to demonstrate how the Polish agricultural sector got hit when its export

---

<sup>1</sup> Other problematic agricultural sectors are in Romania and Bulgaria, but none of these countries are classified as EU front-runner. Hungary has relatively large agricultural sector, but in a better shape than the one in Poland.

<sup>2</sup> The share of agriculture to the total GDP is 5.1% and the proportion of agricultural employment 26% for Poland. These figures are 3.0% and 5.5% for the Czech Republic, 23.3% and 22.0% for Bulgaria, 5.2% and 7.5% for Hungary, 18.8% and 40.0% for Romania and 4.4% and 8.2% for Slovakia, respectively (European Commission; 1998).

decreased. The paper is then summarised in a section of concluding remarks on Polish agriculture.

## **2. Agriculture under the communist regime**

As already mentioned, Poland has been an exception among the CEEC, as most of its farmland has always been privately owned and occupied and private farming in Poland resisted the communist attempts of collectivisation. This is the most distinctive characteristic of Polish agriculture.<sup>3</sup> Hence the privatisation within the agricultural sector was only a minor problem of the agricultural restructuring in Poland. In fact, the agricultural sector was the only sector in the communist Poland that was private.

Despite the maintenance of the element of private ownership and thus real business incentives, due to the diseconomies of scale of large number of small private farms negatively affected the efficiency. During the communist period private farms employed about 80% of total farm labour and produced over 3/4 of total agricultural production, implying that about 10% of the total population were active in private agricultural sector, which considering the communist regime in place was a political paradox.<sup>4</sup>

In addition, there was another drawback imposed on private farmers during the communist time – they were in advance obliged to sign contracts specifying the volumes of produce they would sell to the state and accept the prices set by the state. This in fact meant that although they were considered as private farmers, they were not allowed to exploit the properties of a free-market.

In the pre-reform period, the main agricultural policy objective was the maximisation of agricultural production. The focus was at achieving domestic food self-sufficiency and food security. A further objective for the soft-currency economy was the increase of exports in order to earn hard currency.<sup>5</sup> As in the Czech Republic, parity between farm and non-farm incomes became one of the most important policy goals in Poland (Chloupkova; 2002). To achieve the above stated goals, the communist government employed price fixing and state purchasing as a policy tool. Three levels of price fixing were put in place: agricultural input prices; agricultural producer prices (the state procurement prices); and the retail prices for food were set by the state.

The system of farm-gate price supports, input subsidies, the absence of land rents, and artificially low consumer prices for food led to large discrepancies between retail prices and costs of production. Similar to the situation in the communist Czech Republic, this contradictory policy goals aiming at securing relatively high incomes for farmers and low consumer prices resulted in substantial subsidisation (Ibid; 2002). Nevertheless, unlike the Czech Republic, subsidised consumer prices encouraged demand and, despite production subsidies, shortages on both the input and output sides were a common feature of the Polish communist economy. Such shortages on basic food markets resulted in a non-market food rationing system based on coupons.

---

<sup>3</sup> Slovenia is another example where private farms existed throughout the communist period.

<sup>4</sup> These figures vary between 9.0% in year 1992 and 10.4% in year 1986 (calculations are based on data from Polish Central Statistical Office).

<sup>5</sup> In soft-currency economy the government sets the exchange rate irrespective to any economic fundamentals.

This system aimed at securing coupon-holders with certain amount of food products to be sold at state-fixed prices. This system operated in Poland during 1976-89, covering a varying number of food products (OECD; 1995). Food shortages created a privileged situation for farmers, who not only had easy access to scarce food products, but also were able to sell their products to the state at secured prices for unlimited quantities, regardless of the quality. Only products considered by the state as less essential, like fruits, vegetables and eggs were excluded from this centralised system of distribution and price setting. However, maximum retail prices were occasionally fixed or obligations to sell the products within the limits of certain regions were imposed.

**Table No. 1: The pre-transition structure of Polish agriculture (1988)**

	Area harvested		Labour resources		Average farm size	Value of assets
	(000) ha	%	Units (000)	%	ha	%
Private farms	14,295	76.3	3,735	81.8	6.3	73.9
State owned farms	3,521	19.7	501	11.0	3,490	21.2
Collective farms	701	3.7	186	4.1	324	4.7
Agricultural circles	59	0.3	142	3.1	n/a	0.2
Total agriculture	18,742	100	4,566	100	-	100

Source: GUS Statistical Office (1989)

### 3. Agricultural policies and the transition process

Since 1990, the main objective of the government's medium-term structural policy has been to improve farm structures. To facilitate this process and encourage the development of a private land market, the government has implemented new laws, regulations and financial instruments. As a result, the maximum area and operating restrictions for private firms have been eliminated, restrictions on buying or leasing farmland have been lifted, the duration of leasing contracts has been extended to 30 years, and retiring farmers are now permitted to let their land (OECD; 1995). The land tax system has also been modified.

New forms of ownership, such as various types of companies and foreign equity, were another outcome of the transformation process. The 1996 agricultural census showed a significant differentiation of farm acreage, according to ownership forms :

**Table No. 2: The post-transformation structure of Polish agriculture**

	Number of farms	Area harvested %	Average farm size (ha)
Private family farms	2,041,380	82.2	7
Farming cooperatives	2,467	2.9	203
Foreign capital property	100	0.4	729
Mixed capital property	36	0.3	1,249
State-owned farms, including farms owned by the State Treasury	1,953	7.2	636

Source: Data from the General Agricultural Census (1996)

Despite the considerable positive growth in Poland's overall economy, agriculture has grown more slowly (in oral communication with: Plewa; 15 September 2000).<sup>6</sup> Agricultural output has varied considerably since 1989, growing as much as 7-8% in some years, but failing by equal amounts in others. On average, agricultural gross output is still below the average of the 1980's. It is the slow progress of agricultural consolidation of Poland's small, fragmented private farms, together with the meagre capital resources, among others, which has stunted the overall productivity growth.

In 2000, agriculture generated 3.3% of Poland's GDP (The Economist; 2001). The importance of Polish agriculture as a contributor to GDP is declining. Data for 1999 shows that this contribution was equal to 3.8% and in 1988 the figure was 13.1% (Deutsche Bank; 2001 & The Economist; 2001). This decline seems to be a result of strong overall economic growth, as well as a declining farm output. As the agricultural sector in Poland employs 26% of the labour force, the relation between the number of people employed in agriculture and the GDP contribution by the agricultural sector documents the low productivity of agriculture.

As an indicative example of the depressed productivity can be cereal yields, which at the end of the 1990s reached only 52 to 54% of those in the EU-15 and the milk yield was equivalent to only 61-63% of the EU level. For a comparison, the yields for the Czech Republic are 78% for cereals and 90% for milk of the EU average. In addition, the yields achieved by private farms usually lack behind the Polish national average.<sup>7</sup> The improvement in production conditions and thus yields, for example through modern agricultural engineering and quality standards, could be expected as a result of accession to the EU (Deutsche Bank; 2001)

Despite large proportion of agricultural employment, part-time farming was and still is a characteristic feature of the private agricultural sector in Poland. According to the pre-transition census (1988), only about 25% of them were full-time farmers, 40% had dominant source of incomes from agriculture and around 35% farms had the majority of their incomes coming from non-agricultural activities, pensions or social subsidies.

---

<sup>6</sup> Jerzy Plewa is the under-secretary of state at the Ministry of Agriculture and Rural Development in Warsaw.

<sup>7</sup> The average yield of wheat in Poland is 3.5 t/ha, but only 3.3 t/ha in case of private farms (GUS; 2001). In comparison, the average wheat yields in Denmark is 7.0 t/ha and 4.2 t/ha in the Czech Republic (CSU; 2001). This can be partly explained by the low use of chemicals. The use of NPK fertilisers dropped by 1/3 since the transition (Ministry of Agriculture and Rural Development; 2001).

The high proportion of part-time farmers and the small size of Polish farms raise the question: “What can be considered a farm”? The most common definition of farm is derived from the law on agricultural taxes. This law states that a farm is a unit, which has a combined area of agricultural land that exceeds one ha. Based on these criteria, the results of the last General Agricultural Census (1996) found that there are currently 2,041,000 farms in Poland<sup>8</sup>. Today, the production of more than half of all family farms (i.e. over 1 million farms) is for own consumption, meaning that marketable production accounts for only 57% of the total agricultural output.

Polish sources say that small-scale farming in Poland resisted the communist efforts to wipe it out and replace it with collective farming. A new capitalist system is in place now and various Polish sources claim that “attempts to do the same, to destroy the subsistence family farmers”, and install large automated farming operations instead.<sup>9</sup> SAEPR/FAPA (2000) argues that the overabundance of farmers and the fact that about half of them are only part-time farmers could be viewed as a “manifestation of the multi-functionality of the Polish farms”. There seems to be a window of opportunity of transferring part-time farmers out of agriculture. This process should not be a major obstacle, as part-time farmers are already partly engaged in other sectors of the economy.

Beside the substantial number of farmers active in the Polish agriculture, another indicator of ineffective agriculture is a million horses that are still employed for haulage. For the “cash-poor” Polish farmers this is a source of power that uses only biomass for fuel, produces manure, and draws light machinery which maintains the physical properties of the soil and is not damaging to the soil structure (Nowicki; 1999). This illustrates the fact that agricultural investment incentives in many CEEC are held back by the lack of available credit sources, and thus investment in improvements cannot take place.

### **Box No. 1: Agricultural production in Poland**

*The most important crop in Poland is wheat, followed by rye and rapeseed. The principal livestock product is pork, which accounts for 70% of the 3 million tonnes of meat produced each year (ERS; 2000). Other important commodities include potatoes, vegetables and fruits, poultry and eggs, milk, cattle and sugar beets. Poland exports rapeseed, live cattle, processed meat, fruits, and vegetables and imports mainly grains, meat, protein meal, and cotton (ERS; 2000).*

---

<sup>8</sup> As SAEPR/FAPA (2000) points out, any disputes whether this figure is accurate or not are irrelevant, since negotiations between Poland and the EU in the field of statistics have been concluded, which should mean that the quality of the Polish statistical system is approved by the EU as satisfactory.

<sup>9</sup> The Polish Voice (2001) states “we are now in an analogous situation to that in Mexico many years ago, where the rich United States eliminated Mexican agriculture”.



#### 4. Effects of transition

Despite the underlying efforts of various measures, some land remains under the management or administration contracts from the government. The main reason for this is the lack of capital, the depressed situation in the agricultural sector, and the territorial location of state land resources, as it is not profitable to buy this land relative to other investment opportunities.

In other words, the intention of the broad range of measures was to move Polish agriculture in the direction of free-market economy. That is why the early years of Poland's transition were characterised by unregulated prices and low border protection. Around the year 1992, acting upon the depressed incomes, farmers successfully lobbied for increased protection from international competition. The government responded to the lobbyists' efforts with the introduction of guaranteed minimum prices for wheat, rye, and dairy products and an increase in border tariffs for agricultural products to an average of about 20% (ERS; 2000). Although Poland grants an extensive array of credit subsidies, direct subsidies for input purchases are nearly non-existent.

Ministry of Agriculture and Rural Development (2001) claims that EU agriculture has an advantage over the Polish agriculture due to the CAP support and protection. It is further argued that the Polish farmer bears the entire production risk, whereas the EU farmer does not. Based on these arguments, the Polish government in 1998 issued programme supporting agriculture and rural development. The support given through the programme is relatively high, reaching 12% of total government expenditure: 75% of this spending is for farmers' pensions; the remaining is for agricultural support policies, including price support (wheat, rye, milk and sugar). For comparison, the Czech government assigns 2% of its spending to the agricultural sector (European Commission; 2001). The support related data show that, unlike the Czech Republic, the relative support of Polish agriculture has increased in the post-transition years. OECD (2001) estimates that the PSE has increased from 12% (pre-reform) to 20% (year 2000).<sup>10</sup> Similarly, the corresponding CSE has increased from -3% (pre-reform) to -17% (year 2000) (OECD; 2001).

Unlike the Czech Republic, which has small agricultural sector and where the support to agriculture decreased, the Polish government seems to treat its agricultural sector with increased support. Truscynski (2002) confirms that: "agricultural lobby is strong in Poland".<sup>11</sup> Special treatment of Polish agriculture is rooted in the political interest linked to its large size. Since many farmers are concerned about affairs in the countryside, the democratic process becomes lopsided to suit their needs. The recent elections of 19 October 2001, resulted in a coalition government led by Prime

---

<sup>10</sup> *Producer Support Estimate (PSE) is an indicator of the annual monetary value of gross transfers from consumers and taxpayers to support agricultural producers. The percentage PSE is the ratio of the PSE to the value of total gross farm receipts, measured by the total production (at farm gate prices), plus budgetary support. The nomenclature and definitions of this indicator replaced the former Producer Subsidy Equivalent in 1999 (OECD; 2001, p. 272)*

<sup>11</sup> *Question asked to Jan Truscynski, Under-secretary of State, Ministry of Foreign Affairs of Poland, and Polish chief negotiator for EU accession, at "Poland's Membership in the European Union" round table meeting organized by the Danish Institute for Foreign Affairs (DUPI) on 25 March 2002.*

Minister Leszek Miller from the Democratic Left Alliance (SDL), which is the main party represented in the Polish government and the direct successor of the Communist party. The coalition is further composed of the Polish Peasants' Party (PSL), a left-of-centre grouping representing farming communities and the Union of Labour (UP), a centre right social movement.

Another piece of evidence, supporting the above-stated, is that whereas production and employment have shifted rapidly from the secondary to the tertiary sector, agriculture (as a primary sector) has remained more resistant to structural change, giving Poland a distinctive employment pattern in which agriculture retains the immense social and political importance. The data presented by The Economist (2001) show that ultimo 1999, 27.4% of the workforce was engaged in agriculture (including forestry and fishing), compared with only 22.1% in industry.

Unless Poland starts to treat its agricultural sector as any other sector of the economy (which would lead to structural changes), the unsustainable structural situation of the agricultural sector might become a real obstacle for Polish accession to the EU. Not promoting any structural changes in the Polish agricultural sector can be seen as a reflection that Poland expects considerable EU funding in the years ahead to help to restructure the agricultural sector and invest in rural infrastructure. This policy creates a classical moral hazard problem: Poland postpones a restructuring of the agricultural sector based on the expectation that the EU will pay for it once Poland is accepted as a member of the EU. However, the postponement creates economic problems, which may in themselves postpone the Polish accession, as well as the accession of other front-runners for EU membership. In any scenario, before or after the EU accession, a dramatic decline in agricultural employment is inevitable.

## **5. Cooperatives**

Historical evidence shows that cooperation has been one of the crucial means by which farmers can enhance their performance (Chloupkova & Svendsen; 2002). Cooperation in general terms determines the extent to which economies of scale and scope are exploited and the degree to which complementarities are recognised, exploited and utilised (Harris; 1998). A cooperative is then defined as a group of people who join together in a common undertaking, in accord with the six principles that: (i) membership is open and voluntary, (ii) there is democratic control, usually on the basis of one man, one vote, (iii) interest on share capital is limited, (iv) there is equitable distribution of any surplus, (v) cooperatives devote some part of their surpluses to education, and (vi) cooperatives cooperate among themselves (ICA; 1999).

The roots of the market type cooperative movement in Poland can be traced back to 19<sup>th</sup> century. From an evolutionary point of view, a dynamic development of cooperatives took place from 1918 to 1939. A turning point in the evolution of cooperatives occurred in 1945 when even the real cooperatives were subject to the communist regime's control and new type of government controlled agricultural entity called as "cooperatives" emerged. Thus, the terminology "cooperative" in the context of post-communist countries can be misleading. These communist "cooperatives" were in fact collective farms and since they did not obey the principles set by ICA, it is disputable whether they were real cooperatives. Although it was

politically advocated that collective farms were “joining resources and sharing benefits”, this pseudo-cooperation was artificially enforced.

Unlike in most other CEEC, these agricultural production cooperative farms that were created on the order of the communist government never enveloped a great portion of Polish agricultural land. There were 2,086 agricultural production cooperatives were in 1988 farming 2.8% of arable land and had 177,000 members and 2,700 employees (c.f. Table 3) and they carried out the orders of the central authorities. Their productivity was to some extent comparable to that of state farms, although usually slightly higher, as a few aspects of private ownership were maintained. The communist government treated these cooperative farms (together with state farms) favourably; they assumed a monopolistic/monopsonistic role in the provision of inputs, purchase and processing of agricultural products, deposit and credit activities in rural areas, provision of marketing and other services, as well as housing. The communist government regarded the cooperative form of property as inferior to state ownership, and the eventual replacement of private property with state ownership was an official goal of the regime. The communist regime also violated the abiding principles of cooperatives in a number of ways, such as the imperative of meeting central-planning objectives that in essence effectively eliminated the right of cooperatives to make their own decisions.

Beside this production functions, collective farms also had a social function; they played a major role in training and education, in organising events in local communities, in creating new jobs, and rehabilitation of the disabled. Similarly to other CEEC, as cooperative farms grew in size, members were losing their feeling of responsibility and more less adopted a wage - worker mentality in their relationship to the enterprise and its property.

Besides these production oriented cooperatives, there were four distinct types of “cooperatives” in the communist period. The objective of these cooperatives was somehow closer to the principles of real cooperatives as set by ICA. Nevertheless, as mentioned above, the private decision making of their members could not be exercised freely under the communist regime. Nonetheless, the supportive/marketing functions of these cooperatives were useful for farmers even in the communist period.

**Table No. 3: Polish rural Cooperative movement (31.12.1988)**

Type	Number	Members	Employees	Significance
Supply & marketing	1,912	3,531,500	434,570	59% of marketing of agricultural products
Dairy	323	1,199,400	112,793	95% of milk processed
Horticultural market	140	372,600	55,519	50% of fruit and vegetable
Agricultural production Cooperatives	2,086	177,000	2,700	2.8% of arable land
Savings & credit	1,663	2,566,100	31,290	18.5% of population's savings
Agricultural circles	2,006	113,200	154,447	Important share in mechanisation service
<i>Total</i>	<i>8,130</i>	<i>7,959,800</i>	<i>791,319</i>	

Source: ICA; 1993

For private farmers, there was the “Peasant self-aid Cooperatives” (in Polish: *Samopomoc Chlopska*), which has its roots in 1948 when a number of agricultural and marketing cooperatives in rural areas merged. In 1988, there were 1,912 “Peasant

self-aid cooperatives”, with 3.5 million members, employing 434,000 people. The main objectives of these cooperatives was to: (i) supply private farms with agricultural inputs, (ii) to market agricultural products from private farms, (iii) to process some agricultural products for mainly local needs, and (iv) to supply the rural population with consumer commodities. Such marketing cooperatives had a dominant position in purchasing the majority of agricultural products from private farms, and also performed other services, such as running catering businesses (OECD; 1995).

The second type of cooperative was known as “Agricultural circles”. Its objectives were similar to the “Peasant Self-Aid Supply and Marketing Cooperatives”, with one distinguishing feature – they functioned as “Machinery Pools”, and thus were also known by this name. The additional service they offered to private farms included activities such as ploughing, chemicals applications, transportation, construction of buildings and the repair of agricultural machinery (OECD; 1995). In 1988 there were about 2,000 agricultural circles. Usually one agricultural circle served farmers in one *gmina*<sup>12</sup>. Depending whether the *gmina* was located in a rural area or not, there were usually 10-200 farmers per circle (in oral communication with: Idczak; 2001)<sup>13</sup>.

Since 1989, agricultural circles went gradually in liquidation, as farmers were losing confidence in their cooperatives (National Council of Cooperatives; 2002). Nowadays, each farmer owns a tractor, even though, it might not be efficient considering the small plot of land they usually own.<sup>14</sup> This leads to machinery over-investment, although the machinery equipment used is usually old, technically outdated and inefficient. The reluctance of cooperation is rooted in the fact that farmers do not trust each other. Considering the small and fragmented structure of private farms in Poland, purchases of common machinery would be justified as an efficient mean of cooperation.

---

<sup>12</sup> *Gmina* is a unit of local government administration. Since the administrative reform in 1973-75, Polish territory is organised in 49 wivodship and about 2,400 gminas. About 2,121 gminas are in rural areas (OECD; 1995, p. 28). The *gmina* (commune) is a basic unit of the territorial division of the country, usually consisting of ten to twenty villages and a small town serving as a centre.

<sup>13</sup> J. Idczak is assistant professor of Agricultural Economics at the University of Poznan, Poland.

<sup>14</sup> Although available data do not mention anything about the technical status of the machinery used in Poland, it can be documented that the number of tractors in Poland has increased since the transition, and the agricultural land area per tractor has decreased from 15 ha (beginning of 1990s) to 14 ha (1999). This figure is even lower for private farms, where one tractor serves only 12 ha (GUS; 2001).

**Table No. 4: Current importance of agricultural cooperatives**

Year	Number of agricultural cooperatives		Market share (%)		Number of members		Employees	
	1999	2000	1999	2000	1999	2000	1999	2000
Farm supply coops	1,730	1,691	34	32	250,000	240,000	130,000	125,000
Dairy coops	285	240	75	75	655,000	630,000	44,000	43,000
Horticulture coops	150	143	10	8	100,000	90,000	5,000	4,000
Production coops	1,200	1,100	3	3	57,000	55,000	52,000	50,000
Farm machinery coops	1,250	1,125	3	2.5	250,000	200,000	21,000	20,000

Source: Polish National Council of Cooperatives; 2002

Another form of cooperatives in Polish agriculture was “Dairy Cooperatives”. Their main role was to organise the supply of dairy products to the urban market. On similar principles were based “Horticulture Cooperatives” – they provided inputs, purchased raw produce and handled processing and marketing of horticultural commodities. “Cooperative banks” was a specific type of cooperative that supplied farmers with credit. In the pre-transformation period, Poland had approximately 1,600 cooperative banks, which provided savings and credit services for agricultural and household use (FAO; 1994).

As the Polish National Council of Cooperatives (2001; p.4) points out, until 1990 the duty of marketing of agricultural production from private farms, food processing, etc. belonged to the farmers’ cooperatives. After the beginning of the system transformation in 1989 the impact of these cooperatives has dropped and so did the interest of being their member. While in 1988 agricultural cooperatives had membership base of 4,424,000, in the year 2000, it was 2,671,000. Thus, during the communist regime, the average Polish farmer was member in 0.56 cooperatives, while recently it is in 0.45 cooperatives (calculations are based data available from European Commission; 2001, Polish National Council of Cooperatives; 2001, and ICA; 1993). The reluctance of the recent cooperation between farmers can be explained by the legacy of low social capital inherited from the communist regime (Paldam & Svendsen; 2001).<sup>15</sup>

From the EU perspective, there is scope for renewed inter-cooperative solidarity in the search for new markets abroad, although Polish sources are more pessimistic in this respect. The pessimism from the Polish side can be explained by the bad experiences and low trust/cooperation in the recent years; i.e. a lack of social capital. Thus data presented by Chloupkova and Svendsen (2002) show that the average Dane is a member of twelve times more voluntary organisations than the average Pole.

<sup>15</sup> *Social capital (W)* is usually defined as “features of social organisations, such as trust, norms and networks, that can improve the efficiency of society by facilitating co-ordinated actions” (Putnam, 1993, p. 167).

Similarly, data show that Poland has only about one-third to one-fourth of social capital that is present in Denmark.<sup>16</sup> If the social capital can be rebuilt, which is a long-term task, the cooperation can be strengthened and perhaps the Poland's potential for organic products export to the EU can be exploited. The countries of FSU were mentioned as another market for Poland basic agricultural produce and this is the market where Poland has already experiences.

In this regard, SAEPR/FAPA (2000) argues that the relatively weak development of producer organisations is rooted in the fact that the development of producers' groups and organisations requires a longer time in which farmers are exposed to the appropriate market stimuli. A market economy has been functioning for a relatively short period in Poland. The second reason given by SAEPR/FAPA is the fact that the advanced development of such organisations in the EU results from the functioning of the common market and from financial incentives for agricultural producers who organise themselves within the framework of the CAP.

## **6. Credit policy**

During the communist time, the banking system was fully state-controlled and credit distribution was determined by state central plans, rather than by any monetary policy. In general, interest rates remained unchanged and below the inflation rate. The supply of credit was fixed by the state in annual credit plans. This practice meant that the pattern of effective credit allocation was distorted, and that demand for credit exceeded the artificially fixed level of supply.

Furthermore, credit for agriculture was treated as a special case. Credit for agriculture and the food industry was channelled through the state/cooperative owned *Bank for Food Economy (BGZ)* that served as the central union for the cooperative banks and, as in other banks, granted loans in accordance with the annual credit plans. BGZ also channelled state credit subsidies, recorded the value of farm output sold to the state and cooperatives (for purpose of calculating farmer's pension) and served as agents for land sales. The negative margin between interest rates on deposits and preferential loans rates was covered by a subsidy from the government. State and cooperative farms had a privileged access to the preferential credit system. Every year they received credit to finance annual production operations amounting, on average, to nearly a half of their production cost (OECD; 1995). About half of their investment costs was also financed by direct state subsidies. On proportional bases, the access to preferential credit was much lower for private farmers than for state and cooperative farms.

In early 1989, the banking system in Poland was reformed, in order to making it more compatible with the market economy system. In particular, sectoral credit ceilings were eliminated, and all banks were allowed to operate in all sectors. Interest rate policy became gradually liberalised. Due to the restrictive monetary and fiscal policies accompanying the reform, many farmers became highly indebted, and

---

<sup>16</sup> These data were drawn from the World Development Indicators 2001 database, available at [www.worldbank.org](http://www.worldbank.org). The scale of trust in institutions is from one to four where one implies full trust. Putnam's Instrument is the number of voluntary organizations that an individual participates in.

sometimes forced into bankruptcy. Crediting the non-profitable agriculture would be an irrational behaviour of banks (Chloupkova; 1996). In particular, farmers became confronted with strongly increasing input prices, whereas producer prices didn't increase proportionally; the phenomenon of price-cost scissors. Their situation is aggravated by the fact that they lack capital for new machinery and other operating assets (Chloupkova & Bjørnskov; 2002). The access to credit became difficult, as enterprises became often highly indebted and the high interest rates made investment risky.

As a response to this situation the post-communist government introduced the policy of preferential credit in order to reschedule debts, for land purchase, land improvement, and the purchase of various inputs. The interest rate paid by farmers on the short-term preferential credits was usually fixed as a fraction of the refinance rate<sup>17</sup>. For example in 1993, the preferential rate was 70% of the 35% refinance rate, i.e. when the market interest rate was 40%, farmers paid only 24.5%, subject to the condition of repaying the short-term loans within the same year (OECD; 1995). Banks channelling the preferential credits earned a margin of 4.2% (Ibid; 1995). Despite this margin, banks considered farmers as high-risk clients and the guarantees they asked for have been sufficiently onerous to discourage farmers from requesting preferential credit, despite the low level of preferential interest rates. Logistically, the preferential credit was channelled through the *Agricultural Restructuring and the Debt Rescheduling Fund (FRiOR)*. In the second half of 1993 the FRiOR was suspended because of the irregularities in its administration.

That is why the competence of channelling preferential credit was shifted to the *Agency for Restructuring and Modernisation of Agriculture (ARMA)*, in Polish *Agencja Restrukturyzacji i Modernizacji Rolnictwa (AriMR)*. ARMA started its operation in 1994. For the entities that ARMA considers as creditworthy, and have sound modernisation plans, a loan warranty fund is established. These entities, despite having solid plans, are normally unable to obtain loans due to a lack of available security, as most banks refuse to accept land and buildings as loan collateral (in oral communication with: Sobocinski; September 2000).<sup>18</sup> Preferential credit is distributed at fixed interest rate. ARMA ensures that government policy guidelines are respected, in particular that the limited preferential credit available is used for farm restructuring and modernisation investments, and not other purposes. ARMA also covers the difference between the market and preferential interest rates.

Idczak (2001) notes that the currently available credit programmes enable farmers to borrow for up to 15 years. The preferential credit for investment purposes is jointly-funded; the bank lends 70% of the necessary financial resources, and the remaining 30% has to be matched by the farmer's own resources. In special cases, this ratio can be skewed in the benefit of farmers to 80% and 20%. Some categories of farmers, i.e. young farmers, pay only 4% interest rate, while the interest rate charged by commercial banks are about 24% and interest rates on saving accounts are 11-12% (Ibid; 2001).

---

<sup>17</sup> Refinance rate is charged by the National Bank of Poland to commercial banks

<sup>18</sup> Jerzy Antoni Sobocinski is director of ARMA, Mazowiecki region.

Although the objective of the preferential credit programme is to assist farmers in debt rescheduling, land purchases or land improvement, and the purchase of inputs, it is debatable whether this generous support is rational. Direct input-related subsidies have in fact been replaced by short-term credit subsidies, which are more difficult to monitor, and thus perhaps not been used in the most efficient way. Preferential credit to farmers should preferably be limited to profitable investments. Furthermore, it can be argued whether the credit distribution via ARMA, the office linked to the Ministry of Agriculture and Rural Development, is the most optimal solution.

## **7. Land and tax policies**

In comparison to many other European countries, Poland has land that is not currently under intensive cultivation. As mentioned earlier, the effectiveness of Polish agriculture is low relative to EU standards and there is scope for increasing yields. There is also a potential for increasing the productivity of Polish agriculture. Part of the reason of low yields is the relatively inefficient farm structure discussed in previous sections. Furthermore, many of these private farms consist of several non-contiguous plots. The other reason is the lacking financial resources in the agricultural sector.<sup>19</sup> Banks' reluctance to grant credit is based on farmers' uncertain income. This is a feature shared by most of the CEEC (Chloupkova; 1996). The behaviour of the banks might be a rational response of banks to the current agricultural situation.

Most farmland in Poland has always been in private hands, despite the structural policy throughout the communist regime, aimed at consolidation and collectivisation of private land into public ownership. In practice, the land policy of the communist regime offered private farmers official support to consolidate their small and medium size farms or to sell them (while keeping their own dwelling) to the National Land Fund in return for a pension at retirement. Various policy tools also encouraged this land consolidation, in particular limiting the access to inputs, operating and development credit, and by not providing the machinery of an appropriate-size for farms (OECD; 1995). At the same time, private farm size was by law limited to 50 ha in central and southern Poland and 100 ha in western and northern Poland. Under the central planning system, economic policy was heavily focused on the development of large industries and urbanisation, to the detriment of the rural economy. In comparison to many CEEC, this objective of land collectivisation and consolidation was never accomplished on a large scale in Poland.

As already mentioned, the medium-term land policy of the post-communist government has been to improve farm structures, in order to create an internationally competitive farm structure and the government initiated a restructuring programme. For that purpose, the maximum area and operating restrictions for farms have been eliminated, restrictions on buying or leasing farmland have been lifted, the duration of leasing contracts has been extended to 30 years, and retiring farmers are now permitted to rent their land to others.

---

<sup>19</sup> *Lacking financial resources is also a reason why many private farmers still cannot afford compound feed and instead feed grain, potatoes, sugar beet tops, or whatever else is on hand. This contributes to the low efficiency and yields. Nevertheless, a positive indication is that a growing number of larger, more commercially oriented producers favour compound feed, and their feeding efficiency is rapidly approaching West standards (ERS; 2000).*



On the one hand, the Polish government clearly manifested its efforts for restructuralisation. On the other hand, the agricultural production on private farms remains to be exempted from income taxes and agricultural inputs are also exempted from VAT<sup>20</sup>. Food products are charged with the VAT preferential rate of 7% instead of the basic rate of 22%. This is the key to understanding why over-employment in the agricultural sector persists. People register as farmers in order to claim preferential VATs, but they derive their income from other sources. This is especially true for part-time farmers. Although these part-time private farmers do not achieve high yields, and generally speaking are not effective agricultural labourers, they are probably very rational on their individual levels. In other words, their objective is probably not to maximise the agricultural production, but to take the advantage from available provisions to private farmers, and thus maximise their individual well-being.

Another unusual provision that helps the Polish farmers is the traditionally low land tax that is linked to the price of rye. Under the law on land taxes from 1993, the basic rate is equal to the value of 0.25 tonne of rye per hectare of land of average quality in terms of soil quality and location. For other types of land, under or above the average quality, the basic tax is multiplied by coefficients ranging from 0.05-1.95<sup>21</sup>. OECD (1995) states that in terms of 1993 prices, the upper tax limit would amount to about 830,000 zlotys (46 US\$) per hectare. In addition, there are many reductions and exemptions from the land tax; for example tax exemption on: (i) the poorest quality of land, (ii) land which is undergoing improvement, (iii) land bought to expand existing farms, (iv) land bought for the creation of new farms, (v) fallow land put under cultivation, and (vi) land that has been withdrawn from cultivation. A tax reduction is applied in the case of investments made on-farm to diminish pollution, to create rainwater reserves and to drain or to irrigate fields. Land taxes in mountainous areas are reduced by 30% for the best and good quality of land, and by 60% for the medium quality of land.<sup>22</sup> The law provides for tax reductions in the event of natural disasters.

The organisational structure of Polish agriculture is influenced by the mixture of Continental (Napoleonic) civil law, as well as leftovers of communist legal theory. This in effect means that inherited land is split among heirs, although a preference is given to heirs with agricultural education, leading to a further fragmentation of the ownership of agricultural land.<sup>23</sup>

The price of land is set officially and depends on the land's quality. Market price for land also exists and, as in many other CEEC, is low in comparison to EU countries due to the depressed profitability of the agricultural sector. Similarly to the Czech Republic, land is rarely accepted as collateral when applying for credit (Chloupkova; 1996). ERS (2000) states that land markets will become more efficient if the Polish government can maintain inflation under control and encourage investment. Eventually, these developments will lead to a more viable farm structure.

---

<sup>20</sup> Value Added Tax ( VAT) was introduced in Poland in July 1993.

<sup>21</sup> The coefficient 0.05 is for poor quality of land, while the 1.95 coefficient is for land of very good quality located near towns.

<sup>22</sup> As mountainous areas are considered altitudes above 350 meters

<sup>23</sup> A minimum of two-years of agricultural education, upon finish basic education at the age of 16 (in oral communication with J. Idczak; 2001).

## 8. Rural development and social measures

The process of privatisation and re-structuring of the state and cooperative enterprises led to an increased level of unemployment in rural areas, and alternative employment opportunities are still lacking. Tuszynski (1997) points out that “the rural economy is cash-poor, and the only cash flowing into these communities are welfare checks. Every household has one or two elder grandparents who are eligible for retirement payments from the government.” With the lack of labour mobility, partly caused by housing shortages in urban areas, this unemployment was in general absorbed by the rural areas, which are often provided with reasonable housing. The unemployment in rural areas was aggravated by the influx of people who lost their jobs in urban areas and moved to rural areas where they started to farm. Furthermore, as described above, the special provisions granted to farmers made the agricultural employment relatively attractive.

What hinders people from rural areas in seeking alternative employment outside agriculture is the relatively low level of education (in oral communication with: Braun; September 2000).<sup>24</sup> According to the last General Agricultural Census, persons with a higher or post-secondary school education in rural areas constitute 3.6% of the total, and the figure for those with a secondary school education is 16.2%. The reform of the education system from 1999 can be viewed as an important step towards improving the accessibility of education for rural youth.

A possible solution to the pressing problem of Polish agricultural and rural regions might be to foster agro-tourism, but as Tuszynski (1997) points out “who will pay money to spend time in the flat uneventful plains on which the majority of Polish agriculture resides”. A more workable idea seems to be to conglomerate small plots of arable land into larger portions and induce individuals to use greater amounts of machinery and automation. The idea of organic farming and agro-tourism might be workable to a certain extent, but will never be a universal way of life for most farmers (Banski; 1999).

Since the unemployment rate is lower, wages and rents are higher in urban areas, a modern and fast transportation system connecting urban and rural areas could help in alleviating problems pertaining to rural areas. In particular, about 3.5 million breadwinners will need to find alternate jobs somewhere and somehow in rural areas (Tuszynski; 1997). The idea to move to cities and find alternative housing will be expensive; furthermore, the necessary urban infrastructure that would accommodate these people is missing. Here the example of many US cities, or Copenhagen, could be inspiring in creating a “commuter network”, where people living in rural areas will be commuting for work in cities, taking advantage of cheaper living in rural areas combined with higher salaries in cities. This idea is based on a “self-perpetuation” mechanism: an individual with a city job will inevitably have much more money to spend than his/her neighbour.<sup>25</sup> For this idea to materialise, investment in roads, railways and other means of communication will be necessary (Ibid; 1997). The relatively good housing conditions in rural areas, easier access to food and consequently a higher level of food consumption, low levels of agricultural taxes and

---

<sup>24</sup> *Ulrike Braun is member of the Poland team at the European Commission, DG-Enlargement.*

<sup>25</sup> *Envy could be the driving force that could induce farmers to change their recent ways of living.*

the small scale of indebtedness of private farmers has not stimulated migration and a reduction in employment in agriculture.

### **Box No. 2: Situation in urban and rural Poland**

*On average less than 1/3 of the total labour force is employed in agriculture, but in some parts of Poland about 2/3 of the population lives in rural areas implying that agriculture is their main source of income. The other extreme are areas around Warsaw, Katowice and Gdansk where only about 10% of the total population live in rural areas. The highest level of basic infrastructure is in the most industrialised and urbanised parts of Poland, and in the southern parts with densely populated rural areas. The northeastern parts have the lowest level of basic infrastructure.*

The decreasing share of agriculture in total GDP results from declining prices and volumes of agricultural output. This trend is accompanied by the rapidly growing prices and output in other sectors of the economy, and not only by the decreasing size of the agricultural sector (in oral communication with: Dethomas; 14 September 2000).<sup>26</sup> This in fact means that agriculture is losing its relative importance over other sectors of Polish economy. Agriculture is the main source of income for 4.39 million people, which means that more than 11% of Poland's total population, in comparison to the 27.4% of the rural population, whose income is partly coming from agriculture (Ministry of Agriculture of Agriculture and Rural Development; 2001). Ministry of Agriculture and Rural Development (2001) stresses that the issue of agricultural employment is often overstated.

## **9. Lessons from Polish agricultural exports**

During the pre-transition period, trade in Poland, as well as in several other countries was conducted under the umbrella of the Council for Mutual Economic Assistance (CMEA)<sup>27</sup>.

A normal trading practise was achieved through a trading arrangement within the framework of a five-year plan. In such plans, targets were established for the delivery of goods for the entire period and were based on the estimated needs and availabilities in member countries. Each member country signed a bilateral inter-governmental trade and payments agreement with each CMEA trading partner. These arrangements were re-negotiated annually between the planning offices of the member countries that agreed on the trade details for the coming year and set out the agreed provisions of the agreements in signed protocols. The protocols specified the value of trade, volume of individual commodity deliveries, quality standards and prices (OECD; 1995).

---

<sup>26</sup> Bruno Dethomas is the ambassador at the EC Delegation in Warsaw.

<sup>27</sup> CMEA (also known as COMECON) was founded by a communiqué agreed upon by the Soviet Union, Bulgaria, Czechoslovakia, Hungary, Poland, Romania and Albania. East Germany joined in 1950, Albania was expelled in 1961, Mongolia joined in 1962 and Cuba in 1972. Yugoslavia had associate status. Finland, Iraq, Mexico, Nicaragua, and Mozambique had a non-socialist co operant status with CMEA, since governments of these countries were not empowered to conclude agreements in the name of private companies, and therefore these governments did not took direct part in CMEA operations (Glenn; 1992).

In the 1980s, Polish trade with the Soviet Union took place in three forms: hard currency cash trade, hard currency barter trade and transferable rouble trade. Rouble trade was in fact a form of commodity bartering denominated in transferable roubles and no settlements were made between members in roubles. Polish traders received fast payments in zlotys from the National Bank of Poland, when the commodity left Poland. In effect, these transactions were underwritten by the state as part of the CMEA arrangements, a settlement system that had certain advantages for exporters. Settlement was very rapid and exporters could expect to receive payment within 1-2 weeks. This advantage did not apply to hard currency trade and settlement could take many months, as is normal in western commercial practices (Ibid; 1995). The disappearance of the rouble trade has exposed traders to the problems of financing their transactions; a problem compounded by the high interest rates in Poland and continuing weakness of the banking system in the countries of former Soviet Union (FSU).

Upon the liberalisation of trade in 1990 and thus the disappearance of CMEA guaranteed market outlets, many small traders attempted to find new market opportunities in the west. Their efforts contributed to an increase of agricultural exports to EU countries in 1990-91 (Ibid; 1995). However, the lack of experience of small exporters, the low quality and poor presentation of some products, as well as western trade barriers created new problems which brought back some interest in looking for renewed trade opportunities in the countries of the FSU. The bottleneck of financial arrangements with FSU was however a pivotal point for exports deals. To get around the hard currency bottleneck and in an effort to regain its markets, Poland engaged in barter arrangements offering some products, such as agricultural produce and medicines for mainly oil and natural gas.

Despite the fact that traditionally the Soviet Union was not the Poland's main trading partner (as was the case for Bulgaria and Hungary), the impact of the 1998 financial crisis in Russia on Poland has been severe. After the initial loss of the Russian market in the early 1990's, Poland gradually rebuilt that market. In 1997, 29% of Poland's agricultural exports went to Russia; the FSU countries together accounted for 45%. The Russian market was particularly important for Poland's meat exports<sup>28</sup>. This market collapsed after August 1998. During that year, Poland's total agricultural exports to Russia went down by 26% and meat exports to Russia virtually stopped, which had a drastic impact on domestic hog prices that dropped by 40% (ERS; 2000). Poultry prices were depressed indirectly by the sudden oversupply of pork in the domestic market. In both the hog and poultry sectors, the larger, commercial producers, who had made substantial investments, were hurt the most. Encouraged by various preferential credit programmes and previously high prices of pork, these producers had borrowed heavily to improve their operations.

In the present situation, the overall proportion of Polish agricultural exports accounts for approximately 10% of total exports. The overall proportion of agricultural imports from the total imports is 13%. The EU accounts for approximately 65% of Polish

---

<sup>28</sup> 68% of Poland's meat exports in 1997 went to the FSU countries, mostly low quality pork sausage. Poland also exported canned pork and beef and frozen pork meat. An entire industry developed to produce meat for the Russian market: Poland imported US offal and mechanically de-boned meat (MDM) to put into sausage for the Russian market. All of these imports were destined for re-export, because Polish laws forbid selling MDM on the domestic market (ERS; 1999).

trade of agricultural and food products. The countries of FSU account for about 19% of Polish trade, and other Central European countries (Hungary, the Czech Republic, and Slovakia) for about 3% (Ibid).

## **10. Concluding remarks on Polish agriculture**

Generally speaking, Poland today is among the most advanced accession candidates (De Broeck & Koen; 2000). The decision to forgive Poland around 50% of Poland's foreign liabilities in 1994 helped to fuel a sharp jump in foreign direct investment, which in turn was the main pillar of the investment boom that materialised in the mid-1990s (Deutsche Bank; 2001). Nevertheless, problems in certain spheres, especially in the agricultural sector, seem to be greater than in the cases of the Czech Republic or Hungary. The real obstacle for Poland on the road to the EU is mainly the absolute size of the agricultural sector and its problems. That is why a comprehensive agricultural reform programme has to be carried out, and the modernisation of agriculture has to be facilitated (Deutsche Bank; 2001).

Although Polish sources mention that such reforms might be detrimental, Lukas (1999) mentions that the current problems facing agriculture in Poland are caused mainly by the lack of reforms. Lukas (1999) further claims that there has so far been little political will to change the small-scale farming, which is responsible for depressed competitiveness.

Farming is labour-intensive with about 26% of the labour force producing only 3-4% of total GDP (The Economist; 2001). The average farm size is only 7 ha and is usually operated by a part-time farmer.<sup>29</sup> The relatively high agricultural employment suggests that agriculture has been serving as an employment buffer during the transition periods. Swinnen et al (2001) point to a strong correlation between the regional outflow of labour from agriculture and the importance of state farms in the region at the outset of the reforms. Therefore the statement that agriculture is playing a *buffer role* in Poland is only valid for the small family farms and does not apply to the transformed state farms. Moreover, tax-related incentives to be registered as a farmer are present. Thus the decisions made by private, usually part-time farmers might be rational from the perspective of their well-being, but not necessarily from the perspective of the efficiency of the agricultural sector. Standard economic theory suggests that the excess of labour will disappear when the termination of special treatment of the agricultural sector takes place.

Ministry of Agriculture and Rural Development (2001) estimates that there are about 900,000 workers active in the farming sector, whose work is totally or partly redundant. Furthermore, the acreage and scale of production is too low, which results in high costs and lack of profitability to implement new technologies. This weakness of Polish agriculture, together with the low use of chemical inputs, could be to some extent, transformed into an opportunity of boutique organic production that is demanded on the EU market. Not only for this purpose, the inadequate link between agricultural producers, food processing plants and wholesalers, needs to be strengthened. This problem of vertical is common to many CEEC.

---

<sup>29</sup> Various sources mention different average size of farms, varying from 5 to 8 ha.

If not carefully addressed, Polish agriculture can be an economic problem not only for Poland itself, but also for the whole EU enlargement process, and thus can jeopardize the country's reform momentum (Tuszynski; 1997). Attempts at agricultural reform must be addressed from a broad socio-economic perspective and must include structural transformation with the prospects of alternative employment for farmers. The situation in rural areas can be only partly resolved through state agricultural policy (Hermann; 1999). A general economic upswing in rural regions that would create new jobs in the service sector, and thus in effect enable a reduction of agricultural labour, is necessary. Eliminating the excessive agricultural labour would increase efficiency of the sector. These measures need to be accompanied by more transparency in the Polish agricultural system; including the need for farmers to present their yearly accounts and pay all relevant taxes, although perhaps alleviated to a lower rate.

## Literature

- Banski J. – *Problem areas in Polish agriculture*; article originated in 1999 downloaded on 14/10/2001 at: <http://www.igipz.pan.pl/rolnic/banski/problem.htm>
- Chloupkova J. – The effectiveness of the Agricultural Credit Market in the Czech Republic, MSc. in Agricultural Economics Report, Wye College, University of London; 1996.
- Chloupkova J. – *Czech agricultural sector: Organisational structure and its transformation*; Unit of Economics Working Papers 2002/1; The Royal Veterinary and Agricultural University; Copenhagen; 2002.
- Chloupkova J., Bjørnskov C. - *Counting in Social Capital when Easing Agricultural Credit Constraints*; Journal of Microfinance; forthcoming.
- Chloupkova J., Svendsen G. T. – *Building and destroying social capital: The case of cooperative movement in Denmark and Poland*; Submitted to Journal of Rural Sociology; Madison, WI, USA; 2002.
- Czech Statistical Office (CSU) – *Sklizen zemedelskych plodin v roce 2000* (Harvest of agricultural crops in year 2000); Data downloaded on 24/10/2001 at <http://www.czso.cz/>.
- De Broeck M. & Koen V. – *The "Soaring Eagle": Anatomy of the Polish Take-Off in the 1990s*; IMF Working Paper 00/6; 2000.
- Deutsche Bank – *Eastward enlargement of the EU endangered by agriculture?*, EU Enlargement Monitor, Economics, Deutsche Bank Research; May 2001.
- Deutsche Bank – *From transition to integration: Poland's progress towards the EU*; Bulletin, Economics, Deutsche Bank Research; 2001.
- European Commission – *Agricultural Situation and Prospects in the Central and Eastern European Countries: Summary Report*; Directorate General for Agriculture, Working Document; 1998.
- European Commission – *Enlargement Papers*; Directorate - General for Economic and Financial Affairs; Number 5; September 2001.
- European Commission – *2001 Regular Report on the Czech Republic's Progress towards Accession*; Brussels, November 2001.
- European Parliament – *The Situation of Agriculture in Poland*; Directorate General for Research, Working Papers, Agriculture, Fisheries and Forestry, W-21; 1995.
- Economic Research Service (ERS) – *Poland: briefing room*; United States Department of Agriculture; Washington D.C., USA; 2000.

- Economic Research Service (ERS) – *International Financial Crises and Agriculture; Situation and Outlook Series; International Agriculture and Trade Reports, WRS-99-3*, United States Department of Agriculture; Washington D.C., USA; 2000.
- Economic Research Service (ERS) – *Russia's Economic Crisis: Effects on Agriculture are Mixed*; World Agriculture & Trade, Agricultural Outlook; United States Department of Agriculture; Washington D.C., USA; 1999.
- FAO – *Reorienting the cooperative structure in selected Eastern European countries: Case-study on Poland*; Central and Eastern Europe – Agriculture in Transition 5, Food and Agriculture Organization of the United Nations; 1994.
- FAO – *Reorienting the cooperative structure in selected Eastern European countries: Summary of case-studies*; Central and Eastern Europe – Agriculture in Transition 1, Food and Agriculture Organization of the United Nations; 1994.
- Glenn E. – *Czechoslovakia: A country study*, Washington D.C.: Federal Research Division of the Library of Congress; 1992.
- Harris A. et. al – *Working together: The role of External Agents in the Development of Agriculture-based industries*; Centre for the study of co-operatives; University of Saskatchewan; 1998.
- Hermann R. – *Ready for the Chop: Walking the tightrope between efficiency and social sustainability*; Rural Poland; Central Europe Review; Vol. 1., No. 10; 1999.
- International Co-operative Alliance (ICA) – *Poland: Cooperatives in Eastern & Central Europe*; ICA Studies and Reports; International Cooperative Alliance; 1993.
- International Co-operative Alliance (ICA) – web page accessed on: [www.coop.org/ica](http://www.coop.org/ica); 1999.
- Lukas Z. – *Agriculture in Transition: Widening gap between the CEECs and Russia and Ukraine*; Research Report No. 258, The Vienna Institute for Comparative Economic Studies (WIIW); 1999.
- Ministry of Agriculture and Rural Development – *Government Plenipotentiary for Negotiations of the Poland's EU Membership*; Report downloaded on 14/10/2001 at: <http://www.minrol.gov.pl/en/Reports/omowstan.html/>.
- Ministry of Agriculture and Rural Development – *Note on Polish Agriculture*; Report downloaded on 14/10/2001 at: <http://www.minrol.gov.pl/en/Reports/polishagriculture.html/>.
- National Council of Cooperatives – *General information of Polish cooperatives*; obtained from Comite General de la Cooperation Agricole de la C.E. (COGECA), Brussels; Warsaw 2002.



- Nowicki M. – *A Dangerous Crossroad*; Our Planet, UNEP magazine for environmentally sustainable development; United Nations Environment Programme; 1999.
- OECD – *Poland: Review of Agricultural Policies*; Centre for Co-operation with the Economies in Transition, Organisation for Economic Cooperation and Development; Paris, France; 1995.
- OECD – *Agricultural Policies in Emerging and Transition Economies: Special focus on non-tariff measures*; Organisation for Economic Cooperation and Development; Paris, France; 2001.
- OECD – *Agricultural Policies in OECD Countries: Monitoring and Evaluation*; Organisation for Economic Cooperation and Development; Paris, France; 2001.
- Paldam M., Svendsen G. T. – *Missing social capital and the transition in Eastern Europe*; Journal for Institutional Innovation, Development and Transition; forthcoming 2001.
- Polish Official Statistics (GUS) – *Programme of Statistical Survey publications*; Data downloaded on 24/10/2001 at: <http://www.stat.gov.pl>.
- Putnam R – *Making democracy work: Civic Traditions in Modern Italy*; Princeton University Press; 1993.
- SAEPR/FAPA – *Stereotypes in the European Union concerning Polish agriculture*; Foundation of Assistance Programmes for Agriculture, Agricultural Policy Analysis Unit; Warsaw, Poland; 2000.
- Swinnen J.F.M., Dries L., Mathijs E. - *Constraints on Employment Growth and Development in Rural Areas in Transition Countries: Analysis and Policy Implications*, Paper presented at the 74<sup>th</sup> EAAE Seminar, Wye College, University of London, United Kingdom, September 12-15<sup>th</sup>, 2001.
- The Economist – *Country Profile Poland*; Economist Intelligence Unit; 2001.
- The Polish Voice – *From Euro-Sceptic to Enthusiast*; No. 10, The Polish Voice; The Warsaw Voice – Polish and Central European Review; 2001.
- Tuszynski J. – *NATO, the European Union, and Polish Agriculture*; Polish Affairs; Pigulki, Issue No. 23; 1997.