



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

*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.*

Agriculture and Trade Analysis Division
Economic Research Service
United States Department of Agriculture

Staff Report # AGES9314
1993

**The Environment, Government Policies, and International Trade: A
Proceedings**

Shane, M.D., and H. von Witzke, eds.

Proceedings of a Meeting of the
International Agricultural Trade Research Consortium
December, 1990, San Diego, CA

Chapter 9

Are There Lessons from the Polish Agricultural Reform that Are Applicable to the Soviet Union?

Odin Knudsen*

Introduction

Although there are considerable differences between Poland and the Soviet Union¹, the similarities of the policy decisions faced by each make the Polish experience applicable to the Soviet Union. This chapter focuses on the role of agriculture in the transition, and the problems faced by the sector in the reform process. The effect of the stabilization program on agriculture in Poland was expected to be positive as real exchange rate devaluation and liberalized prices were anticipated to boost incentives to the sector. However, uncertainty and the oligopsony structure of agriculture stymied the expected beneficial effects. Nevertheless, the Polish experience still points to recommending full-scale liberalization in the Soviet Union along with a strict macrostabilization program. Under such a reform, privatization of agro-industry and land must come soon after the initiation of macrostabilization and price liberalization.

* Division Chief, Agriculture Operations Division, Maghreb, North African Region, The World Bank.

¹ The world is changing at such a rapid pace that it is hard to know what to call any country. Between writing and publishing this article, the Soviet Union has become the Former Soviet Union. The issues and problems discussed are still very real today if somewhat more complex because of the breakup into separate republics.

Eastern Europe and the Soviet Union have begun an economic reform without precedent. From centrally controlled economies of varying degrees, these countries are embarking on the greatest economic and political transition of modern times. Economists and policymakers have few lessons or guidelines to assist these nations in making the transition. Experience and theory have been focused more on the end points, how planned versus market economies function, than on the actual transition from one to the other. Complicating the understanding of the transition is the heterogeneity of countries embarking on the reforms and the different starting points, from rigidly controlled economies such as in the Soviet Union to more mixed economies such as in Hungary. Lessons--even when tentative and frail--from the early stages of reforms must be gathered and offered to other countries to help guide their transitions.

In this chapter, I will describe the early stages of the transition in Poland, emphasizing the agricultural sector and using these experiences to draw some lessons for a similar but much later transition beginning in the Soviet Union. In some ways, this comparison may be strange because Poland and the Soviet Union have many dissimilarities. But, as I will attempt to demonstrate, the parallels are also remarkable.

The most evident difference between the countries are in their size and political makeup. Although, estimates in international currencies for the Soviet Union and Poland are only approximate, the gross national product (GNP) of the Soviet Union is about \$500 billion and that of Poland is roughly \$70 billion, according to the International Monetary Fund. Population sizes are about in the same proportion as GNP, 290 million in the Soviet Union and about 40 million in Poland. Thus, per capita incomes are roughly equal. The Soviet Union has been dominated by Communist rule for about 70 years with the population having few contacts with the West. Although in Poland communism was imposed by the outside for about 40 years, the Polish people had more access to the West. Furthermore, the Soviet Union is more diverse politically, consisting of 15 dispersed Republics with many ethnic groups. In contrast, Poland is more unified politically and has only minor pockets of ethnic populations.

The agricultural sectors in both countries are also different. In the Soviet Union, agriculture contributes about 25 percent of GDP, using about 20 percent of the workforce. In Poland, agriculture is much smaller, contributing only 12 percent of GDP but with about 25 percent of the

workforce living on farms although many are only part-time farmers. The structure of production is also different, with about 97 percent of the producing area in state or collective farms in the Soviet Union and only about 20-25 percent in Poland. Furthermore, the private landholdings in the Soviet Union are tiny, only about a half a hectare, while in Poland land is held in small to medium-size holdings averaging 6-7 hectares.

There are also institutional differences between Soviet and Polish agriculture. Although both governments had state orders for supplying planned agricultural output from state farms, the Polish authorities relied more on price as an inducement for production because of the larger private farm sector. Poland also had a long tradition of cooperatives handling marketing and some processing although this tended to be dominated by the nomenclature. In the Soviet Union, the state handled all state orders and procurement with only small quantities entering private channels.

Although there are substantial differences, there are also considerable similarities in the two countries' starting points in the reform process. In the initial stages, both face difficult macroeconomic situations, both have highly distorted relative prices, and both had state-controlled trade and even internal commerce. Furthermore, in both cases, agro-industry and processing are in the hands of the state and, while the state farms in Poland hold a smaller proportion of the total land, both countries must deal with state landownership to get agricultural growth (in Poland, the state farms produce most of the marketable surplus of grains). Also, both countries have difficult housing problems that limit mobility of labor. Finally, any adjustment in either country must deal with the safety net for millions of displaced workers and low or fixed income families.

These similarities in at least the policy decisions that their governments face make the Polish experience at least somewhat applicable to the Soviet conditions. Furthermore, Poland's dramatic stabilization steps and the severe effect on output are often stated as reasons that a similarly striking step would not be possible in the Soviet Union. Yet the international task force of the International Monetary Fund (IMF), International Bank for Reconstruction and Development (IBRD), European Bank for Reconstruction and Development (EBRD), and Organization for Economic Cooperation and Development (OECD) essentially recommended rapid and comparable dramatic steps for the Soviet Union but with certain modifications derived at least in part from the lessons of the Polish experience (Konovalov, 1991). How could they recommend similar steps when in some respects the Polish reforms are

considered to have not achieved the results that were first hoped for? In this chapter, I explore why the Polish case does indeed lead to a conclusion that rapid adjustment will also be needed for the Soviet Union. I begin by describing the Polish case, derive some general lessons from it, and then apply them to the Soviet case.

Poland's Macroeconomic Crisis and Stabilization

The government that took power in September 1989 faced an extremely difficult economic situation. Inflation was accelerating at triple-digit rates, fueled in part by a massive budget deficit equal to 8 percent of GDP. External debt amounted to 80 percent of GDP; debt servicing equaled five times export earnings. Growth had stagnated with per capita income now lying below 1978 levels while government expenditures had grown by over 30 percent in real terms in the last decade.

Complicating the macroeconomic situation was the structure of the economy. Over 70 percent of the industrial sector was owned by the state. Exports were canalized by a few large enterprises that had survived on massive export subsidies. But even more critical was the nature of decisionmaking in these firms. In 1981, the Polish parliament gave wide powers to the workers' councils, among them the power to hire and fire management. Management and labor had merged into an explicit collusion, with the government, the nominal owners of capital, having lost control of costs and production yet retaining the ultimate obligation to fund the losses of these enterprises. Because of large subsidies to state enterprises and a substantial fall in revenues, the fiscal deficit reached 29 percent of budget expenditures in the first half of 1989.

The government had then inherited in the fall of 1989 an essentially bankrupt economy, unable to service its debt, a macroeconomic freefall, and a state sector outside of its control. It had few options. Over 40 years of Communist rule had culminated in a rigid economic structure and in macroeconomic ruin.

The new government decided to launch a critical two-pronged attack on the unstable economy. In the first part of this strategy, the government attempted to gain control over the budget and prepare for the next phase by making some institutional and legal changes, mainly introducing

unemployment compensation and bankruptcy procedures. On January 1, 1990, the second phase of the program was launched. The crux of this phase of the government's program was a standard IMF-type stabilization package: fiscal and monetary restraints, a wage freeze, and a massive devaluation followed by a fixed nominal exchange rate to serve as a nominal anchor. The stabilization package was designed to bring down inflation rapidly and to put pressure on inefficient state enterprises. With budgetary constraints in place, the government expected that the market would select inefficient state enterprises for bankruptcy and initiate the rationalization of the state sector. Unemployment was expected to rise, but this could be viewed as a sign of the success of the process; enterprises would be shedding excess labor and improving control over its wage bill. With improvement in efficiency and reduced costs, the cost-push part of inflation would be brought under control. Following macroeconomic stability, the real adjustments in the economy were expected to follow through a gradual process of enterprise restructuring.

Agriculture's role in this stabilization program was envisaged to be threefold. First, it was expected to respond rapidly to the new incentives. Agriculture, largely a private sector, was expected to follow the incentives of higher relative prices and deliver food to urban areas at prices closer to world prices. Although higher food prices would mean falls in real wages, these drops would be moderated by the increased availability of both greater quantities and varieties of food. Furthermore, the hidden costs of food--waiting in long queues--would be eliminated. Second, agriculture was expected to boost exports, easing pressure on the balance of payments. Although export subsidies were eliminated, policymakers expected that about 80 percent of remaining exports would be competitive at world prices. Furthermore, the devaluation of the real exchange rate would compensate for the loss of export subsidies. And finally, agriculture would hold back rural-to-urban migration and perhaps absorb some of the unemployed from the industrial sector. With about 50 percent of the small farm population being part-time farmers employed in local state enterprises, a more prosperous agricultural sector was expected to absorb some of these displaced workers.

The Actual Outcome of the Stabilization

By most macroeconomic indicators, the stabilization program was a great success. Inflation crumbled under the stringent monetary and fiscal restraints from a monthly rate of 79 percent in January, to 24 percent in

February, and to about 5 percent in May. Budgetary controls and increased revenues (from several reforms on enterprise taxation) produced a budgetary surplus, projected to be between 1 and 3 percent of GDP. Monthly interest rates followed the decline in inflation, undershooting inflation in January but becoming real and positive in February by 14-16 percent and falling to 1-4 percent in May. The massive devaluation of January of about 100 percent (compared with the December rate) held, zlotys became readily convertible in Poland, and foreign exchange reserves expanded. Driving the foreign exchange accumulation was a contraction in imports and a rapid expansion of exports (imports fell by 27 percent, and exports expanded by 14.5 percent from convertible currency areas in the first 5 months of 1990).

But, there were also signs of trouble. Real wages fell by 40 percent in the first quarter of 1990. Output declined by 30 percent in the socialized sector (29 percent below its level in May 1989).² Food expenditures rose from about 39 percent to 55 percent of total expenditures (compared with the first 4 months of 1989), reflecting the immediate pressure of food price rises on household real income. Unemployment, however, did not increase as expected. By the end of April, unemployment stood at only 2 percent of the labor force. Only a few firms had declared bankruptcy. Nevertheless, real debt increased rapidly by 12 percent in March, 18 percent in April, and 3 percent in May. Also, there were various reports of delayed payments between firms. The restructuring program apparently had not hit the state enterprises; labor was largely being retained, and enterprises were somehow holding on despite the magnitude of the macroeconomic adjustment.

The signs of problems with the macroeconomic program were most evident in the agricultural sector where the greatest successes were hoped to have come. The very strengths of the agricultural sector that were to lead to its success--its largely private nature and its ability to respond quickly to incentives--rapidly mirrored the difficulties facing the macroeconomic adjustment program. Agriculture was unable to achieve stability and a supply response through macroeconomic policies when the real structure of the economy remained distorted and economically concentrated.

² These numbers may overstate the severity of the fall as production in the private sector is not recorded.

The Effect of the Economic Program on Agriculture

Agriculture in Poland is a small sector, contributing only about 12 percent of GDP. Thus, agriculture would seem most likely to be affected by the economic program but would not in turn influence the programs' success. But this expectation is turning out not to be the case. The effect of the economic program is straightforward. With the domestic market consuming about 87 percent of agricultural production, one could expect that the macroeconomic program and the resulting sharp recession to significantly affect the market for farm products and hence the sector's economic well-being. But agriculture also has strong feedbacks to the general economy through employment (28 percent of the workforce) and by affecting the real wage rate (food expenditures range from 35 to over 50 percent of all expenditures depending on income class). Furthermore, about 20 percent of industrial output comes from agro-industries, which in turn depend on domestic agriculture for 90 percent of their raw material. The agricultural sector is, thus, more important to the economy than its economic size would indicate.

When the economic program began, the agricultural sector was highly protected and subsidized. From 1986 to 1989, food subsidies were 3.4 to 4.8 percent of GDP. Although part of this subsidy was nominally for consumption, it was in part brought about by high producer prices. For example, producer prices for wheat during the late 1980's ranged from 10 to over 30 percent above equivalent border prices. For the state sector which produced most of the marketed wheat, the price support was even higher, averaging about 50-60 percent greater than world prices. The producer support was nearly equally generous, from 24 to 50 percent above world prices depending on the year. As with wheat, the support was concentrated in the state sector. This support through output prices was supplemented by input subsidies for fertilizers, pesticides, and animal feed at about 1 percent of GDP. Credit subsidies also were provided to the agricultural sector. Furthermore, export subsidies were given for certain commodities at a rate often half the value of the goods exported.

Aggregating these subsidies for the different crops results in what is referred to as the producer subsidy equivalent (PSE) or the total income supplement offered farmers and the state farm sector. In the state sector for wheat, this PSE constituted nearly 70 percent of the value of the wheat produced; for rye, about 50 to 70 percent; for sugar, about 50 percent; for rapeseed, about 40 to 50 percent; for pork, about 40 percent;

for milk, about 40 to 80 percent.³ In other words, support for agriculture and processing on a per unit value basis was about at the level of many industrial economies. Agriculture, especially the state sector, was sheltered and heavily subsidized. In 1988, average farmers' income exceeded that of urban workers by 17 percent (compare this figure with Hungary and Yugoslavia where farmers' incomes are below those of urban workers by 4 percent and 20 percent).⁴

The subsidies ended abruptly with the macro-stabilization program and the reduction of state expenditures. Food subsidies fell from about 4 percent of GDP in 1989 to less than a budgeted 0.2 percent for 1990. Agricultural input subsidies declined from 1.3 percent of GDP in 1989 to 0.3 percent in 1990. Furthermore, credit subsidies and export subsidies were nearly eliminated. In less than a year, a once highly supported agricultural sector (with support near Western European standards) had been released to survive in a deeply recessionary economy, still struggling to establish a market economy.⁵

The devalued exchange rate should have partly compensated for this near elimination of direct subsidies. The real exchange rate (the nominal exchange rate corrected for inflation) fell by nearly 50 percent compared with its 1989 level. If this devaluation had been transmitted to farmgate prices, then the net effect would have been a much more neutral adjustment in producer support.

But the price transmission did not occur in part because of deliberate government policies and in part because of economic concentration in agro-industry. With inflation running rampant, the cooperative structure

³ Some caution should be exercised in interpreting PSE numbers for Poland as the exchange rate is a confounding factor. However, if estimates of the real exchange rate from the World Bank and IMF are used to correct the PSE numbers, then the level of subsidization actually increases for 1987 and 1988 because these estimates point to an undervalued exchange rate (compared with 1980) for those years. During 1982-85, the exchange rate was overvalued (compared with 1980); subsidies helped to compensate for this overvaluation in those years.

⁴ However, in the first quarter of 1990, farmer's income was 86 percent of other workers' income.

⁵ This dilemma is most evident in the dairy sector where subsidies reached nearly \$1 billion in 1988, fell to \$70 million in 1989, and nearly disappeared in 1990. The dairy sector contributes 19 percent of agricultural GDP and provides an important source of cash to over 1 million small farmers.

in disarray (the cooperative unions were dissolved), and a collapse in real producer prices, farmers withheld grains from the market in early and mid-1989 (for the first 9 months of 1989, agricultural supplies to cities were reportedly down by 30 percent). The specter of a food shortage in urban areas created a deep concern to the government. Exports of essential foodstuffs were prohibited and food aid urgently procured. With the blockage of exports, the arrival of food aid, and the sales of farmers to the milling industry increasing (because of the cooling down of inflation and rising interest rates), scarcity quickly turned to abundance. Exacerbating the situation was the decline in domestic food consumption brought about by rising retail food prices and declines in real income. Stocks of grains and milk products accumulated, and farmgate prices plunged. Because of low demand for agricultural inputs, animal feeds and fertilizer sales also sharply declined.

Further aggravating the fall was the behavior of the agro-industry sector. Although the grain industry (the grain monopoly was broken up into 41 separate companies) and the milk industry seem to be quite fragmented and competitive, at the local level they are highly concentrated. Years of accumulated collusive behavior (encouraged by past governments to meet the objectives of a state coordinated sector) continued after prices were liberalized and most subsidies removed. The breakup of national monopolies created local monopolies, and a system of cost-plus pricing continued. Instead of lowering prices to encourage sales, agro-industry restricted throughput, raised selling prices, and forced back on producers (through lower purchase prices) most of the industry's higher per unit operating costs. Wheat prices fell to 60 percent of the border price, oilseeds to 80 percent, pork to 70 percent of its export price, and cattle for slaughter to 59 percent of its f.o.b. export price. The ratio of flour to wheat prices rose from about 3 to 1 on January 1, 1990, to 6 to 1 by the end of June 1990. Heavy government support to agriculture had turned to indirect taxation through export controls, food aid, and oligopsony behavior.

The government, recognizing the rapidly deepening farm crisis, released the ban on most agricultural exports except grains, where it remained bound by its food aid agreements to prevent reexport. For butter given as food aid, the government canceled its request seeking the substitution of feed corn. But the crisis was now deeply imbedded in the sector. Meanwhile, the flush season for milk began, and the grain harvest began to loom on the late summer and fall horizon. High nominal and real interest rates made stockholding extremely expensive, adding to the indebtedness of agro-industry. Dairy cooperatives, the potato industry, feed

mills, sugar processors, and part of the horticultural industry were particularly hard hit. Farmers and some state farms, fleeing high interest rates and debt, quickly sold off durable goods and farm implements. Most dairy farmers received only extremely low and delayed (sometimes for months) payments for their milk. Agriculture, the only largely private sector in Poland, had been brought to its knees. But to rescue agriculture through subsidies meant the opening of the floodgate of subsidies elsewhere in the economy as the austerity program began to take hold in other state sectors. In a collective consciousness, state managers seemed to be contemplating the day of restitution of their state enterprises by the government. Macroeconomic stability was being threatened by the problems of a relatively minor sector (in terms of GDP), agriculture.

The Structural Roots of the Polish Farm Crisis

In the 1980's, the government's vision of agriculture was based on income parity and self-sufficiency. Farmers should receive prices that guarantee an income commensurate with urban wages. Furthermore, imports and exports should be restricted so that Poland would become food self-sufficient. This policy produced a highly distorted sector that was unable to follow its natural economic progression; that is, one that would produce a diminishing share of GDP with a lower portion of the workforce (agricultural employment remains extraordinarily high at about 25 percent of the labor force for an agricultural sector producing only about 12 percent of GDP). Furthermore, these subsidies preserved a sector where many of the private farms were of uneconomic size.

Almost at the onset of the reform process, the agricultural sector faced a new reality, of market forces and world prices. The sector was impeded in adjusting to this new reality by the size of private farms and by the physical conditions of its production: land of only moderate fertility and a short growing season. Two other major impediments also hindered adjustment of the agricultural sector: the state sector and its control of food processing and inputs and the formidable external barriers facing its agricultural trade.

The State-Controlled Agro-Industries as Barriers to Growth

In Poland, as in most countries, the efficiency and productivity of agro-industry is as critical to agricultural performance as good farm technology and management. In Poland, an estimated 75 percent of food is processed, and almost all agricultural inputs come from domestic industry. Between these "upstream" and "downstream" industries lies agriculture. Its farmers depend on the efficient and competitive operation of food processing and distribution for their share of wholesale food prices. Farmers also require high-quality, low-cost inputs such as seeds, fertilizer, and other chemicals from their input suppliers. Without the efficient operations of these industrial sectors, agriculture is helpless and, investments in improving farm productivity are nearly useless.⁶

Agro-industry in Poland is grossly inefficient and generally unresponsive to market forces. In terms of factor productivity growth, food processing ranked second to last in a sample of 17 industrial groups, with a decline in annual growth of 5.1 percent in productivity from 1978 to 1982. With the overall resurgence in output growth between 1982 and 1985, food industry productivity growth became positive at 1.2 percent but still ranked second to last in growth. In terms of international comparisons of competitiveness (as measured through domestic resource coefficients (DRC's), the food industry displayed the least international competitiveness of all of Poland's industries (table 1). In fact, the DRC measure for food processing was negative, indicating that the value of inputs exceeded the value of output when measured in world prices.⁷ Furthermore, many processing plants were generally 15 years behind in technology.

This lack of efficiency shows up in other measures. In a 1988 sample of 500 of the largest State-owned industrial enterprises, about 10 percent lost money in the absence of subsidies and taxes. Of this 10 percent, about 90 percent were in the food processing industry. Of other industries with losses, about 70 percent supplied agricultural inputs, animal feeds, and fertilizer. While part of the losses is attributable to

⁶ The reverse is also true: agro-industry depends on the efficiency of agriculture. This fact also has broader economywide implications because the food industry share of all industrial output is about 20 percent, of convertible exports 13 percent, and of employment roughly 10 percent.

⁷ There was considerable variability of results with the dairy and meat industry being the least competitive and soft drinks and milling products being more competitive.

Table 1--Domestic resource coefficients (DRC's) and value added, Poland, 1986

Industry	Value added, domestic	Value added, world prices	Shortrun DRC's	Longrun DRC's
<i>Coefficients</i>				
Metallurgical	15,411	5,785	1.15	4.00
Electro-engineering	89,208	70,802	.55	1.32
Chemical	23,581	18,786	.41	1.25
Mineral	8,981	9,177	.49	1.05
Wood and paper	9,226	8,399	.54	1.04
Light	40,601	30,373	.61	.01
Food	6,048	-3,803	-1.47	-3.40
Total	193,226	139,518	.62	1.45

Source: Kononov (1989).

price controls, a major contributor must also be assigned to the agro-industries' inefficiencies and antiquated technologies.

Beginning in August 1989, the government began to liberalize prices with the objective of allowing the market to determine which firms are efficient and which are not. The drive for efficiency through price liberalization confronted another barrier, the oligopoly structure of agro-industry.

Agro-industry is highly concentrated, both on an aggregate level and on a regional level. For example, in a 1987 sample, two firms had 47 percent of the market in food concentrates, 41 percent in oils and fats, 51 percent in potato products, 30 percent in vegetable and fruit products, and 30 percent in sugar products (table 2). In other industries, such as dairying, milling, and meat processing, the two-firm concentration ratios were lower (in the range 2 to 20 percent of the market), but these low percentages concealed the regional oligopsony nature of the firms. With transport difficult to obtain and costs high, single buyers dominated many regional markets. Also, there is considerable possibility of collusive

Table 2--Economic concentration of state-owned firms, 1987

Industry	Share controlled by--		
	One firm	Two firms	Four firms
	<i>Percent</i>		
Outputs:			
Food concentrates	31	47	n.a.
Oils and fats	28	41	66
Potato products	27	n.a.	n.a.
Fruit and vegetable products	23	31	40
Flour milling products and pasta	9	14	24
Eggs and poultry	8	15	28
Milk and milk products	2	n.a.	n.a.
Sugar and sugar products	19	30	51
Inputs:			
Tractors	90	96	n.a.
Fertilizer	22	43	73
Farm machinery	15	23	35
Animal feed	14	26	51

Source: Rocznik Statystyczny Przemysłu, 1988.

n.a. = Not applicable.

behavior among these state enterprises. One of the legacies of central planning is that many enterprise directors and managers are accustomed to formal and informal economic coordination.

Despite a dramatic fall in throughput and increasing indebtedness of enterprises, few agro-industrial enterprises have gone bankrupt and few have significantly reduced their labor force. With workers' councils having the right to select and fire managers and the state still the nominal owner and thus, eventually, obligated to bail out failing enterprises, no manager has the incentive to reduce his or her labor force or close the enterprise. In many ways, price liberalization has contributed to the worst case scenario: inefficient, oligopoly, and oligopsony enterprises pricing largely as they wish to compensate for lower output and not reducing costs. The agricultural sector cannot be healthy while it is hostage to such an uncompetitive and inefficient agro-industry.

Lessons from the Polish Experience for the Soviet Union

Several lessons are applicable to the Soviet Union, especially if consideration is given to the similarity of the macroeconomic conditions of the Soviet Union in 1990 and with those in Poland in 1989 and the beginning of 1990. In the winter of 1990, Soviet policymakers faced a similar situation as the authorities in Poland found themselves in the fall of 1989. Growth for nearly a decade had been slow or nonexistent. The macroeconomy had deteriorated, with the fiscal deficit growing from about 2 percent of GDP in 1986 to about 8 percent. Furthermore, tremendous inflationary pressures existed. Broad monetary expansion had been at a rate of nearly 15 percent from 1986 while prices had barely increased. With commodities scarce and prices fixed, this monetary expansion put pressure on the supply system for major cities. Unsatisfied demand resulted in accumulation of rubles to possibly 50 percent of GDP. This monetary overhang and the increasing budget deficit carried with it the prospects of hyperinflation. A worsening trade deficit and a growing external debt complicated the decisions that Soviet policymakers were facing. Postponement of dealing with this situation was only worsening the economy.

The lesson from the Polish experience in dealing with macroeconomic crisis is that hyperinflation under such circumstances when coupled with highly distorted relative prices will be inevitable and even desirable. In turning from a controlled economy to a market economy, relative prices must adjust on some items by more than 1,000 percent (some by 10,000 percent). Because a downward movement in relative prices and nominal wages is nearly impossible both politically and economically given the accumulated inflationary pressures, large movements in absolute and relative prices are inevitable. These movements will be dramatic but ultimately controllable as they are largely step adjustments. The trick is matching monetary and fiscal policies to the necessary price adjustment. If monetary policy is too tight, then the fall in output and rise in real interest rates will be severe, as in the case of Poland. But if fiscal policy is lax, the initial price adjustment will feed upon itself and the overshoot will be large. If the stabilization comes while prices are rigidly controlled, the accumulated inflationary pressure and the need for a relative price adjustment will still exist, waiting the final decontrol and with it the strong probability of failure of the stabilization program.

In a manner similar to the Polish authorities' pre-August 1989 action to liberalize most food prices, the Soviet's are considering whether to administratively raise prices or to liberalize them under their stabilization program. The Soviet authorities fear both the inflation and the political reaction to an uncontrolled adjustment in prices. Poland, before its liberalization of food prices, tried to administratively adjust prices upward. But with inflationary pressures already strong, this action proved to be only a temporary step while keeping the government at the political center for pressures to reverse price changes. Full-scale liberalization, both economically and politically, was inevitable.

In the Soviet Union, full-scale liberalization will also be inevitable, primarily because it will be the only way to dissipate the inflationary pressures from the monetary overhang and to get relative prices somewhat in line. The key in the Soviet case will to ensure that the budget deficit is simultaneously eliminated while monetary policy is even somewhat accommodating to the price adjustment.

Another lesson from the Polish experience is that price liberalization will not induce an agricultural supply response in itself either in the very short term or the longer term without other steps. The short-term supply response will not be forthcoming because of the uncertainty created by hyperinflation. Farmers and state farms would rather keep real assets than money (especially if it is not convertible to hard currency) in such an inflationary environment. Until the inflation subsides or is stabilized even at relatively high rates, the supply of even existing stocks will not be forthcoming. Thus, policymakers find themselves in the worst of all worlds: higher food prices without supplies to the stores. Polish authorities turned to food aid that eventually proved excessive and contributed to the collapse in farmgate prices. The key lesson is that supplies must be made available, and these need to be either stocked from domestic sources or imported. Once the back of inflation is broken and supplies do come forward, then any excess supplies must be reexported or held in storage. Food aid agreements must allow for reexport.

The longer term supply response will also not be forthcoming if the monopoly structure of agro-industry is not dismantled or deregulated. Only one solution ultimately remains: massive privatization backed with import competition. As was the case of agriculture in Poland, if subsidies to the sector are also eliminated with the liberalization, the sector will face higher input prices and an oligopsony structure on its output. These prices increase on the inputs, and the lower output prices caused by lack

of competition and elimination of subsidies will crush the sector. Reentry of the government and resubsidization will be inevitable. In the case of Poland, intervention was inevitable; the key was to design the intervention in a way that was least obtrusive and least costly.

For political sustainability, a safety net is also desirable and perhaps necessary. Poland had not much of a compensation package in place when it began the reform program. Unemployment, however, did not emerge as quickly as expected because of the ability of enterprises to avoid the budget constraints, at least in the short run. Furthermore, many Poles held cash reserves in hard currency which they could use to buffer the initial price hit on food. But, a safety net will eventually be needed as unemployment and real wage cuts become sustained. The safety net should ideally be in place before the program begins, but some slack time is built in through the lethargy of state enterprises in ridding themselves of workers and through various means of avoiding nominal wage restraints.

Finally, the state farms must be dealt with upfront but in as least disruptive a manner as possible. In the case of Poland, the government decided to avoid the issue of dismantling state farms for as long as possible. The government had no way to deal with the excess of farmworkers, especially considering that housing was not available in cities. Furthermore, the government feared that production would be disrupted and the marketed surplus would disappear. But, we know that public farming does not work. State farms must be dealt with in a manner that does not permit the excessive fragmentation of landholding. The task force on the Soviet Union made some specific recommendations that are equally applicable to Poland. The Polish authorities will need to deal with the state farm issue soon or the failure to do so could be added to the lessons from the Polish experience. The government should ideally privatize state farms in conjunction with a privatizing of industry.

References

Brooks, K., and O. Knudsen. (1991) "The Agricultural Transition in the USSR." Paper presented at the Annual Agricultural Symposium, 1991, Washington, DC.

Hinds, M. *Issues in the Introduction of Market Forces in Eastern European Socialist Economies*. EMENA Discussion Paper, Report No. IDP-0057. Washington, DC: The World Bank.

Konovalov, K. (1989) *Poland: Competitiveness of Industrial Activities, 1961-1986*. Washington, DC: The World Bank.

Konovalov, K. (1990) *An Agricultural Strategy for Poland*. Report of the Polish, European Community, and World Bank Task Force, Washington, DC.

Konovalov, K. (1991) *A Study of the Soviet Economy*. Report of the International Monetary Fund, The World Bank, Organization for Economic Cooperation and Development, and European Bank for Reconstruction and Development, Washington, DC.

Rocznik Statystyczny Przemysłu (Ministry of Statistics). (1988) Warsaw, Poland.