NBER WORKING PAPERS SERIES

FOREIGN TRADE IN EASTERN EUROPE'S TRANSITION: EARLY RESULTS

Dani Rodrik

Working Paper No. 4064

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
May 1992

Address correspondence to: (until June 15, 1992) Hoover Institution, Stanford University, Stanford, CA 943-5-6010; (after June 15, 1992) NBER 1050 Massachusetts Avenue, Cambridge, MA 02138. Revised version of paper prepared for the NBER Conference on the Transition in Eastern Europe, February 26-29, 1992. Susan Collins, Jeff Sachs, and Mark Schaffer have provided helpful comments. I am grateful for assistance and information to Ivan Angelis, Vladimir Benacek, Zdenek Drabek, Barbara Durka, Alain de Crombrugghe, John Earle, Peter Himl, Danuse Hinduliakova, Miroslav Hrncir, Jaroslav Jilek, Olga Jonas, Elzbieta Kawecka-Wyrzykowska, Jiri Kovar, Stanislaw Ladyka, Andrzej Olechowski, Brian Pinto, Jan Piotrowski, Milan Polak, Jan Svejnar, and Josef Zieleniec. This paper was written while I was a National Fellow at the Hoover Institution, to which I am also grateful. This paper is part of NBER's research program in International Trade and Investment. Any opinions expressed are those of the author and not those of the National Bureau of Economic Research.

NBER Working Paper #4064
May 1992

FOREIGN TRADE IN EASTERN EUROPE'S TRANSITION: EARLY RESULTS

ABSTRACT

By the end of 1991, Czechoslovakia, Hungary and Poland have achieved a substantial degree of openness to foreign trade. In all three countries, trade is now de-monopolized and licensing and quotas play a very small role. Exchange controls have virtually disappeared for current-account transactions. Judging by partner statistics, export performance has been impressive in all three countries, and import booms are under way in at least Hungary and Poland as well. However, there is no evidence that exporters have had any success in finding Western markets for the exports they have lost in Eastern markets. The collapse of the CMEA represents a significant shock, amounting to a loss of real income of 3½ percent of GDP in Poland and 7-8 percent of GDP in Hungary and Czechoslovakia. Export performance is attributable to exchange-rate policy in part, but the collapse of domestic demand has possibly played an even more important role. Finally, trade liberalization so far appears to have had little effect on price discipline, in large part because of the substantial devaluations that have accompanied it.

Dani Rodrik
Hoover Institution
Stanford University
Stanford, CA 94305-6010
and Harvard University
and NBER

FOREIGN TRADE IN EASTERN EUROPE'S TRANSITION: EARLY RESULTS

Dani Rodrik

Introduction

Integration into the world economy is one of the difficult tasks awaiting Eastern European countries in transition. Three of these economies, Hungary, Poland, Czechoslovakia, have already travelled far along this road. Their economies have opened up dramatically, and trade with the West has expanded rapidly while trade with the East has collapsed under the joint influence of the demise of the CMEA and the loss of Soviet markets. This paper discusses and analyzes the early results on the trade front in these three countries.

As we shall see, such an analysis is plagued by many uncertainties. Basic trade data are in some cases unreliable, and many other statistics are plagued by the inability of official statisticians to keep track of institutional changes and the expansion of the private sector. With many reforms taking place simultaneously, and many shocks to contend with, it is difficult to discern changes that are attributable to the trade reforms alone. Hence, few solid conclusions emerge.

The paper starts by reviewing the changes in trade policy since 1989 in Hungary, Poland and Czechoslovakia. Then, I present an overall evaluation of recent trends in trade flows, paying particular attention to the shortcomings of official statistics. The rest of the paper is devoted to groping for answers to four questions. How much trade reorientation from East to West has really taken place? How bad is the Soviet trade shock? What has caused the boom in exports to the West? Has import liberalization fostered price discipline and restructuring?

1. An Overview of Trade Policy Reforms

The three countries started their reform process from rather different initial points. In Hungary, considerable de-centralization and market-oriented reform had taken place since 1968, with central planning largely discarded and enterprises already having a large degree of autonomy. In Poland, a similar, if more recent, process had been under way since the early 1980s. Czechoslovakia, by contrast, had retained most of the archetypal characteristics of central planning and of state ownership. Since 1989, the process of economic transformation has picked up considerable speed in Poland and Hungary, and was started anew in Czechoslovakia.

Despite the differences in initial conditions and in the timing and speed of reforms, the trade regimes of the three countries looked quite similar by the end of 1991. In all three countries, trade is now de-monopolized and licensing and quotas play a very small role. Exchange controls have virtually disappeared for current-account transactions. As in market economies, the main instruments of trade control have become tariffs and the exchange rate. Average tariffs are low relative to countries at similar levels of development (and in the case of Czechoslovakia compare very favorably with those of the industrialized countries). The exchange rate is managed in a "realistic" fashion, and the black market premium is contained well within 20 percent in Hungary while it has virtually disapppeared in the other two countries (Table 1.1). In all three countries, some of the more important remaining quantitative restrictions are those exercised in connection with the VERs imposed on them by the European Community, the U.S., and some others. This irony highlights the dramatic liberalization that has taken place since 1989.

Box 1 provides a short summary of the main reforms and describes the

current make-up of trade policies in each of the three countries (as of December 1991). Here, I will emphasize only some of the main features and differences.

Box 1: A summary of Reforms in Trade and Exchange Rate Policy

A. HUNGARY

Foreign exchange system: The forint is not convertible to foreign currencies, but in principle foreign exchange is made available to importers automatically if the product is not subject to licensing. As a general rule, other transactions are subject to a foreign exchange license. The exchange rate is set on the basis of a basket of currencies, with the value of the forint adjusted against the basket at irregular intervals.

Tariffs: Tariffs averaged around 13% in 1991. Other charges apply in addition to tariffs: a 2% customs clearance fee, 3% statistical fee, and 1% licensing fee if imported item is subject to licensing.

Licensing and import quotas: Until January 1989, all imports and exports were subject to licensing. Continued liberalization since then has reduced the scope of licensing to imports covering less than 10% of total import value. There exists a consumer goods quota which covers fifteen product groups. The size of the consumer goods quota has been tripled in 1991 (from $200 million in 1990 to $650 million in 1991). There is also an advance import-deposit requirement for 100% of the value of the intended import.

Export measures: Restrictions apply on exports of steel (to EC and the U.S.), sheep and sheepmeat (to EC), and textiles and clothing (to EC, U.S., Canada, and Norway). Hungary maintains export subsidies on a number of agricultural products (including milk and dairy products, fruits and vegetables, and sheepmeat).

B. POLAND

Foreign exchange system: Since January 1, 1990, the zloty is convertible to foreign currencies for current account transactions. The exchange rate was held fixed against the U.S. dollar at zl. 9500 from this date until May 17, 1991, after which the zloty was pegged to a basket following a discrete devaluation. On October 14, 1991, the zloty was put on a pre-announced downward crawl (at the rate of about 1.8% a month). Another discrete

devaluation took place in February 1992.

Tariffs: The average (trade-weighted) tariff rates were 8.9% in 1989 and 8.6% in 1990. During 1990 and first half of 1991, tariffs were suspended on a wide range of goods (mainly raw materials, intermediate goods, and engineering products), pulling the average rate down. In August 1, 1991, a new tariff schedule was introduced, with eight basic rates from 0 to 40%, and suspensions were considerably limited. These changes have raised the average tariff rate to 13.6%.

Licensing and import quotas: Import quotas do not exist (save for certain alcoholic beverages), and licensing is limited to a few items.

Export measures: There are no export subsidies. Export restrictions apply on some "essential" goods for the domestic market and on goods subject to "voluntary" export restraints (textiles and clothing, steel, and sheep and mutton meat exports to the EC; textiles exports to the U.S., Canada, Sweden, and Norway).

C. CZECHOSLOVAKIA

Foreign exchange system: As of January 15, 1991, the koruna is convertible to foreign currencies for current-account transactions. (There is a limit of Kcs 5000 per person for travel abroad, however.) The value of the koruna is determined according to a basket of currencies.

Tariffs: Tariffs average around 5 percent, and 96 percent of tariff lines are bound under GATT. On December 28, 1990, a temporary 20% import surcharge was introduced on mostly foodstuffs and consumer goods. The surcharge was reduced to 18%, and subsequently to 15% during the course of 1991.

Licensing and import quotas: Quantitative controls on imports are abolished, and only few import licenses remain (on items such as drugs, weapons, and the like).

Export measures: There are no taxes or subsidies on exports. Almost 20% percent of exports remain subject to licensing. These cover weapons, "essential" inputs for domestic users (e.g., coal, cereals, and milk), and "voluntary" export restraints. The latter apply on metallurgical products (EC), mutton (EC), textiles and clothing (EC, U.S., Canada, and Norway).

Sources: World Bank (1991), GATT (1991), and national sources.

The major trade reforms in Poland and Czechoslovakia were undertaken simultaneously with their respective "big bangs"--at the beginning of 1990 in

Poland and of 1991 in Czechoslovakia. Hungary's reforms were introduced in a more gradual fashion. Nonetheless, as mentioned above, the speed of reform appears to have had little effect on the end product. While the scope of licensing and QRs remains broader in Hungary, the difference is one of degree and not of kind. Also, the other two countries have not been shy in tinkering with their commercial policies as circumstances have demanded. Czechoslovakia introduced a surcharge on consumer goods at the beginning of 1991, but then proceeded to reduce it when it became apparent that import demand had been overestimated. Poland applied temporary tariff suspensions for items covering more than fifty percent of tariff lines, in part to ease inflationary pressures. In August 1991, it then introduced a new tariff schedule, with higher tariffs, when the real appreciation of the zloty and a growing budget deficit reversed the political pressures.

Tariffs average around 13-14 percent in Hungary and Poland (after the recent change there) and around 5 percent in Czechoslovakia. In Poland, the August, 1991, change in the tariff schedule has helped to more than double the share of tariff revenues in the government budget (from 6 to 14 percent). But some of this increase is attributable to the decline in other tax revenues (particularly in enterprise taxes). In the other two countries, tariffs constitute a smaller share of budgetary revenues (see Table 1.2).[1]

With respect to exchange-rate policy, Poland's big-bang devaluation on January 1, 1990, eliminated the parallel-market premium overnight. This was

---

1. An important constituency pushing for higher tariffs are foreign firms that desire greater protection in exchange for direct investment. This has been especially marked in the auto sector.

achieved by raising the official rate to the level of the parallel rate. The exchange rate has remained unified since then (Table 1.1). In Hungary and Czechoslovakia, the strategy has been somewhat different. In both of these cases, unification has been more gradual, and achieved in part by increases in the official rate and in part by a decrease in the parallel rate (as a consequence of the restrictive monetary and fiscal policies in place). This can be seen in the data presented in Table 1.1. In Hungary, restrictive macro policies during 1990 helped squeeze the parallel-market premium even though the official rate was constant. By the end of the year, the premium was below 20 percent. In view of the remaining restrictions on the convertibility of the forint, the remaining premium is modest and does not indicate a fundamental misalignment of the exchange rate. In Czechoslovakia, a similar downward movement in the parallel rate is also visible. A devaluation in December, 1990, along with highly restrictive macro policies in 1991 have led to the virtual disappearance of the premium by the second quarter of 1991.[2]

Compared to gradualism, instant exchange-rate unification as in Poland may have had an important cost: the unification in Poland had to take place at the level of the parallel rate and may have therefore entailed over-devaluation. In general, the pre-unification parallel rate will be too depreciated in view of the macroeconomic stabilization measures to be put in

---

2. Tourists were offered 36 koruna to the dollar on the streets of Prague in November, 1991, when the official rate was 28. (The transaction is illegal, unlike in Poland.) However, apparently the gap reflects overzealous entrepreneurial behavior rather than economic fundamentals: the unsuspecting tourist receives a wad of bills that look like korunas, but are actually Polish zloties (with an effective rate of 0.10 kcs to the dollar)!.

place subsequently. Such measures can be expected to pull the parallel rate down by reducing aggregate demand. And as mentioned above, this is what has happened in both Hungary and Czechoslovakia. Hence the price paid by Poland for instant unification may have been over-devaluation. Whether this was a price worth paying to stop a developing hyperinflation is another question. I will return to this issue below.

The real exchange rate has appreciated considerably in Poland since the big bang, as a consequence of continued, if reduced, inflation. The same has happened in Hungary also. Czechoslovakia, the country with the greatest degree of success in stabilizing the price level, has also had more success on this front: it has managed to maintain most of the real depreciation achieved by the devaluation at the end of December 1990. Real exchange rate indices are shown in Table 1.3.

As a consequence of these reforms, there has been a substantial expansion in private activity in trade, especially on the import side. In Poland, close to half of imports and around 15 percent of exports were undertaken by private entities by late 1991 (up from 20 percent and 5 percent, respectively, in the first quarter of 1990). The number of private companies engaged in trade has mushroomed, from 2809 in 1990:3 to 12598 in 1991:6 (an increase of 350 percent) (Guzman, 1991). In Czechoslovakia, the trade sector is the most buoyant one in terms of private activity. The number of registered private entrepreneurs in "commerce" has increased from 61,533 (12.6 percent of all registered entrepreurs) at the end of 1990 to 222,804 (19.7 percent) at the end of September 1991. As we shall see in the next section, this mushrooming of private activity is causing problems for trade statistics.

Since the beginning of 1991, trade among the former members of the CMEA

has been carried out in dollars, and in accordance with the same principles as those that apply to trade with the West. The transferable rouble, in which trade was denominated prior to 1991, has been abandoned, save for the fulfillment of accounts left over from 1990: according to national statistics for the first three quarters of 1991, trade amounting to some 15 percent of the corresponding value for 1990 was still carried out in transferable roubles, but this trade is being phased out fast. The obligatory trade protocols of the past have now been replaced by indicative lists, covering much smaller quantities of trade. Soviet authorities initially prohibited all barter arrangements, but the prohibition was later rescinded and there has been some revival in barter deals during the second half of 1991. The switch to dollar pricing for the bulk of trade has implied substantial terms-of-trade losses for Eastern European countries vis-a-vis the Soviet Union. These losses will be discussed further below.

Last but not least, Hungary, Poland, and Czechoslovakia have signed association agreements with the European Community in December, 1991. Under the agreement, the EC recognizes the objective of these countries to become full members of the Community in ten years, and has granted a number of important trade concessions. VERs on steel products are to be eliminated as of 1992. On products subject to variable levies (such as meat), the EC will undertake three equal cuts of 20 percent each year in duties and variable levies, and quotas will be increased (again in equal amounts) by 10 percent for five years. Quotas on textiles and clothing will be increased by 50 percent or more in 1992, with a complete elimination phased in according to the MFA regime to be negotiated in the Uruguay Round, but over a period not exceeding five years. These measures represent a substantial opportunity for

the three countries in what is already their most important export market. In return, the Eastern European countries are not expected to phase in their tariff reductions until 1995.

2. Developments in Eastern Europe's Trade

Table 2.1 summarizes recent developments in the external trade of the three countries, as well as can be pieced together from national sources. The table distinguishes between trade with the formerly socialist economies (FSE) and trade with market economies (ME). With respect to the former, an immediate difficulty is the valuation of trade carried out in transferable roubles (TR) prior to 1991 and the comparison of convertible-currency trade with TR trade. For 1989 and 1990, I have converted TR values to dollars by using the CMEA TR/$ rate set by the International Bank for Economic Cooperation (IBEC) (around 0.65 TR/$). Hence the table presents changes in the implicit dollar value of trade with the FSE. Where available, volume indices are presented also. The former GDR has been included in the ME group in calculating the figures for 1991. While these data are subject to a number of problems (to be discussed below), some of the broad trends they reveal are unmistakable.

First, there has been a rapid downward spiral in trade with former CMEA trade partners. The cumulative decline in the dollar value of exports to the former CMEA since the beginning of 1990 has been on the order of 80-90 percent, and is nothing less than monumental. Declines in volume terms are somewhat smaller, indicating a fall in (implicit) dollar prices in intra-CMEA trade. Soviet deliveries of fuels and raw materials have been severely disrupted. The volume of Soviet petroleum exports to Eastern European

countries has declined by 23 percent in 1990, and is estimated to have declined further by 53 percent in 1991 (IMF 1991a). As shown in Table 2.2, the collapse of trade with the Soviet Union has been accompanied by substantial terms of trade losses. Poland's terms of trade with its former CMEA partners has deteriorated by 48 percent in the first nine months of 1991, and similar numbers are plausible for the other two countries also.

Second, some of the decline in trade with the East has been offset by an increase in trade with the West. Just to point out some of the more remarkable numbers in the table, Poland's exports to the West rose by 41 percent in 1990, while its imports were up by 74 percent in 1991. Hungary's imports from the West have increased by 38 percent in 1991, while its exports have been expanding at less remarkable, but still healthy rates. Czechoslovakia seems to be an outlier, as both its exports and imports appear to have fallen in 1991 after a respectable performance the previous year. However, this evidence is not borne out by the statistics of Czechoslovakia's trade partners: the latter show a continuation of the upward trend, rather than a reversal (see below).

The Czechoslovak case is symptomatic of a general problem with these statistics. As a consequences of the reforms discussed above, and of the mushrooming of private traders in particular, a considerable part of trade appears not to be recorded. Previously, central statistical offices collected trade statistics directly from the small number of state trading organizations permitted to undertake trade. The de-monopolization of trade has required new modes of data collection, which these countries have now introduced. But, at least in the case of Czechoslovakia, these changes appear to have made statistics even less reliable in the short-run.[3]

Table 2.3 compares official figures with those obtained from partner-country data. For Poland and Hungary, the partner data are the exports and imports reported by developed and developing countries in the IMF's Direction of Trade Statistics (DOTS). As DOTS does not give a separate entry for Czechoslovakia, I use the totals reported by OECD countries in the OECD Monthly Statistics of Foreign Trade in this case. In each case, exports (imports) of the Eastern European country are matched with imports from (exports to) that particular country reported by these groups. As the figures show percentage changes, cif/fob valuation differences should not affect the comparisons. However, since national statistics are converted to dollars at period-average exchange rates, some statistical discrepancies are possible on this account. Another source of discrepancy is due to the time that goods spend in transit (and during which they are recorded as exports by one country but not as imports by another). Finally, note that only the first quarter of 1991 is covered by the comparisons, as the most recent (aggregate) data available from IMF and OECD sources at the time of writing (December 1991) did not go beyond 1991:I.

On the export side, Table 2.3 shows that the trends revealed by home and partner data are reasonably close to each other, with the striking exception of Czechoslovak exports in 1991:I. According to Czechoslovak statistics,

---

3. The Czechoslovak monthly foreign trade bulletin puts it bluntly: "the data do not reflect real exports and imports in the reported period but only those exports and imports for which arrive [sic] completed proposals for customs procedure.... As a result of the above mentioned differences, the surveyed data in 1991 can be compared to the data of the previous year (1990) only for rough orientation" (Federal Statistical Office, 1991, p. 3)

exports to the OECD fell by 19 percent in 1991:I, while OECD statistics show an increase of 12 percent. In the other two countries, increases in exports are somewhat higher according to official statistics, but the discrepancies are nowhere as large, and can be accounted by the factors mentioned above.

On the import side, home statistics almost consistently understate the increase in imports from the West, and typically by non-negligible margins. The growth of Poland's imports, for example, appears to have been twice as large in 1990 as was reported in Table 2.1.[4] This is consistent with anecdotal evidence, such as widespread stories of enterprising individuals coming back from Germany with their cars full of consumer goods for resale at home. Since the bulk of private activity in trade has taken place in imports, it is not a surprise to find the discrepancies mostly on the import side. Once again, though, the Czechoslovak discrepancy is noteworthy by its magnitude: while the Czechoslovak statistics show a decline of 32 percent in imports from the OECD in 1991:I, the OECD statistics show an increase of 29 percent!

In view of the large discrepancies in Czechoslavak statistics, Table 2.4 displays the comparative data at the level of individual countries. I have selected here important trade partners for which OECD data were available through the first half of 1991, so that we can also see if the discrepancies extend beyond 1991:I. The answer seems to be yes. On the whole, both imports and exports appear to be greatly underreported in Czechoslovak statistics. Some of the discrepancies on the import side in particular are extremely

---

4. See also Berg and Sachs (1991) on the under-reporting of Poland's imports in 1990. These authors report a larger discrepancy, however.

large: while France reports an increase in exports to Czechoslovakia of 180 percent, Czechoslovakia's own statistics suggest an increase of only 2 percent!

What conclusions can we therefore draw from these comparisons concerning trade with the West? First, it seems evident that Czechoslovak trade statistics for 1991 are not reliable, and hence the 1991 declines in trade with the West reported in Table 2.1 should not be taken seriously. Second, official statistics considerably understate the volume of imports from the West in all three countries. Third, while imports appear to have been increasing at impressive rates in 1991 (especially in Poland), export performance is not as solid in 1991 as it had been the previous year. In Poland, the 1990 export boom has fizzled out (and has been replaced by an import boom). In Hungary, a less impressive import boom is in place also, while exports have not expanded as rapidly in 1991 as in the previous year.

We finally look at trade balances, which are shown in Table 2.5. Two points are noteworthy here. First, in all three countries the balance with FSE (mainly Soviet Union) has deteriorated significantly in 1991, with surpluses in 1990 turning into deficits in Poland and Hungary and a small deficit growing sixfold in Czechoslovakia. These deficits reflect the deterioration in the terms of trade that followed the move to dollar-pricing and the collapse of exports to the Soviet market. Unlike in previous years, these balances are now denominated in real money, that is dollars. (It is still not clear how claims in tranferable roubles that derive from previous surpluses with the Soviet Union will be settled.)

Second, each of the three countries has run a trade surplus with market economies during its program's first year (1990 in the cases of Poland and Hungary and 1991 in Czechoslovakia). Poland's 1990 trade surplus was particularly large, amounting to close to $4 billion. Moreover, in each of these cases, the surplus was entirely unanticipated. The Polish stabilization program had predicted a trade deficit in convertible-currency trade of $0.5 billion for 1990. Similarly, the 1991 Czechoslovak program had predicted a current account deficit of $2.5 billion. Hence these economies have exhibited early on either an unexpectedly strong expenditure-reduction, or an unexpectedly strong expenditure-switching, or both.

The standard economic prescription to a country that is undergoing a one-time transition cost is to run trade deficits for a while in order to smooth consumption. Since these deficits have not materialized (at least until later on), the implication is that the early phase of the transition has been more costly than it need have been.[5]

3. How Much Trade Reorientation Has Really Taken Place?

The boom in trade with the West, combined with the collapse of intra-CMEA trade, suggests that a considerable amount of reorientation has already taken place in Eastern European countries' trade patterns. Statistics using national exchange rates vis-a-vis the dollar and TR seem to indicate that this

---

5. A strong argument can be made that external financing was available for more borrowing than took place. See for example "Poland fails to take up loans," Financial Times, March 26, 1992, p. 8.

has now been going on for some time. The figures show a non-negligible reorientation of exports away from the CMEA and towards Western markets (EC in particular) since the mid-1980s in both Poland and Hungary, and since 1988 in Czechoslovakia as well (Table 3.1). The basic trend is one of sharp reduction in the importance of other Eastern markets (mainly the Soviet Union), offset by an equivalent increase in the importance of the EC. Between 1985 and 1990, Hungary and Poland both reduced their shares of exports going to the Soviet Union by almost 14 percentage points; the shares of the EC meanwhile doubled. Czechoslovakia has undergone the slowest transformation, and the importance of Eastern markets remains much higher in this country than in the other two.

However, these pre-1991 figures are somewhat suspect. The reason has to do with the conversion rates used in translating exports in transferable roubles (TR) to national currency. It is well recognized that national exchange rates against the TR have been rather arbitrary, rendering comparison of flows to the dollar area and the rouble area problematic. This in itself would not affect the trends in trade shares over time. But in both Hungary and Poland changes in the national exchange rates vis-a-vis the TR and the dollar have implied a depreciation of the TR against the dollar (Table 3.2). In part, these changes were motivated by the authorities' desire to discourage exports to the Soviet Union and to reduce trade surpluses in non-convertible currency trade. Consequently, the decline in Hungary's and Poland's CMEA trade is overstated relative to that in Czechoslovakia (where the cross rate has remained more stable since 1985).

These considerations no longer apply to the trade figures for 1991, as the bulk of trade with the East began to be carried out in dollars in that year. These later figures show that former CMEA markets now receive less than

a fifth of Polish and Hungarian exports and about a third of Czechoslovak exports. The share of the EC, meanwhile is greater than 40 percent in all three countries.

These dramatic changes have occurred faster than predicted. Indeed, the decline in the Soviet and former CMEA markets has probably overshot the longer-run, steady-state market shares. Table 3.2 shows for each country a predicted regional distribution of exports at the end of the transition, taken from work that Susan Collins and I have done previously (Collins and Rodrik, 1991). These predictions were obtained by updating an inter-war (1923) trade matrix for these countries by using information from the evolution of the trade of six comparator countries since then.[6] Since these predictions make no allowance for the hysteresis created by four decades of socialism and integration under the CMEA, a reasonable hypothesis is that they overstate the reorientation towards the West that will likely take place in the long run. However, in the case of Poland and Hungary, the 1991 results indicate that the realized reorientation has already surpassed those ambitious projections. In both countries, the share of the CMEA is lower and the share of the EC higher than the levels that our method yields as the most "reasonable" projections over the medium run.

Impressive as they may be, these statistics do not really inform us of the extent to which enterprises have been able to shift sales from the Eastern markets to Western markets. For these outcomes are also consistent with sharp

---

6. The comparator countries are Germany, Austria, Finland, Spain, Italy, and Portugal. See also Wang and Winters (1991) for a study based on the gravity model; the Wang-Winters results are broadly similar to the Collins-Rodrik results.

reductions in the kinds of products exported to the East and sharp increases in products exported to the West, with no real reorientation of trade, save in a statistical sense. Evidence indicates that a considerable share of manufactured products previously exported to the East are unmarketable in the West, at any price. Examples are computer products that are several generations old and manufacturing activities specifically geared to Soviet standards (e.g., tramcars).[7]

In principle it would be possible to see how much reorientation has taken place at the product level by examining highly disaggregated trade data. Here, I analyze somewhat aggregate product categories, exploiting the differences in the product composition of exports to the two areas.

I focus on Hungary and Poland, which are the candidates for the greatest reorientation. Tables 3.3 and 3.4 show the product composition of these countries' exports to the East and the West for 1990 and for either 1985 (Poland) or 1986 (Hungary). The data show large differences in product composition with respect to the two areas. Machinery has constituted almost half of Hungarian exports to the rouble area, but less than 15 percent of exports to the West. Exports of raw materials to the West have been twice as important as exports to the East. In Poland, electro-engineering products constitute three-quarters of exports to the East, but less than a third of exports to the West.

Such differences allow us to check for reorientation of trade at the

---

7. See Murphy and Shleifer (1991) for an argument that East-West trade is likely to remain small on account of the East's specialization in low quality goods for which the West has little demand and no comparative advantage.

product level. If these countries have been successful at redirecting their Eastern exports to the West, we would see a certain convergence in the product composition of exports to the two areas. A quick look at the tables suggests that no convergence has in fact occurred since the mid-1980s, despite the remarkable decline in the overall share of exports to the East as discussed above. The shares of machinery and electro-engineering exports to the West, in Hungary and Poland respectively, were lower in 1990 than in the mid-1980s. Hence there is no evidence that the overall increase in trade with the West was fueled by redirecting Eastern sales to the West, or indeed that the latter played any role at all in the former.

To make this conclusion a bit more precise, Table 3.5 shows an index of similarity of trade with the two partner groups. This index is calculated as $1 - \Sigma(\sigma_i^e - \sigma_i^w)^2$, where σ denotes shares of product categories in exports, i indexes product categories, and "e" and "w" stand for East and West, respectively. The index takes values between 0 (completely dissimilar product composition of trade) and 1 (identical product composition). The index is calculated for the mid-1980 and for 1990. In addition, a hypothetical calculation is presented under the assumption that all of the actual decline in trade with the East was diverted to the West. This hypothetical calculation shows the maximum value the index would take if the reorientation from East to West had been complete. The following steps go into the calculation: (i) I assume a counterfactual scenario in which exports to the East and West increase by an identical proportion, corresponding to the aggregate growth rate in exports; (ii) I calculate the "shortfall" in exports

to the East in 1990, by product category, by subtracting the realized level of exports from the counterfactual level; (iii) this shortfall is then added to the exports that go to the West under the counterfactual scenario, to arrive at a hypothetical structure of exports to the West under full diversion.

The values of the indexes in Table 3.5 bear out the the previous conclusion from eyeballing the statistics. Not only do the values of the index come nowhere near the hypothetical values they would take under the full-reorientation scenario, they actually decline in both countries. While more disaggregated analysis could show some areas where diversion has occurred, the conclusion has to be that very little overall reorientation has taken place, even in the two countries where the shares of Eastern markets have exhibited the steepest declines. Moreover, a look at more recent export statistics for 1991 does not change these conclusions.

4. How Bad Is the Soviet Trade Shock?

The transition to dollar pricing in Soviet trade in 1991 and the sharp decline in exports to that market have wreaked havoc with the economies of all three countries. The effects show in many different ways. Alongside the collapse in exports has come increases in unemployment and reductions in profitability. Table 4.1 shows the Polish situation: industrial exports to the Soviet Union have fallen by 40 percent when evaluated at dollar prices implicit in the national cross rate between the TR and the dollar, and by more than 90 percent when evaluated at the former IBEC exchange rate. From the perspective of domestic activity and profitability, the former figure is

perhaps the more relevant one, but even with that the decline in sales is very significant.

With the decline in enterprise profitability, the tax base of the government has shrunk. In Poland, the deterioration in the fiscal situation during 1991 is attributable in large part to the reduction in enterprise taxes. In Czechoslovakia, fiscal revenues have also been reduced in the second half of the year.

Meanwhile, the increase in prices of raw materials and energy imports relative to prices of manufactured exports has implied a substantial transfer of income to the Soviet Union. The sharp increase in the (domestic) price of raw materials has also affected adversely energy- and raw-material-intensive exports to the West, in pharmaceuticals and petrochemicals for example.

A comparison of economic outcomes in the Czech and Slovak republics highlights the devastating impact of the Soviet trade shock. Such a comparison is instructive because the two republics are quite different in the extent of their reliance on Soviet trade. As Table 4.2 shows, the Czech republic has twice the population and more than twice the income of the Slovak republic, yet the volumes of trade with the Soviet Union are comparable in the two republics. Exports to the Soviet Union are only 60 percent lower in the Slovak republic, while the volume of imports are actually higher.

The greater orientation towards the Soviet market in the Slovak republic finds reflection in a much worse economic performance compared to the Czech republic. Starting from similar macroeconomic positions in mid-1990, output and employment trends in the two republics have diverged greatly. By the end

of 1991, the Slovak unemployment rate was more than double the Czech rate, and the industrial recession was considerably deeper (Table 4.2). The gap between the two regions has continued to widen since mid-1990, indicating: (i) that the difference is intimately linked to the Soviet trade shock, and (ii) as of the third quarter of 1991, the costs of the Soviet trade shock had not been fully paid yet.

Conceptually, the Soviet trade shock consists of three independent shocks that are frequently lumped together: a terms of trade shock, a removal of an implicit import subsidy in Soviet trade, and a market-loss effect. Box 2 discusses these shocks in a more analytical manner (see also Rodrik, 1992).

The first of these is a conventional terms-of-trade trade (TOT) shock. As pointed out earlier, with the transition to dollar pricing, border prices of exports have fallen relative to border prices of imports. The TOT shock has come about primarily because dollar export prices to the Soviet Union have fallen. Unlike what is often claimed, dollar prices charged by the Soviet Union for oil and other energy exports have in fact not risen greatly: under the CMEA moving-average pricing mechanism, Soviet oil export prices had been higher than world prices between 1986 and 1989, and became only slightly lower in 1990 due to the jump in world market prices after the Gulf crisis in August.

Box 2: The Anatomy of the Soviet Trade Shock

Understanding the Soviet trade shock requires understanding the mechanics of the pricing of imports and exports under the CMEA.

The domestic price of, say, crude oil, imported from the Soviet Union was determined in the following manner. First, a five-year moving average of world market prices (in dollars) would be calculated. Then this average price would be converted to TR by using the IBEC exchange rate (which has varied in the range 0.60-0.75 TR/$). This price in TR would then be the border price at which the oil was imported. The domestic-currency price would in turn be the TR price multiplied by the national exchange rate between the TR and the national currency. Hence, the domestic price (denoted p_m) would be:

$$(4.1) \quad p_m = p_m^* \times e^I_{R\$} \times e_R,$$

where p_m^* is the dollar moving-average price, $e^I_{R\$}$ is the IBEC rate (TR/$), and e_R is the national exchange rate between the domestic currency and the TR (NC/TR). This can be stated equivalently as:

$$(4.2) \quad p_m = p_m^* \times (e^I_{R\$}/e_{R\$}) \times e_\$,$$

where $e_{R\$}$ is the national cross-rate between the TR and the dollar (TR/$) and $e_\$$ is the national exchange rate against the dollar (NC/$). Note that $e_{R\$}$ is an implicit rate, obtained by dividing $e_\$$ by e_R. As mentioned in the text, the rouble was implicitly valued more cheaply than the IBEC rate in all three countries, so $(e^I_{R\$}/e_{R\$}) < 1$.

Export prices were determined in more or less the same manner,

$$(4.3) \quad p_x = p_x^* \times (e^I_{R\$}/e_{R\$}) \times e_\$,$$

with the caveat that manufactured exports rarely had adequate comparators in world markets. So the border price set in TR was more or less a negotiated price. Nonetheless, we can still use this (and the IBEC exchange rate) to define an implicit dollar price at the border, p_x^*. Note the important conclusion that the gap between $e_{R\$}$ and $e^I_{R\$}$ kept domestic prices of imports and exports cheap (relative to trade with the convertible-currency area), acting as an import subsidy and export tax in rouble trade.

With the demise of the CMEA, pricing in Soviet trade has become the same as in any other trade. So import and export prices in domestic currency are now given by:

$$(4.4) \quad p_m = p_m^{*\prime} \times e_\$,$$

$$(4.5) \quad p_x = p_x^{*\prime} \times e_\$,$$

where the prime indicates that post-transition world prices in dollar terms may differ from the those prevailing earlier. (But to save on notation and with no loss of generality, $e_\$$ is assumed to remain unchanged.)

Comparing (4.2)-(4.3) with (4.4)-(4.5), we see that the move to dollar pricing involves two distinct effects. One, the terms of trade (TOT) effect, is the change from p_m^*/p_x^* to $p_m^{*\prime}/p_x^{*\prime}$. The second, the removal of import subsidy (RS), is the unification of the cross rate as $(e^I_{R\$}/e_{R\$})$ effectively goes to unity.

The third shock arises from the gap between export prices obtained in the Soviet market, p_x^*, and those prevailing for comparable substitutes in world

markets, p_a. Holding export prices constant, on every unit reduction of exports to the Soviet Union, a loss of $(p_x^* - p_a)$ is incurred on this account. This is the market-loss (ML) effect.

Nonetheless, the domestic price of oil imported from the Soviet Union did increase substantially, because the elimination of the TR removed a huge, implicit subsidy on imports from the CMEA area. The subsidy arose from the discrepancy between the internal cross-rate between the TR and the dollar and the rate used by IBEC in translating a five-year moving average of world (dollar) prices into TRs. Compared to the the IBEC rate of 0.61 TR/$ in 1990, the internal rates were 4.52, 2.30 and 1.79 in Poland, Hungary, and Czechoslovakia, respectively (Table 3.2). Since the rouble was a lot cheaper domestically than externally, importers paid only a fraction of the dollar cost of the oil imported from the Soviet Union. Table 4.3 shows that in Poland, where the implicit subsidy was largest, Soviet oil cost less than $3 a barrel to domestic users, while the border price charged by the Soviet Union was TR 13.31, i.e. $21.83. The second effect of the collapse of the CMEA, therefore, is the removal of an implicit import subsidy (and export tax) on trade with the Soviet Union, which I will call the RS effect. This is of course a positive shock, even though in the short run it has undoubtedly caused distress among enterprises dependent on cheap Soviet oil.[8]

The third shock arises from the reduction in the volume of export sales to the Soviet market. It involves the loss of rents earned previously from

---

8. The import subsidy served the purpose of restraining rouble trade surpluses, which was a sensible objective as long as these surpluses were inconvertible. See Rodrik (1992) for more details and a formal model.

selling manufactured products to the Soviet market at prices that were on average double those they would fetch in Western markets (see the figures in Oblath and Tarr, 1991; FTRI, 1991, pp. 135-137). This market-loss (ML) effect operates independently from the TOT effect, and would be present even if the terms-of-trade had not deteriorated. However, the deterioration has clearly squeezed the margin between dollar prices in the Soviet Union and those in world markets. So in practice there is a certain degree of arbitrariness in attributing the Soviet trade shock separately to the TOT and ML effects.

Table 4.4, based on Rodrik (1992), presents some estimates of the income losses suffered by the three countries on account of the TOT, ML, and RS effects.[9] Before discussing the results, three methodological issues deserve comment.

First, as mentioned above, it is not possible to draw an airtight distinction between the TOT and ML effects in actual calculations involving discrete (as opposed to infinitesimal) changes. If the TOT effect is calculated on the basis of base-year (1990) trade volumes, then in order to avoid double-counting the ML effect would have to be calculated using end-year (1991) margins between prices in Soviet and alternative markets. Alternatively and equivalently, we could calculate the TOT effect based on 1991 trade volumes and use the 1990 price margin for the ML effect. The first option is followed in this table. Note also that the ML effect is calculated both for 1990 and 1991, as it was operative even before the transition to

---

9. For other (partial) estimates of these losses, the reader is referred to Berg and Sachs (1991), Oblath and Tarr (1991), and Kenen (1991).

dollar pricing at the begining of 1991.

Second, there is the issue of conversion from TRs into dollars. For calculating welfare costs, the appropriate valuation of trade is in terms of world prices. Using the IBEC exchange rate to convert TR values into dollars yields the implicit border prices (in dollars) used in Soviet trade (as explained in Box 2). Using any other exchange rate (such as the internal cross rate) would be inappropriate, in view of the pricing rules followed in CMEA trade, and would confuse the external terms-of-trade with an internal tax/subsidy scheme. That the IBEC rate may have been "unrealistic" in valuing the rouble too highly is besides the point in this context. Where Eastern European countries are concerned, the trading oportunities in CMEA were defined by these "world" prices, no matter how inflated in dollar terms they may have been. One complication that arises, however, is the inconvertibility of trade surpluses in TRs. We do have to adjust for the fact that rouble trade surpluses were not redeemable at anything approaching the IBEC exchange rate. So the results in Table 4.4 are based on the assumption that rouble surpluses in 1990 were in fact entirely worthless. This assumption calls for scaling down the "effective" dollar price of exports in 1990 by a factor that equals the ratio of recorded imports to exports (Rodrik, 1992).

Third, the available data are incomplete, and in some cases unreliable. In order to present a full set of estimates, I have occasionally had to rely on extrapolations, especially where Czechoslovakia is concerned (for details, see Rodrik, 1992).. So the results presented in Table 4.4 are, at best, tentative. However, I have generally made the assumptions that would make the

Soviet shock appear less costly. The results are therefore likely to represent a lower bound on the magnitude of the shock.

The numbers in Table 4.4 show that the three effects combined amount to a huge loss of income (on impact) in the three countries, even on conservative assumptions--$2.2 billion in Poland, $2.0 billion in Hungary, and $3.4 billion in Czechoslovakia. These losses represent 7-8 percent of GDP in Hungary and Czechoslovakia, and 3½ percent of GDP in Poland. Taking Keynesian multiplier effects into account, the Soviet shock could easily "account" for a large part of the cumulative decline in GDP in Hungary and Czechoslovakia during 1990-91. The shock plays a comparatively small role in Poland, as Soviet trade is less important in this larger economy.

It should be stressed again that these numbers are somewhat shaky and based on incomplete data. But in view of the conservative assumptions made here, it is unlikely that revised estimates would change these conclusions greatly. Hence there can be little doubt of the devastating effect of the demise of the CMEA in the short run.

5. What Caused the Boom in Exports to the West?

As discussed above, export performance in Western markets has been quite good in all three countries (provided we rely on OECD statistics in the case of Czechoslovakia). In fact, this performance has been much better than most analysts had predicted on the basis of well-known problems with product quality and rigidities in enterprise behavior. What were the reasons for this?

Some of the contributing factors can be listed as follows. First, the external environment was very favorable. By the beginning of 1990, the EC had abolished its discriminatory quantitative restrictions on these countries' exports (except in the "sensitive" areas of agriculture, steel, and textiles). The remaining quotas in the last-mentioned areas were somewhat eased in 1990 and 1991. Further, domestic demand rose quite significantly in West Germany (by 5 percent in 1990, compared to a post-1973 average of 1.9 percent), a key export market for all three countries.

There were also important domestic reasons. Enterprise managers were aware of the need to reorient their sales from Eastern markets to Western ones, in view of the coming collapse of the CMEA. Moreover, following price liberalization, enterprises came under pressure to unload their inventories, which had been at very high levels due to special features of the previous policy regime. The pressure was magnified by a collapse in domestic demand, a by-product of the stabilization measures put in place in all three countries. Finally, the trade reforms discussed earlier must have increased the profitability of exports to the West: import liberalization made available cheaper and higher-quality inputs; and devalutions served to increase the profitability of export sales.

Of these, only the collapse in domestic demand and the changes in trade policy (devaluation, in particular) qualify as serious contenders. The favorable external environment could have played at best a minor role. In view of the small volume of exports from East European countries, it is difficult to believe that these countries faced a serious external demand

constraint. Hungary, Poland, and Czechoslovakia taken together accounted for just about 1 percent of EC imports in 1988, and 2 percent of German imports. With respect to quantitative restrictions, there can be little doubt that these restrictions were pervasive, especially in textiles and clothing, and in steel. But once again, their importance is limited since quotas were rarely binding. Some figures for Poland bear this out: only 68.7 percent of the EC quota in steel products was utilized in 1989, and similar ratios held for previous years also; in textiles, in only 3 out of 33 EC categories were quotas filled by more than 90 percent in 1989 (Synowiec and Rzeszutek, 1991). The situation was similar for Hungary and Czechoslovakia as well.

On the supply side, the incentive to reorient sales from East to West was clearly in place in 1990. But as I have already discussed at greater length above, the reorientation that has taken place so far appears to have been limited at best. As regards the unloading of inventories, the decline in inventories generally preceded the export response. In Poland, the sharpest reduction in inventories took place in January when exports to the West actually fell.[10]

These considerations leave exchange rate policy and the domestic demand shock as the most important determinants of export performance. Both Poland and Czechoslovakia started their big bangs with substantial depreciations in the real exchange rate. And the collapse in domestic demand has exceeded 10 percent in both cases. In Hungary, meanwhile, the real exchange rate has appreciated somewhat during 1990 (Table 1.3), and the reduction in demand has

---

10. See Calvo and Coricelli (1991, Fig. 3) for data on real inventories.

not been as marked as in the other two cases.

It is unlikely that either exchange-rate policy or the demand shock alone could have been responsible for the export boom to the West. First, the effective real depreciations at the beginning of 1990 in Poland and at the beginning of 1991 in Czechoslovakia were smaller than the figures in Table 1.3 suggest, due to the presence of foreign-currency retention accounts in both countries prior to their big bangs. Enterprises were allowed to retain a share (40 percent in Poland, and 30-35 percent on average in Czechoslovakia) of their hard-currency earnings from exports. Hence, exporters were partially able to obtain the more depreciated parallel rate even before the official devaluations. An appropriately calculated real exchange rate for exports would show a much smaller jump in both countries (see Pinto, 1991, for the Polish case). Second, the real rate has tended to appreciate subsequent to the big bang. The appreciation was especially marked in Poland where the fixed rate was eroded by a smaller-than-before, but nonetheless significant, inflation rate (Table 1.3). By the third quarter of 1990, domestic prices had fully caught up with the exchange rate, and so had domestic wages by the fourth quarter. These considerations undermine the importance of exchange-rate policy and suggest that domestic demand may have played the key role. However, the Polish export boom has fizzled out in 1991, despite the continuation of the domestic slump. This outcome would be consistent with the sustained real appreciation of the zloty, suggesting that boom had at least something to do with the devaluation on January 1, 1990.

In principle we can discriminate between the two competing hypotheses as

they have somewhat different empirical implications. If the increase in exports is due primarily to devaluation (or to the reduction in costs that arises from import liberalization), profitability across firms would be positively correlated with export orientation. If, on the other hand, the increase in exports is due primarily to the reduction in home demand, profitability would be negatively correlated with export orientation. This is demonstrated in Box 2 in the context of a simple model of firm behavior, with the firm assumed to be a price-taker in world markets but a price-maker domestically. When the increase in exports is a defensive move to compensate for the reduction in domestic sales, firms that increase their export shares the most will be the ones that suffer the greatest reductions in profitability in equilibrium. But whan the increase comes about because of an increase in export prices (or a reduction in input costs), higher export shares will go with higher profitabilty.

Box 3: Discriminating Between the Exchange-Rate and Demand-Shock Explanations for the Export Boom

Consider a firm which has market power at home but is a price-taker in its export sales. Let home demand be given by $q = a - p$, where p stands for the domestic price. The demand intercept, a, will proxy for demand shocks. The world price in domestic currency is given by e, which also stands for the exchange rate. Costs are given by $c(q+q^*)^2$, where q^* is exports. The firm's profits are:

$$\pi = pq + eq^* - c(q+q^*)^2 = (a-q)q + eq^* - c(q+q^*)^2,$$

with the following two first-order conditions for domestic and export sales, respectively:

$$a - 2q - 2c(q+q^*) = 0,$$

$$e - 2c(q+q^*) = 0.$$

Solving these two equations, we get the equilibrium values of q and q^*:

$$q = \tfrac{1}{2}(a - e), \qquad q^* = \tfrac{1}{2}(e[(1+c)/c] - a).$$

For home sales and exports to be both positive, we require

$$a > e > (a-e)c.$$

We assume this condition is satisfied.

By substituting back into the objective function, we obtain the indirect profit function:

$$\pi(a, e, c) = (1/4)[(a-e)^2 + (e^2/c)].$$

The share of exports in total sales (= α) is in turn given by:

$$\alpha(a, e, c) = 1 - [(a-e)c]/c.$$

We note the various derivatives:

$$d\pi/da = \tfrac{1}{2}(a-e) > 0, \quad d\pi/de = \tfrac{1}{2}[(e/c) - (a-e)] > 0, \quad d\pi/dc = -(1/4)(e/c)^2 < 0$$

$$d\alpha/da = -(c/e) < 0, \quad d\alpha/de = ac/e^2 > 0, \quad d\alpha/dc = -(a-e)/e < 0.$$

Now we can see how profits and the export share co-vary with changes in the exogenous parameters.

<u>devaluation</u>: $de > 0 \Rightarrow d\pi > 0$ and $d\alpha > 0$.

<u>reduction in input costs</u>: $dc < 0 \Rightarrow d\pi > 0$ and $d\alpha > 0$

<u>reduction in home demand</u>: $da < 0 \Rightarrow d\pi < 0$ and $d\alpha > 0$.

Hence these shocks have different implications for the correlation between export shares and profitability. When the predominant shock is a fall in demand, we would expect firms that experience the highest reductions in profits to also experience the largest increases in export orientation. With the other two shocks, profits and export orientation are positively correlated.

Table 5.1 shows profitability rates and export shares (in convertible-

currency trade) for twelve Polish industrial sectors. We note that profits have declined in all sectors (except for food processing) while the export share has increased across the board. Table 5.2 shows the situation in Hungary for the enterprise sector as a whole. While overall profitability appears to have increased slightly in 1990, this is attributable to a shift in the composition of exports from the East (where exports were less profitable) to the West (where they were more profitable). The profitability of exports to the convertible-currency area has actually fallen in 1990, while the export share has increased. The broad evidence, therefore, is more favorable to the demand-shock hypothesis.

We obtain the same conclusion from analyzing the variation across industries in the Polish case (shown in Table 5.1). The correlation coefficient between the change in profitability and the change in export share is -0.43 for the twelve industries included. That is, the industries that improved their export performance the most also suffered the greatest collapse in profits.

Hence this evidence suggests that the demand shock may have been the predominant source of the export boom, with exchange-rate policy playing a more secondary role. However, the evidence is weak, and far from being conclusive.

6. Has Import Liberalization Fostered Price Discipline and Restructuring?

The Polish and Czechoslovak big bangs encompassed trade liberalization alongside price de-control in large part because the discipline of foreign competition was seen to be a crucial restraint on domestic enterprises. Since the industrial sectors of these economies are highly monopolized, one fear was

that enterprise managers would use their new freedom to charge monopoly prices. Free trade would preclude such practices, and would obviate the need for a lengthy process of industrial restructuring before price liberalization could be launched.

In Poland, there is no evidence that this has worked. As Table 6.1 shows, the inflation rate came down substantially after the price adjustments had worked themselves through in the first two months of 1990. However, inflation exhibited a considerable persistence at the rate of 3-5 percent a month for the rest of the year. Given the constant exchange rate, this implied a substantial loss in competitiveness through the end of the year and the first half of the next (see the real exchange rate index in Table 1.3). Moreover, inflation was not confined to services and non-tradables, as the index for industrial goods' prices in Table 6.1 shows. Wages in fact rose slower than tradables prices, suggesting also that this was not a case of wage-push inflation (as in the similar Chilean experience with exchange-rate based disinflation during the late 1970s).

The question is: how can the prices of domestic tradables continue to rise in the presence of a fixed exchange rate, low tariffs, and no quantitative restrictions on imports? The only possible answer is that the unification of the exchange rate with the jump devaluation of January 1, 1990, took place at too high a level, i.e. that the zloty was undervalued throughout much of 1990. The devaluation left domestic prices too low in dollar terms, and left headroom for upward adjustment. Hence it must have been the undervaluation of the zloty that put upward pressure on domestic prices.

In principle, it is not clear why the adjustment in prices could not have taken place in one jump. But in practice it is not difficult to see how

enterprises would be adjusting in a slower fashion, and groping around for the prices that the market would bear. Of course, once the undervaluation was eliminated, as it must have sometime towards the end of the year at the latest, the pressure for inflation on this account should have subsided. The reasons for the persistence of inflation from this point on must be sought in other factors, such as the relaxation in fiscal and credit policies and the increase in wages in the second half of the year (see Calvo and Coricelli, 1991).

That the zloty was undervalued throughout most of 1990 is evidenced also by the huge, unanticipated surplus in Poland's trade balance, and by the fact that the fixed exchange rate could be maintained until May, 1991, even though the initial judgement had been that it would last for a few months only. Interestingly, the Polish authorities not only did not come under pressure to provide domestic firms with trade protection--after a radical trade reform and during a severe industrial recesion--they were in fact pressed to do quite the opposite. As mentioned in section 1 above, beginning in early 1990 suspensions on a wide range of customs duties were implemented. Many of the imports involved were inputs for which no domestic competition existed, but the suspensions were also aimed at imposing price discipline through imports. The suspensions covered more than half of all tariff lines, and served to reduce the effective tariff rate by half (from 10.9% in the first half of 1990 to 5.2% in the last quarter [Bak et al., 1991]).

Berg and Sachs (1991) report the results of a cross-section regression of changes in Polish industrial sales (by sector) on a number of variables including changes in import penetration. For 1990, they find that imports did not have any (economically or statistically) significant effect on industrial

sales. This is consistent with the argument that the zloty was undervalued and import competition was not a serious disciplining factor during most of 1990.

In 1991, with the continued appreciation of the zloty in real terms, the situation changed quite a bit. Since the first quarter of 1991, an import boom has been in place, especially in consumer goods (Table 6.2). Enterprise profits have plummeted in light industries, which bear the brunt of the import pressure. Consequently, pressures for protection have intensified, and the government has eliminated the suspensions and put in place a new tariff schedule with higher average tariffs (see Box 1). However, it is clear from the persistence of inflation that free trade is stil not playing its role of stabilizing domestic prices.

Czechoslovakia's inflation experience has been different from Poland's. Table 6.3 shows the remarkable stabilization in Czechoslovak prices by the middle of 1991. The liberalization of prices has led to a textbook case of a one-time jump in the price level. Since July, prices have been completely stable (further adjustments in controlled prices in November have led to some increases not shown in the table, however). During the second half of the year, prices of many consumer durables (such as radios, TV, passenger cars) were in fact declining. Profits in manufacturing industry have deteriorated significantly throughout 1991, especially in consumer goods, although much of this is no doubt due to the loss of export markets in the former Soviet Union.

As discussed above, the devaluation of the koruna was cautious compared to the Polish case, and did not aim to eliminate the black-market premium at one go. The latter was achieved instead by a progressive reduction in the parallel rate as the domestic credit contraction took effect. In this sense,

the Czechoslovak program was perhaps more conducive to importing price discipline from abroad. Nonetheless, the devaluation in December 1990 was still a large one (Table 1.1), which left considerable room for an upward adjustment in domestic prices when price liberalization went into effect the following month. As in Poland, the pressures on tariffs were in the downward direction, not upward: the phasing down of the 20% surcharge introduced on consumer goods alongside the big bang took place more rapidly than anticipated.

There is of course another key difference from Poland. Inflation was never a serious problem in Czechoslovakia. Therefore, the stabilization program of 1991 did not have to concern itself with rooting out endemic inflation; it could be limited to minimizing the effects of a one-time price adjustment arising from de-control. The inertial and expectational elements present in Poland were probably absent in Czechoslovakia. Hence, while the stabilization of prices in Czechoslovakia is consistent with the more gradual unification of the exchange rate, one cannot read too much into it.

Concluding Remarks

Briefly put, the tentative conclusions of this paper are as follows. First, the changes in trade policy have been quite dramatic, and all three countries have achieved a substantial increase in openness despite some differences in timing and speed. Second, judging by partner statistics, export performance has been impressive in all three countries, and import booms are under way in at least Hungary and Poland as well. Third, despite what the aggregate statistics show, there is no evidence that exporters have had any success in finding Western markets for the exports they have lost in Eastern markets.

The export boom is based on different kinds of products than those traditionally sold in the East. Fourth, the Soviet trade shock is very serious indeed, with real-income losses (on impact) amounting to 7-8 percent of GDP in Hungary and Czechoslovakia, and 3½ percent of GDP in Poland. Fifth, export performance is attributable to exchange-rate policy in part, but the collapse of domestic demand has possibly played an even more important role. Sixth, trade liberalization so far appears to have had little effect on price discipline among domestic enterprises or on industrial restructuring, thanks in large part to the substantial devaluations that have accompanied it.

Table 1.1: Exchange Rates, official and parallel

	Hungary			Poland			Czechoslovakia		
	off.	para.	prem.	off.	para.	prem.	off.	para.	prem.
	(ft/$)		(%)	(zl/$)		(%)	(Kcs/$)		(%)
1988	50.4			431	1979	359	14.36	33.40	133
1989	59.1			1446	5565	285	15.05	42.39	182
1990:I	64.0	95.1	49	9500	9476	-0	16.54	41.14	149
1990:II	64.9	90.9	40	9500	9713	2	16.62		
1990:III	62.9	77.7	24	9500	9502	0	15.99		
1990:IV	61.0	71.4	17	9500	9590	1	22.67		
1991:I	70.3	82.5	17	9500	9471	-0	27.88	34.10	22
1991:II	75.9			10394	10416	0	30.32	31.80	5
1991:III	76.3			11298	11428	1	30.52	32.40	6

Sources: GUS (1991a), Prague Post, Nov. 23, 1991, World Bank (1991), and OECD (1991a).

Table 1.2: Share of Import Duties in Central Government Revenue (percent)

Hungary (1990)	5.7	(import duties only)
	7.5	(including all taxes on imports)
Poland (1991:1-7)	5.8	
(1991:8-9)	13.6	
Czechoslovakia (1991:I-II)	1.9	(import duties only)
	2.4	(import duties + surcharge)

Sources: OECD (1991a), GUS (1991a), RIFER (1991).

Table 1.3: Real Exchange Rate Indices

	Hungary	Poland	Czechoslovakia
1988	100.0	100.0	100.0
1989	100.2	95.2	103.4
1990:I	89.8	122.7	110.3
1990:II	88.2	105.4	110.0
1990:III	81.2	89.7	96.2
1990:IV	76.1	75.6	130.7
1991:I	73.3	71.0	119.1
1991:II		67.7	118.3
1991:III		69.3	118.9

Note: The real exchange rate is calculated by dividing the nominal exchange rate (home-currency per $) by the CPI. An increase signifies a real depreciation of the home currency.

Table 2.1: Recent Trends in Eastern Europe's Trade
(percent change from corresponding period previous year)

	Formerly socialist econ.[a]		Market econ.		Total[b]	
	1990	1991[c]	1990	1991[c]	1990	1991[c]
			EXPORTS			
Value ($)						
Poland	-0.4	-87.5	40.9	6.7	11.8	-1.8
Czechoslovakia	-18.9	-76.4	7.9	-1.2	-17.0	-13.3
Hungary	-17.3	-74.4	19.3	11.3	0.8	0.4
Volume						
Poland	-13.3	-44.0	40.5	19.3[d]	13.7	-5.6
Czechoslovakia	-20.1	(-50.0)[f]	15.1		-5.9	-25.0[e]
Hungary	-27.0		13.0			
			IMPORTS			
Value ($)						
Poland	-25.6	-75.9	6.3	73.9	-2.5	64.7
Czechoslovakia	-7.3	-70.6	20.5	-24.9	-7.0	-23.6
Hungary	-9.8	-51.0	14.6	38.4	-0.1	34.3
Volume						
Poland	-34.1	-45.0	2.9	89.1[d]	-17.9	41.3
Czechoslovakia	-11.5	(-33.0)[f]	34.7		6.4	-28.0[e]
Hungary	-18.0		4.0			

Sources: GUS (1991a,b), FSU(1991a), PlanEcon (1991), GATT (1991), and tables provided by the Embassy of the Republic of Hungary.

Notes:
[a] For 1989 and 1990, dollar values are calculated by using the IBEC exchange rate between TR and $, rather than implicit national cross rates. For 1991, the former GDR is included in market economies, and growth rates are calculated accordingly.
[b] Calculated by converting national currency values to US$ at period-average exchange rates. Due to the difference between the IBEC and national cross rates between TR and $, these figures are inconsistent with those for the FSE in the first two columns of the table.
[c] January-September.

[d] EC only.
[e] January-June.
[f] PlanEcon estimate, for trade with Soviet Union only.

Table 2.2: Terms of Trade
(percent change from corresponding period previous year)

	1989	1990	1991
Poland:	18.5	-17.2	-10.8 (Jan.-Sept.)
in trade with CMEA:	5.7	4.2	-48.2
Hungary:	2.8	0.1	n.a.
in trade with CMEA	3.6	7.6	-33.5[a]
Czechoslovakia:	4.3	2.3	-27.7 (Jan.-June)
in trade with CMEA:	6.1	2.5	n.a.

Sources: GUS (1991b), OECD (1991a), FSU (1991b).

Note: [a] Mid-point of the estimates reported for Soviet trade in Oblath and Tarr (1991), based on 1990 quantities.

Table 2.3: Comparisons of Home and Partner-Country Trade Statistics
(percent change in dollar value of trade with market economies)

		exports		imports	
	source	1990	1991:I	1990	1991:I
Poland	nat'l stats.	40.9	16.3	6.3	68.8
	IMF stats.	39.5	13.3	12.8	84.5
Czechos.[a]	nat'l stats.	12.9	-19.0	27.5	-32.3
	OECD stats.	17.3	11.7	32.4	29.2
Hungary	nat'l stats.	19.3	9.6[b]	14.6	38.0[b]
	IMF stats.	15.5	5.9	23.4	16.2

Sources: Same as in Table 2.1 plus IMF (1991) and OECD (1991).

Notes: [a] Trade with OECD only (including Yugoslavia).

[b] 1991:I-II.

Table 2.4: Czechoslovak Trade with Leading OECD Partners, 1991:I-II
(percent change from 1990:I-II)

	exports		imports	
	CSFR data	OECD data	CSFR data	OECD data
Partner:				
Germany	15.8	21.5	-22.6	6.0
Italy	19.0	19.0	28.8	33.6
Yugoslavia	61.8	72.1	-26.4	1.1
France	-11.4	-1.1	2.0	179.9
Netherlands	6.7	21.3	14.8	20.1
U.K.	-40.2	-13.0	-51.8	2.0

Sources: Same as in Table 2.3.

Table 2.5: Trade Balances

	Formerly socialist econ.	Market economies
Hungary (bil. ft.)		
1990	10.9	47.8
1991:1-9	-52.9	-57.0
Poland (bil. zl.)		
1990	8934	36,608
1991:1-9	-2311	3,071
Czechoslovakia (bil. Kcs)		
1990	-1.43	-6.59
1991:1-8	-8.26	9.62

Table 3.1: Partner Composition of Exports (percent)

Year	Eastern Europe:[a] EE5	USSR	Total	EC	Others
			Czechoslovakia		
1985	13.4	33.1	46.5		
1988	17.2	33.4	50.6	16.7	32.7
1989	16.7	30.5	47.2	18.2	34.6
1990	13.0	25.2	38.2	26.5	35.3
1991:1-9	13.0	19.4	32.4	40.1	27.5
medium-run prediction[b]	10.8	14.3	25.1	46.3	28.6
			Poland		
1985	14.8	28.4	43.2	23.2	33.6
1988	11.8	24.5	36.3	28.3	35.4
1989	9.9	20.8	30.7	32.1	37.2
1990	6.8	15.4	22.2	47.2	30.6
1991:1-9	6.1	11.8	17.9	53.3	28.8
medium-run prediction[b]	9.3	13.9	23.2	51.2	25.6
			Hungary		
1985	12.8	33.6	46.4		
1988	11.8	27.6	39.4		
1989	10.5	25.1	35.6	24.9	39.5
1990	8.0	20.2	28.2	32.2	39.6
1991:1-9			19.7	45.6	34.7
medium-run prediction[b]	15.0	18.0	33.0	37.2	29.8

Sources: Rosati (1991), OECD (1991a), FSU (1991), GUS (1991c).

Notes: [a] Excluding former GDR.
[b] From Collins and Rodrik (1991). See text for explanation.

Table 3.2: Implicit Rouble-Dollar Exchange Rates, based on national rates (transferable roubles per dollar)

	Hungary	Poland	Czechoslovakia
1985	1.88	1.76	1.85
1988	1.94	2.21	1.44
1989	2.09	2.96	1.51
1990	2.30	4.52	1.79
ratio of 1990 rate to 1985 rate	1.22	2.57	0.97

Source: Rosati (1991).

Table 3.3: Hungary: Product Composition of Exports by Area (percent)

	rouble area		non-rouble area	
	1986	1990	1986	1990
energy, elect.	0.6	0.3	3.4	3.3
raw materials	22.3	20.8	38.9	43.8
machinery	46.0	43.9	14.5	11.6
ind. consumer	16.7	19.1	16.4	15.6
food	14.3	15.9	26.9	25.7
TOTAL	100.0	100.0	100.0	100.0

Source: OECD (1991a).

Table 3.4: Poland: Product Composition of Industrial Exports by Area (percent)

	rouble area		non-rouble area	
	1985	1990	1985	1990
metallurgy	4.3	2.1	19.5	21.9
electroengineering	74.2	76.2	30.0	29.2
chemical	10.5	14.8	17.6	15.3
mineral	0.9	0.6	1.8	2.5
wood and paper	0.9	0.6	4.6	6.1
light	6.3	3.0	9.5	9.2
food	2.2	1.8	16.1	15.0
others	0.6	0.9	0.8	0.8
TOTAL	100.0	100.0	100.0	100.0

Source: GUS (1991c).

Table 3.5: Index of Product Similarity in Trade in East and West

Hungary:	1986	0.856
	1990	0.832
	1990 (hypothetical, with full trade diversion from East to West)	0.949
Poland:	1985	0.755
	1990	0.716
	1990 (hypothetical, with full trade diversion from East to West)	0.900

Source: Calculated from Tables 3.3 and 3.4. See text for explanation.

Table 4.1: Poland's Exports to the Soviet Union[a] (million $)

	1990 (A)	1990 (B)	1991[b]	Increase (%) (A)	Increase (%) (B)
Fuels and power	126.5	937.4	82.8	-34.5	-91.2
Industry	1837.7	13617.4	1102.1	-40.0	-91.9
Metallurgy	81.7	605.4	5.5	-93.3	-99.1
Electroengineering	1354.0	10033.1	666.5	-50.8	-93.4
Chemical	203.9	1510.9	249.3	22.3	-83.5
Wood and paper	9.6	71.1	0.4	-95.9	-99.4
Light	153.9	1140.4	44.9	-70.8	-96.1
Food processing	34.6	256.4	131.2	279.2	-48.8
Construction	66.8	495.0	51.5	-22.9	-89.6
Agricultural products	38.1	282.3	58.8	54.2	-79.2
Total	2069.2	15332.8	1295.2	-37.4	-91.6

Notes: [a] Zloty values converted to dollars using: (A) the official exchange rate (zl. 9500/$), or (B) the implied zl/$ rate in trade with the rouble area (9500×4.52/0.61).

[b] First three quarters multiplied by 4/3.

Table 4.2: Comparison of Economic Performance in Czech and Slovak Republics

	Czech Republic	Slovak Republic	Ratio
Imports from USSR (1991:1-8) (million Kcs)	30,888	34,684	0.89
Exports to USSR (1991:1-8) (million Kcs)	26,047	16,381	1.59
Population (million)	10,299	5,269	1.95
Money Income of population (1990, bil kcs)	361.1	163.8	2.20
Industrial output (same year prev. period = 100)			
1990:Apr	97.8	102.7	0.95
Aug	94.8	96.8	
Dec.	94.1	89.4	
1991:Jan.	96.8	92.9	
Feb	95.1	91.0	
Mar	78.3	80.8	
Apr	86.3	80.6	
May	76.6	68.8	
Jun	89.7	81.6	
Jul	71.3	64.4	
Aug	72.0	65.7	1.10
Unemployment rate (%)			
1990:Apr	0.1	0.1	1.00
Aug	0.3	0.5	
Dec	0.8	1.5	
1991:Jan.	1.1	2.4	
Feb	1.4	3.0	
Mar	1.7	3.7	
Apr	2.0	4.6	
May	2.2	5.4	
Jun	2.6	6.3	
Jul	3.1	7.7	
Aug	3.4	8.7	0.39

Sources: FSU (1991) and Statisticke Prehledy (1991).

Table 4.3: Pricing of Crude Oil Imports in Poland, 1990

Source of imports	volume of imports (mil. barrels)	domestic prices '000 zl/b	domestic prices $/b	border prices TR/$	border prices $/b
Soviet Union	55.5	27.61	2.91	13.32	21.83
Others	40.8	240.76	25.34	--	25.34
Total	96.3	117.96	12.42	--	23.32

Source: Own calculations from value and volume statistics in 1990 trade yearbook, using IBEC and Polish cross rates between TR and $.

Table 4.4: Estimates of the Soviet Trade Shock, 1990-91
(billions of dollars, unless otherwise noted)

	Poland	Hungary	Czechoslovakia
		A. Basic Data	
Imports from USSR (1990) (A)	7.840	5.467	7.574
Changes in prices in Soviet trade (%):			
terms of trade	-48.2	-33.5	-38.7
export prices ($)	-46.4	-41.6	-43.6
import prices (B)	-3.5	-12.2	-7.9
ratio of rouble imports to exports (1990)	0.687	0.824	0.949
Changes in prices adjusted for worthless rouble surpluses in 1990 (%):			
terms of trade	-24.6	-19.3	-35.4
export prices ($) (C)	-27.2	-29.1	-40.5
Price premium in Soviet market (%):			
1990 (D)	50.1	44.1	47.1
1991 (E)	3.7	3.3	3.5
Value of rouble exports to USSR:			
1989 (F)	12.450	8.696	9.419
1990 (G)	10.794	6.348	7.526
Change in export volume to USSR (%):			
1990 (H)	-13.3	-27.0	-20.1
1991 (I)	-44.0	-45.0	-50.0
Increase in domestic prices of energy (%) (J)	615.1	231.0	170.2
Value of energy imports from USSR at domestic prices (K)	0.801	0.668	1.291
Reduction in energy use by subsidized users (%) (L)	27.1	11.5	8.2

(continued on the next page)

Table 4.4: Estimates of the Soviet Trade Shock, 1990-91 (continued)

	Poland	Hungary	Czechoslovakia
	B. Estimates of the Soviet Trade Shock		
Market-Loss Effect (ML) (1990) D×F×H	-0.83	-1.05	-0.89
Market-Loss Effect (ML) (1991) E×G×I	-0.18	-0.09	-0.13
Terms-of-Trade Effect (TOT) (1991) A×(C-B)	-1.86	-0.92	-2.47
Removal-of-Subsidy Effect (RS) (1991) ½×J×K×L	0.67	0.09	0.09
Cumulative 1990-91 Shock	**-2.20**	**-1.97**	**-3.40**
(as percent of GDP)	(-3.46	-7.82	-7.46)
Rouble trade surplus at domestic prices	0.39	0.30	0.15
Cumulative 1990-91 shock at domestic prices	-2.59	-2.27	-3.55
(as percent of GDP)	(-4.07	-9.01	-7.79)

Source: Rodrik (1992).

Table 5.1: Export Orientation and Profitability in Polish Industry

	exports to convert. curr. area as a share of sales[a]		cash flow profitability[b]	
	1990	% change from 1989	1990	% change from 1989
Metallurgy	0.34	129	0.23	-17
Electromachinery:				
metal	0.40	119	0.15	-19
equipment	0.39	75	0.13	-39
precision	0.42	63	0.18	-28
Transport equip.	0.04	89	0.02	-89
Electrical equip.	0.31	65	0.09	-39
Chemicals	0.28	59	0.19	-19
Glass	0.42	96	0.12	-61
Wood and paper	0.71	482	0.10	-57
Textiles	0.28	107	0.01	-98
Clothing	0.31	71	0.09	-49
Food processing	0.48	15	0.07	243

Source: Mueller (1991), Table 4 and Schaffer (1992), Table 6.

Notes: [a] From a sample of 167 large enterprises.
[b] Cash flow profit is defined as historical cost profit - nominal inventory accumulation + imputed depreciation.

Table 5.2: Export Orientation and Profitability in Hungary
(all enterprises and cooperatives)

	1989	1990
Percent of net revenue[a] attributable to:		
domestic sales	88.2	89.4
rouble exports	4.2	2.5
non-rouble exports	7.6	8.1
Net revenue from all sales as a share of direct costs[b]	18.4	18.7
Net revenue from rouble exports as a share of direct costs for rouble exports	19.2	16.2
Net revenue from non-rouble exports as a share of direct costs for rouble exports	31.4	26.1

Source: OECD (1991a).

Notes: [a] Sales revenue plus subsidies minus direct costs.
[b] Labor costs plus costs of material inputs plus marketing costs.

Table 6.1: Inflation in Poland: Change in Prices from Previous Month (%)

	CPI	Industrial price index		CPI	Industrial price index
1990 Jan.	79.6	109.6	1991 Jan.	12.7	9.8
Feb.	23.8	9.6		6.7	5.4
Mar	4.3	-0.2		4.5	1.4
Apr	7.5	2.1		2.7	1.0
May	4.6	0.6		2.7	1.6
Jun	3.4	1.5		4.9	3.1
Jul	3.6	3.3		0.1	2.1
Aug	1.8	2.9		0.6	1.6
Sep	4.6	2.7		4.3	1.6
Oct	5.7	4.9			2.1
Nov	4.9	3.6			
Dec	5.9	3.3			

Source: GUS (1991a).

Table 6.2: Composition and Trends in Imports
(corresponding period previous year = 100)

	total	capital goods	raw materials and intermed.	consumer goods
		POLAND		
1990:II	75.9	86.3	70.0	101.0
III	75.8	87.7	70.1	93.5
IV	82.1	89.0	76.9	97.0
1991:I	128.7	98.9	122.3	165.3
II	143.5	153.1	118.2	226.6
III	141.3	139.7	118.0	225.3
		HUNGARY		
1991:I-III	133.2	125.2	151.9	173.9

Table 6.3: Inflation in CSFR: Change in Prices from Previous Month (%)

	CPI	of which: foodstuffs	non-foodstuffs	services	industrial goods
1991 Jan.	20.7	25.9	19.2	6.5	
Feb.	6.8	1.0	13.6	3.6	19.3
Mar	4.7	-2.2	11.4	1.5	-0.2
Apr	2.0	-1.6	3.9	4.8	2.9
May	2.0	-0.5	3.5	4.2	1.7
Jun	1.8	-0.3	0.5	12.8	-0.8
Jul	-0.0	0.4	-0.6	0.6	-0.5
Aug	0.0	-0.1	-0.1	0.6	0.4
Sep	0.3				-0.4
Oct	-0.1				0.0

Source: Statisticke Prehledy (1991).

References

Bak, Henryk, et al., 1991, "Reintegration of Poland into Western Europe by Internal and External Liberalization," Working Paper No. 48, World Economy Research Institute, Warsaw.

Berg, Andrew, and Jeffrey Sachs, 1991, "Structural Adjustment and International Trade in Eastern Europe: The Case of Poland," paper prepared for the Economic Policy Panel, Prague, 17-19 October.

Calvo, Guillermo A., and Fabrizio Coricelli, 1991, "Stabilizing a Previously -Centrally-Planned Economy: Poland 1990," Economic Policy, forthcoming.

Collins, Susan M., and Dani Rodrik, 1991, Eastern Europe and the Soviet Union in the World Economy, Institute for International Economics, Washington, D.C.

FSU [Federal Statistical Office, Czechoslovakia], 1991, Foreign Trade, January-September 1991, Prag.

_____, 1991b, Quarterly Statistical Bulletin, Prag, September.

GATT, 1991, Trade Policy Review: Hungary, vols I and II, Geneva, July.

GUS [Central Statistical Office, Poland], 1991a, Statistical Bulletin, Warsaw, November.

_____, 1991b, Informacje Statystyczne, Handel Zagraniczny, Warsaw, various issues.

_____, 1991c, Handel Zagraniczny 1991, Warsaw.

Guzman, Andrew, 1991, "The Best of Times: The Private Sector in Poland," unpublished paper, Harvard University.

IMF, 1991a, "The Collapse of Trade Among the Former Members of the CMEA," European Dpeartment.

IMF, 1991b, Direction of Trade Statistics, Washington, D.C., September.

Kenen, Peter B., 1991, "Transitional Arrangements for Trade and Payments among the CMEA Countries," IMF Staff Papers.

Mueller, Helga, 1991, "Export Performance of Polish Enterprises during the Transition Process," World Bank, September.

Murphy, Kevin, and Andrei Shleifer, 1991, "Quality and Trade," unpublished paper, University of Chicago and Harvard University, August.

Oblath, Gabor, and David Tarr, 1991, "The Terms-of-Trade Effects from the Elimination of State Trading in Soviet-Hungarian Trade," The World Bank,

Washington, D.C., May.

OECD, 1991a, OECD Economic Surveys: Hungary, Paris.

OECD, 1991b, Monthly Statistics of Foreign Trade, Paris, September.

Pinto, Brian, 1991, "Microeconomic Response to the Economic Transformation Program: Evidence from the Largest Polish SOEs," World Bank Resident Mission, Poland, Warsaw, September.

PlanEcon, 1991, "Recent Czechoslovak Foreign Trade Performance," PlanEcon Report, Washington, D.C., October 24.

RIFER [Research Institute for Foreign Economic Relations], 1991, CSFR in International Economy Quarterly, vol 1, no. 2, Prag, September.

Rodrik, Dani, 1992, "Making Sense of the Soviet Trade Shock in Eastern Europe: A Framework and Some Estimates," paper prepared for the World Bank/IMF conference on the fall of output in Eastern Europe.

Rosati, Dariusz K., 1991, "After the CMEA Collapse: Is the Central European Payments Union Really Necessary," Foreign Trade Research Institute, Working Paper No. 18, Warsaw, May.

Schaffer, Mark, 1992, "The Polish State-Owned Enterprise Sector and the Recession in 1990," Comparative Economic Studies, forthcoming.

Statisticke Prehledy, 1991, Monthly Statistics of Czechoslovakia, Prague, No. 11.

Synowiec, Ewa, and Ewa Rzeszutek, 1991, "Poland's Trade with the European Community at the Turn of the 1990s," Economic and Social Policy Series, No. 3, Friedrich Ebert Foundation (Poland), Warsaw, April.

Wang, Zhen Kun, and L. Alan Winters, 1991, "The Trading Potential of Eastern Europe," Discussion Paper No. 610, Centre for Economic Policy Research, London, November.

World Bank, 1991, Trade Expansion Program Report on Czechoslovakia, Washington, D.C.