

# Two Sides of Economic Openness: Non-Tariff Barriers to Trade and Capital Controls in Transition Countries, 1993-2000

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This article presents new measures of foreign economic openness in the transition countries that allow us to distinguish between non-tariff barriers to trade and capital controls. We argue that this distinction is important for the analysis of foreign economic relations in the post-communist world. While most states lowered barriers to trade since 1993, they increased the number of capital controls, which had been low at the beginning of the transition process. The ELITE (Economic Liberalization in the Transition Economies) data set, which is based on the IMF statistics on exchange arrangements and exchange restrictions and encompasses 24 transition countries, furthermore demonstrates important exceptions to this trend. The comparison of the ELITE indicators with alternative measures of economic openness indicates the need to move towards more fine-grained analyses of the political economy of the transition process.

## Keywords:

Economic openness – Non-tariff barriers to trade – Capital controls – Regulation - EBRD

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## ***1. Introduction***

One of the most distinctive trends of the past two decades is that numerous developing countries have embarked upon a course of external economic liberalization. This becomes obvious if we rely for instance on the criteria used to construct one popular measure of economic openness, the Sachs-Warner indicator (Sachs/ Warner 1995). According to this index, the number of ‘open economies’ almost doubled between 1985 and 1992. Similar developments in European and Asian post-communist countries have paralleled this “rush to free trade in the developing world” (Rodrik 1994).

Yet, researchers who want to investigate and explain this trend with all its particularities and exceptions face a formidable task. If they want to trace the process of foreign economic openness, they have to rely on rough and potentially unreliable aggregate measures that think tanks and international organizations produce. The lack of detailed information forces them to analyze foreign economic openness at the aggregate level. We will demonstrate in this article that the reliance on such indicators blurs the analysis. Our examination shows that the process of foreign economic liberalization in the transition countries has a double face: Most states have indeed started to remove non-tariff barriers to trade. A considerable number of them has, however, introduced capital controls. This mixture of liberalization and closure is a distinctive feature that aggregate measures of economic openness are unable to detect. We also show that the double transformation of the foreign economic policies has not been uniform. While the majority of the countries has become more open over the years, a minority of states has remained closed or moved towards more protectionism.

We are able to detect these exceptions through the help of a new data set that we present in this research note. The ELITE (Economic Liberalization in the Transition Economies) data set follows the footsteps of Quinn’s data set on capital controls. It is based on the systematic content analysis of a key publication of the International Monetary Fund, the *Annual Report on Exchange Arrangement and Exchange Restrictions*. ELITE covers the time period from 1993 to 2000 and includes detailed information on the depth and scope of foreign economic regulation for 24 transition countries.

This research note is structured as follows: The next section outlines the conceptual and empirical foundations of the ELITE dataset and discusses the use of non tariff barriers to trade and capital controls in Eastern Europe. Section 3 describes the trends in the 24 transition countries the dataset covers. Section 4 compares our composite measures of non tariff barriers

to trade and capital controls to other indices of foreign economic openness covering the post-communist countries. Section 5 concludes.

## 2. *General Trends in Liberalization of Foreign Economic Relations*

One of the problems for assessing the transformation of the foreign economic policies of the transition countries is the scarcity of comparative information on government regulation. The research community is as a consequence forced to rely on output measures like the trade-through GDP ratio or on aggregate indicators think tanks and international organizations have developed. The problem of these indicators is, however, that they reduce economic openness to one dimension.

We have developed a new data set that should provide more comprehensive information and directly assesses the depth and scope of government regulations in the domain of foreign economic policy making. The ELITE data set covers the foreign economic policy of the majority of transition countries from 1993 to 2000.<sup>1</sup> The indicators are ordinal variables that describe the regulation of current and capital account transactions. All variables code administrative measures that affect trade and capital flows. Comparability of information across space and time is warranted.

The original source of information on which we relied for the construction of the variables is the IMF's *Annual Report on Exchange Arrangements and Exchange Restrictions*. This resource comprises data on regulations of the exchange rate system, regulations on payments and receipts, information on needed permissions for foreign accounts for residents and non-residents, administrative measures on the regulation of the import and export sector, regulations on invisible transactions and current transfers, as well as regulations on capital transactions. The content analysis of the IMF reports allowed us to identify 64 variables. However, the reports are far from being standardized so that only a small share of information is comprehensively reported for most of the countries. To generate a reliable dataset, we incorporated only variables where the number of missing values was acceptably small and where the lacking information was not concentrated on a specific time.

The 17 remaining variables cover measures of trade and capital regulations. Table 2 shows the variables and their definition from the *Annual Reports* included in ELITE.

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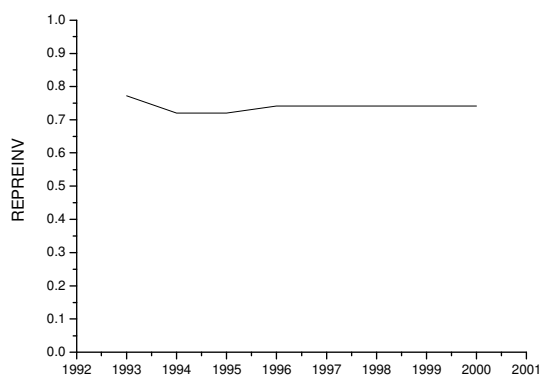
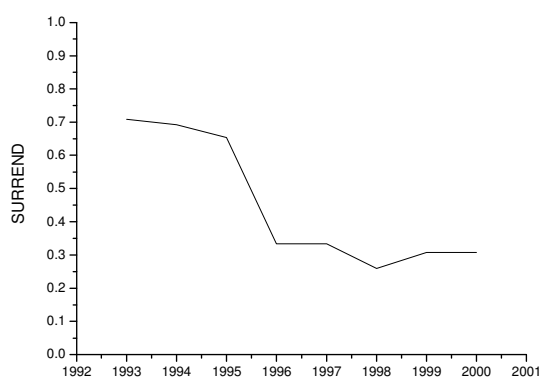
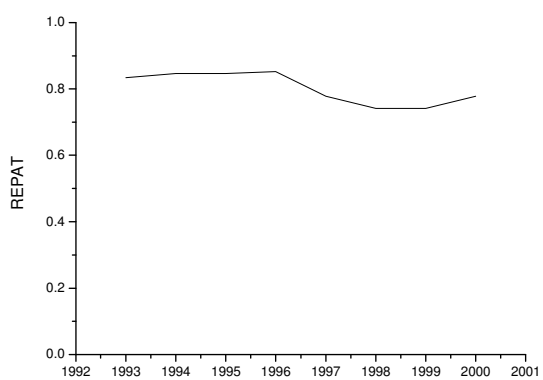
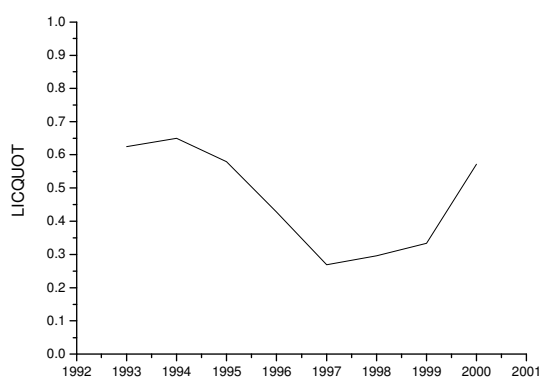
<sup>1</sup> The data set does not include Turkmenistan, Tajikistan, Yugoslavia and Bosnia and Herzegovina.

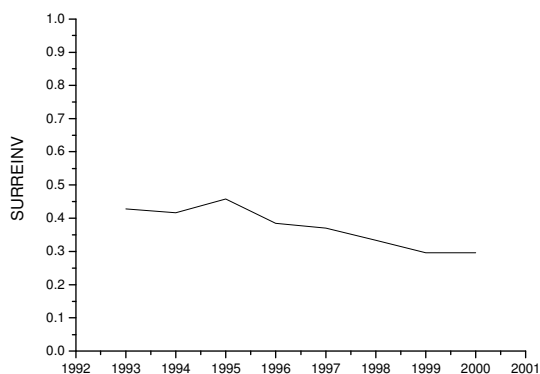
<b>Variable</b>	<b>Definition</b>
<b>TRADE</b>	
<i>DOCREQ</i>	Documentation requirements for release of foreign exchange for imports
<i>LICQUOT</i>	Import licenses and quotas
<i>REPAT</i>	Repatriation requirements
<i>SURREND</i>	Surrender requirements
<i>EXPLIC</i>	Export licences
<i>EXPTAX</i>	Export taxes
<i>INVTRANS</i>	Investment transactions
<i>REPREINV</i>	Repatriation requirements for invisible transactions
<i>SURREINV</i>	Surrender requirements for invisible transactions
<b>CAPITAL</b>	
<i>EXCHANTAX</i>	Exchange taxes
<i>FEARESHD</i>	Foreign exchange accounts held domestically (residents) permitted
<i>FEARESHA</i>	Foreign exchange accounts held abroad (residents) permitted
<i>FEANORES</i>	Foreign exchange accounts permitted (non-residents)
<i>DOMNONCV</i>	Domestic currency accounts permitted (non-residents)
<i>COMCRED</i>	Controls on commercial credits
<i>FDI</i>	Controls on foreign direct investments
<i>LIQFDI</i>	Controls on liquidation of foreign direct investment

*Source: IMF, Annual Report on Exchange Arrangements and Exchange Restrictions*

Table 1: Regulations covered by ELITE

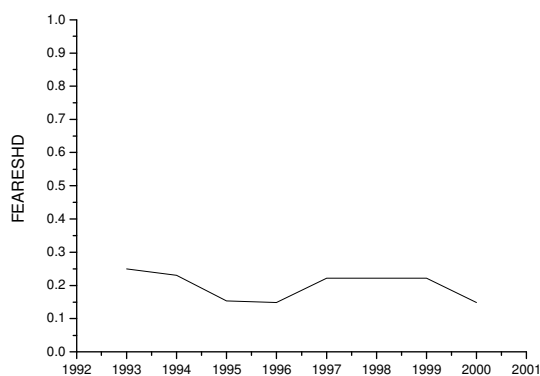
The following figures report the share of countries, which have had a particular restriction in a given year. Thus, a score of 1.0 indicates that all transition countries had implemented a particular regulation in a given year, 0.0 means that no country used this restriction in a given year. Figure 1a shows the number of governments that employed the non-tariff barriers of trade in the time period under consideration. Figure 1b does the equivalent capital control indicators.

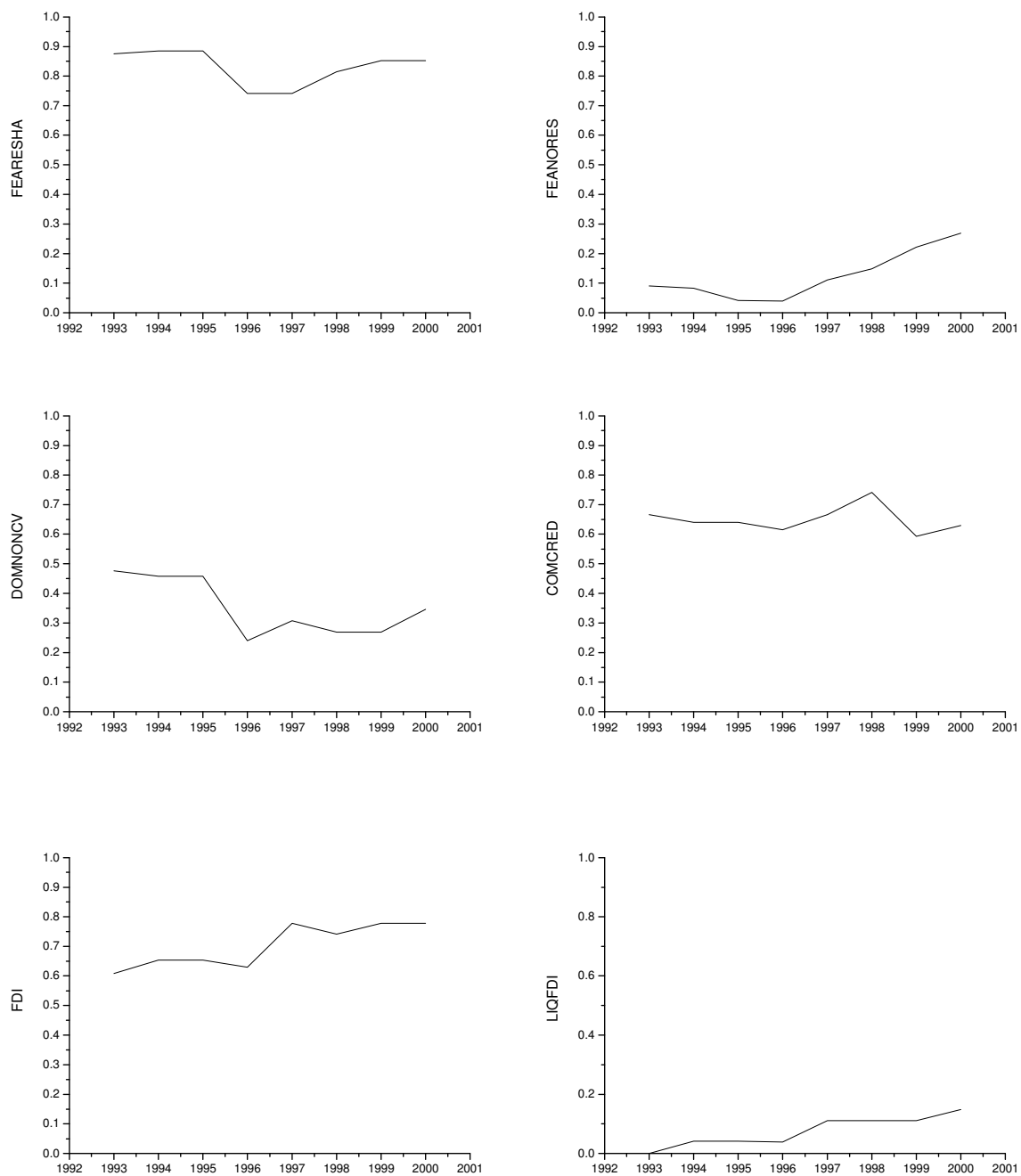




*Figure 1a: Share of Transition Countries that Employ Non-Tariff Barriers to Trade, 1993-2000*

As Figure 1a suggests, the trend towards economic openness has not been uniform across all subdimensions. While we observe some re-regulation on import licenses and quotas after 1997, no such trend is observable for other indicators like for instance export taxes or documentation requirements for release of foreign exchange for imports. This suggests that governments develop different preferences over these policy instruments and target different support groups with them. We may also expect that the taste for protectionism differs across countries. Figure 1b supports the expectation that the support base for government regulations differs considerably across the policy instruments.





*Figure 1b: Share of Transition Countries that Employ Capital Controls , 1993-2000*

If we compare capital controls and the non-tariff barriers for trade, two results are noteworthy: First, while restrictions of the free cross-border transport of goods and services were abolished in most transition countries, the use of capital controls has increased over time. One should therefore interpret indicators that cover trade and capital account openness of transition countries simultaneously with caution. Second, the transition countries started their transition period with a high level of trade barriers, but comparably little capital controls. In

short, governments in transition countries lowered barriers to trade and erected barriers to capital flows.

The apparently different regulatory dynamics should have a simple consequence: In order to understand foreign economic policy making, we need to disaggregate the concept of economic openness. The use of an indicator that combines both, trade barriers and capital controls likely leads to false inferences and a severe underestimation of the extent and scope of regulatory reforms in the transition process. Governments in East European countries have undertaken more wide-ranging reforms than aggregate indices suggest. Hence, at least for the analysis of reforms in transition countries it is therefore highly recommended to use as disaggregated indices as possible. Consequently, researchers should consider the politics of economic liberalization as at least a two-dimensional phenomenon. Since trade barriers and capital controls are different political measures with widely varying distributional consequences, there are also sufficient theoretical reasons for differentiating between these two facets of economic openness.

This also implies that the formation of an optimal composite index is a difficult, perhaps an almost illusionary task. Even if it were possible to exactly calculate the weights of each single indicator of economic openness, the 'true' weights would depend on the research question: The relative influence of different capital controls on saving and investment behavior may vary from the restrictions their lifting imposes on monetary policy. Thus, the optimal composite index in a growth analysis may vary widely from the optimal composite index in an inflation rate regression.

The second-best solution seems to form the most simple composite index and to add each trade barrier and each capital control. In doing so we mirror the coding scheme suggested by Dennis Quinn (1997). Quinn has coded the same IMF information to count the number of capital controls in OECD countries. Implicitly, both Quinn's index and our composite indices assume that capital controls do not serve as complementarities and that these controls have an approximately roughly identical distortionary effect on trade and on capital flows.<sup>2</sup>

### ***3. Foreign Economic Liberalization in Transition Countries***

This section analyzes the degree to which the transition countries have integrated themselves into the world market. We should expect marked differences for several reasons. Bodenstein (2002) as well as Bodenstein/Schneider (2002) show based on other indicators that political variables, especially the support for the formerly communist party explain the variation in economic openness in the transition countries. Kopstein/Reilly (2002) highlight the



importance of geographical factors in the transformation process, and ....(Thilo: Bitte zwei Sätze anfügen).

To analyze the changes over time, Figure 2 plots the 1993 level of non-tariff barriers to trade on the level in 2000. If a country is situated above the 45°-angle, it has moved towards more free-trade. States who are situated below this line, conversely, were more protectionist in 2000 than in 1993.

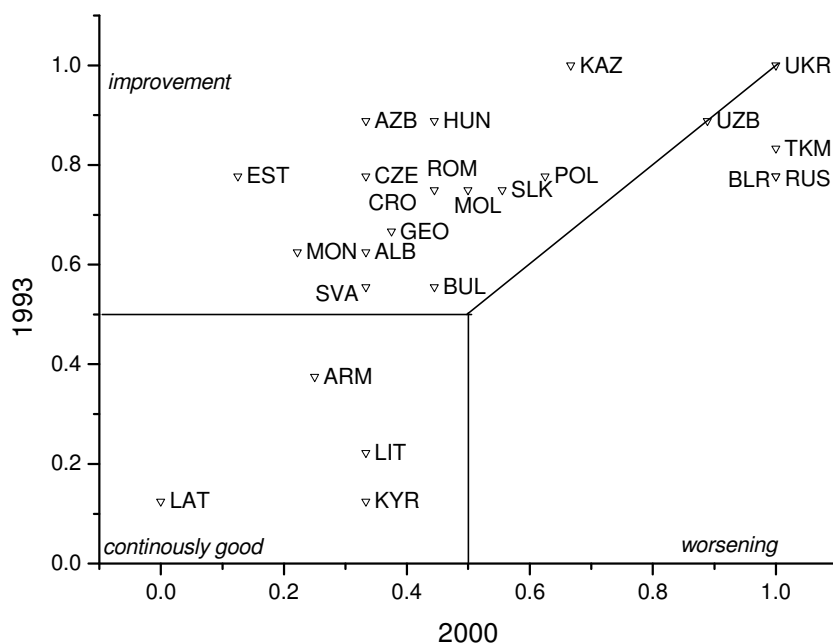


Figure 2: Non-Tariff Barriers to Trade, 1993 vs. 2000

As figure 2 exhibits, there was no general trend towards the abolition of non-tariff barriers to trade. The Ukraine, Uzbekistan, Turkmenistan, Belarus and Russia maintained a very restrictive trade regime throughout the whole transition decade. However, it is a mistake to explain the conservative trade policy of these countries alone through their common Soviet past and thus some kind of historical resistance to change. As Azerbaijan demonstrates, CIS countries may well be able to liberalize a previously restrictive trading regime as much as some Central European states. In 2000, the country does not employ more non-tariff barriers to trade as for instance the Czech Republic and far less than Poland.

It is also wrong to assume that transition countries started with a very similar set of regulations. Latvia, Kyrgyzstan, Armenia, Lithuania already had a relatively liberal trading

<sup>2</sup> To alter this assumption perhaps according to the research question, one would need the disaggregated data. We suggest that researchers who are unsatisfied by our and Quinns procedure either regress our raw data or use it to create a composite measure which is better suited for their purposes.

regime in 1993. Lithuania and Kyrgyzstan even increased the number of non-tariff barriers to trade. Yet, they were still more liberal than the average transition country in 2000.

The majority of the transition countries, however, reduced the number of non-tariff barriers to trade. Estonia undertook the largest leap forward. Starting from a low level of regulatory quality, the various governments of this Baltic state quickly abolished non-tariff barriers to trade. Between 1993 and 1994, the country abolished three quarters of the previously implemented non-tariff barriers to trade. At the turn of the millennium, the trading regimes of the post-communist countries were far more open than they had been in 1993.

As we already know from the aggregation across all countries, no equivalent evolution in capital controls mirrors this “rush to free trade.” Actually, most transition countries increased rather than reduced restrictions on capital flows. Especially after the onset of the Asian crisis in 1997 governments chose an increasingly rigid regime of capital controls.

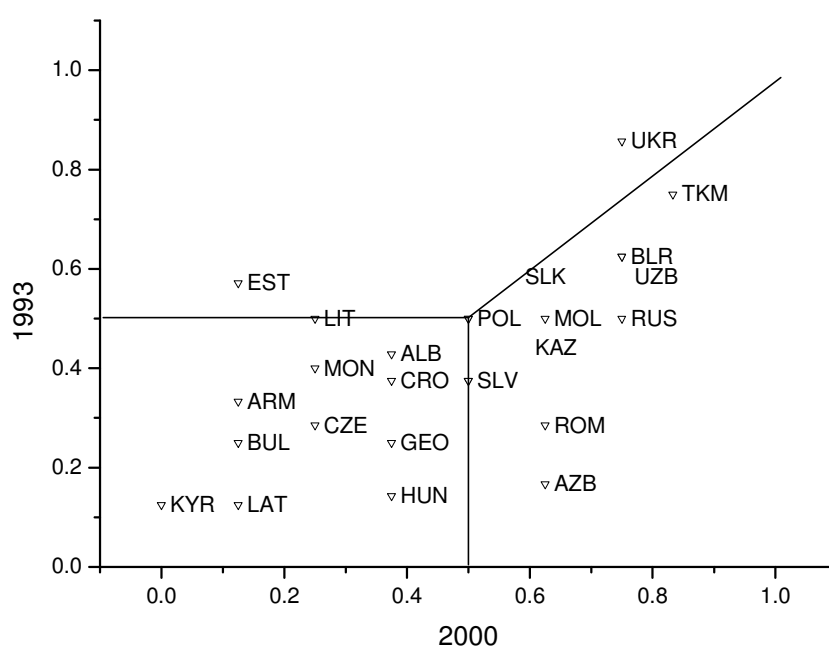


Figure 3: Capital Controls, 1993 vs. 2000

As Figure 3 illustrates, only a minority of transition countries actually eradicated capital controls. Estonia and Lithuania were the only two countries that significantly reduced capital controls. A handful of countries maintained a stable amount of capital controls, while Romania, Azerbaijan, Hungary and Georgia considerably increased the number of capital controls.

Yet, the dynamics in non-tariff barriers to trade and capital controls were only seemingly contradictory. Quite to the contrary, as a result of this regulatory reforms, countries

with higher non-tariff barriers to trade had also imposed more capital controls. Figure 4 illustrates the coincidence of deregulation on one and regulation on the other dimension.

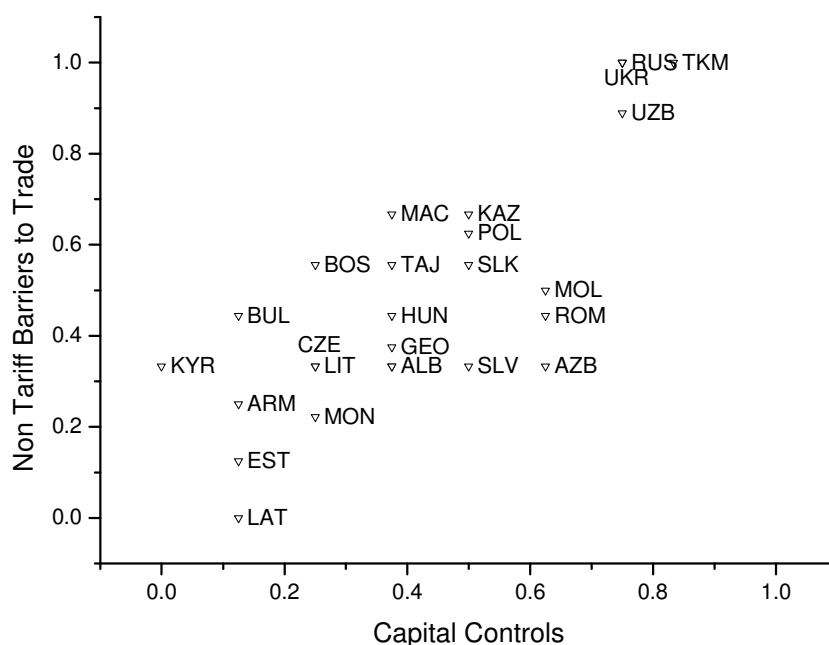


Figure 4: Capital Controls and Non Tariff Barriers to Trade, 2000

Figure 4 illustrates the logic of foreign economic policy making in the first decade of the transition process. On average, the typical country raised capital controls and reduced non-tariff barriers to trade. From the view of their governments, initial capital controls were apparently too low. In 1993, the correlation between trade and capital controls was 0.44. In 2000 it had already reached 0.79. Thus, there seem to be underlying economic and political reasons for the implementation of capital controls and barriers to trade – reasons that have not been prevalent for communist countries. For countries that started from very low levels of capital controls and a very high levels of trade restrictions the increased necessity to form a more coherent regime of external economic affairs, regulatory reforms had to run into opposite directions.

#### 4. A Comparison of *ELITE* to other Openness Indices

At this point we are prepared to compare *ELITE* to other measure of foreign economic openness in transition countries. We begin our discussion by identifying four quality criteria: A good proxy of foreign economic liberalization should allow a cross-sectional as well as a time-series analysis (and therefore also a panel analysis) and it should distinguish between

trade barriers and capital controls. In addition, it is important that the period under observation goes beyond 1994, since most transition countries undertook foreign economic policy reforms only after macroeconomic stabilization.

To start with, measures of international economic openness fall in three, broadly defined groups. The first category comprises output indicators such as the ratio of trade and capital flows to a country's gross domestic product. Since the trade-to-GDP- and capital flows-to-GDP-indicators are both correlated to country size, they do not directly measure government regulation. Therefore, we do not discuss them here. The second category of indicators seeks to eliminate the country size effect from trade and capital flows. The most common variant in this category are gravity models. Usually, researchers regress the log GDP of the exporting country, the log GDP of the importing country, the log distance between the two countries, a few geographical indicators such as a dummy for land-locked countries and islands on the bilateral trade. The sum of all residuals from the gravity regression is considered as proxy for a country's trade policy. Although this procedure does reasonable well, we do not know of a gravity model that includes transition countries. Finally, the third category, the one we are discussing here, includes input variables such as the number of capital controls, the average ratio of tariffs, the percentage of trade regulated by non-tariff barriers, and so on.

The perhaps most popular input indicator has been compiled by Jeffrey Sachs and Andrew Warner (1995). Their indicator defines a country as closed if at least one of the following conditions are met:

- a) Nontariff barriers covering 40 percent or more of trade.
- b) Average tariff rates of 40 percent or more.
- c) A black market exchange rate that is depreciated by 20 percent or more relative to the official exchange rate.
- d) A socialist economic system.
- e) A state monopoly on major exports.

Despite its achievements, some disadvantages are obvious. First of all, the indicator ends in 1994 and is therefore of limited use for the analysis of reforms and liberalization measures in the transition countries. Secondly, the dichotomy of the index gives only a very rough measure of the degree of a country's openness. The index prevents us from detecting minor reforms in a country's global economic orientation. Its dichotomous nature also precludes us from examining sequencing strategies. Finally, since Sachs and Warner only publish a composite index and thereby merge capital controls and non-tariff barriers to trade not only with each other, but also with a distorted exchange rate, we are not able to distinguish

potentially contradictory developments along the different dimension of openness. Since it is not only possible, but also likely that countries' trade policy largely differs from their degree of capital account liberalization, the coding scheme of Sachs and Warner is a crucial disadvantage for any sensitive analysis. In addition, the threshold levels Sachs and Warner use remain unjustified and are arbitrarily chosen. Therefore, the indicator is unreliable and may be misleading in a cross-sectional analysis.

The *European Bank for Reconstruction and Development* (EBRD) assesses the economic reform progress of the post-communist transition countries. One of the indicators measures the reform progress of '*trade and foreign exchange system*'. Based on expert evaluation this index estimates the liberalization efforts on a scale from 1 to 4.3, whereby a value of 1 expresses the lowest and 4.3 the highest degree of liberalization. The indicator has two main advantages: First, it provides data for nearly all transition countries<sup>3</sup> since 1994 and seems to allow an international comparison. Second, its ordinal scale allows us to observe changes over time. However, the EBRD publishes only a composite index of trade policy and capital controls. As we have argued before, an index that combines information on both trade and exchange rate regulations remains problematic.

The *Heritage Foundation* (O'Driscoll et al. 2001) publishes an index of economic openness exclusively based on average tariff rates. The index includes both tariff and non-tariff barriers to trade as well as the level of corruption. It ranges from 1 (average tariff rates of less than 4%) to 5 (average tariff rates of more than 19%). Another well-known index is the *Economic Freedom Index* developed by the *Fraser Institute* (Gwartney et al. 2001). It is a comprehensive liberalization measure that presents multiple dimensions of foreign trade openness. The index includes measures for open capital flows, average tariff rates, the black market exchange rate and the estimated trade quotient. However, the blending of econometric estimations of trade openness and regulatory indicators poses some problems. Regulatory indicators represent a narrower picture than econometric estimations and thus the indicators used in the index construction are hardly comparable to each other. In addition, the *Economic Freedom Index* covers only half of the transition countries for two data points.

Given the specific weakness of each indicator, it is not surprising that the correlations of the ELITE indicators with its alternatives are relatively low. We report the corresponding results in Table 2. Because the scales of the indicators differ, we report both Kendall's tau and the Spearman rank correlation coefficient as measures of association. Note that we recoded the ELITE and the Heritage indices so that on all indicators used higher values represent increased economic openness.

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<sup>3</sup> With the sole exception of Mongolia.

		TRADE	CAPITAL	Trade+Capital/2
EBRD	Kendall's tau	.272***	.283***	.330***
		138	138	138
HERITAGE		.307***	.384***	.351***
		122	122	122
ECFREE		.222*	.452***	.361***
		42	42	42
EBRD	Spearman's rho	.359***	.357***	.438***
		138	138	138
HERITAGE		.385***	.480***	.463***
		122	122	122
ECFREE		.315**	.571***	.509***
		42	42	42

Table 2.: Rank Correlation between ELITE variables and other Indices (\*\*\*p<.001, \*\*p<.05, \*p<.1)

Table 2 clearly shows that the indicators do not exactly measure the same. This becomes clear if we for instance compare the differences in the explanatory power of the Economic Freedom Index. Spearman's rho amounts to more than 0.5 in the association with the ELITE capital control measure, but does not exceed 0.32 in the correlation with the non-tariff to trade measure. It is, however, reassuring that all correlations are positive, indicating that the indices are roughly measuring the same.

To sum up our evaluation of measures of economic openness, the well-known indices show specific weaknesses for the analysis of foreign economic policy reforms in the transition countries. Data constraints threaten the significance of results regarding the process of economic liberalization and protection level as well as the comparison of economic policy strategies and achieved levels of openness.

## 5. Conclusion

The ELITE data set, which we have presented in this article, offers new and comprehensive measures of foreign economic liberalization in the transition countries. Its particular advantage is that it allows the research community to analyze the course of economic openness on different dimension and for various regulatory instruments.

We have shown through the usage of the ELITE indicators that the reliance on aggregate measures of economic openness can lead to misleading interpretations of the extent to which transition countries have opened up. They particularly fail to distinguish between what we called the two faces of economic transition: the removal of non-tariff hurdles to trade and the introduction of capital controls. Our analysis has shown that many countries have embarked on this double course of deregulation and re-regulation in the formerly communist world. We have also demonstrated that the association between the two facets of economic openness has grown over time. Our examination also leads us to reject the fatalistic

expectation that countries that have belonged to the Soviet Union are necessarily more protectionist than other transformation countries. Although this interpretation might be true at the average, there are some important exceptions to this trend. These differences indicate that we need to move away from sweeping generalizations to more fine-grained explanations to understand the different ways countries have chosen to integrate themselves in the world market (Bodenstein 2002, Bodenstein and Schneider 2002). We believe and hope that the ELITE data set might prove a useful tool for these explorations.

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