

# Working Paper

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**Macroeconomic Conditions and Import Surcharges  
in Selected Transition Economies**

Prepared by Piritta Sorsa<sup>1</sup>

Authorized for distribution by Robert Sharer

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**Abstract**

Analysis on macroeconomic determinants of protection in the Czech and Slovak Republics, Hungary, and Poland, while subject to many caveats, suggests that appreciation of the real exchange rate was the main macroeconomic determinant of trade policy reversals in the 1990s. This suggests that balance of payments difficulties may have been used as an excuse for protection. The analysis also suggests that greater exchange rate flexibility and tighter fiscal policies could have been used instead of import surcharges to deal with external imbalances. The surcharges may only have aggravated the external balance by slowing down exports and restructuring of production.

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Author's E-Mail Address: [psorsa@imf.org](mailto:psorsa@imf.org)

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## I. INTRODUCTION

Trade policy reversals have become part of the macroeconomic policy mix in many transition economies in the 1990s. Bulgaria (1993, 1996), the Czech Republic (1990, 1997), Hungary (1995), Poland (1992), Romania (1998), and the Slovak Republic (1990, 1994, 1997) all introduced import surcharges over the decade to deal with balance of payments problems. This has taken place despite the generally recognized ineffectiveness of increased import protection in achieving the external balance (see Corden, 1998) in the long run. While surcharges under fixed exchange rates may reduce imports and thus improve the current account deficit in the short run, their long-run implications for the balance of payments are uncertain as taxes on imports also tax exports. Under flexible exchange rates, the effect of surcharges on the balance of payments is even more uncertain and depends on their impact on the savings-investment balance. The use of second-best trade policies for stabilization can have large distortion costs created by increased protection. The efficiency of domestic resource allocation is reduced, which in turn affects growth. In transition economies, trade policy reversals not only slow down required transition in the real sector to changes in relative prices by sustaining uncompetitive activities, but also encourage protectionist lobbies to continue to resist adjustment. Further inefficiencies are created by resources spent in lobbying for rent seeking.

The frequent use of the second-best trade policies for stabilization in transition countries raises questions on the appropriateness of the macroeconomic policy mix used in these countries at the time of imposing the surcharges. The use of trade measures may suggest that first-best policies were not available or were judged not to work in a given macroeconomic environment to deal with external imbalances. This can arise, for example, if the government is unwilling to temporarily adjust a nominal anchor such as the exchange rate. Monetary policy effectiveness may also be compromised with exchange rate pegs with open capital accounts, or adjustments in fiscal policy may be judged to take too long to take effect or may be undesirable in a given cyclical position. In transition economies, effectiveness of fiscal policy in reducing imports may also be compromised at early stages of transition if import demand is driven by fundamental changes in tastes and preferences. Import surcharges have at times been justified to improve the fiscal balance if no other revenue sources are available. On the other hand, macroeconomic conditions may also be used as an excuse to increase protection on microeconomic grounds against permanent loss of competitiveness.

This paper analyses the role of macroeconomic conditions and policies in the demand for protection expressed in trade policy reversals in selected transition economies. First, it briefly discusses the literature on macroeconomics and protection and the various interlinkages between trade and macroeconomic policies. It then examines the potential macroeconomic determinants of trade policy reversals in four transition countries—the Czech Republic,

Hungary, Poland, and the Slovak Republic.<sup>2</sup> The empirical analysis, although subject to many caveats, suggests that appreciation of the real exchange rate was the main explanation for trade policy reversals, while overall demand conditions or the fiscal-monetary policy mix in terms of real interest rates were less important. In terms of the policy mix, this may suggest that balance of payments difficulties may have been used as an excuse for increased protection. To deal with problems with the external balance, either exchange rate policies could have been more flexible or the fiscal policy tighter to contain demand instead of resorting to increased import protection. The latter may only have aggravated the external balance by slowing down exports and restructuring of production.

## II. MACROECONOMICS AND PROTECTION

### A. Macroeconomics and Protection in the Literature

Macroeconomic conditions can be important determinants of protection. They have been much less analyzed in the trade policy literature than structural or political economy factors (see, for example, Corden, 1997; Krueger, 1993; and Winters, 1995).<sup>3</sup> Macroeconomic factors such as exchange rate and relative price fluctuations can make resource allocation according to comparative advantage more difficult and cause producers to lobby for protection (Eichengreen, 1997). Changes in the business cycle have also been observed to lead to increased protectionist pressures against imports (Leidy, 1996) as activity declines. Demand for protection may also be pro-cyclical, if increased demand increases imports substantially (Dornbusch and Frankel, 1987) causing lobbying for protection. The fluctuations in prices or demand shifts can result from changes in world market conditions, changes in fundamentals in the economy or from uncoordinated domestic macroeconomic policies.

A number of empirical studies have reviewed the linkages between trade and macroeconomic policies. Eichengreen (1997) reviews both theoretical and empirical literature on macroeconomic policy stability and trade, and concludes that, for a range of plausible model specifications, policy instability may prevent the gains from trade from being fully realized. For example, in recent studies policy-induced exchange rate instability is shown to discourage trade although the magnitude is small. He notes that more needs to be done to establish the channels through which this effect operates, and in particular whether the related relative price instability is a source of protectionist pressures. An analysis of several countries' experience with external imbalances and trade policy concluded that large fiscal deficits have often been

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<sup>2</sup>Bulgaria was left out of the sample due to poor data and Romania's import surcharge is too recent to have adequate data for the analysis.

<sup>3</sup>Most important of the arguments used have been political economy factors, for example, rent seeking and infant or sunset industry arguments for protection. Demand for protection may also arise from loss of competitiveness due to changes in productivity, intersectoral misalignments of production, and wage and transfer problems (Dornbusch and Frankel, 1987).

at the heart of major inflation and balance of payments crises in developing countries (Thomas and others, 1991). An expansionary monetary policy which was often a consequence of money financing of deficits also contributed to the problems. Furthermore, the study notes that overvalued real exchange rates arising from expansionary fiscal and monetary policies inconsistent with the nominal exchange rate policy have frequently led to generalized increases in restrictions on imports and capital movements intended to reduce the loss of international reserves. Another study (Little and others, 1993) notes that countries with flexible exchange rates may have been less likely to impose tight trade restrictions in response to balance of payments problems than those with fixed regimes. Drabek and Brada (1998) discuss the relationship of exchange rate regimes and protection in transition countries, and conclude that more flexible exchange rates might have avoided resort to protection to deal with real appreciation. All these studies point to important linkages between trade and macroeconomic policies and protection.

### **B. Trade and Macroeconomic Determinants of Protection**

Trade flows are generally affected by two main macroeconomic variables: relative levels of activity and international competitiveness. Developments in trade flows, in turn, can affect the demand for protection. Key determinants of the level of aggregate demand for domestic production and imports are **the business cycle and the real exchange rate**. In addition, **real interest rates**, which are influenced by the overall monetary-fiscal policy mix, can have an important impact on overall demand.

The impact of the business cycle on demand for protection can be ambiguous. On the one hand, domestic producers faced with declining demand may request protection against imports to shift more demand for their goods. On the other hand, a recession by reducing overall demand will also reduce imports, which can make it harder to sustain a case for protection against increases in imports. This may also suggest that demand for protection on these grounds can be countercyclical. Thus, the sign of the coefficients for this variable as a determinant of trade policy reversals can be positive or negative.

An appreciating real exchange rate clearly makes it more difficult for domestic firms to compete with imports, and thus can be a major source of demand for protection. The sign of this coefficient is likely to be positive. Exchange rate appreciation also affects overall demand by making export development more difficult. The appreciation, which can reflect changes in long-run equilibrium rate or deviations from it, can result from a number of factors.<sup>4</sup> With an open capital account, large capital inflows can appreciate the real exchange rate with fixed rates. Real exchange rate appreciation can also result from differential productivity growth in traded and nontraded goods sectors, or from price arbitrage as administratively controlled

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<sup>4</sup>Real exchange rate dynamics in transition countries have been analyzed by Halpern and Wyplosz (1997) and Krajnyak and Zettelmeyer (1998).

prices are gradually liberalized or adjusted to reflect costs. Real appreciation may also result from changes in macroeconomic policy mixes such as loose monetary or fiscal policies.

Another important determinant of overall demand, and thereby of demand for protection, can be **the real interest rate**. High real interest rates would tend to reduce interest-sensitive components of overall demand of both domestic production and imports. Their impact on demand for protection, as in the case of cyclical factors, can depend on how various components of demand are affected. If, for example, imports contain a large share of capital goods, their demand should go down. If high real interest rates lead to real appreciation, the external balance may deteriorate. Thus, their impact on the demand for protection can be positive or negative.

Real interest rates, apart from conditions in external supply of funds and capital account openness, can be influenced by the fiscal-monetary policy mix. The impact of monetary policy on overall demand and real interest rates can depend on the fiscal stance. If tight monetary policy is accompanied by loose fiscal policy, the impact of the policy mix on real interest rates can be reduced depending how deficits are financed (money creation or domestic credit). Financing the deficit by printing money would tend to increase inflation and reduce real interest rates. Financing by domestic credit could further increase real interest rates by increasing overall demand for credit. Tight fiscal policies would tend to reduce overall demand, real interest rates, and inflation. Depending on the exact policy mix demand for imports could increase or decrease.

### C. Trade Policy and Stabilization

The above indicates that the macroeconomic determinants of demand for protection can be diverse. In general, they are related to demand conditions or loss of competitiveness, which can result from a number of factors including the applied macroeconomic policies. In determining various policy responses to external imbalances, the authorities, in principle, should find the source of the excess demand and address the problem accordingly. Depending on the situation and the temporary or permanent nature of the demand change, this may imply reducing aggregate demand by an appropriate monetary-fiscal policy mix or changing the level of the exchange rate.

It is clear that trade policies are second-best to deal with external imbalances. The use of trade measures to deal with balance of payments problems as second-best policies has been discussed by Corden (1997). If exchange rates are fixed, an increase in protection may improve the current account in the short run by shifting demand and resources into import-competing industries. However, the tax on imports by changing relative prices will also attract resources from exporting, which eventually will worsen the current account. Thus, one could argue that, in very limited circumstances with a fixed exchange rate and no possibility to change the fiscal-monetary-exchange rate policy mix, a surcharge could help the current account in the short run. However, these circumstances are likely to be very rare and should

be weighed against the costs of the surcharge on trade policy credibility, resource allocation, and rent seeking. With flexible exchange rates, the impact of increased protection on the current account is more complex. An increase in protection would lead to an appreciation of the exchange rate, offsetting its initial impact on the current account, unless demand is reduced at the same time. The impact on the current account would also depend on how the savings-investment balance is affected. Higher fiscal revenues may increase public savings and improve the savings-investment balance. On the other hand, higher protection may attract resources to import-competing industries. If private investment goes up, the current account can deteriorate. Thus, increases in tariffs are not a first-best policy to deal with excess demand and external imbalances. If they are used as a second-best instrument to deal with macroeconomic imbalances, they should at least be uniform and time bound. Depending on the source of the problem for excess demand for imports, more restrictive monetary and fiscal policies or appropriate adjustments in the exchange rate should work better to bring a sustainable improvement to the balance of payments than trade restrictions.

Taxing trade for fiscal reasons is also inefficient, as general consumption taxes are likely to raise the same revenue, with less production distortions created than tariffs. Import taxes raise prices of both domestic and imported goods and collect revenue only on imported goods. Trade taxes, however, tend to have lower collection costs than broader-based consumption taxes. But given their distortion costs, trade taxes should only be used if no less distortionary taxes can be applied. The latter is likely to be rare in practice.

Any use of trade policies for stabilization should also consider their costs in terms of efficiency of resource allocation and resources lost in rent seeking. The traditional costs of protection are well known (Corden, 1997). In a dynamic context, higher protection of imports will also slow down structural adjustment and restructuring of industries, which in transition economies are essential to attain sustainable long-term growth. Policy reversals also create incentives for lobbying for further protection, which will further slow down incentives for restructuring.

### **III. MACROECONOMICS AND TRADE POLICY REVERSALS IN TRANSITION COUNTRIES**

Before discussing empirical estimates on the interaction of macroeconomic conditions and trade policies in the four transition economies, this section will first discuss briefly trade and macroeconomic developments in these countries in the 1990s.

#### **A. Trade Policy Developments**

Trade policy stances are measured by an index of trade restrictiveness. It is a composite measure of the restrictiveness of a country's trade policies, taking into account both tariff and nontariff barriers (NTBs) (for details, see Sharer and others, 1997). The index takes values



between “1” (open) and “10” (restrictive). Tariffs fall into five categories<sup>5</sup> and NTBs into three.<sup>6</sup> The index is a weighted average of these two measures of protection with a higher weight assigned to NTBs due to their assumed higher distortion costs. While the index captures mainly large changes in countries’ trade policies it is subject to a number of caveats—the weight assigned to NTBs in the index is arbitrary, and no account is taken of tariff dispersion or exemptions in increasing the distortiveness of a country’s trade regime. Despite these caveats, the index seems to capture well changes in trade policies in the four transition countries. The dismantling of central planning resulted in large changes in trade policy stances and thus in movement on the index. Furthermore, the impact of distortions and exemptions on tariff dispersion in these countries are moderate.

Although all four transition countries liberalized substantially their trade regimes over the 1990s, the process has been subject to a number of reversals.<sup>7</sup> Figure 1 shows developments in trade policies in the four countries since early 1990s, measured by the index of trade restrictiveness. Initially, in the early 1990s, the four transition countries had quite restrictive trade regimes, reflecting centrally planned trading arrangements in the framework of the Council of Mutual Economic Assistance (CMEA). They ranked between “7” and “10” on the index. Nontariff barriers were especially high, reflecting total controls on trading transactions.

Over the decade the **Czech Republic** has become very open by removing all NTBs and lowering its tariffs to below 10 percent, ranking it “1” in 1997 on the index. It briefly reintroduced an import deposit requirement in 1997, but this was eliminated within a few months. The other three countries, after an initial liberalization with the removal of the CMEA-related quantitative restrictions, have experienced several trade policy reversals. In most cases, this has taken the form of import surcharges, but general tariffs also have been increased. **Poland**, in the early 1990s, initially lowered tariffs drastically from an average of 18 percent to 6 percent. Tariff liberalization was seen as an element of its anti-inflation policy. This was, however, reversed rapidly with the introduction of an import surcharge of 6 percent in 1992, when tariffs were also increased back to an average of 18 percent. The surcharge was maintained for about 4 years, whereupon tariffs were also slightly reduced in the context of Poland’s Uruguay Round commitments. In 1997 Poland ranked “6” on the index. The **Slovak Republic** gradually removed all NTBs by 1995. Reductions in tariff protection have been slower, and since 1994 a surcharge of 10 percent (that gradually declined to 7 percent) was levied on imports until early 1997. However, another surcharge was introduced in the second half of 1997, which was later removed in 1998. After the removal of the surcharge, the Slovak

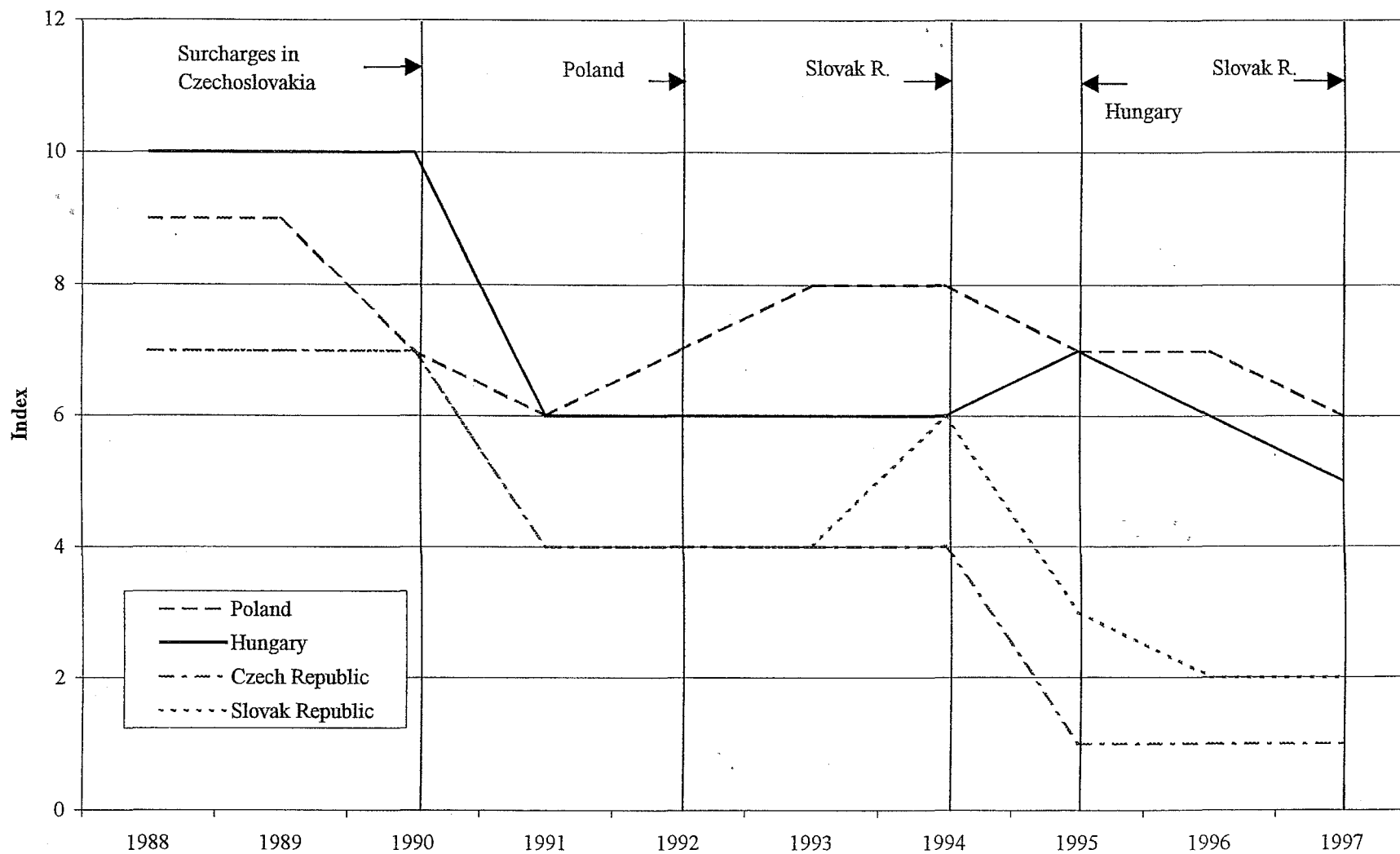
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<sup>5</sup>These are below 10 percent; 10–15 percent; 15–20 percent; 20–25 percent; and above 25 percent.

<sup>6</sup>NTBs cover less than 1 percent, between 1 percent and 25 percent, or above 25 percent of imports and exports.

<sup>7</sup>Drabek and Brada (1998) discuss in detail trade policy developments in the four countries.

Figure 1. Evolution of Trade Policy Stance with the Trade Restrictiveness Index



Source: IMF staff estimates.

Republic ranked “1” on the index in 1998. **Hungary** gradually lowered especially NTBs, but tariffs have also been reduced. However, in 1995 an import surcharge of 8 percent was introduced, which was only eliminated in 1998, ranking Hungary “5” on the index.

All the surcharges have been introduced in compliance with World Trade Organization (WTO) rules.<sup>8</sup> These rules are weak in preventing the introduction of surcharges as their justification is in general examined only several months after their introduction. In recent years the WTO has taken a tougher stance in asking countries to gradually eliminate the surcharges making the rules stricter against longer term maintenance of surcharges. All four countries invoked the balance of payments exemptions of the GATT/WTO rules to justify the surcharges. This implicitly suggests that the motivation for the policy reversals was the countries’ macroeconomic situation.

## B. Macroeconomic Developments

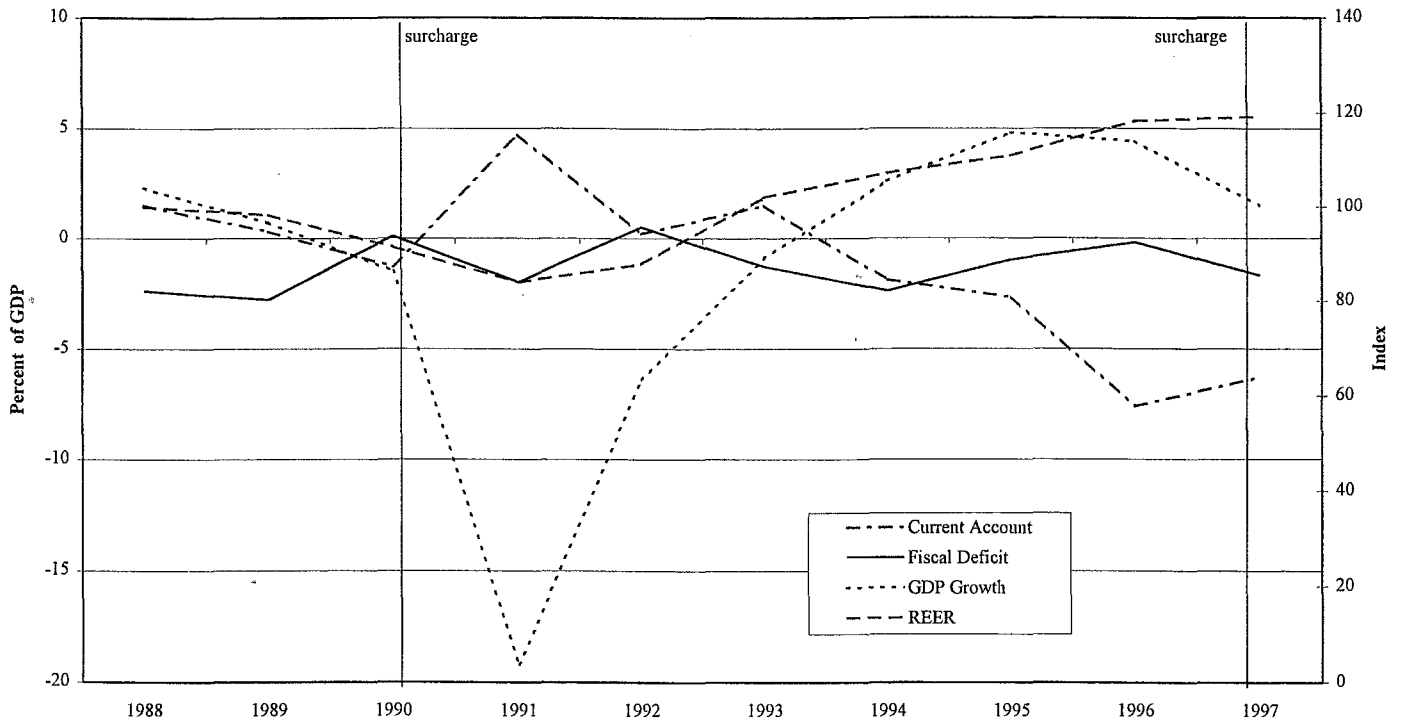
To give background to the analysis of import surcharges, this section examines briefly the macroeconomic situation in the four transition countries prior to the introduction of the surcharges and whether the trade measures may have made sense at the time of their introduction. The first experience with a surcharge in the **Czech Republic** was in 1990 when a surcharge of 20 percent was introduced by the then Czechoslovakia. Available statistics suggest that at the time there did not seem to be a large current account problem (Figure 2a). The current account deficit in 1990 was about 1 percent of GDP. Between 1990 and 1992, output declined substantially reaching -20 percent in 1991, which is also likely to have contributed to lower imports and the subsequent current account surplus of nearly 5 percent of GDP in 1991. The fiscal account in 1990 was in rough balance. The above would suggest little macroeconomic justification for an import surcharge on balance of payments grounds. One motivation for the surcharge may have been avoidance of a larger devaluation and possibly protection of domestic industries. The latter is more likely as the surcharge applied only to a small part of imports. The surcharge is likely to have slowed down transition in the real sector to changes in market conditions. The initial undervaluation of the exchange rate (Wyplosz and Halpern 1997) should have had a favorable impact on competitiveness and thus reduced the need for surcharges. Subsequently, the Czech Republic continued to liberalize trade.

An import deposit requirement was, however, again introduced between April and August 1997 which increased the cost of importing like a tariff. In 1996 and 1997 the current account deficit was worsening and reached 6–8 percent of GDP. In 1997, growth had started to slow down (from just under 4 percent in 1996 to about 2 percent in 1997), the fiscal deficit to

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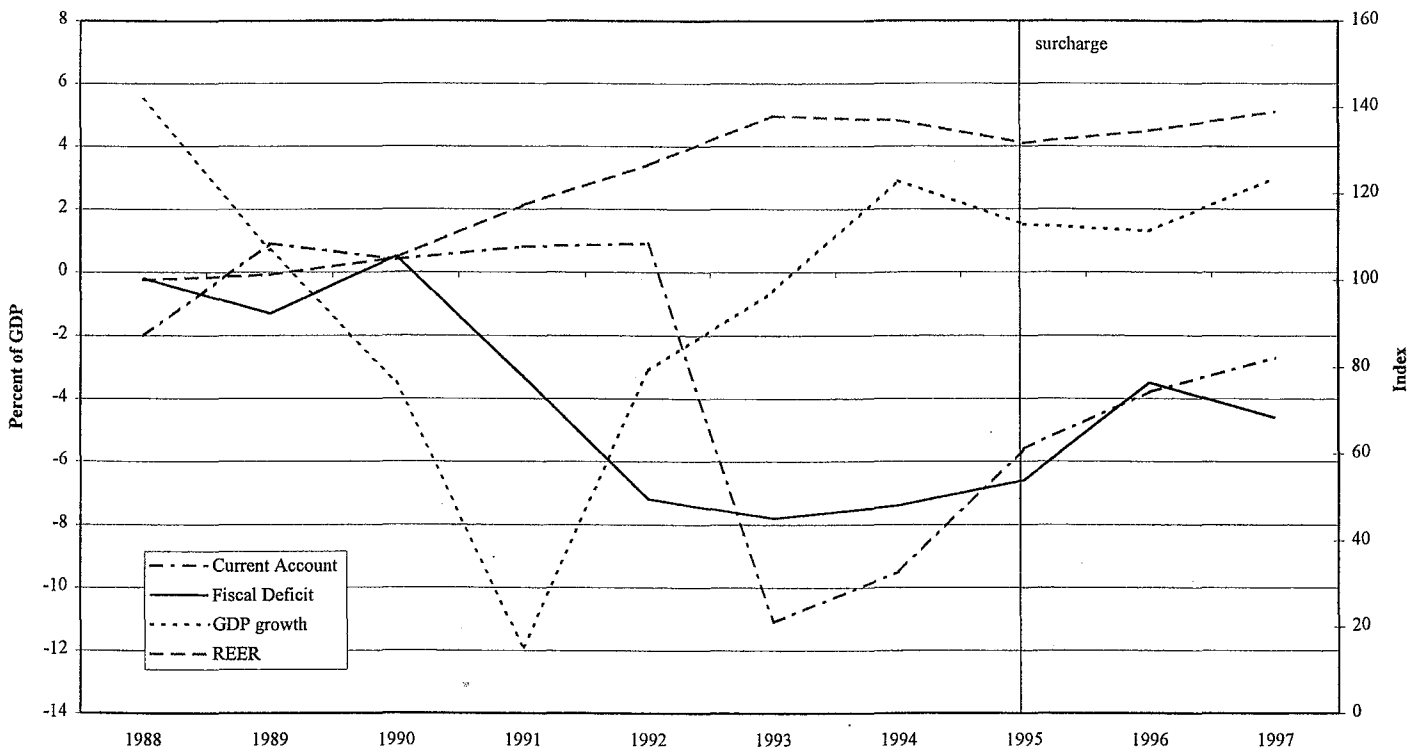
<sup>8</sup>This means that the surcharge is notified to the WTO, and justified on balance of payments grounds and/or to protect foreign exchange reserve levels. A WTO committee examines the case ex-post (often more than six months after the notification of the surcharge) and approves the restrictions generally for a given period.

Figure 2a. Developments in Key Macroeconomic Aggregates:  
The Czech Republic



Source: IMF staff estimates.

Figure 2b. Developments in Key Macroeconomic Aggregates: Hungary



Source: IMF staff estimates.

increase (from 1 percent in 1996 to about 2 percent of GDP in 1997) and the real exchange rate continued to appreciate with the fixed peg. The deposit/surcharge in 1997 was imposed in a deteriorating balance of payment situation. At the same time the fiscal deficit was widening, real interest rates increased and the real exchange rate continued to appreciate. In the end the authorities adjusted the exchange rate in mid-1997 by introducing a more flexible managed float (Box 1). The motivation for the surcharge was the deteriorating balance of payments situation, but it seems that the surcharge might have been avoided by more and earlier fiscal tightening and earlier action in increasing exchange rate flexibility.

Box. Exchange Rate Arrangements

*Czech Republic*: until May 1997 peg to a basket, thereafter managed float

*Hungary*: until March 1995 fixed peg with irregular adjustments, thereafter crawling peg

*Poland*: since 1991 a crawling peg to a basket of currencies

*Slovak Republic*: fixed peg to a basket of currencies, since October 1998 free float.

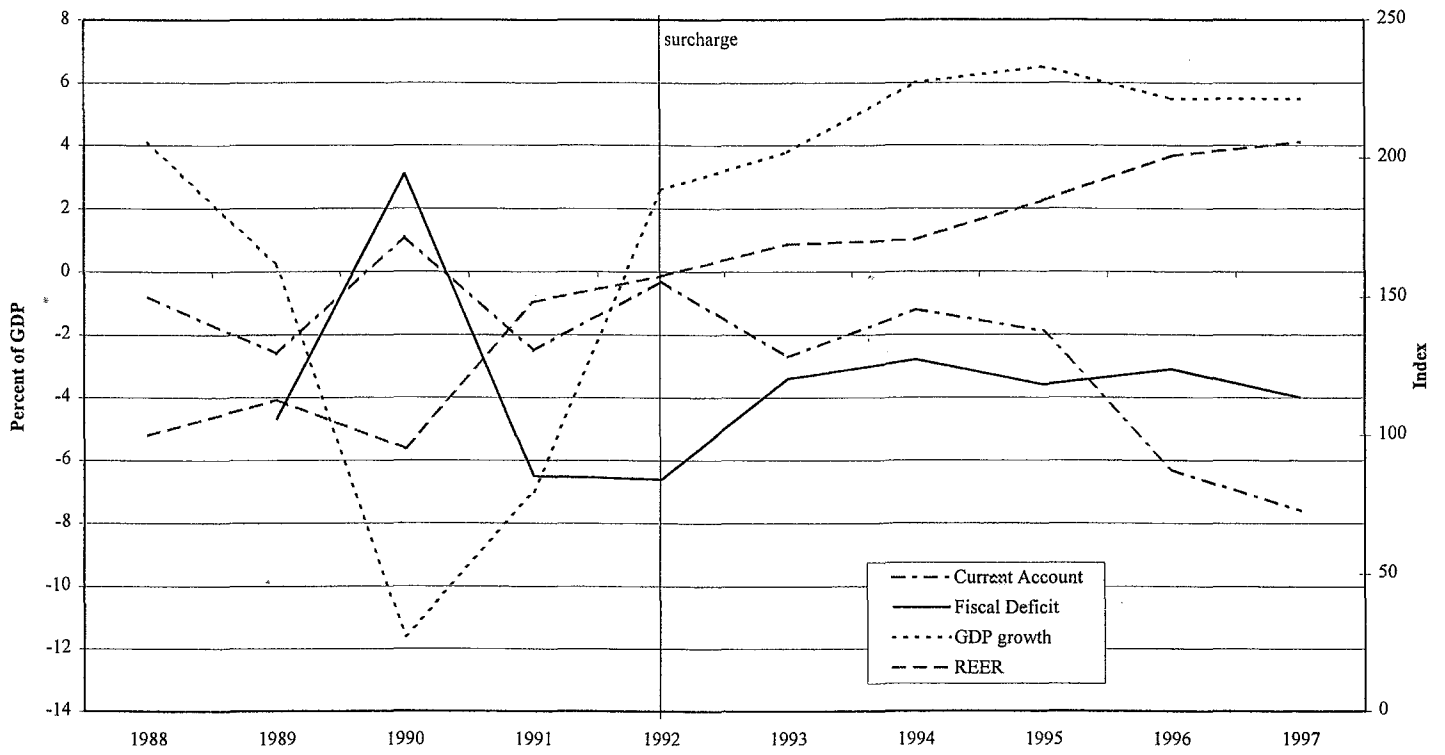
In **Hungary**, a surcharge was introduced in 1995. The current account deficit had deteriorated sharply in 1993 to over 10 percent of GDP, but recovered in 1994 and 1995 to about 7–8 percent of GDP. Growth of GDP was relatively strong in 1994 and 1995 (2–3 percent), compared to the negative rates in the previous years. Fiscal deficits in the preceding years had reached 7–8 percent of GDP and they seemed to stay at this level between 1992 and 1995. Thus, the statistics suggest that the current account situation in Hungary was already improving at the time of the surcharge, while the fiscal deficit was persistently high, suggesting a loose fiscal policy. Real interest rates were also coming down from about 8–9 percent in 1994 to about 3–4 percent in 1995–97, suggesting either a looser monetary stance or improvement in the country's creditworthiness, or both. The balance of payments motivation for the surcharge in this situation can be questionable, and its true motivation is likely to have been fiscal reasons or protection. The fact that it was not uniformly applied to all industry (energy and capital goods were exempt) also undermines its balance of payments motivation. It is doubtful whether no other fiscal revenue sources could have been found. In 1995 the authorities also adjusted the exchange rate, from a fixed peg with periodic adjustments to a more flexible managed float. Again, one could ask whether a search for other fiscal revenues, or more and earlier adjustments in the exchange rate policy could have prevented the resort to the import surcharge.

In **Poland**, when the 6 percent surcharge was imposed in 1992, the current account deficit was relatively low (Figure 2c). In the preceding year it stood at about 2–3 percent of GDP. In 1992 there was a large increase in growth (from -7 percent in 1991 to 3 percent in 1992) which may have put more pressure on the current account. At the same time, despite the increase in growth, fiscal policy remained expansionary and the deficit stood at 6–7 percent of GDP in 1991 and 1992. Real interest rates were negative, suggesting a loose monetary policy. The current account situation does not seem to justify the imposition of the surcharge. It is likely to have been influenced by the fiscal situation or the loss of competitiveness following the sharp real appreciation of the currency between 1990 and 1992. The fact that the surcharge was not uniformly applied (alcohol, tobacco, fuels, cars, and medical equipment was exempt) to all imports again undermines its macroeconomic effectiveness. In these circumstances, one could again ask whether fiscal and monetary policies could not have been tightened to reduce demand to deal with any pressures on the current account or the fiscal deficit and to avoid the resort to the import surcharge.

In the **Slovak Republic**, in addition to the 1990 imposition of the surcharge, another one was imposed in 1994 and again in 1997. In 1993 the current account had deteriorated to over 5 percent of GDP, but it improved in 1994 to a surplus of about 5 percent. The large fiscal deficit of 1992 and 1993 of about 7–10 percent of GDP had also started to improve. The GDP growth was strong between 1994 and 1997, which is likely to have contributed to the worsening of the current account deficit in 1996 and 1997 to about 10 percent. Despite growth pressures, fiscal policy seemed to remain loose (the deficit increased from about 1 percent to nearly 4 percent between 1996 and 1997), and the real exchange rate was appreciating. The low level of real interest rates in 1994 also suggests that monetary policy may have been loose as well. But instead of tighter demand management, the policy makers chose an import surcharge to constrain demand for imports and deal with the current account deficit. No adjustment was made to the exchange rate. Again the surcharge was not uniformly applied (it applied to 75 percent of imports), which undermines its macroeconomic motivation.

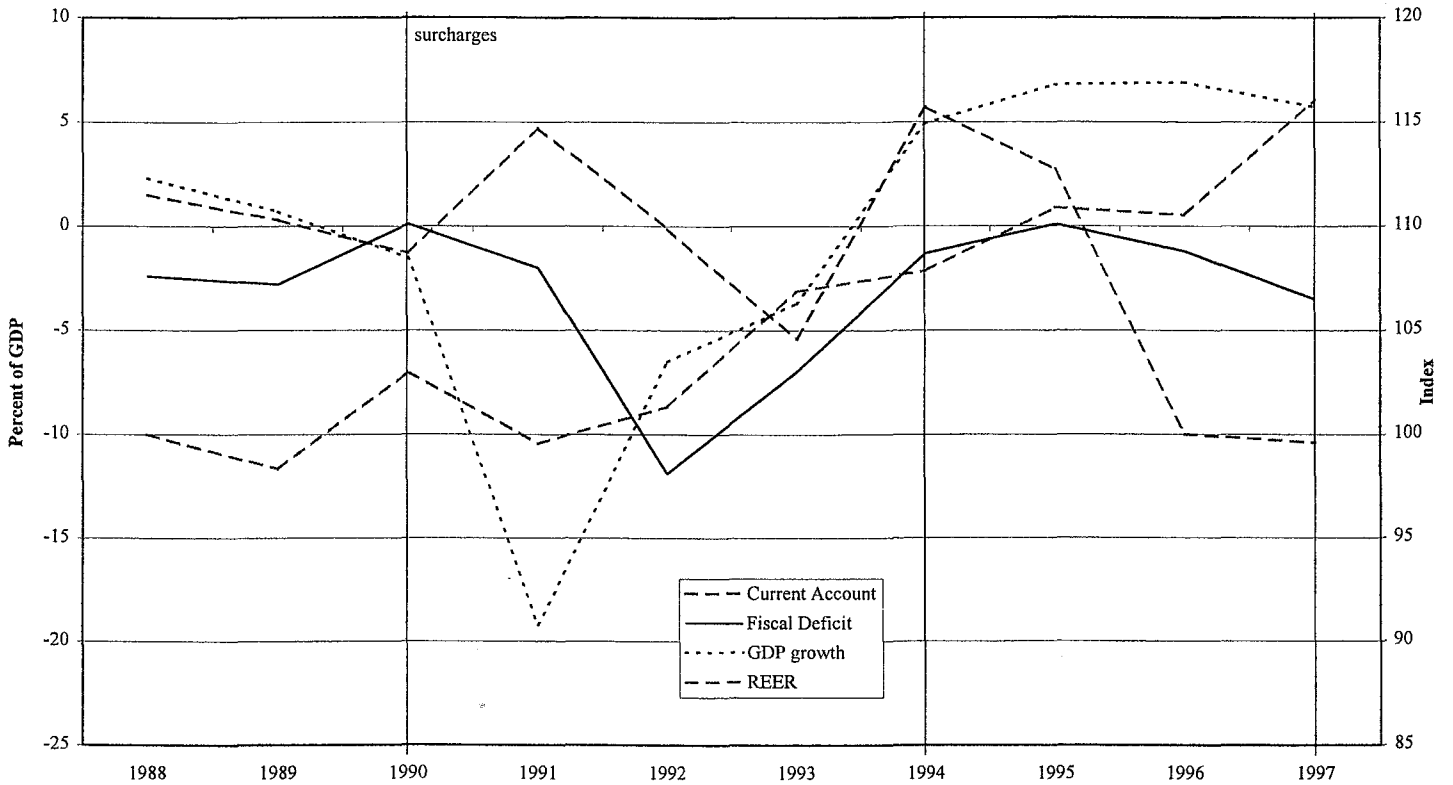
In sum, it seems that in all cases, although the motivation officially for the surcharges was a dire balance of payments situation, other policies such as fiscal tightening or an earlier adjustment of the exchange rate (which in many cases was undertaken subsequently) could have avoided the imposition of surcharges. Furthermore, in many cases the imposition of the surcharge is likely to reflect giving in to protectionist pressures from industries losing competitiveness.

Figure 2c. Developments in Key Macroeconomic Aggregates: Poland



Source: IMF staff estimates.

Figure 2d. Developments in Key Macroeconomic Aggregates: Slovak Republic



Source: IMF staff

### C. Estimation Results

To test the hypothesis of the impact of the various macroeconomic conditions discussed in Section IIB on trade policy reversals, some econometric estimation was undertaken. In the literature the difficulty of measuring the restrictiveness of a country's trade policies has been discussed widely and it has been an important obstacle for empirical work (Edwards, 1997; Dornbusch and Frankel, 1987). Many studies have proxied changes in trade policies by a measure of openness related to the share of trade in GDP. This is unsatisfactory as the trade share tends to decrease with country size and can be sensitive to terms-of-trade movements or deflators used. Others have constructed complex indexes, which require much data that is hard to get across countries (Andersen and Neary, 1994) especially across time. To overcome these difficulties this study used an index of trade policy that combines developments in both tariff and nontariff barriers and captures changes in trade policies (see above).

Changes in the Index was regressed on changes in the real exchange rate (RER), relative level of activity (GDP), and real interest rates (RR) following the methodology used in Dornbusch and Frankel (1987). The real exchange rate reflects changes in competitiveness, while changes in GDP reflect overall demand conditions<sup>9</sup> and those in the real interest rate the overall monetary-fiscal policy mix. The expected signs of the coefficients are noted below.

$$\log(\text{Index}) = F(\log(\text{RER}), \text{GDP}, \text{RR})$$

+        +/-    +/-

The regressions were run for 1988–97, and the equation including the real interest rate was only run for Poland and Hungary (Table 1). Despite the serious estimation problems (see below), the results give support for the role of real exchange appreciation in explaining trade policy reversals. The t-statistics of the lagged RER variable are significant in both regressions and the sign correct. The estimation does not differentiate between changes in the equilibrium real exchange rate and deviations from this. No matter what the source of the real appreciation, it seems to have affected competitiveness of some industries, which would have lobbied for protection. The t-statistics of the GDP are also significant and positive indicating a small impact on trade policy reversals from changes in overall economic activity. This suggests that demand for protection in the transition economies would not have been countercyclical. Increased growth would increase imports, which could have a small impact on demand for protection. The t-statistic of the lagged real interest rate (RR) is not significant, suggesting that real interest rates do not have a large impact on demand for protection and trade policy reversals. The country-specific dummies suggest that institutional factors in each country explain a certain part of demand for protection especially in the Czech and Slovak Republics. The relatively low R square statistics can suggest that microeconomic determinants of protection are also important. The results would suggest that loss of competitiveness is the

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<sup>9</sup>The regression was also run with fiscal and current account deficits but they were not significant.



Table 1. Regression Results

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Equation 1

GLS (Cross Section Weights) // Dependent Variable is  $\Delta \log(\text{INDEX})$

Sample: 1990 1997  
 Included observations: 8  
 Total panel observations 32  
 Convergence achieved after 3 iteration(s)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
$\Delta \log(\text{RER})_{t-1}$	0.875078	0.247879	3.530268	0.0012
$\Delta \text{GDP}$	0.018433	0.003764	4.897254	0.0000

Fixed Effects

POL--C	-0.133176
HUN--C	-0.124145
CZ--C	-0.263832
SLO--C	-0.186124

Weighted Statistics

R-squared	0.560217	Mean dependent var	-0.177095
Adjusted R-squared	0.475644	S.D. dependent var	0.441054
S.E. of regression	0.319378	Sum squared resid	2.652062
Log likelihood	32.33484	F-statistic	33.12009
Durbin-Watson stat	2.626839	Prob(F-statistic)	0.000005

Unweighted Statistics

R-squared	0.194427	Mean dependent var	-0.134290
Adjusted R-squared	0.039509	S.D. dependent var	0.325881
S.E. of regression	0.319378	Sum squared resid	2.652062
Durbin-Watson stat	2.570869		

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Table 1 (concluded). Regression Results

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Equation 2

GLS (Cross Section Weights) // Dependent Variable is  $\Delta \log(\text{INDEX})$   
Sample: 1990 1997  
Included observations: 8  
Total panel observations 16  
Convergence achieved after 2 iteration(s)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
$\Delta \text{RR}$	0.000207	0.000884	0.233978	0.8182
$\Delta \text{GDP}$	0.019277	0.006121	3.149505	0.0066
$\Delta \log(\text{RER})_{t-1}$	0.908298	0.279131	3.254015	0.0053

Fixed Effects

POL--C	-0.141288
HUN--C	-0.125424

Weighted Statistics

R-squared	0.703504	Mean dependent var	-0.082776
Adjusted R-squared	0.595687	S.D. dependent var	0.223248
S.E. of regression	0.141954	Sum squared resid	0.221659
Log likelihood	23.25926	F-statistic	13.04998
Durbin-Watson stat	2.689524	Prob(F-statistic)	0.001248

Unweighted Statistics

R-squared	0.492047	Mean dependent var	-0.068663
Adjusted R-squared	0.307337	S.D. dependent var	0.170564
S.E. of regression	0.141954	Sum squared resid	0.221661
Durbin-Watson stat	2.342698		

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main determinant of protection. Dornbusch and Frankel (1987) also found that the real exchange rate would be the most important macroeconomic determinant of demand for protection.

Given the sample problems, the results may not be very robust and should be interpreted with caution. One problem is the very small number of observations available for transition economies as data especially prior to 1990 is unreliable. To overcome this problem the study used pooled cross-section estimation with data from the four countries between 1988 and 1997, which is a balanced panel. The small sample size (40) also renders tests for stationarity of the variables or co-integration between the variables difficult.<sup>10</sup> The RER and GDP are generally known to have unit roots. The estimation method used was weighted Generalized Least Squares (GLS) estimated in logs and first differences to ensure stationarity of the variables. The model was estimated with fixed effects (common slopes but country-specific intercepts). Dummies in the fixed effects model capture country-specific institutional effects on the demand for protection. To correct for possible simultaneity bias between the Index and the RER, the latter was estimated using RR and GDP as instruments.

Another estimation problem is the poor quality and availability of data especially in the pre-1990–1992 period for transition countries. A problem is also raised by the fact that the Czech and Slovak Republics only became separate countries in 1993. Furthermore, although estimates of trade policy developments, the real exchange rate, and GDP are available for 1988–1997 for all four countries, data for real interest rates is not available for the Czech and Slovak Republics until 1993.

#### **D. Policy Issues**

The results naturally raise questions on the macroeconomic policy mixes in the respective countries and how they may have or should have contributed to the real appreciation and thereby to trade policy reversals. Most countries at the time of the policy reversals had relatively fixed exchange rate regimes with pegs or crawling pegs to one or more currencies and gradually opening capital accounts. The use of the exchange rate as a nominal anchor for stabilization may have constrained the use of the exchange rate instrument to deal with current account problems. This put pressure on other macroeconomic policies or trade policy to deal with potentially volatile or excessive real exchange rate movements or macroeconomic imbalances. However, it is interesting that in two of the countries the exchange rate regime was changed subsequent to the imposition of the import surcharges (Hungary and the Czech Republic). In the Slovak Republic the regime was eventually changed one year after the third surcharge was imposed. But only the Czech Republic repealed the surcharge subsequently, while the others maintained it. This raises the question that had the exchange regimes been made more flexible earlier, the countries could have been spared the distortion costs from

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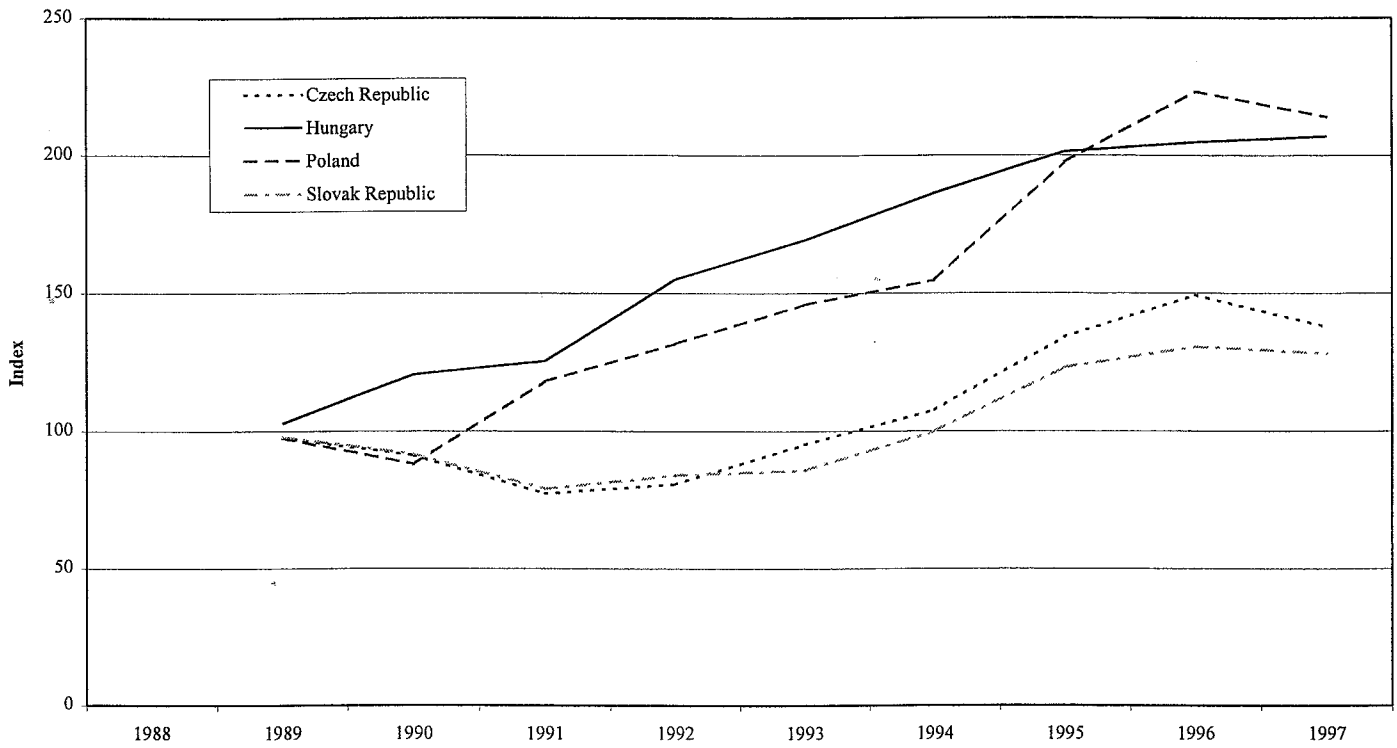
<sup>10</sup>Stationarity of the series was tested, but the values for most variables were below the critical values. The sample did not have enough observations to run the test for co-integration.

trade policy reversals and higher protection, which are likely to have affected especially export competitiveness and the attractiveness of the foreign investment climate.

However, in transition countries much of the movements in the real exchange rate is likely to reflect shifts in the long-run equilibrium rate, to which the economy should be adjusting to. One source of the appreciation is likely to be increased productivity growth in the traded goods sector compared to the nontraded one discussed above (Halpern and Wyplosz, 1997). As all four countries have undergone substantial structural transformation over the decade, this effect can be large. Although data on productivity growth (measured by output per employed) is relatively poor, Figure 3 does indicate that productivity increased especially in Hungary and Poland, in which the real appreciation was also the largest. Another source of appreciation of the equilibrium exchange rate can be large capital inflows. Net inflows of capital into all four countries have been large especially until 1995 with the capital and financial account reaching 17–18 percent of GDP in the Czech Republic and Hungary. Although the amounts have fluctuated widely from one year to another they are likely to have had an impact on the equilibrium exchange rate. In some countries such as the Czech Republic these inflows may have been aggravated by high real interest rates. A further source of real appreciation may have been price arbitrage as previously controlled prices have gradually been adjusted to market levels. In these cases the countries should adjust to the new relative prices. Trade policy reversals will only retard the adjustment process.

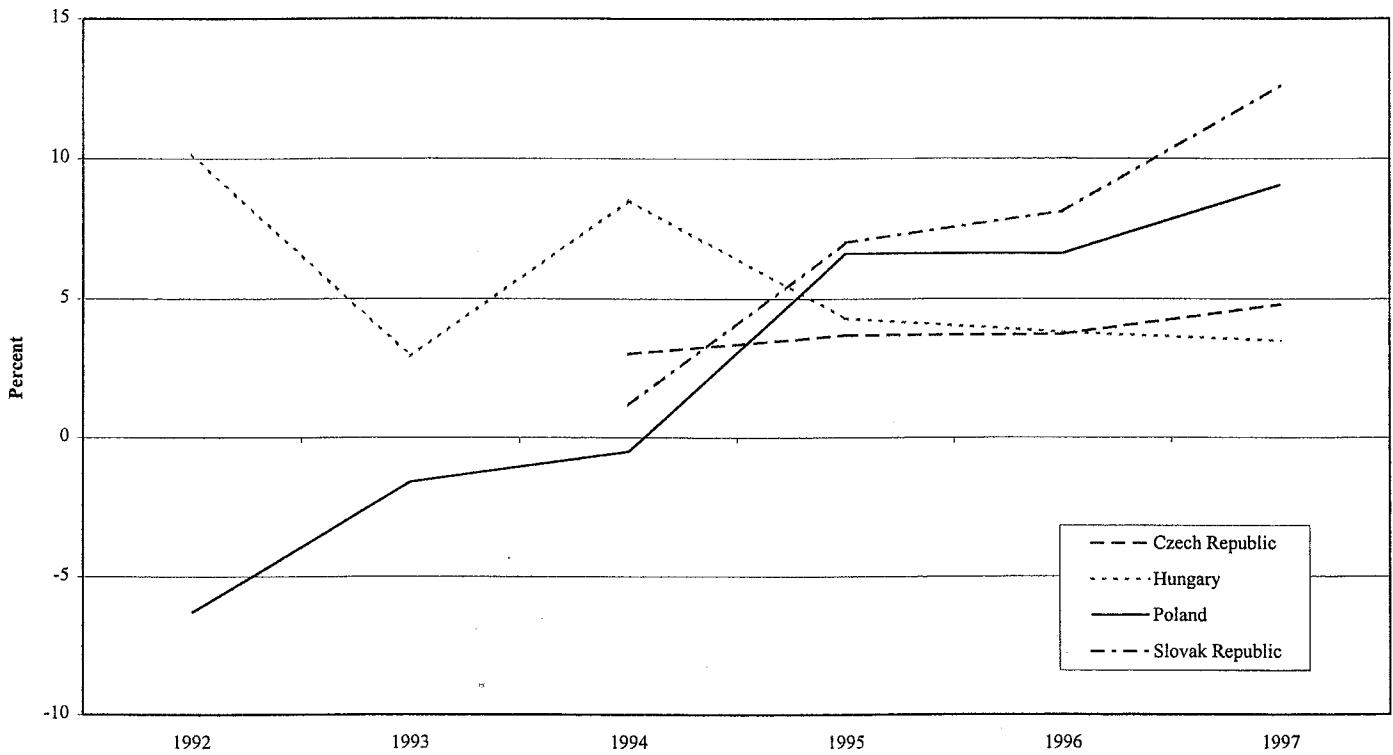
The above also raises the question of whether fiscal and monetary policy mixes could or should have been different in dealing with the real appreciation and current account deficits in the framework of relatively fixed exchange rates. This would apply especially to the part of the real appreciation that does not reflect changes in the long-run equilibrium rate. The discussion on macroeconomic developments above shows that fiscal policy in most of the countries prior to the imposition of the surcharges was loose or expansionary. As discussed above in Poland real interest rates were negative prior to the imposition of the surcharge, which may suggest an expansionary monetary policy as well. Since the surcharge real interest rates in Poland (Figure 4) have increased, and fiscal policy was tightened, although overall deficits have remained relatively large. Thus a further tightening of fiscal policy could have slowed down some of the real appreciation. In Hungary, fiscal policy was tightened after the surcharge in 1996 but it became more expansionary again in 1997. Both the Czech Republic and especially the Slovak Republic have tightened monetary policy after the surcharges. However, after initial tightening fiscal policy has become more expansionary in 1997 in the Czech Republic, and in 1996 and 1997 in the Slovak republic. In all four the gradual opening of the capital account may have influenced the effectiveness of monetary policy, which puts even more pressure on fiscal policy (or exchange rate policy). This suggests as discussed above that had the tighter monetary policy been accompanied by tighter fiscal policy real appreciation might have been slower. This in turn could have reduced pressure on the current account and on the demand for protection. The other alternative could have been the introduction of a more flexible exchange rate regime earlier in the process.

Figure 3. Productivity in the Four Transition Economies



Source: IMF (output per employed).

Figure 4. Real Interest Rates in the Four Transition Countries



Source: IMF (lending rate less consumer prices).

Overall, apart from Hungary, the policy mixes including the surcharges do not seem to have prevented the deterioration of current account deficits over the decade. One explanation for this can be the impact of the increase in protection on export development.

#### IV. CONCLUSIONS

The discussion in the paper suggests that the main determinant of demand for protection and trade policy reversals in the four transition countries has been the appreciation of the real exchange rate. All four countries' trade regimes were subject to reversals over the decade in response to macroeconomic imbalances. While much of the appreciation is likely to be related to changes in fundamentals and structural factors such as productivity growth, price adjustments and capital inflows to which the economy should adjust, some of it may be explained by the macroeconomic policy mix in these countries.

An analysis of the macroeconomic conditions in the four countries suggests that surcharges might have been avoided had macroeconomic policies, especially in terms of fiscal and exchange rate policies, been adjusted more appropriately in response to current account imbalances. A tighter fiscal policy without the surcharges might have slowed down the real appreciation and improved the competitiveness of exports and import competing industries. While the exchange rate as a nominal anchor is likely to have helped in stabilization in the early stages of transition, a more flexible exchange rate policy later in the process might have changed the terms of trade in favor of tradable goods and reduced pressures for protection. The present policy mix coupled with the reversals in trade openness are likely to have sustained uncompetitive industries and slowed down export development and structural change in the economies. Thus more open trade policies especially in Poland and Hungary could have helped faster adjustment and thus a more sustainable current account. Fiscal adjustment may have been partly postponed by slower trade liberalization. What this may also suggest is that the external imbalances have also been used as an excuse for increased protection on microeconomic grounds. In sum, in all four countries import surcharges and their potential negative side effects could have been avoided by a better macroeconomic policy mix.

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