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DOMESTIC AND TRADE POLICY FOR CENTRAL AND EAST EUROPEAN AGRICULTURE

by

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Executive Summary:
Domestic and Trade Policy for Central and East European Agriculture

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Policy-makers with responsibility for Central and East European (CEE) agriculture face a basic choice between moving toward liberal markets, or toward the type of interventionist policies prevalent in the West. There appears to be a tendency to adopt the second approach. This is partly as a result of habits of behaviour created under socialism, the example of the West, and the belief that liberal markets would lead to the destruction of domestic agriculture. It would be unfortunate if policy-makers succumb to this tendency. Instead of adopting sector-specific commodity programs, policy should be broadly neutral to agriculture. In particular, this means avoiding commodity-specific tariffs or subsidies. To the limited extent that government budget constraints admit support for the sector, this should be given by underwriting collateral for bank loans.

Commodity programs provide producer support at excessive cost. Collateral subsidies have less serious adverse effects, and some positive effects. The "special considerations" invoked to support commodity programs are unconvincing. Commodity programs are bad policy because: they encourage unproductive lobbying which leads to greater demands on the treasury; a given level of state support creates unnecessary distortions; and the programs become capitalized into land values and are ineffective in supporting general prosperity in agriculture. The benefits of a collateral subsidy are that it: encourages the development of the banking sector, which in the long run assists agriculture; this subsidy has useful insurance properties; and it largely avoids the disadvantages of commodity programs. Among the reasons which have been advanced to support the use of commodity programs, and which we reject, are: the assertion that producers need assistance because they face monopsonistic processors; the West supports its agriculture, and CEE should follow suit in order to obtain a level playing field or to prepare for integration into the EC; and there are adjustment costs and market failures that can be remedied by government intervention.

Despite their severity, the problems within CEE agriculture are not qualitatively or quantitatively different than those in other sectors. The general economic policies needed for all sectors include, privatization, demonopolisation, removal of subsidies, open trade, and restructuring or elimination of old debt. The evidence that an ad hoc and distortionary policy is being created and entrenched in CEE, makes it worth spelling out the importance to agriculture of an alternative approach. Most of our data and discussion of specific policies refer to Hungary, Poland and (the former) Czechoslovakia (EE-3). However, the principles underlying our recommendations apply more generally to other CEE countries.

Section I provides an overview of agricultural production and consumption in EE-3. Relative to West Europe, agriculture is an important sector in the national economies, but its share in GDP and in the labour force was declining even before liberalization. There exist a

variety of forms of farm ownership across CEE, and these are correlated with size: private farms tend to be too small, and state and collective farms too large to be run efficiently. Output per hectare is low relative to West Europe, and varies widely across CEE. The per capita production and consumption levels of major food items in CEE approach and in some cases exceed Western levels. Consumers' budget share for food is very high relative to Western levels.

Section II discusses summary statistics of policies under socialism. We review evidence that distortions in OECD countries and in CEE under socialism were of similar orders of magnitude. If this is correct, it implies that the adoption of a Western-style agricultural policy might resemble a lateral movement rather than progress toward liberalization. In aggregate, it appears that consumers would be better off under free trade than under pre-liberalization policies with their explicit subsidies.

Sections III and IV review arguments against commodity programs, and suggest that support be distributed by means of the banking sector. CEE can not afford to protect its agricultural sector using Western-style policies. Attempts to do so are likely to result in wasted resources and a weaker agricultural sector.

Sections V and VI assess the importance of agriculture in CEE trade, and review current trade policies. There has been a tendency for Western markets to become increasingly important for CEE agricultural trade. The composition of CEE agricultural exports is more similar in Eastern and Western markets than is the case for general commodity trade. These last two factors tend to diminish the (considerable) damage to CEE agriculture caused by the disruption of Eastern trading relations. The Association Agreements with the EC and the recent Central European Free Trade Agreement show the extent to which agriculture is excluded from many of the benefits of liberal trade. This exclusion is in response to pressures both internal and external to CEE. Within CEE there has been a move away from liberal trade policies for agriculture during the past year.

The argument that domestic protection of CEE agriculture is a rational response to Western policies is criticized in Section VII. The notion that adoption of Western-style policies is good preparation for integration into the EC seems to be gaining popularity. In our view this is a particularly serious mistake. The argument for agricultural protection based on adjustment costs and market failures is discussed in Section VIII, and concluding comments are contained in Section IX.

Introduction

After two generations of state control, Central and East European (CEE) agriculture has been liberated to face world markets which are subject to massive governmental interference. The socialist legacy in agriculture includes: financial crisis, inappropriate scale and technology, poorly defined property rights, and unfamiliarity with market transactions. The liberalization process has added new difficulties by disrupting old intra- and international trading relations. The problems in agriculture, and the policy environment needed to improve them, are shared by other sectors.

There is no doubt that government policy will continue to affect the agricultural sector. However, there is a debate as to whether this intervention should take the form of a system of taxes, subsidies, and quotas designed to achieve specific policy objectives within the agricultural sector (e.g. certain levels of production, consumption, or trade). Throughout this paper we refer to such a collection of programs as an *agricultural policy*. The distinguishing feature of an agricultural policy is that it is sector-specific, and relies on individual programs which are commodity-specific. Most OECD nations have such agricultural policies. The alternative to these is a broad-based (as opposed to sector-specific) economic policy which attempts to promote reform and achieve growth.

There is a strong temptation in CEE to adopt an agricultural policy. This tendency stems from habits of behaviour created under socialism, the example of the West, and the belief that the alternative to an interventionist policy is laissez faire which would lead to the destruction of domestic agriculture. We think it would be unfortunate if policy-makers succumb to this temptation; instead, policy should be broadly neutral to agriculture. In particular, this means avoiding commodity-specific tariffs or subsidies. To the limited extent that government budget constraints admit support for the sector, this should be given by underwriting collateral for bank loans.

There are three parts to our argument. First, commodity programs are bad policy because: they encourage unproductive lobbying which leads to greater demands on the treasury; a given level of state support creates unnecessary distortions; and the programs become capitalized into land values and are ineffective in supporting general prosperity in agriculture. Second, the benefits of a "collateral subsidy" are that it: encourages the development of the banking sector, which in the long run assists agriculture; this subsidy has useful insurance properties; and it largely avoids the disadvantages of commodity programs. The third part to the argument consists of a rebuttal of many of the reasons that have been advanced to support the use of commodity programs within CEE. These include: the assertion that producers need assistance because they face monopsonistic processors; the West supports its agriculture, and CEE should follow suit in order to obtain a level playing field or to prepare for integration into the EC; and there are adjustment costs and market failures that can be remedied by government intervention.

Despite their severity, the problems within CEE agriculture are not qualitatively or quantitatively different than those in other sectors. The general economic policies needed for all sectors include, privatization, demonopolisation, removal of subsidies, open trade, and restructuring or elimination of old debt. CEE governments should avoid creating a sector-specific agricultural policy. Economic policy should be neutral toward agriculture, except for specific and limited goals which we describe below. The evidence that an ad hoc and distortionary policy is being created and entrenched in CEE, makes it worth spelling out the importance to agriculture of an alternative approach.

Most of our data and discussion of specific policies refer to Hungary, Poland and (the former) Czechoslovakia (EE-3). However, the principles underlying our recommendations apply more generally to other CEE countries. Section I provides an overview of agricultural production and consumption in EE-3. Section II discusses summary statistics of policies under socialism. Sections III and IV review arguments against commodity programs, and suggest an alternative. Sections V and VI assess the importance of agriculture in CEE trade, and review current trade policies. Section VII explains why Western agricultural policies do not rationalize the use of similar policies in CEE. The argument for agricultural protection based on adjustment costs and market failures is discussed in Section VIII, and concluding comments are contained in Section IX.

I. An Overview of Agricultural Production and Consumption

In order to provide a context for the discussion of policy, this section presents an overview of agricultural production and consumption in CEE. Relative to West Europe[2], agriculture is an important sector in the national economies, but its share in GDP and in the labour force was declining even before liberalization. There exist a variety of forms of farm ownership across CEE, and these are correlated with size: private farms tend to be too small, and state and collective farms too large to be run efficiently. Output per hectare is low relative to West Europe, and varies widely across CEE. The per capita production and consumption levels of major food items in CEE approach and in some cases exceed Western levels. Consumers' budget share for food is very high relative to Western levels.

There is considerable variation in the structure of ownership within CEE. In Czechoslovakia and Hungary 96 and 85 percent of the land was owned by cooperatives and state farms, whereas in Poland 76 percent was privately owned before liberalization. State (or collective) farms accounted for all land in the former Soviet Union (FSU); state farms accounted for only 30, 15 and 21 percent of the land in Czechoslovakia, Hungary, and

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[2] Reference to West Europe is made only as a convenient basis for comparison. We are not implying that West European agriculture represents a standard against which CEE agriculture should be measured.

Poland, respectively. The average private farm in Poland, at less than 6 hectares, is unable to take advantage of economies of scale. The state and collective farms across CEE are generally regarded as too large to be run efficiently.

TABLE 1

IMPORTANCE OF AGRICULTURE TO NATIONAL ECONOMY

	1985	1986	1987	1988	1989	1990
(Agriculture as Percent of GDP)						
Bulgaria	12.9	15.0	12.2	11.7	11.2	10.8
Czechoslovakia	7.5	7.5	7.1	6.9	7.1	6.8
Hungary	18.6	19.0	17.7	15.1	15.0	14.3
Poland	14.6	14.7	13.5	13.2	13.2	14.7
(Percent of Labor Force in Agricultural Production)						
Bulgaria	14.9	14.0	13.4	13.2	12.6	12.2
Czechoslovakia	11.1	10.6	10.2	10.0	9.7	9.3
Hungary	14.5	13.8	13.3	12.7	12.1	11.5
Poland	24.4	23.7	22.9	22.2	21.5	20.8

Source: FAO Production Yearbook, Various Issues.

There is evidence that the agricultural sector was declining even before liberalization. Agriculture accounted for over 14 percent of GDP in Hungary and Poland in 1990, and 7 percent in Czechoslovakia (Table 1). Between 1985 and 1990 this share declined for Bulgaria, Hungary, Poland, and Czechoslovakia. In 1990 agricultural production employed over 20 percent of the labor force in Poland, and approximately 10 percent in Czechoslovakia, Hungary and Poland.[3] In the latter three countries this share declined since 1985. By

[3] FAO statistics on agricultural employment tend to be lower than data reported elsewhere. National statistical services show Poland and Czechoslovakia's agricultural labor force as high as 28 and 15 percent, respectively. However, many workers on agricultural cooperatives and state farms are employed in services supporting the agricultural community (e.g., school teachers, social services) rather than production work. The re-classification of many positions from agricultural to non-agricultural employment in 1990 contributed to the dramatic decline in the Polish state agricultural workforce.

contrast, in EC agriculture accounts for 6.5 percent of employment and between 2 - 4 percent of GDP in 1990 (FAO, 1992; World Bank 1992). This comparison is consistent with a general tendency for the importance of agriculture to decrease as national income grows.

Output per hectare varies across CEE but is generally much lower than EC levels. Hungarian productivity, the highest in CEE, is at 87 percent of the West German level for potatoes, 90 percent for grains, and 95 percent for milk. Grain yields in Poland and Ukraine are approximately half the German levels; yields in Czechoslovakia reach 80 percent of the German levels. Potato yields range from Bulgaria's 32 percent to the Hungarian level.

The quantity, if not the quality of food consumption in CEE, was close to that of much richer economies, but consumers spent a large proportion of their income on food. Meat consumption at the time of the transition in CEE rivaled or exceeded the Western European levels. Following liberalization, the consumer budget shares for food increased from under 40 percent to over 50 percent in Czechoslovakia and Poland; in contrast, the budget share for food in Eastern Germany dropped by nearly 10 percent in the first year of price liberalization. In Western Europe, the consumers' budget share for food is approximately 20 percent (Hallberg, 1992).

II. Agricultural Policies Under Socialism

Pre-reform agricultural policies are of more than historical interest. Measures of subsidies under socialism suggest the magnitude of the policy shift implied by adoption of a liberal regime. This has direct bearing on the central policy debate. Proponents of an agricultural policy (as we have defined the term) believe that liberal policies would devastate the sector. In their view, commodity programs represent a compromise between excessive intervention under socialism and neglect under the free market. However, there is evidence that distortions in OECD countries and in CEE under socialism were of similar orders of magnitude. If this is correct, it implies that the adoption of a Western-style agricultural policy might resemble a lateral movement rather than progress.

Despite a number of shortcomings[4], the most useful summary statistics of producer and consumer subsidies/taxes are the Producer Subsidy Equivalent (PSE) and the Consumer Subsidy Equivalent (CSE). These aggregate all types of intervention into a single measure. For example, a wheat PSE of 30 (percent) means that aggregate government transfers to wheat producers increase revenue from wheat sales by 30%. Table 2 presents the PSEs for CEE and the EC and US for comparison. Aggregate PSE and CSE measures are weighted averages, with weights being the share of value of the commodities. There are three import characteristics of PSE and CSE data for CEE and OECD.

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[4] The main problems with these statistics are discussed in Karp and Stefanou (1993b)

TABLE 2

PRODUCER SUBSIDY EQUIVALENTS, 1989

	Barley	Beef & Veal	Corn	Eggs	Milk	Poultry	Pork	Oil-seed[a]	Sugar Beet	Wheat	Ag-gregate
Czecho-slovakia	-30	77	-3	22	5	n.a.	38	-45	-9	-22	20
Hungary	-18	53	-26	1	25	10	-3	-75	-25	-14	-3
Poland	51	3	n.a.	65	-7	31	4	-1	-21	42	2
USSR	n.a.	32	56	n.a.	1	46	20	-16	55	-31	21
EC	34	55	40	16	59	26	6	60	49	27	41
US	-	32	30	8	55	10	7	9	43	25	28

Sources: Europe Branch, ATAD/ERS, U. S. Department of Agriculture. OECD, Tables of Producer Subsidy Equivalents and Consumer Subsidy Equivalents, 1979-1990, Paris 1991; Liefert et al., Table 1; USSR PSE levels are for 1986.

n.a. = not available

[a] Rapeseed is reported for Oilseed for Czechoslovakia, Hungary and Poland.

First, the aggregate producer subsidies in CEE were no higher than those in the West; for many commodities CEE producers received low subsidies. By this measure at least, agricultural policies in the West were as distortionary as those in CEE. This data indicates that aggregate support for agricultural producers in CEE and the USSR was lower than in the EC and US. The aggregate statistics disguise considerable cross-commodity variation. At the aggregate level, Hungarian agricultural producers were taxed in 1989, but support to Hungarian beef and veal production is as high and higher than the EC and US, respectively. Sugar and rapeseed production were taxed in CEE as was Czechoslovakian and Hungarian grain production. (Hungary currently subsidizes grain exports.) In contrast, the EC and US taxed none of the agricultural products identified in Table 2. The taxation of Polish producers began recently. Between 1983-1988, milk was the only commodity that was taxed. The taxation of Czechoslovakian and Hungarian producers in 1989 follows the pattern for the 1980s, when grain and rapeseed producers were taxed and meat producers were subsidized.

Second, data (not shown here) indicates that income support policies dominated price supports in CEE until the late 1980s. Income policies tend to be less distortionary than price policies, since the former have a smaller effect on production decisions. Western nations rely more heavily on price policies, and are attempting to replace these by income policies.

Occasionally in Czechoslovakia (1985-86, 1988) and Hungary (1985) price policies taxed producers, but these were overwhelmed by the subsidizing effect of income support programs. The income support component was always positive and, for Czechoslovakia and Hungary, exceeded the effect of price policies during most of 1983-91. Polish income support matched or exceeded price supports in the aggregate between 1985-87 and 1989. From 1988-1991 price interventions taxed producers. The level of support from income subsidies decreased, so that the net effect was a producer tax. Data for the USSR in 1986 suggests that income support programs in that country provided slightly more than half of a PSE of 21 percent (Liefert et al.).

Third, data on CSEs imply that despite large nominal subsidies, on balance consumers were implicitly taxed in 1989 by the inability to trade at world prices (Table 3). Hungary had the lowest aggregate tax (1 percent) and Poland the largest (35 percent). All three CEE countries taxed consumption of beef, butter and vegetable oil and subsidized consumption of poultry. The FSU (in 1986) taxed only the consumption of poultry and subsidized consumption of the other selected food products and food consumption in aggregate. In aggregate, Polish consumers were taxed at the same level as EC consumers, while Czechoslovak consumers were taxed at the level of U.S. consumers. The use of an overvalued exchange rate in calculating CSEs would exaggerate the extent of the consumer tax (understate the subsidy), whereas failing to account for the fact that demand was constrained by quotas underestimates the extent of the tax.

TABLE 3

CONSUMER SUBSIDY EQUIVALENTS, 1989

	Wheat	Pork	Beef & Veal	Chicken	Milk	Butter	Veg. Oil	Aggregate
Czechoslovakia	3	-36	-15	5	79	-37	-59	-16
Hungary	-9	-14	-2	0	-22	-15	-36	-1
Poland	-9	35	-45	2	-54	n.a.	-49	-35
USSR (1986)	66	2	82	-28	29	58	110	32
EC	-18	-12	-49	-29	-49	0	0	-34
US	-1	1	-25	0	-45	0	0	-16

Source: Europe Branch, Agricultural Trade Analysis Division, ERS, USDA.

The CSE data may appear to contradict the conventional view that food consumption was subsidized and that the removal of these subsidies would lead to falling consumption. This view is based on the fact that consumption subsidies were a significant part of government budgets prior to the reform. However, these subsidies reflect the difference between consumer prices and production costs, whereas the CSEs involve a comparison between domestic consumer prices and world prices. Therefore the CSE data is consistent with large budgetary outlays for consumption subsidies. The CSE data implies that the removal of consumer subsidies and the ability to trade at world prices would be likely to benefit consumers.

This data suggests that a transition from socialist policies to liberal policies in CEE, and the removal of illiberal agricultural policies in the West, would represent changes of similar orders of magnitude. As with any summary statistic, the PSEs and CSEs miss a host of subtleties, so it is dangerous to draw broad conclusions from them. In particular, government intervention in agriculture was far more pervasive in CEE than in the West, and this might appear to suggest that liberalization would require a much greater change in the former region. This is a plausible interpretation. On the other hand, the complicated nature of socialist intervention meant that much of it was probably contradictory and self-canceling, and much of it led to pure waste (rather than simply inefficient transfers).

There is an emerging consensus in the West that commodity programs should be phased out and replaced by less distortionary ways of supporting the agricultural sector. At the same time there is support in some circles for introducing an agricultural policy based on commodity programs into CEE. If that advice were followed, and CEE policy came to resemble current policy in the West, then the evidence we have presented above suggests that CEE would have failed to achieve substantial liberalization. The current state of flux in CEE probably does not make reform less painful, but it makes reform more possible. It would be a wasted opportunity if CEE imitates the failures of Western policy. Following sections discuss the disadvantages of such policy, and suggest an alternative.

III. General Arguments for Policy Neutrality

There are political and economic arguments in favour of policy neutrality. The political arguments are based on the belief that sector-specific policies encourage lobbying which leads to a higher level of intervention. The economic arguments are that sector-specific policies tend to be ad hoc, inflexible, and involve unnecessary distortions.

Producers are encouraged to lobby for tariffs, subsidies, or other measures which affect individual commodities, if the political climate tolerates these policies. The incentives to attempt to increase protection of a single commodity are much reduced when this requires an increase in the general level of protection. This requirement makes the free-rider problem more severe. Individual producers still benefit from protection whether or not they contribute to the lobbying effort, but withholding their contribution is less likely to affect the success of

the effort. In addition, the interests arrayed against a general increase in protection are likely to be more powerful than those that oppose the protection of a single commodity. For both of these reasons, a policy environment that treats different sectors neutrally is likely to generate less political pressure for distortions.

The adoption of sector-specific policies spawns a group of officials who are interested in their perpetuation. Since old policies seldom die but are simply buried under new policies, regulations become ever more complex; the undesirable consequences of old policies create arguments for the adoption of new ones. Understanding these well enough to execute them requires specialized knowledge. The value of this human capital would be wiped out if transparent policies were adopted. There is a natural allegiance between producers in a sector and the public servants who oversee sectoral policies, and their interests are not always compatible with those of the general public.

The political basis for the objection to sectoral policies is that their adoption increases the general level of protection, and does so using complex and arbitrary schemes. However, commitment to uniform policies has the obvious cost of decreasing flexibility. It is necessary to decide how important this flexibility is likely to be for CEE agriculture.

If the major distortions in an economy are policy-induced (e.g., caused by tariffs or subsidies), there is a presumption that harmonization, which represents the movement away from sectoral policies, improves efficiency. If all policies are tariffs and goods are net substitutes in production and consumption, then greater uniformity of tariff levels increases welfare. A movement toward a more uniform tariff structure is not necessarily welfare improving if some goods are not net substitutes or if policies other than tariffs (e.g. commodity-specific subsidies) are used. However, in such cases there are no general results for the design of welfare improving policy reform. Certainly there is no presumption that lack of uniformity is beneficial. Therefore, the simple case where the important distortions are policy-induced provides no support for the adoption of sectoral policies. We have to turn to other types of distortions to look for such support.

CEE agriculture under socialism was explicitly subsidized, but the agricultural sector was disadvantaged in many important ways: it confronted monopolized and inefficient processors-distributors; it received low quality inputs; and producers had little training in how to make decisions in a market environment. The explicit subsidies could be, and in many cases were, eliminated with the stroke of a pen. With flexible prices, the terms of trade turned against agriculture rapidly. For example, a ratio of indices of (output) prices received by Polish farmers and (input) prices paid by them fell from 118 in 1988 to 50 in 1990, and then rose to 75 in 1991 (Agra Europe, February 1993).

It is widely reported that liberalization also left producers more vulnerable to monopsonistic processors, who were no longer constrained by the state to fixed wholesale price mark-ups and profitability levels. There is some statistical evidence for this view. In the first half of 1991, following liberalization in January, profits in the Czechoslovak food

processing sector increased by 245 percent over the previous year. During the same period agricultural producers experienced losses (Slovak Ministry of Agriculture and Nutrition, 1992). A year after the January 1990 liberalization in Poland, the ratio of retail/procurement price had actually fallen for most commodities; however, by the end of 1991 they exceeded the 1990 levels. This suggests that retailers increased their markup, although not immediately. Table 4, reproduced from Kwiecinski (1992), compares Polish and West German retail/procurement price ratios. For most commodities, the markups in Poland were significantly higher than in Germany. This, together with the presumption that there is less value added in the Polish processing sector, is additional evidence of monopsony power.

TABLE 4

RETAIL/PROCUREMENT PRICE RATIOS FOR SELECTED FOOD AND AGRICULTURAL PRODUCTS IN POLAND AND WEST GERMANY (in percent)

Retail Product/ Primary Product	January-March 1990		January-March 1991		June-August 1991	
	Poland	W. Germany	Poland	West Germany	Poland	West Germany
Cooked Hams/Pigs	573	928	566	971	746	927
Beef/Cattle	306	344	298	454	335	428
Milk/Milk	217	206	212	217	257	225
Butter/Milk	1786	1391	2139	1389	1760	1428
Wheat Flour/Wheat	401	341	395	347	437	341

Source: Kwiecinski, 1992, Table 2.

Processors' market power and other features which place the production sector at a disadvantage could not be altered by government fiat. Activities which may be viable in the long run, as these problems are corrected, are not profitable in the short-run. This provides a rationale, similar to the infant industry argument, for short term protection of the sector. Of course, the same types of problems plague other sectors of the economy in which the state played a leading role, so it is not clear that agriculture has a greater claim on public resources. Demonopolisation is certainly an important objective, in the agricultural processing sector as elsewhere. Producer price support policies are more likely to retard than to advance this goal, since state support for a sector which is exploited by downstream monopsonists may be largely captured by the monopsonist.

Proponents of adjustment assistance may believe that liberalization has led to a widespread and excessive exodus of resources, or that the process encourages the wrong people to leave the sector. In a later subsection we discuss the policy prescription for the first case where the exodus is unselective. Here we consider the second situation, which may be appear to describe Poland. There a large number of small, private, subsistence farms co-existed with large state farms which purchased inputs and relied on off-farm sales. By virtue of their lower degree of self-sufficiency, the state farms are more vulnerable to market reforms which cause a deterioration of their terms of trade. These are also the farms that are more likely to adopt modern technology and an appropriate scale of production. It appears that the individuals and organizations that should be encouraged to remain in the sector are the most likely to be driven from it.

Even if this conjecture is correct, a policy that affects all producers in a sub-sector (such as a producer subsidy for milk) is the wrong response. Such a policy is likely to be too expensive, either in terms of government revenue or cost to consumers, to undertake on a scale large enough to keep the most vulnerable (and by assumption those with the most potential) in the sector. The primary effect of a more modest subsidy is to entrench the position of the small and inefficient producers. Also, it may be socially desirable for the most efficient farmers to leave the sector. The opportunity cost of the small proprietors remaining in agriculture is probably very low. They may have a comparative advantage in agriculture, relative to the more efficient producers even though the latter have an absolute advantage. Finally, it is not clear that the conjectured response of producers is actually occurring. In general, there has not been the sharp drop in production that would be associated with a departure of the most efficient producers. For a particular example, the changing size distribution of Polish dairy and pork producers appears to involve a decrease in the shares of both the largest and smallest units (Karp and Stefanou, 1993a).

IV. Agricultural Banking Instead of Commodity Programs

The view that recent reform puts at greatest risk the most efficient units in agricultural underscores the need for modernization of the banking sector. In common with enterprises throughout the economy, state farms in CEE inherited debt which bears little relation to their economic potential. This debt reflects a sunk cost; the cost of servicing the debt should not enter calculations of the economic viability of an enterprise. The uncertainty of whether, or to what extent, the debt will be forgiven, also makes enterprises less attractive to buyers and hinders the process of privatization. The resolution of this issue, which in many cases will require banks to write off debt, will weaken banks and lead to heavy demands on the state treasury. These needs should have priority over price support measures.

In Western countries agriculture relies more heavily on debt than equity financing, possibly because moral hazard and adverse selection problems tend to be severe in that sector. This suggests that agriculture is among the sectors more seriously disadvantaged by the

embryonic stage of the CEE banking sector. Reforms needed to develop banking are occurring. An example of this is the reform of Polish collateral law (IRIS Update 1992). Under previous law, inventory which in the normal course of events was sold, could not be used for collateral. The reform makes it possible to use stocks as collateral, and also clarifies and strengthens the creditor's right to seize collateral in the event of non-payment. Reforms of this sort are a prerequisite of an efficient credit market.

Where state resources are available to support the agricultural sector, these should be distributed through banks rather than direct price subsidies. In the 1993 Polish agricultural budget, however, the amount allocated to "servicing agricultural credits" is approximately equal to the amount spent of fuel subsidies, about a quarter of the total budget (Agra Europe, 1993).

Price supports reduce credit risks, but they are an indirect and expensive means of promoting agricultural banking. Subsidizing producers via the banking sector fosters an institution that is necessary to the long run health of agriculture. This form of subsidy does not distort the relative costs of purchased inputs and consequently leads to more efficient production. It also makes it more likely that state aid will reach efficient producers, since the banks care about the probability of repayment of loans. Where producers are heterogenous, with some largely self-sufficient and others reliant on market transactions (e.g. Poland), the latter group will be better placed to apply for loans. In 1991 State farms in Poland had more than twice the amount of bank debt of private farms.

Agricultural support that is offered in the form of a credit subsidy should be for financing operating costs or new investment, rather than for the purchase of land. We return to this point below. The question remains whether such aid should come in the form of an interest rate subsidy or a collateral subsidy (by which we mean that a government guarantee provides a partial substitute for a borrower's collateral). Either form of intervention affects both the equilibrium interest rate and collateral requirement that farmers face, since these are jointly determined. In special cases, the two policy instruments are equivalent, but in general the effects of the policies will differ.

It seems likely that an interest rate subsidy, for example, would have a greater effect on the equilibrium interest rate than would a collateral subsidy which carries the same expected cost to the government treasury. If this assumption is accepted, it provides a basis for comparing the two types of policies. The interest rate subsidy is more common; it has been widely used in developing countries. However, for several reasons we think that a collateral subsidy is the better option. The difficulty of obtaining any credit seems a more acute problem than the high cost of credit, and a collateral subsidy provides a more direct way to deal with this. For efficiency reasons producers should pay (approximately) the social cost of capital at least in some states of nature. However, in view of the absence of private insurance markets, it may be desirable to insure them through social policy in bad states of nature (a fall in prices or poor harvest). These two considerations imply that the interest rate farmers face should be close to the competitive rate, but that credit should be possible to obtain and

default should not lead to ruin. This suggests using collateral subsidies, which provide a substitute for insurance. In addition, it is easier to design incentives for banks to make appropriate loans when collateral subsidies rather than interest rate subsidies are used.[5]

Collateral subsidies have important similarities with, but are superior to, a more common method of providing insurance: government supported price floors. That policy offers insurance against price but not output risk, and thus provides limited protection against income risk. Also, minimum price programs are commodity-specific; collateral subsidies, on the other hand, provide implicit insurance for whatever activity (crop or livestock) the farmer undertakes, and therefore have less tendency to distort the choice of activity. Minimum price programs often cover all producers and do not set limits on quantity. This lack of selectivity makes the programs a very expensive way to provide insurance.

Some policies used in the West share features price support and loan subsidy prgrams. The US loan rate program allows producers to pledge a certain quantity of their harvest as collateral for a loan. The producer is forgiven the loan and forfeits his collateral if its value at harvest is less than the loan. "Set aside" requirements (obligations to idle a certain amount of land) limit the quantity that can be borrowed in this manner. By fixing the loan rate, the government sets a price floor, and by choosing the set aside requirement the government affects the quantity that is protected by the floor. If the loan rate is higher than the expected price, the government effectively values the collateral more highly than the market, and the program resembles a collateral subsidy. However, there are the important differences already mentioned. As a minimum price policy, the loan rate program provides price rather than income insurance, it is crop specific and therefore distorts the choice of activities, and it does not discriminate across individuals on the basis of efficiency.

In addition, there are political and institutional reasons for thinking that collateral subsidies are preferable to price floors. The latter require direct and obvious government involvement. Collateral subsidies use banks to mediate government intervention. In the process of supporting agriculture, collateral subsidies also promote the growth of banking, a sector that is crucial to agriculture. The absence of direct government-producer interaction, and the lack of identification with specific commodities, means that collateral subsidies should have a smaller tendency to generate powerful interest groups. A phased reduction of the total subsidy to agricultural banks may be simpler to achieve than the piecemeal reform of many commodity-specific policies.

One of the drawbacks of agricultural programs is that they become capitalized in land values. The expectation that current support programs will continue, increases the price of

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[5] Mexico provides a prominent example where collateral subsidies were used, and with unfortunate results. The failure resulted from the poor design of the program, in which the government collateral completely replaced private collateral, and the banks had no incentive to collect loan payments.

agricultural assets, chiefly land. This increase in wealth of current landowners is realized when the land is sold. The additional farm revenue resulting from the agricultural programs is paid to the new owner, but this largely compensates for the higher operating costs due to the higher debt needed to pay for the more expensive land. The programs are not an efficient way to increase net income. The agricultural program which is intended to bolster farm income is transformed into a windfall for the original owner. Subsequent owners have (to some extent) already paid for the continuation of the programs, although they have not, of course, paid those who bear the cost of the programs: the taxpayer and consumer. This implicit "prepayment" makes farmers feel justified in demanding the continuation of the programs; banks, who hold the debt, support them. The government can abandon a policy that is largely unsuccessful in raising net farm income, and risk a financial crisis. It can continue or increase the level of support, allowing current owners to remain solvent or receive capital gains, but exacerbating the problem for the next generation of farmers and policy-makers. Finally, it can buy off current owners by exchanging lump sum transfers for price policies.

The problem of capitalization of benefits plagues farm programs in the EC, the US, and Japan. CEE has the opportunity to avoid this outcome by rejecting the type of agricultural policy found in those countries. Now is the right time to adopt this approach, since reform will probably be more difficult in the future. A critical stage of CEE agricultural transformation is privatization, which is complicated by the uncertain policy environment. Land markets are thin, and there is great uncertainty about the value of land. In Poland, for example, the real price of land of former state farms fell by nearly 50 per cent in 1992, and less than 10 per cent of the amount put on the market was sold (Agra Europe 1993). It is important that land prices reflect individuals' expectations about the productivity of land, and the value of output in world markets. Land prices should not reflect producer optimism about government support. Given the state of world agricultural markets, this means that land prices would be low in comparison to similar land in the West.

Low land values are unattractive to those with claims on the land: the state, workers and managers in agricultural enterprises who are eligible to obtains shares at a discount, and those with restitution claims. The latter two groups of claimants have no basis for expecting the state to increase the value of their assets. Increased state revenue from land sales in which prices are inflated by the expectation of future government largesse, merely represents an extremely inefficient way of public borrowing.

The willingness to let land prices settle at a low level raises two policy problems. The first, already alluded to, is that it weakens the balance books of banks which hold these assets as collateral. However, this is part of the general reorganization required of banks, a process which will involve writing-off much old debt. If collateral subsidies were offered for debt used to acquire land, this would be a means of subsidizing land prices, and therefore would provide a transfer to current owners. Since scarce public revenue should not be devoted to this goal, we recommended that credit subsidies be for short and medium term debt, i.e. to cover operating costs and new investment rather than the purchase of land.

The second policy problem is that low land prices increase the attraction of speculative purchases for Western buyers. Although the economic argument for blocking foreign purchases is ambiguous, political considerations may be paramount here. The amount of foreign revenue that could be generated from land sales is probably small, but the political cost of appearing to sell the nation's birthright for a pittance would be substantial. Moreover, if such purchases are mainly for speculative reasons, there is a greater chance that the land would be left idle. In this case, the sales would decrease agricultural employment and investment. The same considerations do not apply to industrial assets, which include the agricultural processing and distribution industries. Possibilities for speculative gains also exists with industrial assets, but because of their rapid depreciation when unused, such purchases are made with the intention of additional investment and continued operation. Investors do not buy factories with the intention of closing them down for ten years until the market improves. Therefore, restrictions on foreign land purchases are sensible.

To summarize, our main point is that CEE should avoid an agricultural policy that relies on a web of subsidies and quantity restrictions. In so far as government budget constraints are consistent with aid to agriculture, it should be given through the banking sector. This method of transfer avoids some of the greatest drawbacks of agricultural policy, preserves many of the useful effects of such policy, and promotes the growth of a sector vital to agriculture. In situations where interest rate and collateral subsidies are not equivalent, we have explained why collateral subsidies appear preferable. Such subsidies should be concentrated on short and medium term debt, so that they have the characteristic of income support programs and investment subsidies, rather than long term debt, where they would support land prices. There is, of course, the danger that the expectation of such subsidies in the future would be capitalized into land prices. However, this form of government support is mediated by a neutral institution whose interest is served by efficient allocation of the aid. It is not tied to specific commodities, so it discourages the formation of producer groups; and it would be available only after satisfaction of standard criteria for loans, rather than as a matter of right. These features give the program the character of a temporary measure. They enhance flexibility, making it easier to change the amount of aid or the criteria for receiving it. Consequently there is a smaller likelihood of the program having the perverse effects which have resulted from agricultural policy in many Western countries.

There are two practical objections to using banks rather than commodity programs to support CEE agriculture. The first is the logistical problem stemming from the early stage of development of CEE banking. If the government's objective was to transfer a large amount of resources to the agricultural sector, a weak banking sector would be a bottleneck. The clumsier but quicker method of price support policies and subsidies might be defensible. However, CEE governments are not in a position to make large transfers to agriculture. Since the transfers will necessarily be small, they must be made carefully and with a view to the long term. Also, the logistical problems can be overstated. Initially, the loan application can be made very rudimentary without completely eliminating its role as a screening device. Any form of government intervention requires administrative costs, which might as well take the form of training future bankers rather than government officials.

The second objection is that providing support via banks appears to increase opportunities for corruption. This view stems from the fact that under commodity programs, government support is conditioned on variables that can be relatively easily observed (output or inputs). A loan contract personalizes the transfer, which raises the possibility that bankers will be able to extract bribes from borrowers. If this happened the program would be an inefficient way to support producers. However, this comparison may understate the potential for corruption under commodity programs, and overstate the potential with credit programs. There have been reports of corruption under CAP programs, e.g., involving the production of substandard wine for intervention stocks. Discouraging corruption requires a strong administrative structure under either commodity of credit programs. With many banks offering services under similar circumstances it is possible to use "yardstick competition" to monitor bankers. The performance of various banks can be compared, making it easier to detect corruption. A low ratio of program loans to program costs for a particular bank signals that the bank has either used poor judgement or been corrupt in allocating the subsidies.

This problem of asymmetric information between bankers and the government is an additional reason for preferring collateral subsidies to interest rate subsidies. Under the latter, there is a fixed relation between the total government cost of the subsidy and the amount of money lent, making it impossible to determine whether deserving applicants received the loans. With a collateral subsidy, on the other hand, the government incurs a cost only when the loan is not repaid. This makes the relation between the amount of government money paid to a particular bank, and the amount of loans made by that bank under the program, a random variable. The bank is able to improve the ratio of program loans to government costs by choosing good applicants. By conditioning the banker's reward on this ratio, the government is able to decrease the banker's temptation to behave corruptly.

V. Agriculture and Trade

As a background for discussing the role of current trade policy, we provide an overview of CEE agricultural trade during the 1980s. This trade is important, but to varying degrees for CEE countries. There has been a tendency for Western markets to become increasingly important for CEE agricultural trade. The composition of CEE agricultural exports is more similar in Eastern and Western markets than is the case for general commodity trade. These last two factors tend to diminish the (considerable) damage to CEE agriculture caused by the disruption of Eastern trading relations.

Agricultural exports as a percentage of total CEE exports increased in 1990 over the 1987-89 level while the share of imports decreased (Table 5). Within CEE and FSU, agriculture as a share of total exports are largest for Hungary, and smallest for FSU and Czechoslovakia. Agriculture as a share of total imports are largest for FSU; they are also important for Czechoslovakia and Poland, but much smaller for Bulgaria and Hungary.

TABLE 5

AGRICULTURAL TRADE AS PERCENTAGE OF TOTAL TRADE

	1987-1989	1990
IMPORTS		
Bulgaria	7.1	6.9
Hungary	8.8	8.5
Poland	14.3	13.2
Czechoslovakia	14.3	12.0
USSR	17.3	16.2
EXPORTS		
Bulgaria	10.5	12.1
Hungary	21.3	24.3
Poland	10.0	14.6
Czechoslovakia	4.9	6.2
USSR	2.7	2.3

Source: UN, ECE, Agricultural Review for Europe No. 34, Vol. I, 1992.

The economic liberalization in CEE coincided with the dissolution of the eastern-bloc trading area, CMEA, leading to the interruption of the traditional trading relationships within CEE and between CEE and FSU. This reinforced a tendency, which had already been apparent, of increased importance of Western agricultural trade. Barter exchanges between CEE and FSU republics have been widely reported but are difficult to quantify. Combined CEE and FSU agricultural exports to Western Europe exceeded imports in 1990 (Table 6). Bulgaria, Hungary, Poland, and Czechoslovakia ran trade surpluses, while the FSU, Romania and Albania ran deficits with the EC and other European nations.

With 17 percent of total FSU imports consisting of agricultural products during the 80's, the FSU was a major market for CEE products. CEE had large market shares of FSU imports of eggs, vegetables, and fruit. It had a small market share for cereal, the single most important agricultural import for FSU (25 percent of their total). FSU grain imports increased at an annual rate of 3.7 percent between 1986-90, but grain imports from North America increased at an annual rate of 9 percent, and in 1988 - 90 accounted for two-thirds of the market. France, the major EC grain exporter, supplied 10 percent of the FSU grain imports by the late 1980s. Hungary, the dominant CEE exporter, lost market share over the decade, and had less than 3 percent of the FSU market by 1990.

TABLE 6

BALANCE OF TRADE OF WESTERN EUROPE
FROM CENTRAL AND EASTERN EUROPE COUNTRIES IN 1990

(millions of 1990 $US)

	Albania	Bulgaria	Hungary	Poland	Romania	CS	USSR	Total
EC	-20	76	808	692	-311	33	-946	332
EFTA	12	72	188	-21	-4	8	-140	115
Others	-19	8	249	211	-30	25	-179	265
Total	-27	156	1245	882	-345	66	-1265	712

Source: UN,ECE, Agricultural Review for Europe, No. 34, Vol II.
(A positive entry indicates that the country at the top of the table had a surplus with the region on the left of the table.)

Hungary has maintained a positive agricultural trade balance with CEE, Western Europe, and in aggregate. The FSU and Western Europe account for 30 and 50 percent of Hungarian agricultural exports, respectively, in 1989-90. In the mid-1980s Hungarian agricultural exports to CEE and FSU exceeded exports to Western Europe, but this was reversed by 1987. The increased importance of the West relative to the East is due to increasing meat and dairy exports to Western Europe and decreasing cereal exports to CEE and FSU.

Poland's agricultural trade balance fluctuated over 1985-90, but except for 1990, remained small (in comparison, say, to Hungary's balance). Poland maintained a positive balance with both Western Europe and the East over 1987-90. Over the last two years of the decade, exports to Western Europe were more than ten times as large as exports to the USSR.

Czechoslovakia was a net agricultural importer from formerly planned economies between 1980-90 but became a net exporter in 1991. Agricultural exports to formerly planned economies accounted for over 30 percent of all agricultural exports from 1980-88. Agricultural imports from these economies accounted for approximately 65 percent of all agricultural imports in the mid-1980s but dropped by more than half during 1989-91.

The composition of exports between the CEE's trading partners in the formerly planned and market economies can be summarized by an "index of similarity". The index is defined as $1 - \Sigma_i(\sigma_i^e - \sigma_i^w)^2$ where σ_i^e and σ_i^w denote the shares of commodity i in total (agricultural) exports to the East (formerly planned economies) and West (all market-oriented economies), respectively. The index ranges from 0 to 1, with a value of 1 indicating that the composition of exports is the same for both regions, and a value of 0 indicating that exports are completely dissimilar.

Rodrik (1992a) calculates this index for total exports (including agriculture). He interprets an increase in the index as a positive sign of adjustment, since it implies that markets are being found in the West for commodities which can no longer be sold in the East. However, there is no reason to suppose that in the long run the composition of exports will or should be the same for the two regions. An increase in the index may simply mean that following the loss of markets in the East, CEE economies are failing to make the changes necessary to take advantage of trade with the West. Although the interpretation of a change in the index is ambiguous, its level is still interesting. Other things being equal, a larger value implies that the loss of markets in one region should cause fewer adjustment problems, since similar products are being sold in other markets.

Table 7 reproduces Rodrik's indices for total exports and presents indices for agricultural exports. The most striking result is that for Czechoslovakia and Hungary, there is greater similarity between the composition of agricultural exports to the East and West, than is the case for exports in general. (We were unable to construct the index for Poland.) This suggests that there is no reason to single out agriculture as one of the sectors which has been most severely hurt by the disintegration of FSU and the resulting loss of markets. Of course, there are other factors which point to a different conclusion. The most important of these is that in Western markets there are more import restrictions for agriculture than for manufacturing in general.

TABLE 7

CHANGING COMPOSITION OF EXPORTS IN CEE

	1980	1985	1986	1987	1988	1989	1990	1991
	Agricultural Exports							
Czechoslovakia	.988	.962	--	.981	.991	.910	.966	.981
Hungary	--	.799	.880	.926	.879	.803	.898	
	Total Exports							
Czechoslovakia	.794	.700	--	.760	.706	.803	.835	.956
Hungary*	--	--	.856	--	--	--	.832	--
Poland*	--	--	.755	--	--	--	.716	--

*Indices reported in Rodrik (1992a).

Sources: Facts on Czechoslovak Foreign Trade, 1989 and 1990; Statisticke Prehledy (Monthly Statistics of Czechoslovakia), Federal Statistical Office, June 1992, Table 28; FAO Trade Yearbook, 1990; UN, ECE, Agricultural Review for Europe, No. 34, Vol. II, Tables XXVI, XXVII.

VI. Current Trade Policy and Agriculture

Although a liberal trade policy does not guarantee a rational agricultural policy, the type of agricultural policy found in many Western countries does rely on trade protection. The potential advantages of liberal trade are widely recognized: it allows consumers access to low cost and high quality goods; it encourages efficient allocation of productive resources; it disciplines domestic monopolists; it fosters progress by promoting the spread of new technology. To these four benefits, there is the added fifth benefit that a commitment to liberal trade makes it impossible to contemplate a Western-style agricultural policy.

Agriculture will not enjoy the full benefits of an anticipated general liberalization in trade. In the case of the Association Agreements with the EC, the special treatment of agriculture was imposed on CEE from the outside. Tangerman (1992) estimates the short term effect of the EC Association Agreements on agricultural trade for EE-3. He calculates the value to these countries of the agreements as the product of the "preference margin" (the difference between the MFN levies and the levies under the Association Agreements) and exports to the EC of various commodities. The level of exports is taken as the import quota where this exists, and in other cases is the 1990 level of exports. The calculated value of the Agreements, as a percentage of the value of total agricultural exports to the EC in 1990, is in the region of 3% - 5% in 1992. Since the quotas are scheduled to increase over time, this value should also increase. By 1996 it reaches 7% for Poland, 14% for Hungary, and 22% for CSFR.

Tangerman notes that these estimates exaggerate the probable benefits to EE-3 for two reasons. First, the numbers above involve the potential rent resulting from the Agreements, but a substantial percentage of that may be captured by the distributors in the EC rather than exporters in EE-3. Second, the calculations are based on EC support policies prior to the announced CAP reform of May 1992. That reform will reduce EC prices, causing the value of the preference margin to fall; this could reduce by more than half the value of preferential access. Thus, it seems unlikely that the Association Agreements will provide a major impetus to CEE agricultural development.

The Association Agreement shows the strength of protectionism outside CEE. The December 1992 agreement on the Central European Free Trade Area, comprising Poland, Hungary, Slovakia, and the Czech Republic, demonstrates the strength of protectionist tendencies within CEE. The agreement exempts agriculture, allowing the signatories the right to protect their domestic agriculture. Tariffs will be reduced for certain agricultural products, but quantitative restrictions and other domestic policies will remain.

Current CEE agricultural trade policy is described as an attempt to strike a balance which provides the benefits of liberal trade while still protecting domestic producers (Csaki and Varga, 1992). During the beginning of the transition, the EE-3 were remarkable for their freedom from trade restraints. For example, the average import tariff on agricultural and food products in Czechoslovakia in 1991 was 5 percent (Czech Ministry of Agriculture, 1992).

Pressure from domestic importers led to the adoption greater protection in 1992. Table 8 shows tariff rates for EE-3. Processors, rather than primary producers, are likely to be the major beneficiaries of this protection.

Czechoslovakia, Hungary and Poland have also subsidized agricultural exports. Czechoslovakia and Poland subsidized exports of grain and livestock to FSU in 1991 and 1992 (Czech Ministry of Agriculture, World Economic Research Institute). Hungary has maintained a long-standing policy of subsidizing exports; nearly 80 percent of the 1993 Hungarian agricultural budget is allocated to measures such as export subsidies (Agra Europe 1993). The 80 percent growth of Hungarian agricultural output between 1960 and 1990 was largely achieved by subsidies and state trading which insulated Hungary from world prices. Hungarian export subsidies amounted to 12 percent of the value of agricultural exports in 1991 and are estimated to be 13 percent in 1992 (FAS, USDA and PlanEcon). Livestock and meat products are the most heavily supported, ranging from 20-30 percent of Hungarian agricultural export receipts in 1992 (USDA, FAS, 1992). Hungary's agricultural export success in the last decade may come to haunt it as the necessary restructuring to achieve competitiveness is postponed in favor of maintaining current export earnings.

TABLE 8

SELECTED CEE AGRICULTURAL IMPORT DUTIES, 1992 (in percent)

	Czechoslovakia	Hungary	Poland
Live Beef and Pork	25-30	0	35-40
Meat Products	30	15-20	30
Butter	30	60	40
Milk and Cream	30	30	35
Eggs	n.a.	30	25
Sugar	60	0	40

Sources: Kabat (1993), Tomczak (1992), FAS/USDA.

The brief period of liberal agricultural trade following reform is in danger of being replaced by a protectionist policy typical of developed economies. The optimal staging of reform in general, and the role of trade liberalization in particular, have recently been discussed by Dornbusch (1992), Falvey and Kim (1992), and Rodrik (1992b) among others.

Because of the need to raise public finance,[6] the opposition by producer groups, and balance of payments problems, it is probably not possible to remove all trade restrictions in the short term. In that case, the consensus is that quantitative restrictions should be replaced by tariffs, which should be reduced according to an announced and sustainable plan. The same advice is appropriate for the agricultural sector. This does not provide an argument for an "agricultural policy" - any more than does the need to privatize and demonopolize the economy. However, public finance and the balance of payments are sometimes put forward as justifications for agricultural subsidies and tariffs. For example, despite their admitted inefficiency as a method of transfers, these policies are defended on the grounds that direct transfers are impractical because of their costs to the treasury. The exigencies of public finance may justify a general level of trade protection, but they do not provide a basis for special protection of a particular sector. To believe otherwise is to accept the proposition that policies for every sector should be self-financing, a position which tolerates the most inefficient programs. Similarly, the idea that a balance of agricultural trade is an intrinsically worthwhile policy goal is as quaint as the notion that a balance of chicken trade would serve the national interest.

VII. CEE Agricultural Protectionism as a Response to the West

What makes agriculture special? From the standpoint of CEE, one answer is that their trading partners in the West heavily subsidize their own agricultural sectors. Conceivably, this provides a reason for an interventionist approach in the CEE. We consider this issue in two parts; first the vague but compelling idea that policies in the West invite a policy response from CEE, and then the more focused argument that CEE policies are needed to set the stage for integration into the EC.

There are no limits to the emotional appeal of subsidies as a means of offsetting disadvantages. For example, socialist agricultural policy in Czechoslovakia highly subsidized those farms with poor soil or poor access to transport. If these natural and accidental features are considered a legitimate reason for government favour, how much more persuasive is the fact that foreign competitors are receiving subsidies. As a statement about fairness, this can only be an argument for income transfers, not for an agricultural policy that promotes production. Two types of beliefs might still rationalize invoking Western subsidies as a reason for CEE agricultural protection.

First, it might be thought that CEE policy has some leverage over Western policy, but this seems implausible. Western trade restrictions and agricultural subsidies make it harder to sustain economic liberalism (or democracy or the willingness not to migrate) in CEE. However, enlightened self interest has proven to be a poor match against sectoral interests in

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[6] Poland, the Czech Republic and the Slovak Republic instituted a VAT tax in early 1993, weakening the public finance argument for tariffs.

the West. Only optimists will think that concern for agriculture in CEE will hasten reform of Western agricultural policies.

Second, it might be believed that agricultural reform will quicken in the West, and that CEE agriculture will then be able to compete without subsidies, providing that it has not been allowed to decay in the meantime. This argument relies on asymmetric information (between farmers and policy-makers) or imperfect capital markets. In either case, it may provide a justification of broad support for agriculture given by credit subsidies, but it does not justify an attempt to manage agriculture by means of commodity-specific policies. The level of agricultural protection in the West does not make an interventionist policy in CEE a rational response.

General trade issues do not provide grounds for an agricultural policy. In the narrower area of food aid we might, however, expect reform in the West and also justify an active response in CEE. Food aid serves two purposes for both the donor and the recipient. The first, ostensible purpose, is the same for each: to alleviate suffering and lessen the risk of turmoil. This aid also has a less benign purpose for each party, to support producers in the West, and to discipline them in the East.

For example, US Public Law 480 is a "food aid and *market development program* focused on the needs of developing countries and *is aimed at establishing a US presence in developing markets* and supporting economic growth" (USDA 1992, emphasis added).[7] The objectives of providing aid and promoting market access may be incompatible. Western aid competes with producers in the CEE. It not only depresses the domestic price, but can also destabilize the market. Western food shipments to Poland are an example of both effects. In autumn of 1989 farmers stored grain in anticipation of price rises. In the same year over 80 per cent of the total value of food aid to Poland was for grain. Approximately a third of grain imports was in the form of aid. In 1990 food aid was virtually the only source of grain imports. This resulted in a glut and low producer prices in 1991, which led to demands from producers for price supports. When the government is a leading agent in the crisis, it is reasonable for producers to expect government help for recovery.

Food aid and Western export subsidies are a major factor in agricultural trade. In the 1992-93 crop year the US Export Enhancement Program was expected to cover shipment of 5.5 million tons of wheat to the former Soviet Union (FSU), roughly a fifth of their average imports over the past several years. (The shipments are currently suspended as a result of Russian default of previous food loans.) The EC credit package of 1.25 billion ECUs will finance over two million tons of grain shipments to the FSU. Most of this will come from EC stocks, although a portion of the money will be used for purchases from Eastern regions (USDA 1992). However, sales to FSU from EE-3 financed by the EC credit, are deducted

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[7] PL480 was established in 1954. The objectives of supply management and market development, and of humanitarian assistance, have been linked for a long time.

from the export quotas EE-3 receives as part of the Association Agreements. Since this policy leads to increased CEE exports to FSU and decreased exports to EC, and thereby discourages the creation of new marketing channels, it may be harmful to CEE agriculture in the long run.

The mixed motives for food aid increases the danger that it has unintended effects. At least for a time Western nations will continue to use export subsidies to capture market share. There should be a clear distinction between this motive and the aim of humanitarian assistance. The responsibility for the two should be vested in different agencies. The demonstration that there are insufficient supplies in the recipient country should be a requirement for providing humanitarian aid "in kind" rather than in the form of an untied grant. This policy change can only come from the West. Although it would probably not have a large immediate effect, it would be useful as a means of clarifying Western policies, both to the public and to politicians.

CEE governments are implicated in the problem. Rowinski's (1992b) analysis of the instability generated by Western agricultural aid to Poland is revealing. It would be natural to justify the decision to request the aid on the grounds that policy-makers were not able to predict the effects of the imports. However, his justification is very different: the state should not be subject to the "extortion" of the farmers demanding a high price. The view that holding stocks in anticipation of a price rise is an act of extortion, is shared by many in the West, so it is plausible that it is also widely held by CEE policy-makers. In this case, food aid is a means of disciplining producers/storers, as well as a means of feeding the population.

Storage is an important way of smoothing fluctuations. Ronald Anderson (1992) shows that it can make a large contribution to stability, even in the presence of other stabilizing measures, such as international trade. Government policy that discourages private storage is inimical to the development of the agricultural sector.

In addition to destabilizing domestic agriculture, food aid may also be counterproductive if it reinforces old power structures. Vadim Ivanov, director of a Moscow economics institute, points out that food credits provide support for the bureaucratic structure that controls grain imports and distribution. He claims that "Russia has the potential to avoid all grain imports. But the existing system has no desire to undo itself, even when it is no longer needed." (Rubinfien, 1993)

To summarize, we disagree with the notion that Western agricultural subsidies provide a rationale for an interventionist policy in CEE. Western agricultural policies are lamentable for a number of reasons, only one of which is their effect on CEE development. Perhaps these policies will be reformed. A clearer understanding (both in the West and East) of the role of food aid is a more immediate possibility. We recognize that there is not a sharp distinction between turning down aid on the grounds that it is destabilizing, and imposing a tariff on the grounds that the exports are subsidized. This is a grey area which could be illuminated if Western policy were more candid and consistent. CEE import policy must be also be consistent (and liberal) so that storage is not discouraged.

We now turn to the argument recently made by Munk (1992), that CEE agricultural policy is necessary in order to prepare for accession to the EC.[8] The logic is as follows: CEE would benefit from joining the EC. It would be too costly for the EC to allow CEE into CAP if they were to arrive as net agricultural exporters. Therefore CEE should adopt an agricultural policy that aims at an approximate balance of agricultural trade as a means of paving their way into the EC. We disagree with this argument on a number of grounds.

First, suppose that CAP continues to protect EC agricultural producers primarily through price support programs, as is currently the case. If accession means that CEE producers face the same prices as producers in other member countries, then in order for accession not to be costly to the EC, it has to be the case that CEE is not a net exporter at those prices. That is, it is not enough for the CEE to have a zero balance of agricultural trade; it has to be the case that this trade is balanced at the prices that will prevail after accession. Even if one knew what those prices were, there is no reason to believe that their adoption would result in balanced trade, since this depends on technology, factor endowments, and consumer tastes.

Second, suppose as above that the basis for CAP remains price policies, but that now accession means CEE faces quotas to insure that their exports do not flood the (old) EC market. This would be a retrograde policy, since the 1992 Association Agreements incorporate a gradual elimination of quotas. In this scenario, CEE is exchanging liberal entry (under the Association Agreements) for quotas but higher prices. There is no reason to suppose that CEE negotiators would accept a deal that makes them worse off. Their negotiating position would only be weakened if they already had balanced trade; they would effectively have conceded everything before the negotiations.

Third, and more plausibly, suppose that the projected reforms of CAP get underway so that price policies are increasingly replaced by direct income support. This support could be justified as compensation to producers for having accepted the capital loss resulting from the diminished price support. There is no reason why it would also be given to CEE producers after accession, since, not having been protected by the original measures, they had not suffered the capital loss following their removal. To the extent that income support does replace price support, the costs to CAP and the benefits to CEE producers of accession diminish, whatever the agricultural balance of trade; to the extent that price supports remain the cornerstone of CAP, our arguments above apply.

Finally, we think that the idea of designing an agricultural policy to somehow track a large trading partner assumes an unrealistic level of knowledge about the shape that the

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[8] *Agra Europe* (1993) No 126, pg 1 writes, "...Hungary [has] ...announced plans to set up agricultural support systems which bear a striking resemblance to ...the Common Agricultural Policy.... Budapest has its eyes firmly fixed on EC membership.... The Hungarians take the view that the closer their poicy resembles that of the Community, the easier it will be to adjust to the CAP when membership finally comes."

partner's policy will take in the future, and it also assumes an unrealistic ability to manage domestic events. Aspirations to join the EC do not provide a rationale for a sector-specific agricultural policy.

A final trade-related argument for an agricultural policy is based on the disintegration of the Soviet Union and the resulting loss of markets there. Since liberalization, agricultural export subsidies have been used to maintain sales to that region. If these delay production and marketing changes needed to re-orient trade, the policies do not serve the long run interests of the agricultural sector. They merely provide an inefficient means of making transfers to producers and distributors. In addition, it is not clear that the agricultural sector has been hurt worse than other sectors by the loss of Eastern markets. As we discussed in Section V, CEE economies had already begun to re-direct exports toward the West, even before the liberalization of the early 1990s. Also, the evidence that the composition of CEE agricultural exports to the West and to the former CMEA was more similar than was the case for non-agricultural exports suggests that the loss in Soviet markets would result in a more severe adjustment problem for manufacturing than for agriculture.

VIII. CEE Agriculture and Adjustment Assistance

The adjustment assistance argument for agricultural protection is based on the twin presumptions that the sector is declining, and for some reason it is declining too rapidly. Among the quasi-fixed factors of agricultural production, labour is the most important, for both political and economic reasons.[9] Therefore, we focus in this section on the adjustment of labour. Experience in the West shows that massive intervention slows the rate of decline but does not prevent the agricultural population from shrinking. If moderating the speed of urban migration is an objective, this might appear to provide a rationale for an agricultural policy. We consider this argument in two stages: first, the issue of whether agriculture is a declining sector, and second, the implication of adjustment costs.

The evidence is consistent with, but does not strongly support, the view that CEE agricultural population is likely to decline as a direct result of recent reforms. A review of quantitative models of the effect on agriculture of various policy changes (Karp and Stefanou 1993b) provides conflicting estimates of changes in aggregate production. The estimates suggest considerable changes in the mix of production, but do not predict an agricultural boom. Since a large part of estimated increases in production is due to productivity gains,

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[9] Workers have the possibility of leaving the agricultural sector, and this usually entails adjustment costs. Many other factors of production in agriculture (e.g., land, machinery, buildings) are essentially fixed. The cost of their "adjustment" is irrelevant, since they will not be moved.

which includes more efficient use of labour, we interpret these models as being consistent with expectations of a future decline in the size of the agricultural population.

We have limited data on actual changes in the size of the agricultural population following liberalization, but East Germany provides an interesting special case. Paarlberg (1992) states that the size of the agricultural population has decreased by more than 80 percent. Since this is more than double the unemployment rate, it implies a huge decline in the percentage of labour employed in agriculture. However, in East Germany, as in other CEE countries, many workers employed on state farms and collectives were actually involved in manufacturing or service enterprises rather than agriculture. Following liberalization there has been a move to separate these activities from farming, leading to a reclassification of workers. Consequently, it is hard to interpret the official data. In addition, there were several aspects of East German liberalization not shared by other CEE countries, which make the fall in the agricultural population particularly severe there. First, unification resulted in an overvalued exchange rate, which discouraged the production of tradeables; second, entry into the CAP required accepting quotas on the production of certain commodities, which also contributed to a fall in the demand for agricultural labour; third, the possibility of migration to the West increased the opportunity cost of remaining in agriculture. Despite these qualifications, the East German experience is at least consistent with the view that the agricultural population will decline.

Another perspective is obtained by looking at the relation between the pre-reform share of agricultural workers and estimates of per capita GNP in CEE, and comparing these to corresponding numbers in market economies. Data on 64 countries, excluding CEE, were obtained from World Bank (1992). A group of 41 low-middle income countries with an average per capita GNP (in 1990 dollars) of $4300 had an average of 35 percent of their labour forces in agriculture; the corresponding numbers for 23 high income countries are $15,500 and 5 percent. For the sample as a whole, the numbers were $8,300 and 24 percent. We ran various regressions relating income to agricultural labour share. In all cases the relationship is significant and negative, and explained 30 - 70 percent of the variation in agricultural labour share. The agricultural labour share in 1988 for Czechoslovakia, Hungary, and Poland were approximately 10 percent, 13 percent, and 22 percent, respectively (Table 1). Wang and Winters (1992) summarize various estimates of per capita GNP for the three countries in 1988. The PlanEcon and CIA estimates suggest a plausible range of $7600 - $10,000 for Czechoslovakia, $6500 - $8600 for Hungary, and $5400 - $7200 for Poland. Using this GNP data and the various regression results described above, we obtain estimates of what the share of labour in agriculture would have been, had the CEE countries been market economies with the same per capita GNP levels.[10]

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[10] These calculations ignore other determinants of agricultural labour share, such as land per capita. However, we expect that the inclusion of such variables would have strengthened the conclusion. On the basis of factor endowments, CEPR (1990) and Kym Anderson (1992) conclude that CEE is likely to have a comparative advantage in agriculture. To the extent that

Comparison of these estimates with the actual labour shares suggests that the pre-reform economic systems did not lead to systematically larger shares of labour in agriculture. This implies that there is no reason to expect reform to lead directly to a smaller agricultural population. Socialist policies were designed to encourage a high degree of agricultural self-sufficiency and the policies promoted inefficient use of labour. Both of these considerations would lead us to expect those policies to result in an inordinately large share of labour in agriculture. However, labour was used inefficiently throughout the state controlled sectors, where other activities were promoted without regard to comparative advantage.

If reform leads to an increase in per capita GNP, the regression results suggest that the agricultural labour share will fall. For example, under Rollo and Stern's (1992) "optimistic scenario", per capita GNP in Poland in the year 2000 is nearly 25 percent higher than in 1988. An elasticity of agricultural labour share, with respect to per capita GNP, of -1 is within the range of estimates we obtained in the regressions described above. These estimates of increase in GNP and elasticity imply that the agricultural labour share in Poland falls from 22 percent to 17 percent. Over 1985 - 1990 the labour share fell from 24 percent to 22 percent (Table 1). Under Rollo and Stern's "pessimistic scenario", GNP per capita falls in Poland between 1988 and 2000; in that case, no decrease in the agricultural labour share is expected.

Based on the limited evidence described above, it is at least plausible that the share of the CEE labour force in agriculture will fall. This is more likely the more successful the reforms are in increasing income and labour efficiency. Thus, there is a case to be made that agriculture is likely to be a shrinking sector. Whether this implies a role for agricultural policy depends on the nature of adjustment costs, the issue we now address.

Factors of production, especially labour, move following a change in the terms of trade of the magnitude experienced by CEE agriculture. The varied reasons why the sector does not immediately reach the new long run equilibrium are often lumped together and described as adjustment costs. The cost of the last worker leaving a sector over a given period of time increases with the number of workers leaving the sector during that period. The optimal speed of adjustment balances the increase in cost with the benefit of having the worker in the more productive sector. The presumption that the agricultural sector will contract, and that this will generate adjustment costs, suggests a possible role for agricultural policy. For example, it is sometimes argued that reform should proceed slowly, since the immediate removal of trade restrictions or subsidies causes a sudden deterioration in sector terms of trade and encourages too rapid adjustment, and excessive adjustment costs.

The presence of adjustment costs provides a weak rationale for a sectoral policy. First, there is nothing intrinsic about these costs that implies market failure and a role for

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production is determined by comparative advantage under a liberal trade regime, the CEE agricultural population would be larger than the level predicted on the basis of only income.

government intervention. A policy response is appropriate only if the adjustment costs are associated with some kind of market failure, and then the policy should target the market failure rather than the costs. (See Falvey and Kim for a more detailed discussion of this point.) Two plausible kinds of market failure illustrate this: first, individuals may have poorer information or may understand the dynamic process less well than policy-makers, and second, they may face credit constraints due to imperfect capital markets. The initial effect of a deterioration in the terms of trade causes farmers to leave the sector; as they leave, the value of the marginal product of the remaining farmers increases, since there will be fewer farmers on the land and less domestic production. The decision to leave should take into account the stream of future earnings, and not merely current earnings. Farmers who do not do this, either because of the quality of their information or their inability to obtain financing for the crisis, may leave the sector when under ideal circumstances they should remain. The appropriate policies in the first case is to provide farmers with better estimates of future prices, and in the second case to make it easier for them to obtain credit.

In the examples above, the adjustment costs were born by the individual who makes the decision, and the market failure meant that he was unable to account properly for the future. Another type of market failure implies that the individual bears only part of the social cost, and that therefore adjustment is too rapid relative to the social optimum. In this case, the principal of targeting implies that the private cost should be increased, perhaps by an implicit tax on migration.

Since such a tax would not be politically acceptable, the argument leads proponents of sectoral policies to recommend these as a second best option. It is possible to support almost any policy recommendation on the basis of some second best argument. Theoretical models of adjustment costs with market imperfections and a restricted policy menu (Karp and Paul, 1993) illustrate that the optimal policy is very sensitive to the nature of these costs. In some of these models, the policy trajectory looks nothing like that proposed by those who want to defend sectoral interests. These theoretical considerations make adjustment costs an unconvincing grounds for a sectoral policy.

Recent practical experience reinforces this skepticism. Again, the example of East Germany is interesting. After reviewing the adjustment assistance that has been given the agricultural sector, Paarlberg (1992) concludes that an excessive portion of this has gone to easing the costs of adjustment (e.g. unemployment benefits) rather than to promoting new investment. Begg and Portes (1992) reach the same conclusion regarding adjustment assistance for nonagricultural sectors. Many Western countries also have adjustment assistance programs. The high opportunity cost of government revenue means that these programs are not an attractive policy option in CEE. Even when adjustment assistance is self-financing, as with tariffs, the disadvantages of them outweigh the benefits.

IX. Conclusion

The legacy of socialism and the example of Western nations creates pressure in CEE to adopt a network of policies that aim at managing their agricultural sectors. In our view this would be a mistake. We acknowledge a critical role for government in the economy. This role includes encouraging the development of institutions such as banking and stock markets, managing the process of privatization, regulating monopolists, and assisting the poor. It may also involve such illiberal but expedient measures as tariffs. This does not require pursuing an agricultural policy, a road which is paved with good intentions.

Most of the problems in agriculture are also faced by other sectors. In the interests of avoiding the proliferation of special interest groups, remedies should be designed at the national rather than the sectoral level. The advantages of the resulting decrease in government flexibility outweigh the disadvantages. Agricultural ministries should not determine agricultural policy. To the extent that special aid is available for the agricultural sector, as distinct from the general aid to the unemployed, this should be mediated through the banks. This method encourages the growth of these banks, keeps government involvement at arms length, leads to less distortion of production and investment decisions, and will be easier to phase out, compared to price policies. Western agricultural policy makes it harder for CEE to follow this advice, but does not alter the economic reasons for doing so.

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