EXTERNAL SHOCKS, ECONOMIC REFORMS, AND THE FOREIGN TRADE BEHAVIOR OF THE SOVIET UNION, CHINA, AND HUNGARY, 1970-1987

by

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Abstract

This article finds that the export demand effect of external shocks had the strongest impact on the USSR. The effect was second largest in China and Hungary, and smallest in the NICs. The USSR responded to external shocks in a manner typical of the traditional centrally-planned economy. It was unable to strengthen export promotion and import substitution, and instead relied on external borrowing to adjust. This was not the case with either of the reform economies of China and Hungary. Outward-oriented China relied on exports to pay for imports and foreign borrowing to continue its growth and reform program. Inward-oriented Hungary relied on import substitution and a slowdown of demand to reduce reliance on foreign borrowing.

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I. INTRODUCTION

Between 1974 and 1981, there were two periods of serious economic disruption in the world economy--1974-76 and 1979-81. These included the two oil shocks followed by recessions manifested in the contraction of world trade. Examinations of Soviet-type economies (STEs) in Eastern Europe concluded that the small Eastern European countries, and to a lesser extent the Soviet Union, were indeed significantly influenced by the mid-1970 international economic disturbances (see articles in Neuberger and Tyson 1980; Tyson, 1984).[2] The systemic economic reforms and greater openness to trade with the West meant the transmission mechanism of the external shocks was at work in these economies as it was in market economies, though in a different fashion.[3] Using a methodology developed in Balassa (1981), Tyson (1984), Tyson and Balassa (1985), and Balassa (1986) examine the balance of payments effects of external shocks in some East European countries as well as in several NICs. These studies have shown that although the outward-oriented NICs suffered greater external shocks than Hungary, Yugoslavia, and the inward-oriented NICs, they still were able to achieve higher economic growth rates.[4] High growth rates were the result of output increasing policies of export promotion and import substitution in the outward-oriented NICs whereas Hungary, Yugoslavia, and the inward-oriented NICs relied largely on external financing of the adverse balance of payments effects of external shocks. In the latter cases, debt financing necessarily led to the application of deflationary measures once borrowing possibilities were exhausted.

Based on the existing literature, this paper focuses on the Soviet Union, China and Hungary for a comparative analysis. The analysis is also extended to the mid-1980s which can be regarded as a third external shock period.

The mid-1980s can be characterized as a "reverse" oil shock in the sense that oil prices plummeted about 50 percent in 1986. This had an adverse impact on the net oil exporters, including the Soviet Union and China. During this period Gorbachev launched his reform program of the Soviet economy and China initiated a second phase of economic reforms with emphasis on the urban sector following the successful initial reform of the rural sector. In addition, hard-currency debt problems of East European countries once again became acute in the mid-1980s. These three periods (1974-76, 1979-81, and 1984-87) provide an opportunity to evaluate economic stability with regard to external shocks of various economies in a comparative perspective.

Adding the Soviet Union and China into the analysis enables us to address several interesting questions. First of all, we can investigate peculiarities in the foreign trade behavior of Soviet-type economies (STE) and the effects of economic reform on that behavior. In particular, such issues as the alleged marginality of STEs' export share in world markets and the low elasticity of their import demand can be assessed. Hungary met all three shocks after the economic reforms it initiated in 1968. China's economic reform started during the second oil shock period, and the Gorbachev reform began during the third shock period. Thus, the Soviet Union, Hungary, and China constitute interesting comparative cases to study the effects of socialist economic reform across periods and across countries.

In the case of socialist economies, the focus is on their hard currency trade. Although the ratio of hard currency trade to national income is small in these economies, the hard currency gap is regarded as one of the most important contraints on their economic growth. Although the resource-rich, continental-sized Soviet Union and China have gained, or were less adversely

affected than others by changes in the terms of trade during the first two periods, the export demand demand effects of worsening world economic conditions almost offset the favorable terms of trade effects. Soviet hard-currency trade remained in deficit throughout the 1970s and the debt problem became serious in the late 1970s. Since both the Soviet Union and China were adversely affected by the plummeting oil prices during the mid 1980s, comparison of their respones to these shocks across periods and across countries is also worthwhile.

In our analysis, Hungary, China and the Soviet Union will be compared with outward-oriented and inward-oriented NICs as determined by Balassa (1985). Such a comparison is of interest because both socialist and newly industrializing countries have maintained a greater level of state intervention than have developed market economies. In addition, hard-currency foreign exchange is generally one of the most important economic constraints in both groups of countries. It may also be possible to identify the degree of outward- or inward-orientation of China and Hungary through a comparison with the outward- and inward-oriented NICs.

The second section discusses theoretical, methodological, and data issues. In section 3, analysis of the first two periods is presented. Section 4 extends the analysis to the mid-1980s.

II. THEORETICAL CONSIDERATIONS AND METHODOLOGY

Foreign Trade Behavior of STEs

Traditionally in the STEs, foreign trade is a residual of domestic planning.[5] The purpose of foreign trade planning in STEs is to estimate import requirements above the available domestic supply, and then to see if

exports are sufficient to finance imports. One reason for the passive role of exports is that with a rigid domestic supply structure, exports simply have inflationary effects and do not stimulate additional production. Furthermore, world demand for STE exports tend to be marginal because of the poor product quality and the inferior marketing ability of the STEs. In STEs, in the spirit of autarky, domestic goods are substituted for imported goods as far as possible, and imports tend to be reduced to the minimum necessary level. For this reason, there remains little room for further adjustment when unexpected external imbalances arise. A low elasticity of import demand is one of main characteristics of traditional STEs. A reduction of imports through tightening of centralized trade controls tends to lead to input bottlenecks and result in, through a multiplier effect, reduced domestic production. If import reduction worsen shortages of consumer goods, workers' incentives, productivity, and participation rates may deteriorate. Thus, a reduction in imports may cause domestic output to decline by directly and indirectly affecting supply and productivity of material and labor inputs. These two channels of the effects of reduced imports are important supply-side multipliers working in STEs (Holzman, 1979a). Since neither export promotion nor import substituion are easy matters, external financing is often sought in order to cover unexpected external deficits so as to maintain a given level of national income.

Economic reforms and decentralization in STEs are supposed to introduce more flexibility in both domestic production and foreign trade. Increasing flexibility and responsiveness to demand signals allows export promotion to play a more active role in stimulating domestic production. The intensive growth strategy in the reformed STEs requires an open-door policy and imports

of advanced technology and capital goods. However, the over-valued exchange rates typical of STEs have incentive effects for imports and disincentive effects for exports. Export promotion in reform-oriented STEs requires devaluation, adoption of a dual exchange rate system, and/or export subsidies. In terms of policy responses to external shocks and related foreign trade behavior, we can differentiate "inward-looking" reformed STEs and "outward-looking" reformed STEs. The former rely on import substitution and domestic contraction, whereas the latter rely on export promotion and external financing, to overcome external shocks and sustain growth.

Methodology

For comparative analysis of the mechanisms to achieve external balance in socialist economies, we closely follow the methodology developed by Balassa (1981) and applied in Tyson and Balassa (1985) and Balassa (1986). Thus, the explanation below is almost the same as in their articles. However, we add some caveats in applying Balassa's method to STEs. Data issues are discussed in the Appendix.

The methodology involves estimating the balance of payments effects of external shocks resulting from the change of the terms of trade and the slowdown of foreign demand for exports, as well as the effects of policy responses to these shocks, including reliance on additional net external financing, export promotion and import substitution, and contractionary macroeconomic policies.

The balance of payments effects of external shocks have been derived by postulating a situation that would have existed in the absence of external shocks. Terms of trade effects have been obtained as the difference between the current price values of exports and imports and their constant price

values, estimated in the prices of the relevant base period. In the estimates, "1972" and "1977" (the average from the years from 1971 to 1973 and from 1976 to 1978, respectively) are the base years for calculations pertaining to 1974-76 and 1979-81, respectively.

The balance of payments effects of the slowdown of foreign demand on the exports of the countries studied, or export volume effects, have been calculated as the difference between the trend value of exports and hypothetical value of exports. The trend value of exports has been derived on the assumptions that the growth rate of foreign demand for individual export products and product groups remained the same as in the 1965-73 period and that the country maintained its base year market share in these exports. In turn, hypothetical exports have been estimated on the assumption that the country maintained its base year market share in the actual exports of product groups during the period under consideration. The balance of payments effects of the increase in interest rates in the 1979-81 period have also been estimated. These effects have been derived as the difference between actual net interest payments and the payments that would have been made if interest rates remained at "1977" levels.[6]

The balance of payments effects of policy responses to external shocks have also been estimated by hypothesizing a situation that would have occurred in the absence of external shocks. Additional net external financing has been derived as the difference between the actual merchandise trade balance and the trade balance that would have been obtained if trends in imports and exports observed in the periods 1965-73 (exports) and 1970-73 (imports) continued and prices of exports and imports remained at their base year level.[7] The effects of export promotion have been calculated as the difference between the actual

and hypothetical exports. Import substitution has been defined as savings in imports associated with a decrease in the income elasticity of import demand as compared to the 1970-73 period. Finally, the effects on imports of changes in GNP growth rates in response to macroeconomic policies have been calculated on the assumption that the income elasticity of import demand remained at 1970-73 levels.

There are some caveats in applying this methodology to centrally planned economies. First, regarding the fourth policy response (i.e., the effect on imports of changes in GNP growth associated with macroeconomic adjustment such as contractionary macro policy), we have to note that central planning can directly curtail imports without relying on indirect economic levers usually associated with macroeconomic adjustment policies. In the case of STEs, slower GNP growth induced by the supply-side bottleneck multiplier is a likely consequence of import curtailment. In other words, the causality may run exactly opposite of that in free market economies. When they face a foreign exchange shortage, socialist planners often resort to import curtailment. In this sense, this is a foreign trade version of "forced savings" which is typical of consumption behavior in centrally planned economies. As unsatisfied consumption demand becomes forced savings, unsatisfied foreign exchange demand turns into forced import savings. We will use the term,"import curtailment" in order to distinguish this from import savings associated with import substitution, which involves changes in the import elasticity of outputs. However, our current methodology does not distinguish quantitatively the effect on imports of macroeconomic adjustment from that of direct import curtailment. Thus, cautious interpretation is needed, especially in the case of reformed STEs with some decentralized foreign trade,

where both mechanisms are probably at work. In the text, both terms, macroeconomic adjustment and import curtailment, will be referred to at the same time.

Second, the four-types of policy responses in the Balassa methodology need not be interpreted narrowly as "direct and intentional" policy responses to external shocks. Rather, the responses can be thought of as descriptive of an economy's foreign trade behavior. For instance, in the case of the Soviet Union, the balance of payments effect of the first oil shock was minimal since the positive terms of trade effect was almost fully offset by export reduction effects. During this period, the Soviet Union borrowed heavily and greatly increased imports. Our methodology does not tell us whether or not the heavy borrowing and import expansion should be regarded as an "intentional response" by the Soviets to the external shocks. However, its measurement helps us understand the sources of the serious debt problem in the late 1970s and continued hard-currency deficits throughout the 1970s.

In the analysis of the mid-1980s, we do not utilize the Balassa methodology except in measuring the terms of trade effect. This is because the mid-1980s did not bring about any abrupt changes in world market prices and trade volumes, except the decrease of oil prices. Thus, actual, trend, and hypothetical trade volumes are not that meaningfully distinguished. The importance of the mid 1980s period is mainly for the cases of the Soviet Union and China in meeting decreases of oil prices during the process of economic reform. For this period, our discussion will mainly rely on direct examination of changes in trade volumes and prices, and domestic outputs in these STEs. For similar reasons, analysis of NICs for the mid 1980s period is

not done. The interesting comparisons of NICs with STEs is during the first two periods.

III. EXTERNAL SHOCKS AND POLICY RESPONSES, 1970-1981

A. Effects of the Changing Terms of Trade and Export Demand

The two oil shocks adversely affected the balance of payments of most oil-importing countries. Subsequent recessions then reduced world trade volumes. The two oil shock periods are observed to have had different impacts on capital market and goods market conditions. In goods markets during the first oil shock, the abrupt increase in the price of energy was followed by a brief, though sharp, world recession. In the second period, increased oil prices resulted in a prolonged world economic downturn. It is observed that demand for manufactured goods held up better than the demand for primary products in 1975-76, while the opposite was the case in 1979-81 (Balassa, 1986, p. 144). In capital markets, international interest rates increased substantially in the late 1970s, while this was not so much the case during the first oil shock.

As a matter of fact, in the cases of most countries which were adversely affected by the two oil shocks, the balance of payments effects of the changing terms of trade was dominant over the effects of decreasing export demands during the first oil shock, whereas the opposite was the case during the second oil shock period (ibid). More detailed results are reported in table 1. During the first oil shock period, the deteriorating terms of trade effect was dominant in Hungary; while during the second oil shock, the export volume effect was dominant and the terms of trade effect was favorable to the balance of payments. Also, in the case of the Soviet Union, the export demand

effects were much greater in the second oil shock period than in the first. During the second oil shock period, persistent external deficits were aggravated by poor agricultural harvests in 1979 and 1980.

[Table 1 here]

In table 1, when compared with the NICs, the three socialist economies of China, Hungary, and the Soviet Union were less effected by the changing terms of trade during the two periods, except in Hungary during the first period (negative signs in the table indicate "favorable" effects on the balance of payments). During the two oil shocks, terms of trade changes had favorable effects on the Soviet balance of payments because it is a net oil exporter. However, when fuel trade is excluded, the adverse balance of payments effect amounts to about 19 percent of average nonfuel trade during both oil shock periods.[8] The changing terms of trade adversely affected China's balance of payments on average during both periods. However, the extent of adverse effects was very small when compared with the NICs during both periods and in Hungary during the first period. For China, the effect amounts to 0.4 percent and 13.1 percent of average total trade in each period. For the NICs, these effects were equivalent to more than 25 percent during 1974-76, and about 20 percent during 1979-81. In the case of Hungary, the terms of trade effects were 33.9 percent of average trade turnover during the first period, however the terms of trade effects on the balance payments were marginally favorable during the second period.

From these findings, it appears that the terms of trade effects are largely determined by a country's resource endowment and the commodity composition of its trade. Continental sized countries like the Soviet Union and China have a relatively balanced commodity composition of trade, while

resource-poor NICs mainly relied on manufactured good exports whose prices were weak relative to those of raw materials.

Now, regarding the effect on export demand of the external shocks, it is clear that the Soviet Union met the most serious setbacks during both periods, followed by China, then Hungary, and lastly, the NICs. The Soviets lost the equivalent of about 20 percent of their exports, while in the NICs, export demand effects of external shocks amounted to less than 10 percent of total exports. This empirical finding supports the theoretical hypothesis that world export markets of traditional STEs are relatively weak and rely on marginal demand due to their poor commodity quality and marketing ability. It is also interesting to note that the relative margin between the Soviet Union and China in their respective export demand effects of the shock increased during the second oil shock period, while that between China and the already reformed socialist economy of Hungary became smaller. This phenomenon may be related to the fact that the Chinese economy went through a systemic economic reform during the second period.

[Table 2 here]

In both China and the Soviet Union, the negative export demand effects largely offset any positive terms of trade effects (see table 2). If we add the interest rate effect on their debt associated with the rapid increase of international interest rates in the late 1970s, the situation becomes worse. Even in the case of the Soviet Union which had a huge favorable balance of payments effect from the changing terms of trade (averaging $4 billion) during the second shock period, the net total effect on the balance became negative ($718 million) if increased interest burden on its debt is included (see the last column in table 2). Soviet hard-currency trade remained in deficit

throughout the 1970s (see table 3). In particular, Soviet trade deficits worsened in 1975 and 1976 during the first period, as well as in 1980 and 1981 during the second period. This deficit was covered by foreign borrowing, and Soviet indebtedness became serious by the end of the 1970s. The Soviet ratio of net interest payments as a percent of total exports toward market economies, and the ratio of net debt to exports toward market economies peaked in 1978 and 1976, respectively (Economic bulletin for Europe, 1988, pp. 44-45).

[Table 3 here]

B. Policy Responses

Additional Net External Financing

In Hungary, the inward-oriented NICs, and the Soviet Union the main response during the first oil shock was to increase external borrowing with hardly any restraint on expenditure. In contrast, additional external financing was small in the outward-oriented NICs and China, which placed reliance on export promotion and import substitution. The accumulation of external debt during the first period of external shocks made it difficult for Hungary and some inward-oriented NICs to continue the practice of externally financing imports during the second oil shock period. Thus, these countries had to adopt deflationary macroeconomic policies. During the second external shock period, most countries, except China, experienced a slowdown of output growth with import reduction as a consequence. However, in the case of Hungary and the inward-oriented NICs, slower growth was a result of an intentional stabilization policy of demand management, while in the Soviet Union, the slowdown of output growth appears to have originated from

supply-side sources through bottleneck multipliers.[9] Hungary's stabilization policy was successful in the sense that it did not have to rely on additional external financing if we exclude the interest rate effects. Some of the inward-oriented NICs and the Soviet Union also reduced their reliance on external financing during the second period of external shocks. However, this was only possible in the Soviet Union because the trade balance was helped by oil exports, and trade deficits were smaller than during the first period.

Compared with the outward-oriented NICs, China relied relatively more on additional external financing. Increasing indebtedness was less worrysome due to the outstanding performance of China's exports. In this period, China's export expansion alone more than offset the whole of the balance of payments effects of the shock, while in the case of the outward-oriented NICs, exports offset about 32 percent of the shock effects. China's borrowing rose in the late 1970s in order to finance the initiation of economic reforms. In turn, the economic reforms stimulated China's foreign trade, with imports rising more rapidly than exports. After an enormous trade deficit in 1979, China effectively pursued export promotion and decisively slowed growth of imports in 1981 and 1982.

Export Promotion and Import Substitution

Hungary, Yugoslavia, and the inward-looking NICs failed to promote their exports during both external shock periods, and continued to lose their export shares, albeit at a slower rate than prior to the shocks.[10] Only China and the outward-oriented NICs succeeded in increasing their export shares. Though the Soviet Union achieved some degree of export promotion during 1974-76, its performance significantly deteriorated during 1979-81.[11]

Both Hungary and Yugoslavia induced some import substitution in both periods of external shocks. However, the import savings were not enough to offset declining export market shares for the two countries. The Soviet Union did not pursue import substitution in either period. China experienced some import substitution in the first period, but negative import substitution in the second period. China's pattern in this regard appears to be similar to the experiences of the inward-looking NICs, however, there exist some differences. In the case of the inward-looking NICs, the net compensating effects of export promotion and import substitution amount to less than one-third of the total adverse balance of payments effects of external shocks in both periods. In contrast, the net effects of China's export promotion and import substitution more than compensate for the shocks of the first period, and offset about 90 percent of the shock's adverse effects on the balance of payments in the second period. In this regard, China compares more favorably with the outward-looking NICs. In the case of the outward-looking NICs, the net effects of export promotion and import substitution were equal to over two-thirds of the balance of payments effects of external shocks in 1974-76, and nearly one-half in 1979-81.

Macroeconomic Adjustment or Import Curtailment

The outward-oriented NICs consistently applied deflationary policies in both periods. Hungary and Yugoslavia did not consistently employ restrictive macroeconomic policies during 1974-76, while deflationary measures were introduced in 1979 in Hungary and in 1980 in Yugoslavia. This pattern is followed in the inward-looking NICs as well. Though the pattern of the Soviet Union in this regard appears similar to these countries, reduced output growth

during the 1979-81 period is difficult to be regarded as the result of intentional deflationary policies, as explained above. It may rather have resulted from domestic problems or have been caused by the curtailment of imports of capital goods. There is also no indication that China pursued any deflationary policies in response to external shocks in either of the two periods.[12] A significant decline in output in 1976 is attributed to domestic political strife.[13] In the period 1979-81, China experienced a substantial degree of open and repressed inflation as central control over a large amount of economic resources and purchasing power were reduced (Feltenstein and Farhadian, 1987). In 1981, Chinese authorities adopted some adjustment measures to correct initial disturbances brought on by reform measures. These included restrictive investment policies, thus generating a buyers' market in some producer goods. This also had some dampening effect on imports.

IV. THE "REVERSE" OIL SHOCK AND ECONOMIC REFORMS IN THE MID-1980s

The Soviet Union

Since Gorbachev took power in March 1985, the Soviet foreign trade sector has also gone through successive reform measures. First, a Central Committee decree issued in July 1985 included minor changes in the foreign trade system, mainly expansion of existing export incentive programs. Specific measures included in the decree were increased price subsidies on hard currency exports and retention of foreign currency by enterprises with the delivery of export products (McIntyre, 1987b, p. 497). In late September 1987, the Soviet authorities announced a major reform of the foreign trade system. For the first time, measures were introduced to break the Ministry of Foreign Trade's monopoly. More than twenty ministries and seventy large associations and

enterprises were granted authority to conduct trade directly. With some organizational change, the relationship between the Foreign Trade Organizations and enterprises has been put on a contract basis in contrast to the previous system of delivery orders fulfilling plans (ibid.).

Beginning in late 1985, world oil prices started to plummet. In 1986, the export price of fuel in the Soviet's nonsocialist trade declined by 43.4 percent (see table 5). As fuel accounted for more than 40 percent of Soviet nonsocialist exports, the price decrease led to a 17 percent deterioration of the terms of trade in 1986. Table 4 shows that the trade balance effect of the deterioration in the terms of trade amounted to $6.5 billion. Though trade balance in non-socialist trade would appear to have improved over 1985, the quality of the trade surplus deteriorated seriously. Whereas in 1984 about one-third of the surplus was earned in the developed West, in 1985 the Soviets registered a trade deficit with the developed West of $611 million, and the deficits surged to 3.7 billion dollars in 1986 (PlanEcon Report, No. 16 1987). A large portion of the trade surplus recorded with the developing countries is assumed to be a paper surplus based on soft-currency export credits (ibid.). In fact, the Soviet hard-currency trade balance switched from a large surplus of $3.7 billion in 1984 to a deficit of $0.6 billion in 1985 and a modest surplus of $0.6 billion in 1986 (PlanEcon Report, September 1987).

[Table 4 here]

In response to the deteriorating balance of payments, the Soviet Union resorted to foreign borrowing, export promotion, and import reduction. First, with heavy borrowing since 1985, the Soviet Union's gross debt increased from $25.6 billion in 1984 to $31.4 billion in 1985 and $37.4 billion in 1986. In

this period, the main source of borrowing was commercial borrowing from Western banks and other private sources. The actual amount of net commercial borrowing was $6.7 billion in 1985 and $7.2 billion in 1986. Thus, the Soviets borrowed more than the reduction in their hard-currency trade balance. This "over-borrowing" seems to have resulted from a favorable credit rating and generous terms being offered by banks during this period (McIntyre, 1987a, p. 483). The Soviets also increased their gold sales by 2.0 billion dollars in 1986 (PlanEcon Report, ibid.).

The Soviets also launched export promotion efforts in 1986 and 1987. Except for exports of machinery and equipment, most goods exports rapidly increased. The Soviets increased the quantity of energy shipments in general, and oil in particular, even as the price of oil was collapsing on the world market. As other oil producing countries were curtailing oil exports, the Soviets, pushed to the wall by unfavorable external economic developments, moved in the opposite direction. Soaring arms exports and gold sales supplemented export promotion. Despite the volume increase in exports, total nonsocialist export values in 1986 were still below the 1985 level. The value of 1985 exports was surpassed only in 1987 (see table 5).

In addition to export promotion, the Soviet Union reduced imports in volume terms significantly in 1986 and 1987. This led to a reduction of total nonsocialist imports by $3 billion in 1986, and to an almost zero increase in the import bill in 1987. In their import reduction, the heaviest cuts were on consumer goods, both in 1986 and 1987. This reminds us of the tradition of low priority on consumer items in the STEs. Favorable harvests in 1985 and 1986 reduced the food import bill. In 1986, imports of all other items, except for machinery and equipment, decreased in quantity terms. In 1987,

imports of machinery and equipment and production services decreased by 9.3 percent and 6.3 percent, respectively.

As for import reduction, current analysis does not exactly differentiate import substitution from import curtailment associated with growth reduction through the bottleneck multiplier. In this regard, quarterly data show that Soviet growth rates continuously decelerated up to the first quarter of 1987 from the first quarter of 1986 (PlanEcon Report, No. 33 1987). Recent estimates show that total output in the Soviet Union grew only 0.5 percent in 1987 (New York Times, 4/25/88). Reduced imports of machinery and equipment may be one of the main reasons for this retarded growth during the period.[14] Thus, the so-called bottleneck multiplier seems to have worked in association with the reductions of imports of producer goods in the Soviet Union.

As a result of successful export promotion and import reduction, the Soviet Union recorded a substantial trade surplus in 1987. Though we cannot judge the effectiveness of Gorbachev's reform of the Soviet foreign trade regime, the policy responses to the deterioration in the balance of payments in the mid-1980s appear somewhat different from policy responses to the previous external shocks.

[Table 5 here]

China

The second phase of economic reform in China began in 1984. After two years of adjustment to the initial disturbance effect of economic reforms, the Chinese authorities enlarged the scope and degree of reform. In particular, reforms were initiated in the urban sector following the success of reform of the agricultural sector in the previous period. The trade balance shifted from a surplus position in the early 1980s to a modest deficit in 1984 and to

an even larger deficit in 1985. This seems to be attributable to increasing import requirements during the second phase of economic reform and modernization. China's 1985 trade deficit of $8.4 billion is the highest on record since the 1970s. In addition to the effect of increased imports since 1984, the substantial reduction of oil prices in 1986 also adversely affected the trade balance of China. In 1986, China's terms of trade deteriorated by 12 percent, primarily because of a decrease in export prices. The balance of payments effect of this change is estimated to be about $3.7 billion in table 4.

In response to its worsening balance of payments position, China resorted mainly to increased foreign borrowing and further promotion of exports. China maintained the level of imports in order to continue its program of modernization of industry. Table 4 shows that China stepped up its foreign borrowing from $2.7 billion in 1985 to more than $5 billion in 1986 and 1987. Export growth in real terms reached 20 percent in both 1986 and 1987, up from 7.6 percent in 1984 and 14 percent in 1985. Fuel exports grew remarkably in light of the collapse of oil prices in the world market. This phenomenon, which was also observed in Soviet export promotion efforts in 1986, might be attributed to the peculiarity of foreign trade behavior of centrally planned economies.

Again, it does not appear that China pursued any serious import substitution and curtailment, except for the reduced import of nonfuel primary goods in 1986. Imports of these items increased again in 1987. Manufactured imports were largely maintained at previous levels through 1986 and 1987 in real terms. Thus, the bottleneck multiplier associated with import reduction was not a factor, and GNP continued to grow annually in real terms by about 10

percent between 1985 and 1988. As a result of successful export promotion since 1986 and improving terms of trade in 1987, China's trade balance showed a surplus in 1987.

Hungary

Even though Hungary is a net fuel importer, its terms of trade deteriorated by 7 percent in 1986 and the adverse balance of payments effect of the changing terms of trade was $350 million in table 4.[15] Whereas Hungary's trade surplus averaged $400 million in 1983, 1984, and 1985, it had a deficit of about the same amount in 1986 and 1987. The magnitude of the deficits which amounted to less than 5 percent of total trade turnover does not appear serious. There was no discernible policy response to the deficits at least in 1986, except for increased foreign borrowing. Exports performed poorly in 1986, while both imports and GDP showed modest increases during the period. Thus, it appears that the trade deficits were simply met by increased foreign borrowing in 1986. Hungarian gross external debt increased by $3.7 billion in 1986 and reached a record-high of $17.7 billion in 1987 after a $2.6 billion increase during that year. The Hungarian debt position thus became serious. 1987 is the peak year since the time series of gross debt was first recorded in the ratio of net interest payments to exports, and the ratio of net debt to exports to the market economies (table 2.17 of Economic Bulletin for Europe 1988). Hungary's degree of indebtedness in the mid-1980s is much higher than the average of Eastern Europe and second only to Poland.

Hungarian efforts to improve the balance of payments and debt position appear to have started in 1987 and became more desperate in 1988. Hungarian exports to the West increased a respectable 13 percent in real terms in 1987 and continued to grow at 14 percent during the first quarter of 1988 (PlanEcon

Report, No. 26-27 1988). This reflects the priority attached by the government on reducing the hard-currency deficits and on avoiding having to ask for a rescheduling of the country's hard-currency debt. However, it is not so impressive because the improvement of exports reflect mostly the growth of exports of raw materials rather than capital goods and processed food. While the growth of non-rouble imports was held below that of exports in 1987, the dramatic reduction of imports during the first quarter of 1988 by 17 percent in real terms reflects the seriousness of the Hungarian effort to alter the situation (ibid.). As a result, in contrast to a deficit of $324 million during the first quarter of 1987, the deficit during the corresponding period of 1988 was a mere $12 million. Hungarian indebtedness also was slightly reduced in 1988 from its 1987 level (Economic Bulletin for Europe 1988, pp. 44-45).

V. CONCLUSION

Based on the above findings, we can now summarize the balance of payments effects of external shocks and the corresponding policy responses in the Soviet Union and the two reformed Soviet-type economies, China and Hungary.

First, all three suffered more from declining shares of export markets than did the NICs. This fact signifies the weak penetration of world markets associated with poor marketing ability and the low quality of goods produced by centrally planned economies. In this regard, Soviet exports were more heavily affected than those of other two reformed STEs.

The patterns of the terms of trade effects seems to be largely explained by each country's resource endowment and the commodity composition of trade. For both China and Hungary, the terms of trade deteriorated during the first

two periods, except for Hungary during the second period, while the oil exporting Soviet Union had favorable balance of payments effects in its total hard-currency trade during the first two periods. During the reverse oil shock of the mid-1980s, all three socialist countries had unfavorable terms of trade effects in the balance of payments, the largest in the case of the Soviet Union, a big net oil exporter.

In terms of policy responses, the Soviet policy responses can still be understood within the framework of foreign trade behavior of traditional STEs, even though some reform has been going on since the mid 1980s. Even though the Soviet Union gained through changes in the terms of trade during the first two periods, the export demand effects of worsening world economic conditions almost offset the favorable terms of trade effects. Despite continuing deficits and increasing indebtedness throughout the 1970s, the Soviet Union during the first two periods did not pursue any import substitution and mainly relied on external financing during the first two periods. Even with the abrupt worsening of the terms of trade during the third period, the Soviet Union's main response was still additional foreign borrowing, while it reduced imports and promoted exports to a certain extent. The response to the reverse oil shock by the Soviets was very similar to China's response to the first oil shock when China experienced the deterioration of its terms of trade and increasing trade deficits in 1974 and 1975.

Policy responses of the two reformed STEs of China and Hungary are somewhat different from that of the Soviet Union, and more similar to the NICs. Both of them pursued export promotion, import substituion, and macroeconomic adjustment. However, the response of China is in some contrast with Hungary. China's export growth was outstanding through all three periods,

except 1974, helping pay for the large imports and external financing needed for economic reform and rapid modernization. However, Hungary failed to promote exports and thus had to rely on import substitution during the first and second periods, growth reduction during the second period, and external financing during the first and third periods. In other words, inward-oriented Hungary relied on a slowdown of aggregate demand and import substitution for internal and external stabilization, and thereby tried to reduce its reliance on external finance. Thus, China can be considered an outward-oriented reformed STE, while Hungary should be considered an inward-oriented reformed STE.

APPENDIX: DATA SOURCES AND USAGES

Since our interest is on STEs's hard currency trades and balance of payments, most of our analysis is done with hard currency trade data. Foreign trade of STEs can be divided into hard currency trade and soft currency trade most of which is associated with counter-trade among socialist countries. In the case of China, we use total trade data, except for the period of the mid-1970s. This would be accepted because China's trade with socialist countries has been reduced to less than 5 percent of total trade since the late 1970s. In the case of Hungary, we sometimes use data of nonsocialist trade; and most nonsocialist trade is conducted in hard-currency.

China: Real Trends in Trade with Non-communist Countries (U.S. CIA, 1977) provides data for the Chinese aggregate and sectoral exports and imports in constant and current values for the period 1970-75, and China: International Trade 1976-77 (U.S. CIA, 1977) provides such data for the year of 1976 and also provides foreign debt figures. China's trade data for 1979-

87 are from various years of the People's Republic of China, Almanac of China's Foreign Economic Relations and Trade, which also provides some price and volume indices for exports and imports. China's GNP figures are from U.S. CIA (1977, 1979), China: Economic Indicators. Quantum and unit value indices of world trade needed for calculation of trend values and hypothetical values of sectoral exports are from the United Nations (1979, 1984, 1988), Yearbook of International Trade Statistics (special table C, special table G). The Soviet Union's current and constant values of sectoral hard-currency trade for 1970-81 are from Zoeter (1983). Soviet GNP figures are from U.S. Congress, Joint Economic Committee, USSR: Measures of Economic Growth and Development 1950-80, and from U.S. CIA, Economic Statistics. For the Soviet Union and Hungary, trade and debt data during the mid-1980s are from various issues of PlanEcon Reports and Economic Bulletin for Europe.

Changes in the sources of data over time may improse some difficulties. However, our primary concern is with the relative effects of shocks and policies, such as the terms of trade effect measured as a percentage of total trade turnover and export promotion measured as a percentage of total exports.

ENDNOTES

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2. The domestic economy of the Soviet Union was found not to be seriously affected by the first oil shock, see Rosefielde's article in Neuberger and Tyson (1980).
3. See Tyson and Kennen's article in Neuberger and Tyson (1980).
4. See Balassa (1986), p. 139. In his usage, outward oriented NICs include Korea, Singarpore, Taiwan, Chile, and Uruguay. Inward-oriented NICs include Brazil, Israel, Portugal, Argentina, Mexico, and Turkey.
5. See Brown (1967) and Holzman (1979a,b) for more on the foreign trade behavior of STEs.
6. The calculation has been made by utilizing London Euro-dollar rates. These rates averaged 6.77 percent in "1977;" they were 11.96 percent in 1979, 14.36 percent in 1980; and 16.51 percent in 1981 (IMF, International Financial Statistics, 1982, p. 56; Balassa 1986, p. 141).
7. In Balassa (1986), trends in both exports and imports are taken from time series data of the period 1965 to 1973. In our study import trends are taken from the period 1970 to 1973. The income elasticity of import demand during this period seems to better represent the trend than that during the earlier period. In the case of China, the late 1960s is the most tubulent period of the Cultural Revolution. In the case of the

Soviet Union, since the early 1970s the economy showed more openness toward the world economy than in the previous decade, and subsequently maintained that level of openness.

8. If fuel exports are included, the Soviet Union gained a lot owing to the rising oil prices. For China, it simply decreases the damaging effects since China started oil exports only in 1973, and was a small exporter.

9. 1976 is the first year since 1950 that the annual growth rate of Soviet industrial production fell below 5 percent to 3.9 percent (U.S. Congress, 1982). Persistence of a below 4 percent annual industrial growth rate since then may well be explained by some domestic factors. The steady reduction of imports of machinery and equipment since 1976 also might have contributed to stagnation of other industrial sectors through bottleneck multipliers.

10. While the data for inward-looking NICs show a gain in exports, this was due to increases in petroleum exports following new discoveries by Mexico and Peru. Excluding these exports, continuing losses are shown for the group as a whole (Balassa, 1986).

11. The mid-1970s is a period when the Soviet authorities gave exports a higher priority than ever before.

12. The Soviet Union and China had not had standard macroeconomic policies as in market economies. China has recently started to experiment with some macroeconomic policies (Feltenstein and Farhadian, 1987).

13. Relative to other developing countries and STEs, China experienced significant stagnation of output growth in 1974 and 1975. The stagnation does not appear to be due to the automatic adjustment mechanism seen in developed countries, but due to the disruptive effects on production of

the political strife during the period, such as Gang of Four and political succession. For more on this issue, see Lardy (1978). Some portion of China's import substitution was also related to internal events.

14. Other reasons are said to be the harsh winter weather, backsliding on worker discipline, shortcomings in the construction industry, and confusion over the economic changes among the state enterprises (New York Times 4/25/88).

15. Such a deterioration in the terms of trade seems surprising in the case of a country that is a net importer of oil and raw materials from the world market at a time of a dramatically reduced oil price and relatively depressed raw material prices. Hungary's experience in this respect also appears to differ sharply from other East European countries. Among several reasons for this, one explanation is that, unlike Yugoslavia and Romania, Hungary is only a small net importer of oil and the average price of fuels imported by Hungary dropped only 13 percent, while the average world market price of oil dropped nearly 50 percent in 1986. Another reason is much higher increases of prices of Hungary's import items such as raw materials than that of export items such as agricultral products (PlanEcon Report, No. 22-23 1987).

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Table 1: BALANCE OF PAYMENTS EFFECTS OF EXTERNAL SHOCKS AND POLICY RESPONSES OF SOCIALIST ECONOMIES AND NICS

SHOCKS AND RESPONSES	1974	1975	1976	Average	1979	1980	1981	Average
EXTERNAL SHOCKS								
(a) TERMS OF TRADE EFFECTS AS % OF TRADE TURNOVER								
The Soviet Union, total	-19.2%	6.0%	-5.8%	-5.4%	-10.0%	-16.4%	-14.4%	-13.7%
Non-fuel	0.0%	26.1%	19.6%	16.5%	10.8%	17.9%	28.1%	19.0%
China, Total	5.3%	4.9%	-8.5%	0.4%	3.6%	2.7%	3.7%	3.3%
Non-fuel	11.8%	16.3%	0.4%	9.4%	7.7%	14.1%	16.7%	13.1%
Hungary	34.7%	44.1%	23.7%	33.9%	-0.1%	-0.1%	-3.2%	-1.1%
Yugoslavia	64.3%	75.9%	54.4%	65.0%	24.6%	43.7%	57.7%	41.4%
Outward Oriented NICs	27.8%	34.3%	16.4%	25.4%	5.9%	19.2%	26.3%	17.7%
Inward Oriented NICs	40.0%	54.6%	42.8%	45.7%	12.9%	25.2%	23.1%	20.7%
(b)TOTAL EXPORT DEMAND EFFECTS AS% OF TOTAL EXPORTS								
The Soviet Union, Total	9.3%	25.7%	21.6%	19.1%	16.5%	29.2%	43.0%	28.9%
Non-fuel	8.2%	24.8%	19.8%	17.6%	11.4%	15.8%	21.6%	15.8%
China, Total	8.5%	17.3%	12.7%	13.0%	10.8%	13.7%	17.9%	14.5%
Non-fuel	8.6%	17.4%	12.8%	13.0%	10.7%	12.6%	15.6%	13.3%
Hungary	1.7%	13.5%	5.8%	7.0%	4.5%	10.7%	16.9%	10.7%
Yugoslavia	2.0%	17.7%	6.2%	8.6%	3.4%	7.6%	11.5%	7.8%
Outward Oriented NICs	-0.4%	12.4%	4.4%	5.4%	5.2%	9.9%	14.7%	10.3%
Inward Oriented NICs	2.9%	12.1%	7.9%	7.7%	3.3%	5.0%	7.3%	5.4%

POLICY REACTIONS	1974	1975	1976	Average	1979	1980	1981	Average
(1)ADDITIONAL NET EXTERNAL FINANANCE AS% OF TRADE TURNOVER								
The Soviet Union, Total	-2.6%	39.2%	28.4%	23.8%	-7.3%	-4.8%	1.2%	-3.6%
Non-fuel	15.4%	61.1%	56.7%	47.1%	7.3%	22.5%	33.1%	21.2%
China, Total	8.4%	1.3%	-30.0%	-7.2%	8.0%	5.8%	-3.4%	3.2%
Non-fuel	15.1%	13.0%	-21.0%	1.9%	15.3%	20.4%	11.1%	15.5%
Hungary	46.8%	52.4%	37.2%	45.2%	-6.4%	-4.0%	4.0%	-2.1%
Yugoslavia	84.4%	79.1%	18.5%	61.1%	46.0%	30.0%	14.6%	30.8%
Outward Oriented NICs	17.7%	9.6%	-21.2%	0.3%	4.2%	2.8%	-0.8%	1.9%
Inward Oriented NICs	57.8%	58.3%	25.2%	47.2%	11.1%	18.0%	-0.9%	9.0%

(Continued)

(2) TOTAL NET EXPORT PROMOTION AS % OF TOTAL EXPORTS								
The Soviet Union, Total	0.1%	11.9%	12.6%	8.5%	1.1%	-5.4%	-7.3%	-3.8%
Non-fuel	4.5%	9.7%	7.5%	7.2%	8.7%	-8.8%	-19.1%	-6.2%
China, Total	6.6%	17.5%	24.6%	17.0%	20.6%	26.4%	36.8%	28.7%
Non-fuel	6.3%	17.0%	24.3%	16.7%	16.1%	21.3%	33.5%	24.6%
Hungary	-12.3%	-10.8%	-21.6%	-15.1%	-2.0%	-6.1%	-18.1%	-8.6%
Yugoslavia	-32.0%	-20.4%	-20.8%	-24.0%	-10.9%	-11.2%	-3.2%	-8.1%
Outward Oriented NICs	4.1%	8.1%	16.1%	10.1%	3.5%	7.5%	12.7%	18.3%
Inward Oriented NICs	-9.0%	-7.3%	-11.3%	-9.3%	1.5%	6.4%	18.2%	9.6%
(3)TOTAL IMPORT SUBSTITUTION AS % OF TOTAL IMPORTS								
The Soviet Union, Total	-21.0%	-43.4%	-47.0%	-39.3%	2.8%	-5.2%	-3.4%	-2.1%
Non-grain	-33.8%	-47.8%	-49.2%		-2.4%	-10.3%	-3.8%	
China, Total	-5.4%	4.4%	20.8%	5.9%	-14.2%	-13.6%	-2.2%	-10.1%
Hungary	1.4%	15.1%	9.3%	8.5%	6.4%	5.2%	3.3%	4.9%
Yugoslavia	6.5%	12.8%	41.0%	18.9%	-10.3%	10.4%	24.1%	6.5%
Outward Oriented NICs	1.1%	14.7%	18.9%	11.8%	3.6%	3.0%	6.6%	4.4%
Inward Oriented NICs	-4.0%	5.5%	23.3%	7.7%	-2.7%	-4.4%	-7.5%	-4.9%
(4)EFFECTS OF LOW GNP GROWTH ON IMPORTS AS % OF TOTAL IMPORTS								
The Soviet Union, Total	0.2%	2.1%	2.1%	1.6%	2.9%	6.0%	9.4%	6.2%
Non-grain	0.2%	1.8%	1.9%		2.7%	5.5%	9.0%	
China	1.2%	2.7%	14.4%	5.7%	-3.0%	-4.4%	-4.9%	-4.1%
Hungary	-0.7%	-1.2%	2.0%	0.1%	4.9%	12.4%	17.1%	11.6%
Yugoslavia	-7.1%	1.9%	5.0%	-0.4%	1.0%	9.2%	20.3%	9.3%
Outward Oriented NICs	4.5%	12.5%	6.9%	7.9%	-0.5%	15.2%	22.4%	12.7%
Inward Oriented NICs	-3.2%	3.6%	5.9%	1.9%	5.6%	9.6%	20.5%	12.1%

Sources: Figures for Hungary, Yugoslavia, and NICs are from Balassa (1986).
The remaining data are our estimaton. For data sources, see Texts.
For calculation methods, see text and Balassa (1981) for details.
For the Soviet Union and China, since they are oil exporters, calculations
are also done for non-oil exports. For the Soviet Union's imports,
the effects of non-grain imports are also calculated separately.
In discussing the terms of trade effects, the "-" signs mean that
the effect is favorable to the balance of payments.

TABLE 2: BALANCE-OF-PAYMENTS EFFECTS OF EXTERNAL SHOCKS AND OF POLICY RESPONSES

SHOCKS AND RESPONSES	1974	1975	1976	Average 1974-76	1979	1980	1981	Average 1979-81
(million US$)								
	CHINA							
I. EXTERNAL SHOCKS								
(a)TERMS-OF-TRADE EFFECTS	326.8	312.9	-557.1	27.5	805.0	665.0	954.0	808.0
(b)EXPORT DEMAND EFFECTS	250.5	554.1	491.7	432.1	1146.0	1644.0	2520.0	1770.0
(C)INTEREST RATE EFFECTS	0.0	0.0	0.0	0.0	264.7	491.4	555.2	437.1
II. POLICY REACTIONS								
(1)EXTERNAL FINANCE	517.0	82.7	-1972.4	-457.6	1798.0	1411.0	-866.0	781.0
(1)' = (1) + (C)	517.0	82.7	-1972.4	-457.6	2062.7	1902.4	-310.8	1218.1
(2)EXPORT PROMOTION	194.7	560.6	949.1	568.1	2183.0	3158.0	5180.0	3507.0
(3)IMPORT SUBSTITUTION	-173.2	138.8	565.9	177.2	-1680.0	-1710.0	-260.0	-1216.7
(4)LOW GNP GROWTH	38.7	84.8	391.9	171.8	-350.0	-550.0	-580.0	-493.3
TOTAL REACTIONS	577.2	866.9	-65.4	459.6	1951.0	2309.0	3474.0	2578.0
TOTAL SHOCKS = (a) + (b)	577.3	867.0	-65.4	459.6	1951.0	2309.0	3474.0	2578.0
= (a) + (b) + (c)	577.3	867.0	-65.4	459.6	2215.7	2800.4	4029.2	3015.1
	THE SOVIET UNION							
I. EXTERNAL SHOCKS								
(a)TERMS-OF-TRADE EFFECTS	-2003.8	799.2	-877.4	-694.0	-2932.1	-4969.8	-4255.8	-4052.6
(b)EXPORT DEMAND EFFECTS	355.7	1015.3	964.4	778.5	1880.2	3102.6	4895.6	3292.8
(C)INTEREST RATE EFFECTS	0.0	0.0	0.0	0.0	936.6	1462.8	2035.7	1478.4
II. POLICY REACTIONS								
(1)EXTERNAL FINANCE	-268.8	5248.8	4283.3	3087.8	-2138.6	-1446.8	343.6	-1080.6
(1)' = (1) + (C)	-268.8	5248.8	4283.3	3087.8	-1202.0	16.0	2379.3	397.8
(2)EXPORT PROMOTION	5.0	468.6	564.6	346.1	125.1	-572.8	-836.4	-428.0
(3)IMPORT SUBSTITUTION	-1397.7	-4101.8	-4978.3	-3492.6	471.5	-974.7	-637.9	-380.4
(4)LOW GNP GROWTH	13.4	198.9	217.4	143.2	490.1	1127.1	1770.5	1129.2
TOTAL REACTIONS	-1648.1	1814.5	87.0	84.5	-1051.9	-1867.2	639.8	-759.8
TOTAL SHOCKS = (a) + (b)	-1648.1	1814.5	87.0	84.5	-1051.9	-1867.2	639.8	-759.8
= (a) + (b) + (c)	-1648.1	1814.5	87.0	84.5	-115.3	-404.4	2675.5	718.6

SOURCES: For calculation methodology, see texts and Balassa (1981).
For China, 1974-76 figures are based on China's trade with non-communist countries only, while the figures for 1979-91 are based on China's total trade.
For the Soviet Union, only hard-currency trade is included.

TABLE 3 Balance of Payments and the Terms of Trade
(in million US dollars)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
THE SOVIET UNION												
TERMS OF TRADE	100	99	98	110	162	143	165	180	140	188	222	227
TRADE BALANCE	-560	-317	-1388	-1735	-826	-6297	-5253	-2942	-3690	-2018	-2486	-4000
IMPORTS												
CURRENT VALUE	2984	3093	4342	6744	8695	14577	15478	14805	17026	21435	26070	27778
PRICE INDEX	100	108	118	155	166	196	186	197	233	258	284	302
CONSTANT VALUE	2984	2851	3677	4349	5223	7419	8325	7531	7294	8324	9188	9205
EXPORTS												
CURRENT VALUE	2424	2776	2954	5009	7869	8280	10225	11863	13336	19417	23584	23778
PRICE INDEX	100	107	116	170	270	281	306	353	327	483	629	685
CONSTANT VALUE	2424	2589	2541	2939	2910	2946	3342	3359	4075	4018	3747	3469
CHINA												
TERMS OF TRADE	100	101	105	125	117	105	116	136	134	120	114	110
TRADE BALANCE	-66	431	585	662	-670	-223	277	376	-1148	-2017	-1278	1411
IMPORTS												
CURRENT VALUE	2326	2205	2858	5157	7619	7487	6578	7214	10893	15675	19550	19482
PRICE INDEX	100	94	97	125	176	189	160	161	177	220	258	275
CONSTANT VALUE	2326	2356	2956	4122	4329	3966	4119	4489	6151	7119	7583	7074
EXPORTS												
CURRENT VALUE	2260	2636	3443	5819	6949	7264	6855	7590	9745	13658	18272	20893
PRICE INDEX	100	95	102	157	207	198	186	219	237	264	294	304
CONSTANT VALUE	2260	2775	3375	3713	3364	3665	3685	3461	4117	5172	6219	6877
HUNGARY												
TERMS OF TRADE	125	126	125	123	108	100	107	103	104	113	107	109
TRADE BALANCE	0	-100	0	300	-400	-300	-200	-300	-800	-100	300	500
IMPORTS												
CURRENT VALUE	900	1000	1100	1400	2500	2500	2500	3000	4000	4200	4600	4400
PRICE INDEX	43	45	49	64	94	100	94	102	109	128	143	136
CONSTANT VALUE	2074	2247	2234	2188	2671	2500	2668	2935	3663	3271	3224	3240
EXPORTS												
CURRENT VALUE	900	900	1100	1700	2100	2200	2300	2700	3200	4100	4900	4900
PRICE INDEX	54	56	62	79	101	100	100	105	114	145	153	149
CONSTANT VALUE	1654	1607	1783	2160	2071	2200	2302	2567	2817	2824	3205	3297

Sources:
For the USSR, calculations are based on current and 1970 price values of the USSR hard currency trade given in Zoeter (1983). China's trade in current values and indices are given in Almanac of China's Foreign Economic Relations and Trade, 1985.
For Hungary, price index are from Economic Bulletin for Europe, vol.37.
These are for Hungary's trade with non-socialist countries. Hungary's hard currency figures are from Economic Bulletin for Europe, vol. 40, 1988.
Exports data are FOB values, while imports are CIF values.

TABLE 4 Balance of Payments and the Terms of Trade in the mid 1980s

(million US $)	1984	1985	1986	1987
THE USSR, Non-socialist trade				
TERMS OF TRADE	96.0	100.0	83.0	89.8
TRADE BALANCE	6325.0	1512.0	2720.0	8428
TERMS OF TRADE EFFECT	-1329.7	0.0	-6564.4	-3809
GROSS DEBT	25600	31400	37400	40200
IMPORTS				
CURRENT VALUE	33212.0	32328.0	29498.0	29477
PRICE INDEX	104.3	100.0	100.2	103.9
CONSTANT VALUE	31842.8	32328.0	29439.1	28368.5
EXPORTS				
CURRENT VALUE	39537.0	33840.0	32218.0	37905
PRICE INDEX	100.1	100.0	83.2	93.4
CONSTANT VALUE	39497.5	33840.0	38723.6	40605.1
China, Total Trade				
TERMS OF TRADE	101.0	100.0	87.8	94.9
TRADE BALANCE	-940.0	-8416.0	-6069.0	1312
TERMS OF TRADE EFFECT	172.5	0.0	-3731.0	-1949.7
FOREIGN BORROWING (used)	1286	2688	5014	5805
REPAYMENT (Princ.+Inter.)	2274	3259	3449	5196
IMPORTS				
CURRENT VALUE	25356.0	34331.0	33083.0	33399
PRICE INDEX	106.4	100.0	99.3	97.6
CONSTANT VALUE	23841.72	34331	33308.05	34231.66
EXPORTS				
CURRENT VALUE	24416.0	25915.0	27014.0	34711
PRICE INDEX	107.4	100.0	87.2	92.6
CONSTANT VALUE	22729.27	25915	30970.02	37493.35
HUNGARY's non-ruble trade				
TERMS OF TRADE	101.2	100.0	93.0	93.0
TRADE BALANCE	609.4	113.4	-444.0	-370
TERMS OF TRADE EFFECT	64.3	0.0	-350.4	-376.3
GROSS DEBT	8800	11800	15100	17700
NET DEBT/EXPORT RATIO	171	249	328	355
IMPORTS				
CURRENT VALUE	4293.0	4347.0	4934.0	5378
PRICE INDEX	100.9	100.0	112.7	119.8
CONSTANT VALUE	4254.363	4347	4377.994	4489.144
EXPORTS				
CURRENT VALUE	4902.4	4460.4	4490.0	5008
PRICE INDEX	102.1	100	104.8	111.4
CONSTANT VALUE	4799.449	4460.4	4284.351	4495.414

Source: Trade data of the USSR and Hungary, are from PlanEcon Reports, various years. Debt figures are from Economic Bulletin for Europe, 1988 China trade data are from China Foreign Trade Yearbooks, various years. China foreign borrowing and repayment figures are from China Statistical Yearbook, 1989.

Table 5. Commodity Composition of Foreign Trade
of the USSR, Hungary, and China in the mid 1980s

USSR, Non-socialist Trade	Exports (FOB)						Imports (CIF)					
			% changes in						% changes in			
(mil. US $)	Value		1) Price		2) Quant'y		Value		1) Price		2) Quant'y	
	1986	1987	1986	1987	1986	1987	1986	1987	1986	1987	1986	1987
Total	32225	37905	-16.8	12.2	14.4	4.9	29498	29477	0.2	3.7	-8.7	-3.6
Machin. & Equipm.	3488	3958	15.0	16.5	-2.1	-2.6	8625	8912	14.0	13.9	11.1	-9.3
Fuels	13558	17195	-38.0	14.7	13.5	10.6	2903	2723	-47.0	-4.9	-4.3	-1.4
Raw materials	5325	5731	12.0	4.5	8.1	3.0	10159	11114	14.0	5.0	-20.1	4.2
Food stuff	647	807	5.0	-0.2	37.7	25.0	5282	4813	0.0	-10.1	-54.9	1.3
Consumer Goods	839	1029	15.0	6.7	29.8	15.0	2347	1726	14.0	5.0	-24.6	-30.0
Production Service	171	206		11.7		8.0	182	190		11.4		-6.3

Hungary, Non-Ruble Trade	EXPORTS (fob)						IMPORTS (cif)					
			% changes in						% changes in			
(mil. US $)	Value		1) Price		2) Quant'y		Value		1) Price		2) Quant'y	
	1986	1987	1986	1987	1986	1987	1986	1987	1986	1987	1986	1987
Total	4490	5008	4.8	6.3	-3.9	4.9	4934	5379	12.7	6.3	0.8	2.6
Energy	289	322	-43.4	11.3	41.9	0.1	356	323	-12.7	-17.9	-17.0	10.3
Raw materials	1716	2015	5.0	7.0	-0.7	9.8	2746	3074	13.9	9.4	1.0	2.3
Machin. & Equipm.	612	612	13.2	7.2	-8.3	-6.8	661	783	15.4	9.4	6.1	8.2
Consumer Goods	700	832	17.0	7.1	1.7	10.9	596	624	15.1	5.6	16.0	-0.8
Food & Agri.Prod.	1173	1227	4.5	3.4	-11.9	1.2	575	576	17.4	-3.9	2.3	4.1

China, Total Trade	EXPORTS (fob)						IMPORTS (cif)					
			% changes in						% changes in			
(mil. US $)	Value		1) Price		2) Quant'y		Value		1) Price		2) Quant'y	
	1986	1987	1986	1987	1986	1987	1986	1987	1986	1987	1986	1987
Total	27014	34711	-12.8	6.1	19.5	21.1	33083	33399	-0.7	-1.8	-3.0	2.8
Non-fuel Primary	8210	8618	8.8	6.9	12.7	-1.8	4466	6444	8.8	6.9	-26.7	35.0
Fuels	3582	4834	-64.8	0.4	38.7	34.4	462	648	-34.8	12.1	175.8	25.2
Manufacured goods.	15222	21259	16.1	12.9	10.4	23.7	28155	26307	-1.1	-4.7	-0.1	-1.9

Sources: Hungary and USSR data are from various issues of PlanEcon Reports.
China data are from various years of Zhongguo duiwai jingjimaoyi nianjian (China foreign Trade Yearbooks). Some price indices from UN, International trade statistical yearbook 1988, are used for estimation of China trade trends.