



CONSULTING ASSISTANCE ON ECONOMIC REFORM II

DISCUSSION PAPERS

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Patterns and Determinants of Economic Reform in Transition Economies: 1990-1998

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SYSTEMIC TRANSFORMATION IN TRANSITION ECONOMIES

Volume I

Patterns and Determinants of Economic Reform
in Transition Economies: 1990-1998

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Executive summary

After a decade of transition, there is still no consensus among economists as to what the most appropriate recipe is to place the transition countries onto a path of sustainable economic growth. As a step towards achieving a better reform paradigm for transition, we first need to have a systematic understanding of the various paths the transition countries have taken over the transition period. Developing a set of economic indicators to provide such an understanding is the central task of this paper. In doing so the paper reveals various patterns of transition and the factors influencing them, placing the experience of transition in perspective. The approach places a heavy emphasis on the use of both the now massive amount of existing data on transition as well as new survey data specially collected from the 25 transition countries for this purpose.

The paper begins by presenting a framework for evaluating transition. The framework identifies categories of influences or “determinants of transition” and how they interact to produce short-term impacts, intermediate outcomes, and long-term socio-economic performance. Among the determinants are the so-called “initial conditions” of transition. The paper then uses the initial conditions to create a country cluster typology, which is used throughout the rest of the paper. Focusing on the “cluster” as the central unit of analysis allows us to control specifically for commonalities in the initial conditions, and to evaluate the effectiveness of the alternative policies that countries have taken within the cluster. We believe that a cluster-based analysis is a more productive approach upon which to formulate donor programs.

Besides the initial conditions, there are six additional determinants of transition that together explain the transition paths taken over the decade and for which we develop indicators. These include policies, institutions, government objectives, donor assistance, economic fundamentals, and exogenous “shocks”. The policy and institutional (including regulatory, legal, and economic institutions) reform determinants include the USAID programmatic reform assistance areas (enterprise restructuring and privatization, land privatization, capital market functionality, banking sector effectiveness, trade liberalization, SME promotion, corporate governance/business standards, and tax administration). The objectives of the government is an important determinant not just because governments are the direct recipients of donor aid and ultimately must spearhead reform, but because the transition process is a transformation of government as well as markets. Furthermore, it is impossible to evaluate the quality and performance of reform without taking into account the *intentions* of those directing and implementing the process itself. The paper presents the patterns of these determinants from the point of view of donor priorities and allocations according to the USAID programmatic reform assistance areas above. Economic fundamentals indicate how well the private sector has responded to the economic environment created by government. The stress here is not only on performance *per se* but on economic variables that affect performance such as levels of private investment, stock market capitalization, and the economy’s openness.

In order for USAID to track its contribution to improved country performance, it needs to evaluate first its impact on reforms and second the impact of reform on country performance. Toward this end, we develop measures of the progress of reforms in USAID programmatic areas as well as measures of economic performance that we later use in the companion paper.

The first set of indicators measures depth of privatization. This recognizes that “true” privatization is more than purely a change in title (ownership). It must include considerations of “agency” issues (ability of shareholders to monitor and exert effective control over management), the “hardness” of the firm’s budget constraint, and the nature of the firm’s objective func-

tion (for example, are they maximizing employment or profits?). Each of these elements is captured as a sub-indicator as well as being aggregated into a principal reform measure.

The second set of indicators measures progress-in-transition. The aggregate indicator of this set is a comprehensive measure of the progress in reform performance. The indicator is built up from sub-indicators measuring the success of reforms in the USAID programming areas mentioned above. We present how the transition countries have evolved over time according to this indicator and its sub-indicators. This offers a means to USAID to track its reform progress across countries and through time. The sub-indicators and, in most cases, their sub-sub-indicators help us to identify cluster and country weaknesses – and strengths – to be taken into account in the design of technical assistance programs.

The third set of indicators focuses on country economic performance. They examine performance from several levels, including micro, mezzo, and macro dimensions. Here we capture such aspects as export performance, foreign direct investment, productive efficiency, and macro performance.

In summary, by highlighting the differences between and within clusters of transition countries according to these constructed measures, the paper helps both to identify country progress in reform made to date as well as areas suitable for targeting additional donor assistance.

Abbreviations

Country codes

ALB – Albania, ARM – Armenia, AZE – Azerbaijan, BGR - Bulgaria, BLR – Belarus, CZE – Czech Republic, EST – Estonia, GEO – Georgia, HUN – Hungary, HRV – Croatia, KAZ – Kazakhstan, KGZ – Kyrgyz Republic, LTU – Lithuania, LVA – Latvia, MDA - Moldova, MKD – Macedonia, POL – Poland, ROM – Romania, RUS - Russia, SVK - Slovakia, SVN – Slovenia, TJK – Tajikistan, TKM – Turkmenistan, UKR – Ukraine, UZB – Uzbekistan

Other Abbreviations

CEE – Central and Eastern Europe
EBRD – European Bank for Reconstruction and Development
FSU – Former Soviet Union
USAID – United States Agency for International Development
na - data not available

Cluster numbers in graphs

1. EU Border: Poland, Hungary, Czech Republic, Slovakia, Slovenia, Croatia
2. The Balkans: Bulgaria, Romania, Macedonia
3. The Baltics: Estonia, Latvia, Lithuania
4. Albania
5. Western FSU: Moldova, Ukraine, Belarus, Russia
6. The Caucasus: Azerbaijan, Georgia, Armenia
7. Central Asia: Turkmenistan, Tajikistan, Uzbekistan, Kazakhstan, Kyrgyz Republic

Symbols for intra-cluster graphs

Hollow square: average of the cluster for 1998
Horizontal line: average of the entire sample for 1998

Year transition began

1990: Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovakia
1991: Albania, Croatia, Macedonia, Slovenia
1992: Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyz Republic, Lithuania, Latvia, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan

Missing data in graphs

The cluster trajectory graphs are missing the following observations:

Cluster 1: transition year 9 (since observations for Croatia and Slovenia are missing), years 1

Cluster 2: transition years 1 and 9 (since Macedonia gained independence only in its second year of transition)

The government priorities/donor effort graphs have the same missing data as trajectory graphs except that *T* for Macedonia was taken as 1992, its first year of independence.

1 Introduction

Transition is now a decade old. Over this period – and for the first time in history – 25 countries in Eastern Europe and the Former Soviet Union (FSU) faced the challenge of wholesale economic reorientation from a centrally planned economy to a market-oriented economy – and an abrupt reintegration into the world trading regime. Yet while early lessons abound (Balcerowicz 1993) there is still no consensus among economists as to what the most appropriate recipe is to place these economies onto a path of sustainable economic growth and with the lowest short-run (human) cost. As a step in this direction, we first need to have a systematic understanding of the various paths the transition countries have taken over this period. Developing a set of economic indicators to provide such an understanding is the central task of this paper.

Any recent reading of the literature on countries in transition (e.g., Kolodko 1998) suggests that the initial obsession with macro stabilization and structural adjustment among decision makers and advisors alike has given way to a focus on a third ingredient: the so called “systemic transformation” (Sachs 1996; Kornai 1994; Aslund 1994). This paper develops a heuristic framework to help understand the transition paths taken during the first decade of this systemic transformation. In doing so it reveals various patterns of transition and the factors influencing them, placing the experience of transition in perspective. The approach places a heavy emphasis on the use and analysis of both the now massive amount of existing data on transition as well as new survey data specially collected from the 25 transition countries¹ for this purpose.

As the first of a three-volume study,² Systemic Transformation in Transition Economies, the paper lays the groundwork for a large policy research project that the Harvard Institute for International Development (HIID) carried out for the United States Agency for International Development (USAID). The goal of the study was to evaluate the privatization and economic restructuring experience of countries in transition and to make recommendations on how USAID might improve the impact of its assistance to these countries. Of particular concern to USAID was the role of competitiveness and international integration in achieving sustainable economic transition as well as how donor assistance can support these. In addition to the present volume, Volume II of the study focuses on transition country international competitiveness while Volume III econometrically analyzes the policy and institutional pre-conditions for privatization to produce economic performance gains at the country level.

The paper begins by presenting a framework for evaluating transition. The framework identifies categories of influences or “determinants of transition” and how they interact to produce short-term impacts, intermediate outcomes, and long-term socio-economic performance. Among the determinants are the so-called “initial conditions” of transition. The initial conditions describe the situation a country finds itself at the start of the process and are a mixture of geographic fixed characteristics, hard-to-change institutional and economic conditions, and relatively easy-to-change policy conditions. The paper then uses the initial conditions to create a country cluster typology, which is used throughout the rest of the paper. Focusing on the “cluster” as the central unit of analysis underscores our belief that this method greatly simplifies the analysis while at the same time illuminating common features that would otherwise be obscured by country-specific details. This approach also recognizes that the inter-cluster differences are so profound as to make it senseless to compare, say capital market developments in Poland with the

¹ These include all transition countries with the exception of China, Mongolia, Vietnam and Bosnia Herzegovina.

² The full three-volume study is Sachs, Zinnes and Eilat (2000).

Kyrgyz Republic; their initial conditions are just too different. While it is difficult to draw lessons between countries in different clusters, the opposite is true within clusters. By specifically controlling for common initial conditions among countries within a cluster we find ourselves with a powerful assessment tool to evaluate the effectiveness of the alternative policies that countries have taken within the cluster. In brief, a cluster-based analysis is a more productive approach upon which to formulate donor programs.

Besides the initial conditions, there are six additional determinants of transition that together explain the transition paths taken over the decade. These include government objectives, policies, institutions, donor assistance, economic fundamentals, and exogenous “shocks”. The objectives of the government are important not just because governments are the direct recipients of donor aid but because the transition process is a transformation of government as well as markets. Furthermore, it is impossible to evaluate the quality and performance of reform without taking into account the *intentions* of those directing and implementing the process itself. The policy and institutional (including regulatory, legal, and economic institutions) reform determinants include the USAID programmatic reform assistance areas (enterprise restructuring and privatization, land privatization, capital market functionality, banking sector effectiveness, trade liberalization, SME promotion, corporate governance/business standards, and tax administration). The present paper presents the patterns of this critical determinant from the point of view of donor priorities and allocations. Economic fundamentals indicate how well the private sector has responded to the economic environment created by government. The stress here is not only on performance *per se* but on economic variables that affect performance such as levels of private investment, stock market capitalization, and the economy’s openness. Finally, there are “exogenous shocks” – matters beyond anyone’s control – that affect the process and timing of transition. Examples include war and social conflicts, international factors such as European Union accession opportunities, earthquakes, or discoveries of mineral wealth.

In order for USAID to track its contribution to improved country performance, it needs to evaluate first its impact on reforms and second the impact of reform on country performance. Toward this end, we develop measures of the progress of reforms as well as measures of economic performance that we use in the companion paper to test the effectiveness of the former on the latter.

The first set of indicators measures depth of privatization. This recognizes that “true” privatization is more than purely a change in title (ownership). It must include considerations of “agency” issues (ability of shareholders to monitor and exert effective control over management), the “hardness” of the firm’s budget constraint, and the nature of the firm’s objective function (for example, are they maximizing employment or profits?). Each of these elements is captured as a sub-indicator as well as being aggregated into a principal reform measure.

The second set of indicators measures progress-in-transition. The aggregate indicator of this set is a comprehensive measure of the progress in reform performance. The indicator is built up from sub-indicators measuring the success of reforms in the USAID programming areas mentioned above. We present how the transition countries have shifted in rank over time according to these indicators and their sub-indicators. This offers a means to USAID to track its reform progress across countries and through time. The sub-indicators and, in most cases, their sub-sub-indicators help us to identify cluster and country weaknesses – and strengths – to be taken into account in the design of technical assistance programs.

The third set of indicators focuses on country economic performance. They examine performance from several levels, including micro, mezzo, and macro dimensions. Here we capture such aspects as export performance, foreign direct investment, productive efficiency and macro performance.

Prior to presenting project conclusions, a number of caveats should be made. First and foremost, this is “big-picture” research related to where countries stand and the central issues on how donors can make privatization and related reforms more effective. We do not use firm-level, household, or labor sector micro data sets; we do not carry out comprehensive, country-specific, needs assessments nor generate country-specific reform priorities; we do not design the components for a technical assistance programming exercise. Second, while our work is based on a specially constructed database of over 400 country panel variables, including those from a 25-country, 100-question competitiveness survey administered as part of the project, the data are far from perfect. There are two aspects to this problem. One pertains to each country separately and there is great variation – from the comprehensive to the sparse – on how much information is collected, both by the governments themselves as well as by (foreign and domestic) private organizations. The other pertains to the consistency of data across countries, since it is hard to do cross-country analysis – even with high quality data – if data definitions are different in each country. We have tried to compensate for data inadequacies by using more of it and by aggregating it into indicators.

In summary, the paper develops a framework to identify and measure (i) initial conditions clusters of transition countries, (ii) the key determinants of transition, and (iii) indicators of performance and a framework on how the determinants affect them. By examining inter- and intra-cluster differences, the paper highlights the underlying patterns of transition.

2 A heuristic model of transition

The framework of the present paper is based on a heuristic model of transition comprising six elements. These are the transition production function, the initial conditions of transition, an initial conditions cluster typology, categories of determinants of transition, measures of transition performance, and the use of indicators. In this section we examine each of these elements in turn.

2.1 The transition production function

We view the transition process as the result of several mostly sequential “production functions”. These are illustrated in Figure 1 and relate to the figure’s three “blocks”: Determinants, Reform, and Performance. The production functions produce outputs over three different time periods, the short-run, medium-term and long-run. Since the transition process has not been in progress long enough for a long-run measurement to reflect underlying transition progress, we place a particular emphasis on medium-term variables. We refer to these as “intermediate outcomes” since they are not desirable for their own sake but rather for the long-run benefits they will eventually confer. Examples of intermediate outcomes are “private-sector activity”, export performance, foreign direct investment, country competitiveness (constructed in paper 2). We examine in turn the three levels of production that comprise the heuristic model.

At the decision level, we see that government and donor objectives combine with a country’s initial conditions as inputs to “produce” institutional and policy reforms and their direct consequences. For example, a trade liberalization objective may lead to the policy of a simplified and lower average rate tariff structure with the direct consequences being lower tariff revenues.

At the intermediate level, policy and institutional changes impact on the rest of the economic system and, combined with exogenous shocks and the initial conditions – these are impossible to avoid at any level – produce intermediate outcomes.

At the long-run level, the intermediate outcomes combine with the initial conditions and exogenous shocks to produce long-term performance. It is primarily this performance that is the ultimate goal of government and donors.

2.2 The initial conditions of transition

A central premise of our approach is that a country's performance is affected by the conditions with which it finds itself at the start of the transition period. Clearly a country that is isolated geographically (or was, politically), has a low level of human capital, or has few paved roads will find itself at a performance disadvantage. We identify twelve categories of initial conditions. The categories and their variables used are given in Table 1.

It is also useful to think of the initial conditions as being of three types. "Fixed" initial conditions are those that are invariant and impossible to change. Examples would be geography, topography, natural resource endowment, culture, history, and climate. "Hard" initial conditions are primarily those that can be changed but not quickly. Examples include the quality of institutions (private, public, and market), industrial structure, ownership, public attitudes, composition of economic output, level and quality of human and physical capital stocks. It is a matter of semantics whether such characteristics such as degree of urbanization, literacy, and demographics (and its rates of change) are "fixed" or "hard". We take the view that variables that can be affected by donor aid are "hard" rather than "fixed". "Soft" initial conditions primarily refer to government policy such as the tax code. One could consider international relations and agreements here as well. Thus "hard" and "soft" refer to the speed at which an initial condition can be changed.

Good initial conditions present opportunities for government and donors to take advantage of; bad initial conditions need to be compensated through policy and directed economic activity. While initial conditions may not ultimately prevent a country from attaining a given level of performance, they do influence the speed and cost of such attainment in two ways, directly as a "fixed effect" and indirectly as an "interaction effect". As an example, consider the two effects of being a land-locked country on exports. This may have a direct effect by increasing transportation costs by a fixed amount relative to those of a country with a coast. At the same time, being land-locked might have an indirect effect by decreasing the effectiveness of trade liberalization policies.

Figure 1: A framework to evaluate transition

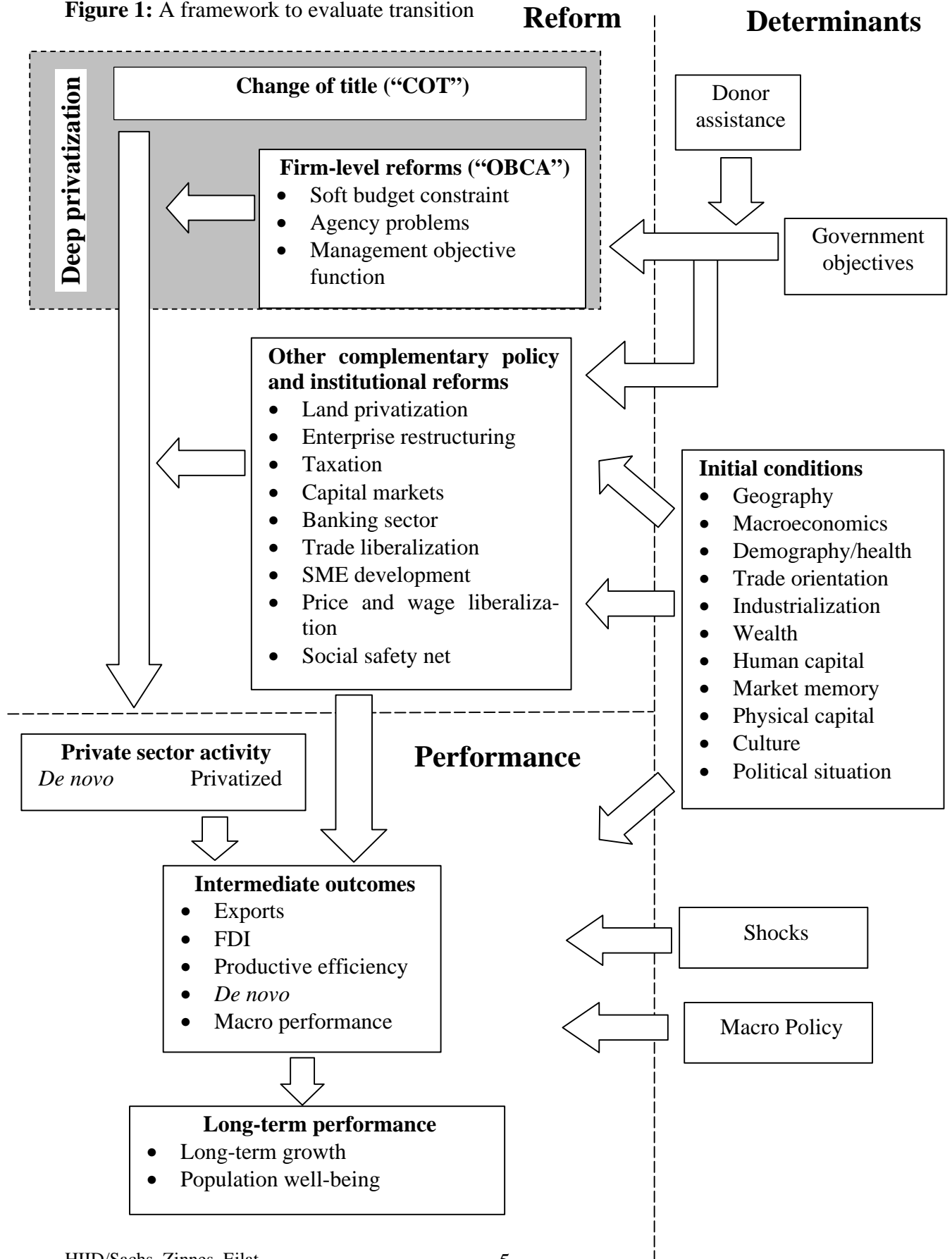


Table 1: Categories of initial conditions and their key variables.

<i>Initial conditions category</i>	<i>Key variables</i>
Physical geography	distance to major port, landlocked population, landlocked country, adjacent to a thriving economy, resource balance, natural resource abundance.
Macroeconomics variables	gross domestic savings, consumption, 85-89 growth of GDP, inflation, domestic absorption, government expenditures, black market premium, 1987-90 repressed inflation, government revenues.
Demographics/health	working age population, birth rate, population growth, infant mortality, life expectancy, public health expenditures, size of population, urban population, urban population growth
Trade and trade orientation	trade to GDP ratio, exports to CMEA countries
Infrastructure	paved roads, telephones, electricity consumption, hospital beds
Industrialization	share of industry in GDP, share of agriculture in GDP, industrial overhang, commercial energy use
Wealth	income per capita, GNP per capita adjusted for PPP, televisions per capita, vehicles per capita, private consumption.
Human capital	school enrollment, education index, UNDP human development index, physicians per capita
Market memory	years under central planning, economic freedom index, political rights index.
Physical capital	domestic investment fixed domestic investment
Culture	Percentage of Muslims, Christians and Orthodox
Political situation	war situation, former FSU dummy

Recently the literature has begun to incorporate the importance of initial conditions into the analysis. Most notable is the work of de Melo, Denziger, Gelb and Tenev (1996). Their approach is rather different from ours in that they statistically extract the first two principal components (which they refer to as “clusters”) out of their initial condition variables for their later regression analysis. As will be seen below, we retain a diversity of variables and use them in sensitivity analysis to identify clusters of countries with similar initial conditions.

2.3 Cluster typology

While at first sight, the 25 countries in our sample appear to exhibit a large variety of transition experiences, in fact, mostly because of common geographical, historical, and resource patterns there are significant similarities. So much so that by considering blocks or “clusters” of countries based on their initial conditions as described above we can greatly simplify our analysis, as well as highlight fundamental problems facing the various groups of transition economies. The cluster approach allows us to identify the underlying issues in a way more satisfactory than 25 individual country assessments. In this step, we use the initial conditions to establish the most parsimonious clustering possible by assigning countries to clusters in a way that minimizes within-cluster country differences and maximizes across-cluster country differences.

The country clusters become the fundamental unit of analysis in the rest of this paper as well as in the companion papers. The clusters facilitate our analysis in a number of ways. First, by analyzing the *inter*-cluster similarities and differences, we can generate distinct patterns of transition. The heart of the present paper, for example, comprises “benchmarking” the *clusters* over time by calculating unweighted cluster-specific averages for the initial condition proxies, intermediate outcomes, and other determinants of transition. This leads to the “patterns” reflected in the title of this paper. Second, we examine country successes and failures *within* each cluster in order to identify lessons learned regarding what policies might work better for a given transition pattern (i.e., for a given set of cluster characteristics). By using cluster “dummies” as fixed effects and in interaction terms with other explanatory variables, the cluster approach permits in our companion econometrics paper a more controlled basis to assess the contribution of policy and its effectiveness on intermediate outcomes and long run objectives. Finally, the inter- and intra-cluster tabulations that emerge provide a rich diversity of stylized facts.

We should mention that there is an alternative way to capture the initial conditions than to use country clusters. The approach taken by those following de Melo, Denziger, Gelb and Tenev (1996) use the first two principal components of their group of initial condition variables. Given that we identify seven clusters, their approach has the advantage that it uses up fewer “degrees of freedom” in their regressions. It has the disadvantages that, first, the principal components are not easy to interpret and, second, much detail is lost from the variable compression.

2.4 Determinants of transition

Our heuristic model posits that there are a number of determinants leading to a country’s transition performance in addition to its initial conditions. These include:

- government objectives;
- policies and institution-building undertaken during transition (we will especially emphasize the policy areas in which USAID/ENI operates);
- past economic performance;
- donor assistance received; and
- other idiosyncratic shocks (e.g., war).

Consider each in turn.

One of the virtues of our model is to recognize the importance of the objectives and priorities of decision-makers in affecting outcomes. The government is primary among these. Not only does it direct policy and institutional reform, but donor technical assistance is generally received and implemented by the government. In acknowledgement of this fact, we explicitly measure government priorities and objectives using survey responses on the degree of effort governments allocate to various reforms. We do the same regarding donor assistance.

As the major focus of study, policies and institution-building undertaken during transition form a key category of transition determinants. In deference to USAID, we group these into the reform areas in which USAID/ENI operates. These include enterprise privatization (strategic and other), land privatization, trade liberalization, tax (and tax administration) reform, SME development, social safety net development, capital market creation, banking sector reform, corporate governance, and wage and price liberalization. Since privatization is of primary interest to the study, we pay special attention to it in developing measures of policy determinants of transition. In particular, we develop proxies for change-of-title, softness of budget constraints, “agency” problems, and the management objective function.

Finally, exogenous shocks are an important determinant of transition. Perhaps the most potent example would be war or civil unrest, either in the country itself or of a neighbor.

2.5 *Measures of performance*

While the determinants of transition describe the “production function” inputs, quantitative analysis also requires measures of outputs or outcomes. These are broken into three groups or “runs”. Short run outcomes refer to stock market volume, number of firms privatized, or amount of government tax receipts in a year. Intermediate outcomes include such notions as share of the private sector in economic activity, foreign direct investment, openness of the economy (and particularly exports), the number of *de novo* firms, state of the macro economy, productivity, and economic competitiveness. Long run outcomes include economic growth, income per capita, wealth, and human well being.

2.6 *Use of indicators*

While the list of the variables mentioned in this section seems impressive, in fact as mentioned in the introduction data scarcity is a major obstacle of any work on transition economies. We confront this in three ways. First, we have collected as much data as currently available from reputable sources. This has led to a massive database of several hundred variables. Second, we have augmented this database by carrying out our own special survey of 25 foreign economic research institutes located in the transition economies. Third, we have extensively used indicators constructed from all the sources above³.

Indicators have several advantages. If their constituent data are noisy or even missing, the aggregation afforded by the indicator is able to cancel these out and put the “law of large numbers” to work. Indicators also provide an easy way to capture a concept in the case that a single specific variable cannot; examples of this are presented below.

In this study, we develop indicators for all intermediate and long run performance measures and for “competitiveness”, “depth-of-privatization”, overall “progress-in-transition” outcomes and each USAID reform category. In each case, it would be impossible to summarize the concept implied by the indicator’s name by using a single existing variable. Thus, for example, we build up a competitiveness indicator from over 70 variables. Similarly, we construct a “depth-of-privatization” measure by aggregating measures (themselves indicators) for change-of-title, softness of budget constraints, and “agency” problems/management objective.

The construction of the indicators is done in a hierarchical way. For *each* level, starting from the lowest, and within the same branch of the definitional tree (for which the weights add up to one), we:

³ For a more thorough discussion on the ideology, motivation and technique of the use of indicators, see Sachs, Zinnes, Eilat (2000, vol.2).

- (1) For each conceptual level select variables, ensuring that each one is monotonically related to the concept,⁴
- (2) sign them (multiply by -1 , where necessary) so that each new variable is *positively* related to the concept level (i.e., so that “more is better”),
- (3) standardize⁵ all the variables, including any sub-indicators constructed from the previous level,
- (4) multiply them by the assigned weights, and
- (5) add up all the resulting products.

We then climb up one level up and repeat this five-step process until we reach the highest level. As were the variables, the weights are chosen by canvassing expert opinion (including our own) about the relative importance of the variables selected in capturing the underlying concept. In some cases, however, we made adjustments to reflect our knowledge of data quality and quantity.⁶

This approach allows us both to track the progress of a country over time as well as to compare the progress of countries.

While the construction of the indicators is relatively straightforward, we did encounter a large number of methodological challenges. Let us highlight what some of these issues are.

To make cross-country comparisons, we often needed to deflate (divide) variables of interest by another variable (the deflator). For example, Russia may have greater absolute levels of stock market capitalization but this itself is not economically interesting. What is interesting is this measure after “correcting” for the relative size of the country or economy. In most cases, the obvious choice is GDP. However, there are a number of problems with using GDP. First, due to the existence of large *unofficial* economies⁷ (whose share of total activity varies significantly across countries), *official* GDP can grossly under-represent the true size of economic activity. An alternative deflator is to use population. The problem here is that population does not reflect the level of economic activity as accurately as GDP, nor the size and extent of the market. We have, therefore, applied the most appropriate deflator in each case, according to the concept we wanted to capture. In some cases, we use the logarithmic transformation of the population when we believed that the variable should have been higher for a bigger country, but less than proportional to the size of the population. (For example, this was the case when deflating the number of local and foreign insurance companies).

Much of the data for transition economies suffers from a multitude of reporting biases and measurement problems, often related to the newness of government collection agencies as well as to corruption. We have addressed this problem in a number of ways. First we have used as many variables as possible to capture particular concepts. Second, we try to overcome biases by using seemingly identical variables. For example for exports, we have used both figures reported via the balance of payments statistics as well as through the trade authorities.

⁴ In other words, the variable’s relationship to the conceptual level being captured must be uniformly either positive or negative and not depend on value of the variable. See the example of “unemployment” below on how to correct for non-monotonicity.

⁵ To standardize, we subtract the sample mean from each observation and then divide the result by the sample standard deviation. This forces a mean of zero and a variance of one across countries and years, making otherwise “unlike” objects “like” objects suitable for aggregation.

⁶ We mention “quantity” here since a small number of variables were included though their coverage across countries or years was incomplete.

⁷ This occurs due to tax evasion, avoidance of predatory bureaucracies, corruption, and weak statistical agencies.

A subtler problem concerns how two standardized variables of different series length should be aggregated into the same indicator. (Recall that we scale sub-indicators to have a mean of zero and a variance of 1 prior to aggregating them into an indicator). If two series, say foreign direct investment available for only 1995 onward and foreign portfolio investment having a coverage from 1990 to 1998, then, once they are each properly deflated and standardized, adding together the two series would create a big “kink” in the indicator trend. This results from one average being taken over nine years and the other average being taken over four years. To see this, consider the aggregating two *identical* series, X95 available for 1995 onward and X90 available for 1990 onward and assume that X has rising trend. Then during the standardization process we would subtract a smaller mean from each of the observations of X90 than we would from X95 since the mean of X90 would also contain earlier years and therefore smaller numbers pulling down the average which we subtract. Combining X90 and X95 and plotting the result would show a jump in the line in 1995 even though they are the *same* series by construction. To correct this we use a smaller mean during the standardization of X95. How much smaller? Simply the difference between the two means evaluated over the 1995 observations.

3 Clustering countries by initial conditions

As explained in section 2.3, the cluster approach allows us to identify the underlying issues in a way more parsimonious than 25 individual country assessments. At first blush, it may seem as some risk of over-simplification to take the extreme view that initial conditions are the overriding determining factor of a country’s performance. However, there are two variants of this view. Under the strong variant, the main determinants that matter are those that are related to the “fixed” initial conditions as defined in section 2.2; the weak variant would add to these the “hard” and “soft” initial conditions. Our approach follows the latter. Since “hard” and “soft” conditions can be changed over time, the weak variant indirectly implies greater potential impact from policy and institutional change over the long run than would the “strong” variant.

Our goal is therefore to assign countries to groups based on similarity in initial conditions, in a way that minimizes within-cluster country differences and maximizes across-cluster country differences. In order to achieve this goal, we identify a list of representative variables that describe the initial conditions. These variables are chosen to proxy for a wide variety of aspects that, based on economic theory, are relevant for the countries’ prospects of transition performance and may be relevant for the recommended policy treatment. Countries will be clustered together only if they display a strong similarity in a wide range of aspects.

The purpose of this clustering is twofold. First, in the phase of investigating policy effectiveness it will allow us to derive strong conclusions by comparing between performances of countries that belong to the same cluster, but follow different policy paths. Second, in the phase of policy recommendations we may want to distinguish between global recommendations and cluster specific recommendations.

In econometric terms, the use of cluster dummies in our regressions will provide the necessary control for different starting points of the countries, without losing excessive degrees of freedom that can weaken the power of our results. Furthermore, using interaction terms of the cluster dummies with policy variables will allow us to investigate the relative effectiveness of different policies in different clusters. This will help us derive policy prescriptions.

3.1 Literature review

While we base our typology on an *initial conditions* approach, it is worth mentioning that the literature contains other approaches to arrive at country typologies. The most common divide the countries into “Eastern European” and “Former Soviet Union”. While there is merit in this grouping, especially since it stresses shared history as well as geography, we find it a bit too broad in that it obscures important insights. Two other approaches have been taken that bear mention, once focusing on transition period *performance* and the other on country policy orientation.

The first shown in Table 2 is Szyrmer [1998] and is representative of several studies which have identified *performance* as the discriminating variable for membership. While this typology captures the recent experience as well as the end point (i.e., where we are now), it is not directly based on fundamentals, making it potentially less appealing for long-run applications. Moreover, this type of clustering does not provide a useful basis for econometric analysis explaining the reasons for success, itself.

Table 2: Transition trend-based typologies

<i>Group</i>	<i>Sub-group</i>	<i>Country membership</i>
I. “Successes”	A	Croatia, Poland, Slovakia, Slovenia,
	B	Bulgaria, Hungary,
	C	Estonia, Latvia, Lithuania
II. Borderline		Czech Republic, Moldova, Romania,
III. “Failures”		Russia, Ukraine,
IV. Unallocated	Caucuses	Armenia, Azerbaijan, Georgia,
	Balkans	Albania, Macedonia
	Unreformed	Belarus
	Central Asia	Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, Uzbekistan

Source: Szyrmer (1998)

A second type of grouping is based on the *policy* focus of the transition countries. The grouping in Table 3 of Dabrowski (1996) is a good example of this. It is based on three aspects: the speed of action, the comprehensiveness and consistency of policy, and cumulative progress.

Table 3: Development policy typology

<i>Group*</i>	<i>Country membership</i>	
Immediate accession	German Democratic Republic	
Quick launchers	Albania, Czech Republic, Estonia, Latvia, Poland, Slovakia	
Slow but coordinated	Hungary, Slovenia	
Significant but incomplete	Non-radical	Lithuania, Moldova, Kyrgyz Republic
	Uncoordinated	Romania, Russia
	Radical but no critical mass	Bulgaria, Macedonia**
Lack of systemic change	Belarus, Kazakhstan, Turkmenistan, Ukraine, Uzbekistan	
Countries at war	Armenia, Azerbaijan, Bosnia, , Georgia, Serbia, Tajikistan	

Notes: *Names of groups assigned by present authors. **Macedonia is not explicitly included by Dabrowski but we have placed it where we think his criteria would have dictated.

Source: Dabrowski (1996)

3.2 Cluster methodology

The process of creating the clusters is done using two methods, and then a feedback method is used to verify the effectiveness of the results. The first method for clustering is to generate computer clusters using our economic, political and geographical variables, presented in Table 1.⁸ The program then generates clusters in a way that minimizes the average variance of the variables within each cluster, and maximizes the average distances between the clusters' means. This guarantees that any two members of a given cluster are on average more similar to each other, with respect to the chosen list of variables, than two countries belonging to different clusters. The output of the program is then a list of the countries in each cluster.

The advantage of using this method is that it generates the clusters directly from economic fundamentals, without the necessity of having any prior beliefs about the form the clustering should take. By repeatedly using the routine for different variations of the variable list, strong clustering tendencies become apparent. Yet, we should note that there is no one clean-cut clustering since the clusters generated by the program can sometimes change with the exact variable list chosen. These variations will be discussed below.

The second method for the clustering, which is used to supplement the first, is to plot key variables against the suggested clustering. This demonstrates graphically the tightness of the clustered groups, and shows what countries tend to be outliers in their groups. Moreover, it gives us a better feeling for what variables drive the clustering, and what variables tend to generate the exceptions in the different cases. This information is useful for a better understanding of the clusters.

As a final check of the appropriateness of our allocation of countries to clusters, we analyzed⁹ the statistical significance of the cluster fixed effect and interaction dummies in regressions of performance on policy. The significance of the dummies suggests that the groups do differ in a way relevant for transition performance. Moreover, the significance of the interaction terms show that there are differences between the groups in the effectiveness of policy measures.

⁸ We did this by inputting a selected list of relevant variables into the statistical computer software, STATA and running a clustering routine developed at the U.S. Geological Service.

⁹ The results of this analysis are provided in Sachs, Zinnes and Eilat, (2000, vol 3).

Note that we occasionally used the first and second principal components taken from de Melo, Denziger, Gelb and Tenev (1996) in addition to the initial conditions variables listed in Table 1. These have been widely used in the transition literature. The first principal component represents mostly macroeconomic distortions and unfamiliarity with the market process (trade dependence, repressed inflation, black market premium and years under central planning). The second principal component can represent the level of development (income per capita, urbanization, over-industrialization and natural resources).

3.3 The transition clusters

Applying the methods laid out above suggests that we group the countries into seven groups, summarized in Table 4. Before entering into detail on how the clusters scored for each initial condition, we first provide a brief description of each cluster and then indicate where the clustering is weakest.

Table 4: Summary of the initial conditions-based typology

<i>Cluster name*</i>	<i>Country membership</i>
EU-border states (1)	Croatia, Czech Republic, Hungary, Poland, Slovakia, Slovenia,
The Balkans (2)	Bulgaria, Macedonia, Romania
Baltic States (3)	Estonia, Latvia, Lithuania
Albania (4)	Albania
Western FSU (5)	Belarus, Moldova, Russia, Ukraine
Caucuses (6)	Armenia, Azerbaijan, Georgia
Central Asia (7)	Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, Uzbekistan

*The number in parentheses is used as a cluster identifier in the analysis in the following chapters.

EU Border States (1): includes Poland, Hungary, Czech Republic, Slovakia, Slovenia and Croatia. This group demonstrates a very strong similarity in most variable groups, and especially in development, geography, infrastructure, population, human capital, and economic freedom. For all these variables the countries in this group score higher than countries in other groups. One notable exception is the former Czechoslovakian countries, which suffered from lower economic and democratic freedom. It should also be noted that our variables did not provide any grounds for distinguishing between the new states (Slovakia, Slovenia and Croatia) and the rest of the group. Slovenia, for example, scored higher than the veteran states on most categories.

Balkan States (without Albania) (2): includes Macedonia, Bulgaria and Romania. The countries in this cluster differ in many historical/political aspects, but nevertheless they display a strong similarity in many economical variables such as population, physical capital, initial wealth and macroeconomic variables. It should be noted that Bulgaria scores highest in the group in most of these categories, and in this sense it is the closest to the EU states. Romania has significantly higher natural resources, and Macedonia is a landlocked country and has a bigger agriculture sector and is therefore less industrialized. It is also a new country, and belonged in the past to a country with more economic and democratic freedom. A final note should be made

about Albania: due to its special features we placed it into its own group. It will therefore be discussed more thoroughly under group (4).

Baltic States (3): Include Lithuania, Estonia and Latvia. The countries in this group are almost identical to each other in every aspect considered. The only thing worth noting is that Lithuania has a slightly bigger agricultural sector and a slightly lower income. In many aspects the Baltic countries are similar to the Western FSU countries, and especially industrialization, population and human capital. Yet some grounds could be found for distinguishing between the groups, once considering geographical differences (location, proximity to thriving economies, size of population), free-market memory, and infrastructure.

Albania (4): Albania is a unique case in its political history and its economical starting point. It is enough to note that it displays the lowest levels of initial wealth, development and infrastructure in our sample (sometimes by considerable margins) and that it was totally isolated from the outside world for many years, to understand why it deserves a special treatment. We considered two “natural” groups in which to group Albania: the Balkans, and Central Asia. The only justification that we found for including Albania in the former is its geographical location. Albania has access to the sea, and is extremely close to a developed European country (Italy). Nevertheless, its bizarre pre-transitional political situation did not allow it to exploit its favorable location. We therefore find that in terms of pure initial conditions it fits much better into the landlocked group of Central Asia, especially in variables of development, initial wealth, population and even culture (religion). Yet, for our purposes it may not be appropriate to add it to this group: once the political barriers were lifted, Albania’s “landlocked” initial conditions were no longer valid. In a sense, with the end of autarky Albania “moved” its location from Central Asia to the Adriatic. Albania can have, after a catching-up period, similar prospects of performance as other countries in its (new) region, provided it knows how to make use of its favorable location. Albania is, therefore, disqualified from both groups. As if to cement its case, the computer clustering routine suggested that Albania should be grouped on its own.

Western FSU (5). Includes Russia, Ukraine, Moldova, and Belarus. This is a rather heterogeneous group. Nevertheless, the countries in this group do display some similarity that justifies their group status. Examples of the similarity are industrialization (with the exception of Moldova), population variables, initial wealth and most infrastructure variables. On the other hand, many countries in this group have unique features: Russia for example, is considerably larger than the other countries and is different along many political dimensions and its recent history. Moldova is less industrialized, and usually scores lower in terms of development, human development and initial wealth. In many ways it resembles the Balkan countries: culture, population variables and some welfare variables. Yet the overall clustering results supports leaving it in the western FSU group. In addition, one should point out that Moldova and Belarus are landlocked countries; even Russia has poor ocean access.

The Caucasus (6). Includes Georgia, Armenia and Azerbaijan. The data were ambiguous about whether to maintain the Caucasus as a group of its own, or rather, split it into two, with Georgia and Armenia on the one hand, joining the Western FSU countries and Azerbaijan, on the other hand, with its similarities joining Central Asia. Deciding between the two options was perhaps the most ambiguous question in the cluster analysis. We eventually decided to keep the Caucasus as an independent group. The driving force for this decision was geographical and political as well as practical. Georgia and Armenia score on average lower than the Western FSU on initial wealth and infrastructure variables. This provides some motivation for separating between Georgia/Armenia and the Western FSU. Once an independent Caucasus is formed,

Azerbaijan seems much closer to it than to Central Asia, even though it fits the latter better than the Western FSU in terms of culture, population and initial wealth.

Central Asia (7). Includes Kazakhstan, Uzbekistan, Kyrgyz Republic, Tajikistan, and Turkmenistan. These countries display a very strong similarity in all aspects apart from natural resources (Kazakhstan and Turkmenistan scoring much higher, the Kyrgyz Republic and Tajikistan scoring much lower) and size (Kazakhstan is considerably bigger than the others). Kazakhstan consistently scores better than other countries in the group in terms of development and initial wealth and it has a higher urbanization rate. Along these dimensions, Kazakhstan could also fit into the Caucasus. Yet, mainly due to cultural and geographical parameters, we have kept it in the Asian group.

No typology is perfect. As the foregoing discussion suggests, our analysis also allows us to identify some problematic countries for which there is some ambiguity regarding their placement. We summarize this information in Table 5. We note in ending that since the “hard” and “soft” initial conditions may be affected by the other determinants of transition, it would be eventually necessary to re-conduct the clustering analysis. Perhaps after a decade or more in transition, Albania will once again look like a Balkan country, the Caucasus may “move” back to the Western FSU with Azerbaijan joining Central Asia, and Macedonia will leave the Balkans (or join Albania?). Only time – and additional analysis – will tell.

Table 5: Summary of clustering tendencies among transition countries*

<i>Group**</i>	<i>Countries in group</i>	<i>Least-fitting countries in the group</i>	<i>Most similar countries in other groups</i>
EU Border States (1)	Croatia, Czech Rep., Hungary, Poland, Slovakia, Slovenia,	(Croatia)	(Bulgaria)
The Balkans (2)	Bulgaria, Macedonia, Romania	(Bulgaria)	(Moldova), (Albania), (Croatia)
The Baltics (3)	Estonia, Latvia, Lithuania		(Belarus) (Russia)
Albania (4)	Albania		Most Central Asian countries
Western FSU States (5)	Belarus, Moldova, Russia, Ukraine,	(Moldova) (Belarus) (Russia)	Georgia, Armenia
The Caucasus (6)	Armenia, Azerbaijan, Georgia	Georgia, Armenia, Azerbaijan	Kazakhstan
Central Asia (7)	Kazakhstan, Kyrgyz Rep Tajikistan, Turkmenistan Uzbekistan.,	Kazakhstan	Azerbaijan, Albania

*Countries in parentheses represent a weaker tendency to leave or join a group.

**Numbers in parentheses indicate the cluster number used in the graphs in the rest of this paper

3.4 *Inter-cluster differences in initial conditions*

To give the reader a better idea as to how the clusters “look” we can examine how the clusters differ according to their initial conditions. For this purpose we provide Figure 2, which contains histogram examples of selected initial condition variables from the full set as well as Table 10 in the annex, which contains all the centroids (cluster means) and within-cluster standard deviations.

Regarding Figure 2, a number of observations are apparent. With the exception of Albania which does the absolute worst, we see that per capita incomes are more or less correlated to distance to London. Note, however that there are not dramatic differences between the Baltics, Balkans, Western FSU and the Caucasus – a surprising fact considering how different their future performance trajectories become.

Consider the fixed initial conditions. As an example from the geography group we have chosen the percent of the population within 100 kilometers of a major coast. Here we see that the Caucasus and Central Asia distinguish themselves from the other clusters as being particularly low. For demographics, we see that while Central Asia and Albania have very high population growth rates, the other cluster are all very low, with the Balkans actually negative; these rates appear to be negatively correlated with per capita incomes.

Consider next the “hard” initial conditions. For telephone lines per 1000 persons, the Baltics and Albania are by far the best and worst. The other clusters more or less follow a CEE-FSU split, though the Balkans surprisingly outperform the EU Border States¹⁰. For the economic freedom indicator, the CEE-FSU differences are clear (which is perhaps not surprising taking into account that the FSU countries were given a uniform value for this variable) with the EU Border States with the best score.¹¹ The UNDP human development indicator more or less follows per capita income, with the exception that the Balkans and Baltics switch places.

Finally, consider the “soft” initial conditions. Both repressed inflation and the black market premium reflect the CEE-FSU divide (again, the FSU has a uniform value), with the latter having values of two and four times as big as the former, respectively.

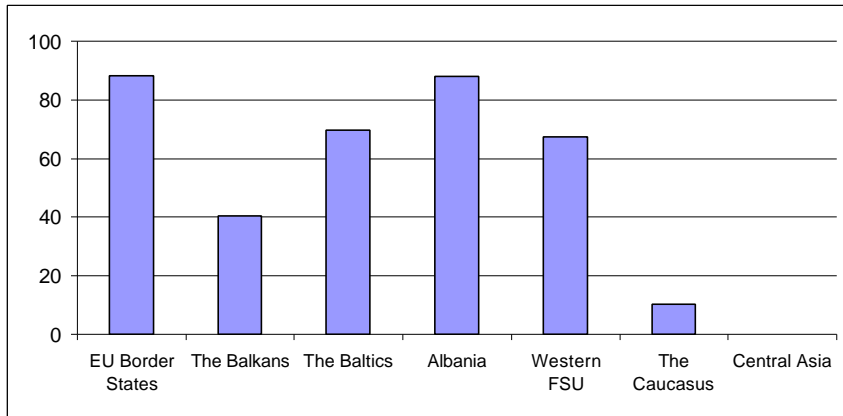
While we provide Table 10 in the annex mainly for completeness, a few observations may still be added. First, we draw the reader’s attention to the standard deviations. These indicate roughly just how “tight” the individual clusters are. Thus, for example we see that the variable, “Distance to a major port” is very tight while income per capita is less so. In general the table evidently supports the view that the FSU should be split from the non-FSU. The table also reveals, however, splits in the FSU on the dimensions of culture and demographics, for example. Finally, the table reveals how good initial conditions are not necessarily a guarantee for future success. The Western FSU, for example, comes out rather well in wealth-related measures, surprising given its later poor performance.

¹⁰ Yet, one should note that this variable reflects only the quantity of the telephones, not their quality.

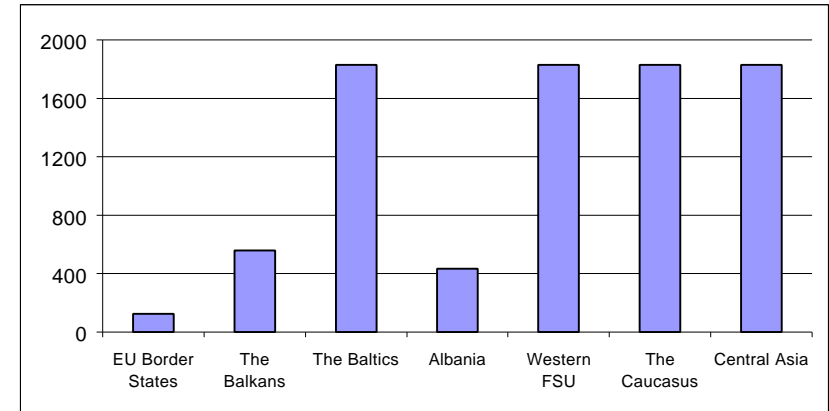
¹¹ Interestingly, the Czech Republic and Slovakia (as Czechoslovakia) are an exception, scoring among the worst in the sample for these variables.

Figure 2: Representative initial conditions by cluster, 1989-90. *Sources:* see Table 9.

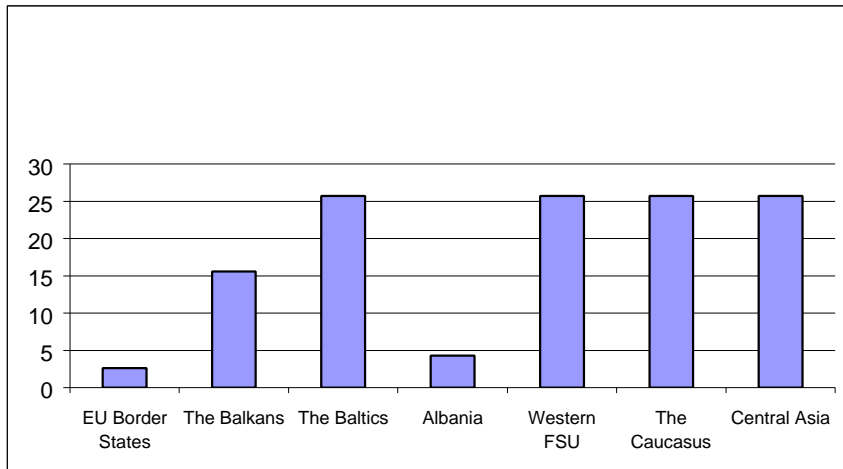
Percent of population within 100 km of major river/coast



Black market premium, 1990 (%)



Repressed inflation, 1987-1990 (%)



Annual population growth, 1989 (%)

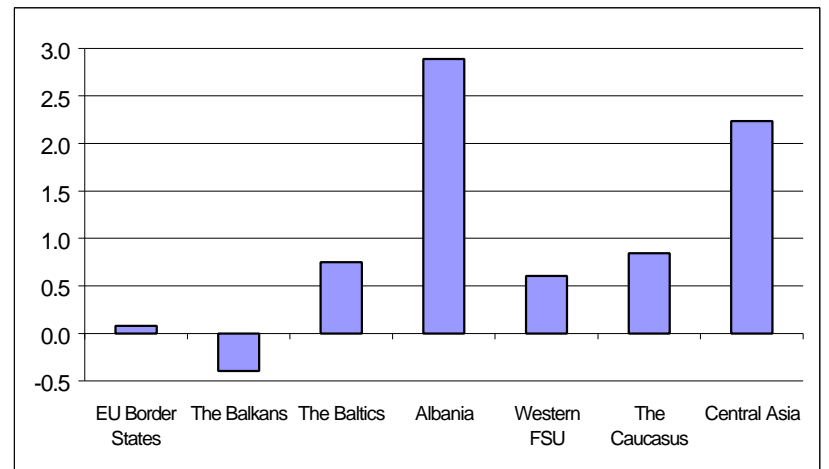
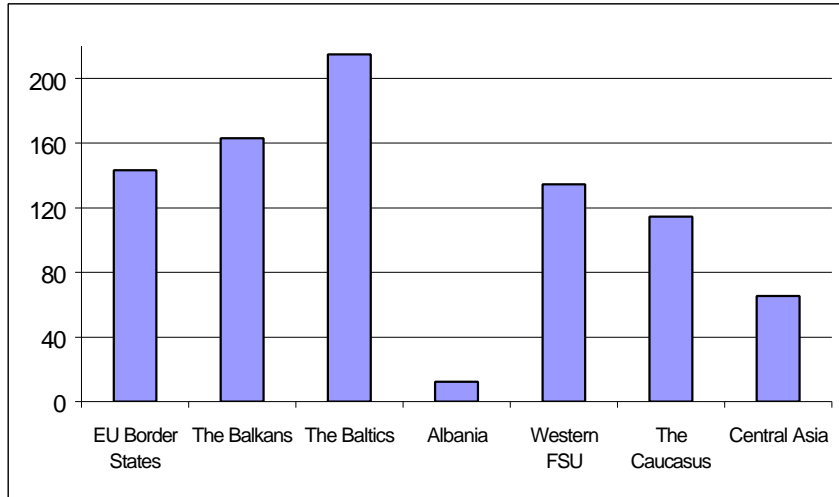
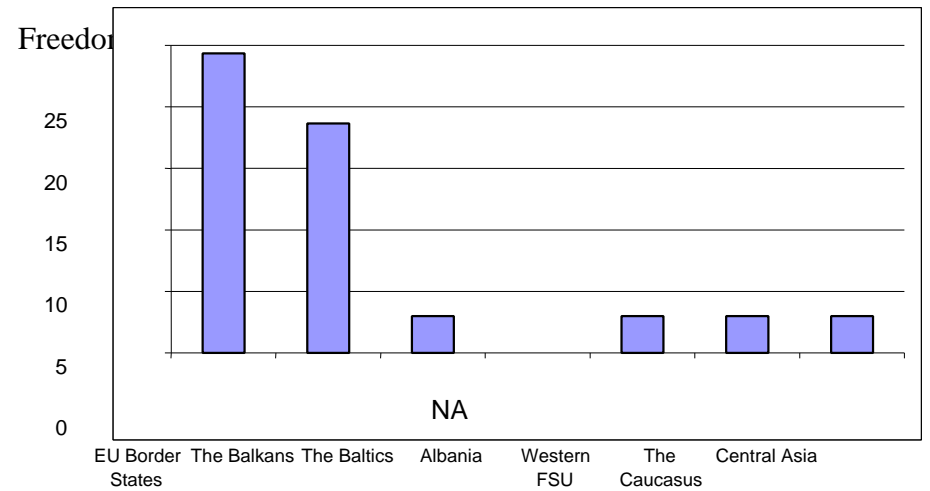
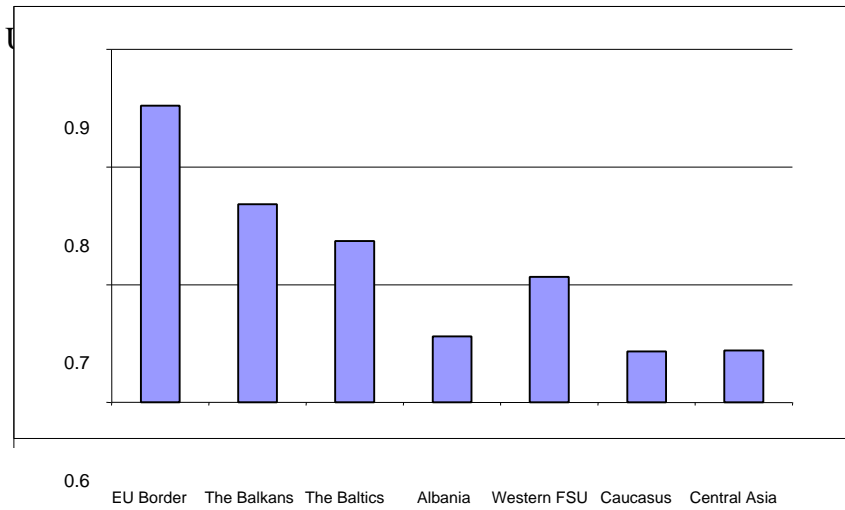
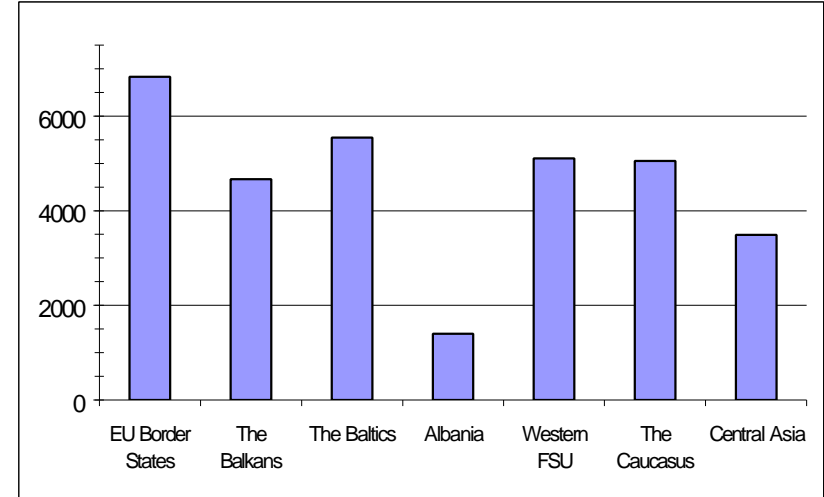


Figure 2: (continued)

Telephones lines per 1000 persons, 1989.



Annual Income per capita, PPP adjusted, 1990 (USD).



3.5 Intra-cluster differences in initial conditions

As a final window into the initial conditions clustering, consider the situation regarding the within-cluster variations exhibited by the transition countries. A summary of these is provided in Figure 3. In the figure we have selected the same variables presented in the inter-cluster comparison above with the exception that we drop the policy variable graphs (since their values for clusters made up of FSU countries would all have the same values). These figures make clear that Albania is a group of its own.

Turning first to the “fixed” initial conditions (landlocked population) we see that Russia does not fit in well with the rest of the Western FSU, that Georgia is different from the rest of the Caucasus, and that Macedonia is very different from the rest of the Balkans.

Regarding “hard” initial conditions (telephone lines per 1000 people), here we see tighter clusterings though now Bulgaria is the outlier in the Balkans. Population growth is another variable with very tight clustering, though here again the exception is the Balkans. With the exception of the Central Asia cluster, the FSU groups also all score similarly in this respect.

Finally we add the first principal component of de Melo *et. al.*(1996) to round out the discussion. This variable captures mostly macroeconomic distortions and unfamiliarity with the market process (trade dependence, repressed inflation, black market premium and years under central planning). Here we find the tightest clustering of all the variables, indicating how strongly related are the principal component technique and the clustering technique. Note how the mean zero line perfectly bifurcates the countries into FSU and non-FSU; this has the implication that the Balkan group exhibits the closest performance to the EU Border States.

Figure 3: Intra-cluster comparisons of initials conditions, 1989-90. (Cluster numbers are from Table 4). *Sources:* see Table 9.

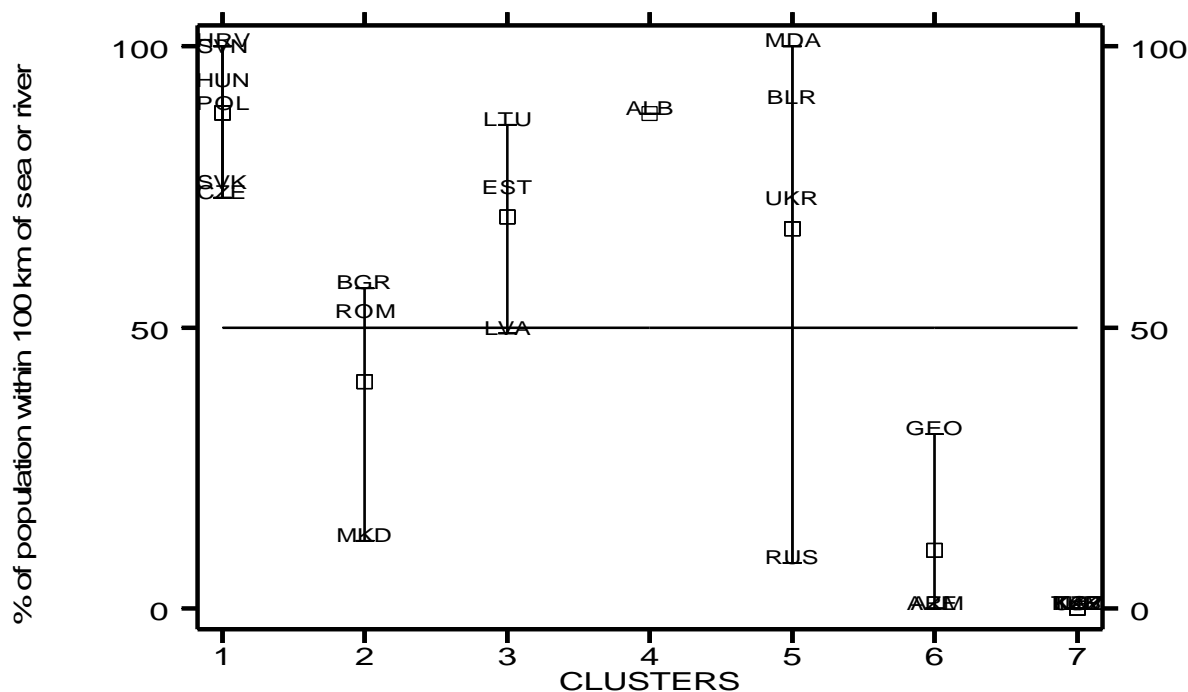


Figure 3: (continued) Intra-cluster comparisons of initials conditions, 1989-90. (Cluster numbers are from Table 4). *Sources:* see Table 9.

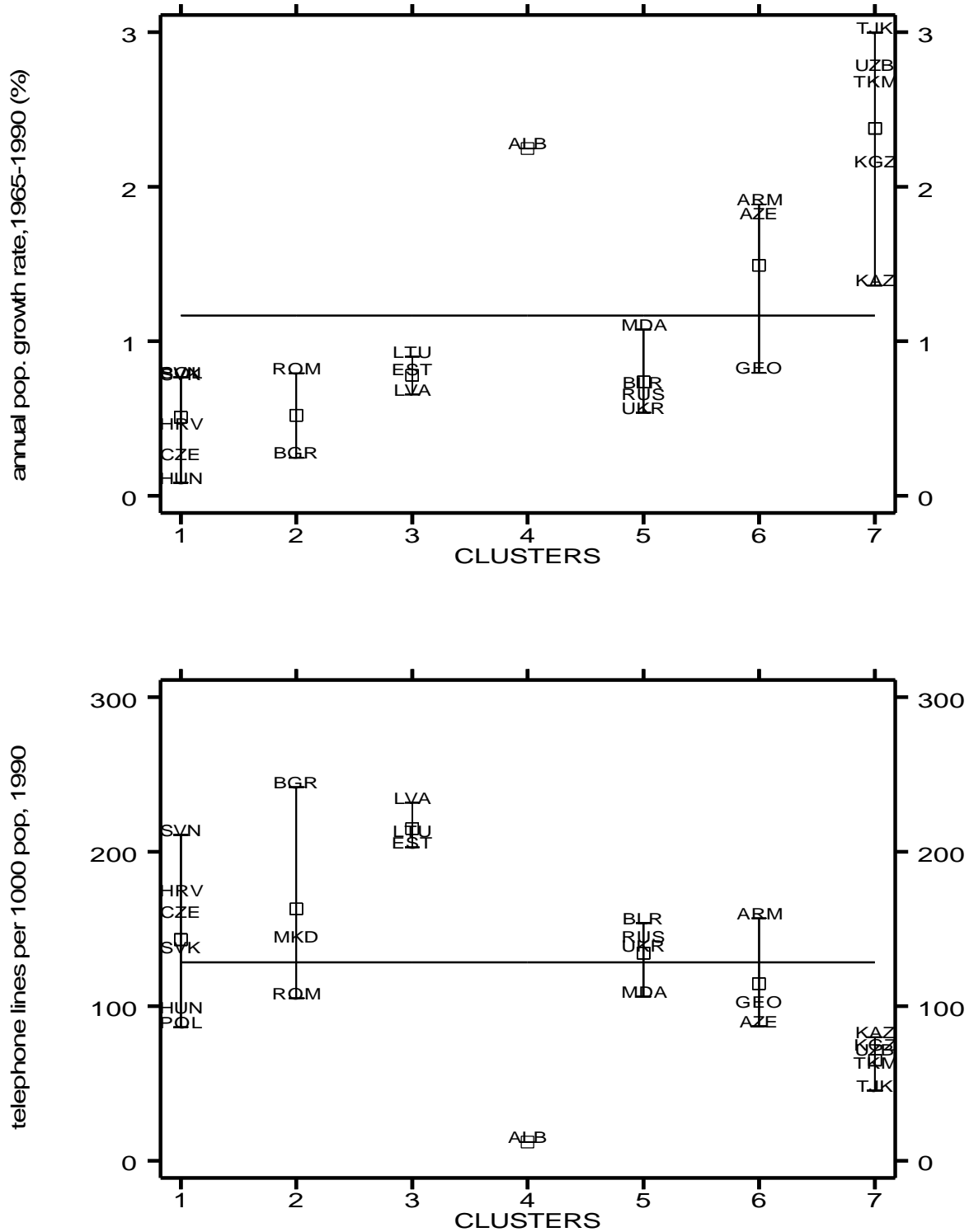
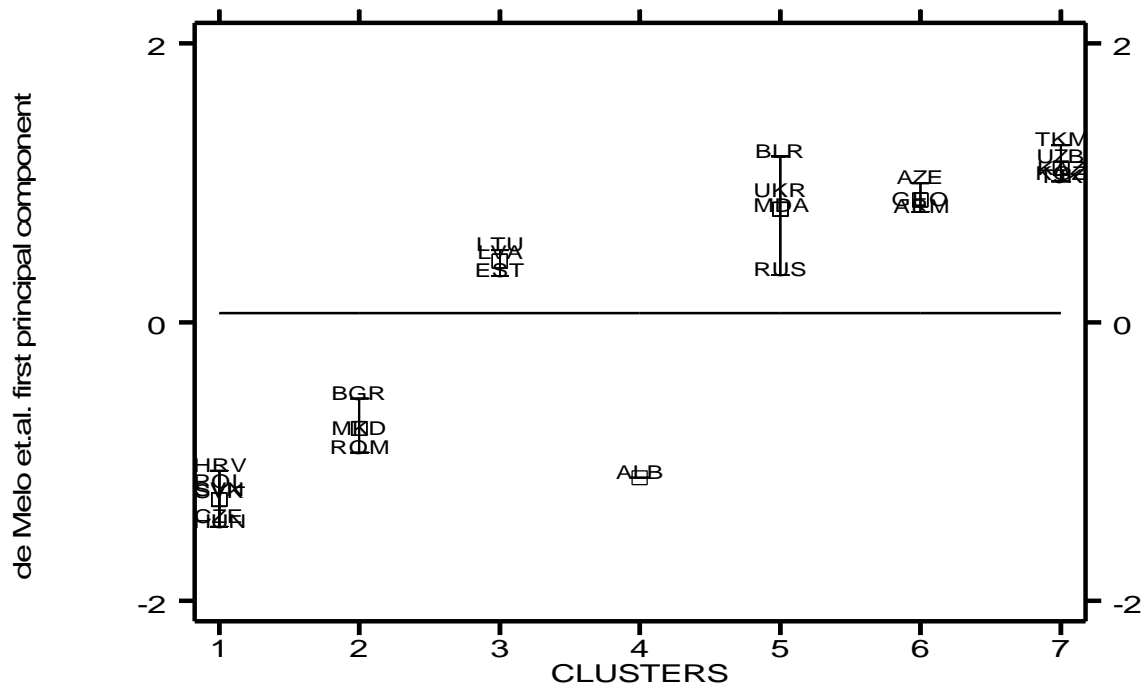
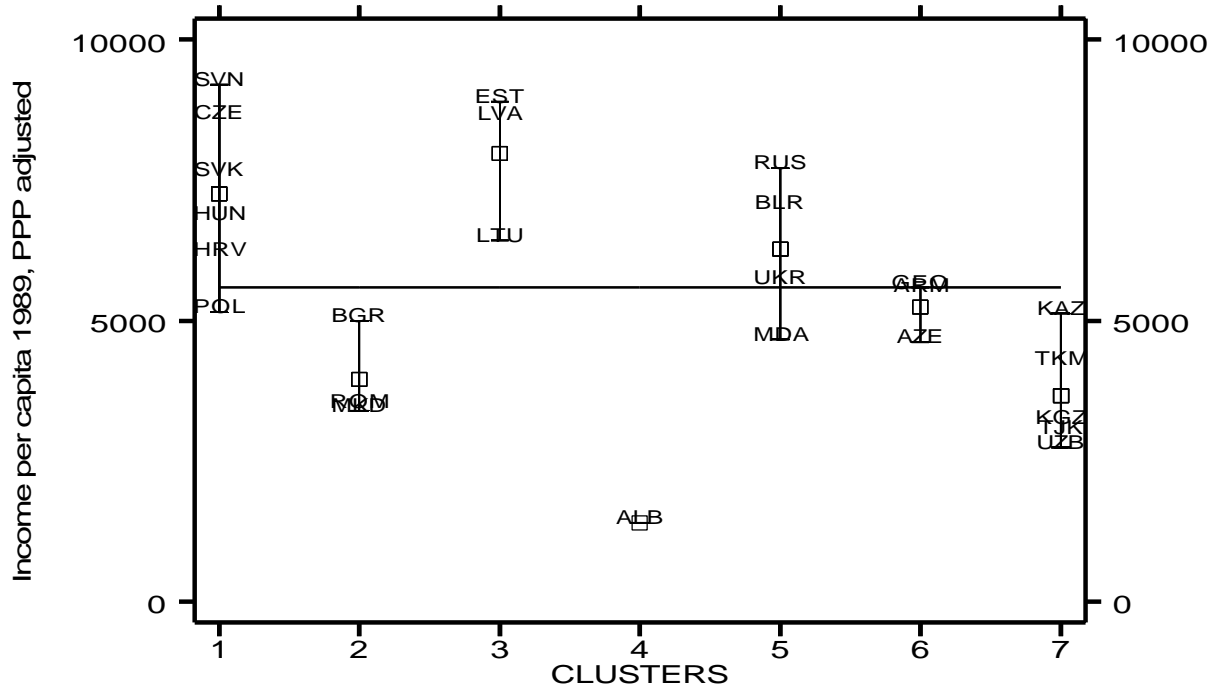


Figure 3 (continued) Intra-cluster comparisons of initials conditions, 1989-90. (Cluster numbers are from Table 4). *Sources:* see Table 9.



4 Government objectives and donor priorities

To evaluate the performance of transition policies and to produce recommendations on how to improve them in the future require explicit measures of what the decision-makers' objectives were and are. To assess how well a reform was executed it is necessary to know how important it was to the executor. We need to be able to distinguish between the case that country characteristics, weak institutions, or related economic performance impeded the success of a reform from the case that the government placed a low or no priority on its implementation. In the first two sub-sections and with the help of our field survey, we identify and quantify the objectives, respectively, of each country's governments and participating donors over time. In the final sub-section we compare the congruence of these objectives across reform categories and over time.

4.1 Government objectives

Clearly any measure of government objectives is going to be imperfect. Nevertheless, given its importance, this should not be used as an excuse to avoid its quantification. There are at least two approaches possible, one through "revealed preference" and one through government statements. The former would look at what reforms actually receive the most budgetary support from the government. While theoretically appealing, in practice we were unable to get consistent data at the level of the individual reforms.

Instead, we took the second approach. We did this by surveying government bureaucrats and higher-level decision-makers involved in the reforms at the time to determine what reforms had received the most effort, priority and attention (though not necessarily the best results). Ten reform areas were selected. These included:

- Enterprise privatization
- Strategic sector privatization
- Enterprise (pre-privatization) restructuring
- Tax code and tax administration reform
- Judicial reforms
- Social safety net reform
- Trade liberalization
- Stock market creation
- SME promotion

Permissible answers included:

- Strongly against (-2)
- Weakly against (-1)
- Not a priority (0)
- A low priority (1)
- A high priority (2)

We examine the results of their responses in a number of ways. First, we compute a measure of the government's total commitment to reforms. The measure, which we call "Government Commitment", is simply the average of the scores for each reform. We look at this measure both across time and across clusters. Then we examine the variation in government responses by reform area over time.

Figure 4: Non-FSU and Baltics Government Commitment to Reform. *Source:* Survey and authors' calculations.

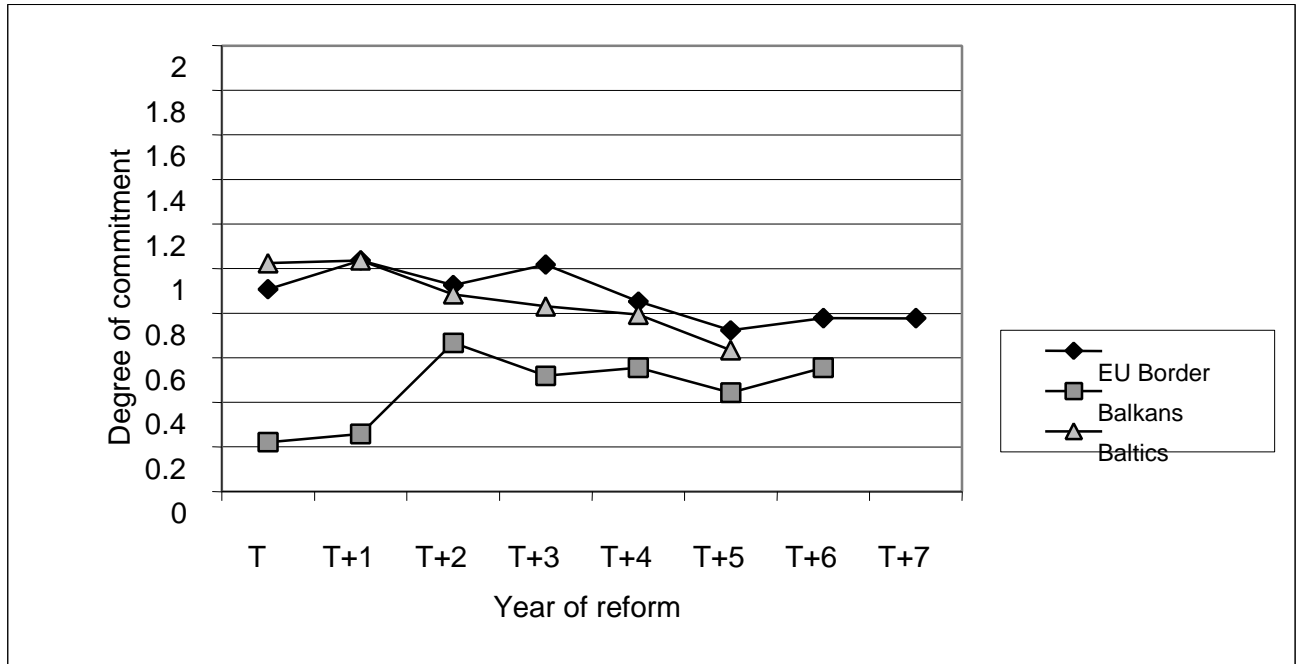


Figure 5: FSU (without Baltics) Government Commitment to Reform. *Source:* Survey and

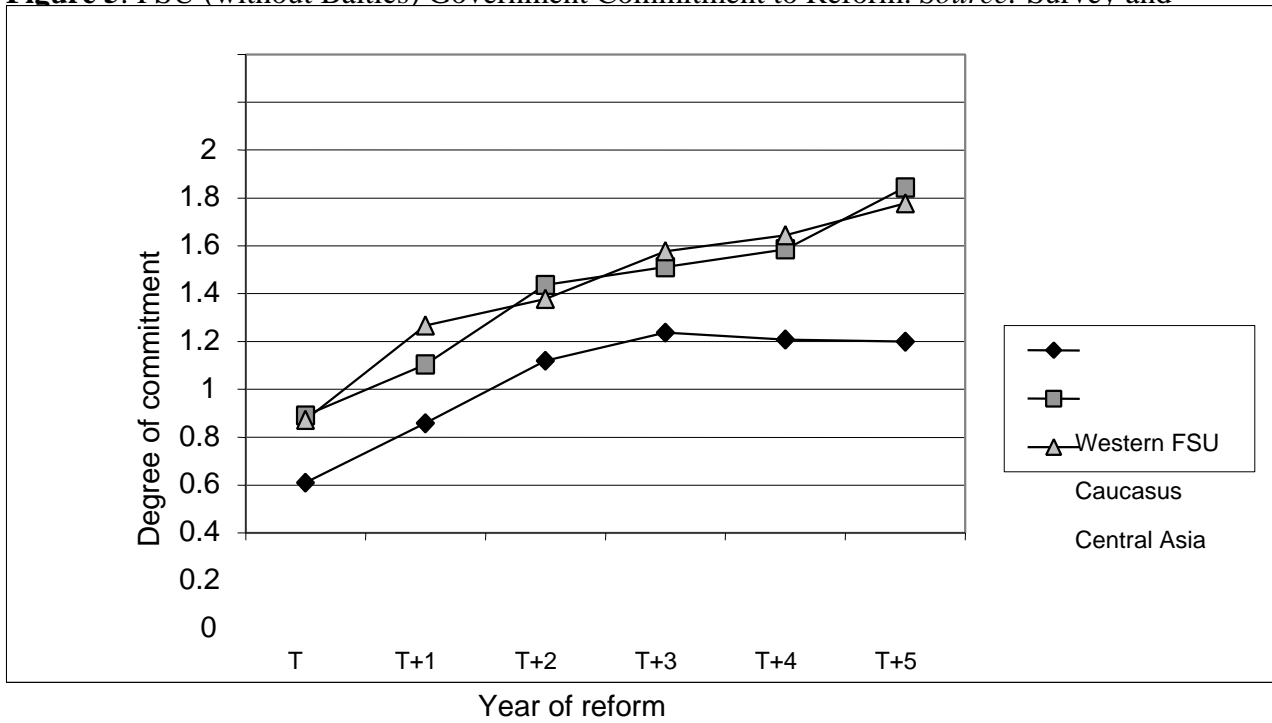
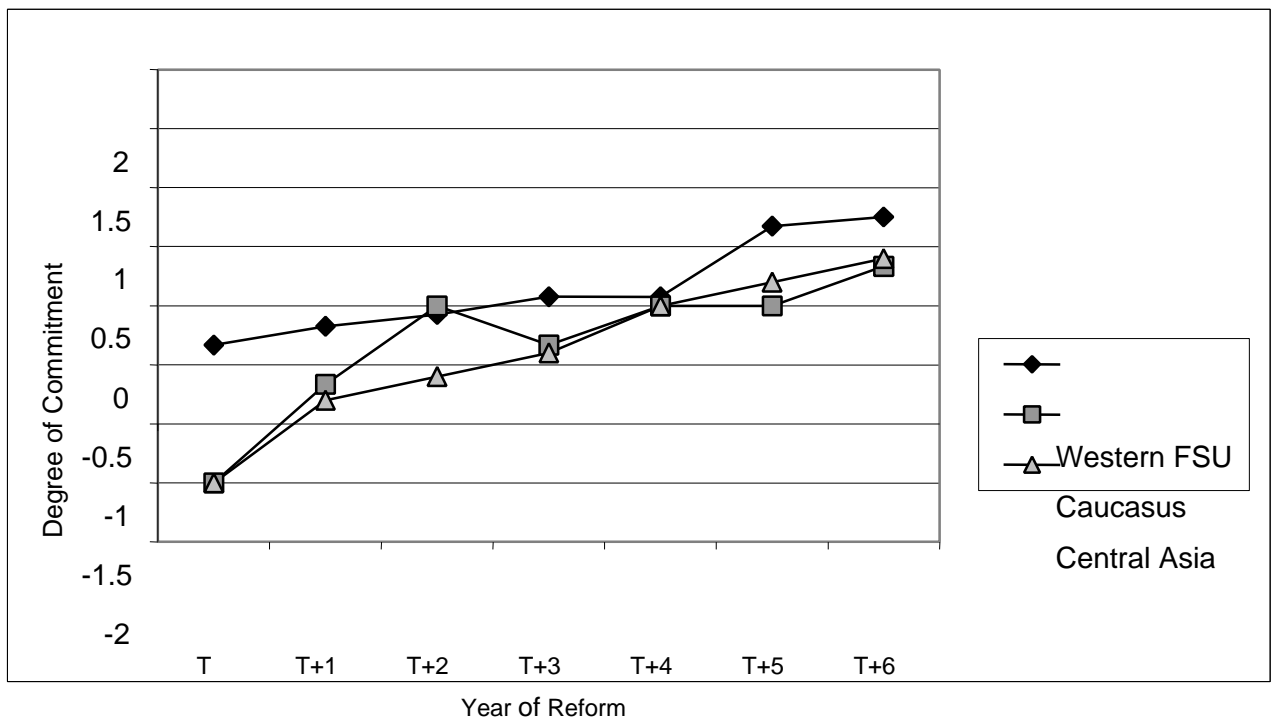
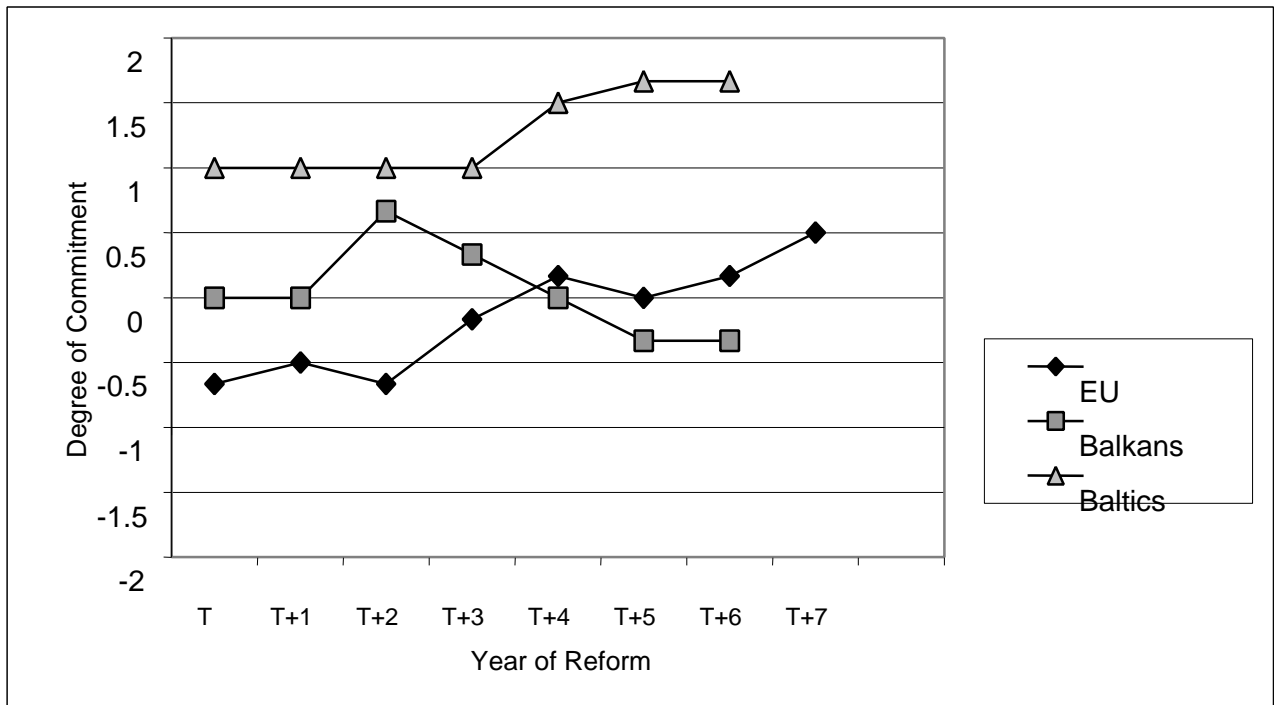


Figure 4 and Figure 5 summarize for the FSU (including the Baltics) and non-FSU (excluding the Baltics) clusters, respectively, the governments' commitment to the main USAID reform areas over time. Scores are plotted by years since transition has begun, not by calendar year. Thus, "T+3" indicates the value in the third year since the start of transition.

These figures reveal a number of insights. We see that from the third year of transition, the Western FSU's interest in reform plateaued. As we shall see below, this is in keeping with their reform performance as well. On the other hand, Central Asia and the Caucasus display a similar and continuous increased zeal for reform, though they started from a slightly higher level of interest from the beginning. The Balkans also experienced a plateau in the from the middle of the transition decade. At the other end of the spectrum are the EU Border States and the Baltics. They begin with a high level of reform commitment and, as reform progressed, so too did the level of (and need for) further commitment.

Let us now consider the same graphs but for selected reforms. Of greatest interest due the strong feelings it generates is strategic sector privatization. This is illustrated in Figure 6. Here we see that only the Baltics showed any real level of interest in this reform. In fact, most clusters register a *negative* interest, at least in the first years of transition. The EU Border States, for example, are against strategic sector privatization until the fourth year of reform, and then they show only a weak interest. The FSU clusters show a similar pattern, with the Western FSU showing over the last two years the highest interest of the sample, with the exception of the Baltics.

Figure 6: Government commitment to strategic sector privatization over the decade of transition.
Source: Survey and Authors' calculations.



4.2 Donor assistance priorities¹²

As presented in the description of our heuristic model summarized by Figure 1, donor aid can have both direct and indirect effects on the initiation and effectiveness of reform.¹³ However, as in the case of government objectives, developing a measure of donor interest or effort is not straightforward. While there are data on the total level of technical assistance by bi-lateral and multi-level sources as well as by originating country, we know of no dataset that allocates these expenditures by reform category. Therefore, as we did in the previous section for government effort, we use a survey interest to collect this information.

Prior to presenting these, we present in Figure 7 a summary by cluster of the inter-cluster patterns over time of total aid per capita. In order to present as much of the data as possible and since technical assistance levels were less sensitive to the point in the transition cycle of a country, we have presented the data by calendar year rather than by transition year, which we used in the previous subsections. Here we see that Central Asia and the Caucasus have received a fairly continuous increase in assistance over the period. While Central Asia seems to have started from rather low initial levels it is the Caucasus cluster that has reached the highest recipient levels of the sample. The Western FSU, on the other hand, shows exactly the opposite trend, namely downward-sloping. Moreover it is the cluster with the lowest average aid per capita levels. The Balkans, while receiving a somewhat volatile flow of assistance appears to have reached plateau levels by early in the decade. Finally, the EU Border States and the Baltics after the first year of transition seem to remain at slightly above average levels for the whole period.

These tendencies are explored further in Figure 8, which presents average levels of per capita aid at the intra-cluster level for the periods 1992-4 and 1995-7. We see that while the general average level has risen from the first to the second period (as illustrated by the horizontal line in each graph in the figure), the general recipient pattern of giving is maintained. All countries receiving the highest amount in one period also receive it in the later period. These highest scorers appear to be a mix of the better reformers of their cluster (such as Estonia, Kyrgyz Republic, Poland, and Hungary) as well as the more needy (such as Macedonia and Armenia). Regarding EU Borders States, we see a huge variance, relative to the other clusters in the early period. Here the “new” states are at the bottom of the cluster’s aid ranking, perhaps indicating the high strategic importance that the donors placed on the northern Border States at the start of the decade. In the later period, while the cluster average aid received rose about 20 percent (the “square” in cluster line), emphasis was to the “new” states, though Poland remained a favorite. For the Balkans, the main change in the later period was the large increase in Macedonia’s assistance, probably reflecting the compensating contributions it received as a result of the various Balkan crises with Serbia. What is curious in the case of the Western FSU is that Belarus seems to be the favored country of the cluster in the early period, not Russia or Ukraine. Nevertheless, this cluster received the second lowest aid levels in the early period and the lowest average levels in the later period. This may simply reflect that these countries have among the biggest populations of the sample and that aid giving per-capita may be diminishing in population size. Regarding the Caucasus we see the highest average levels of the sample,

¹² Albania is a special case in the context of aid since it received a massive amount of aid for reconstruction. Therefore it was not included in the discussion in this chapter. For completeness, note that the aid per capita received by Albania was significantly higher than the other countries, especially in the years 92-95.

¹³ For discussions of the impact of donor aid on policy formation see Boone (1995) and Kaminski *et. al.* (1995).

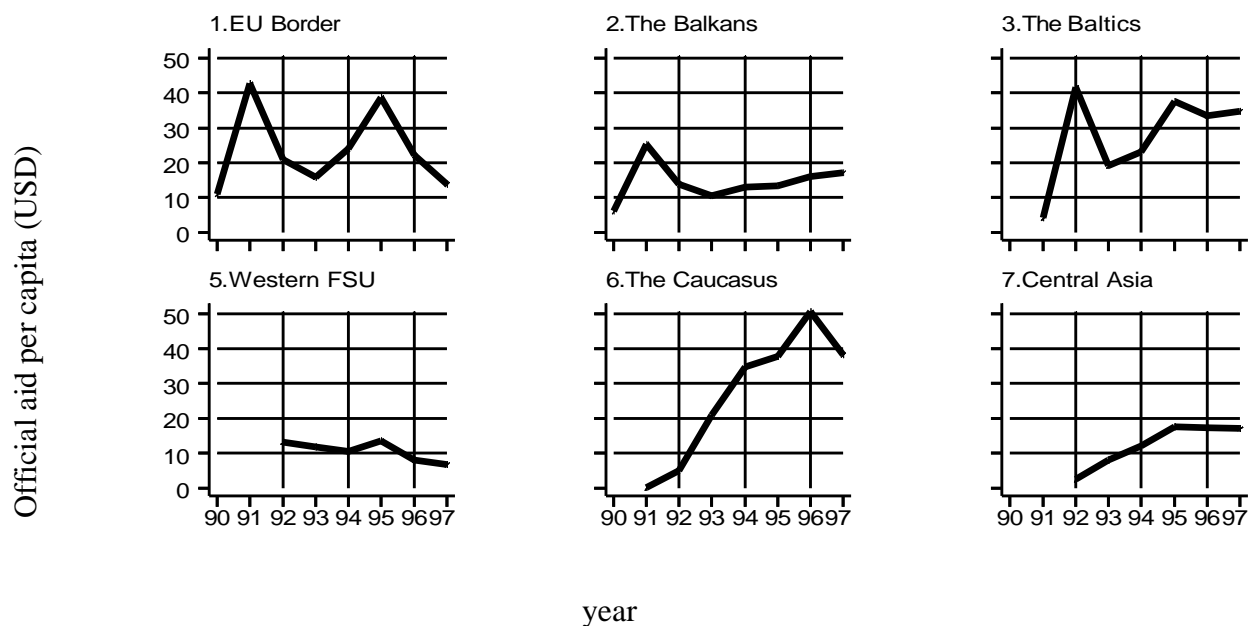
though here we see that Azerbaijan appears to the donors as belonging in Central Asia since its receipts are equal in the later period to the average receipts of the latter cluster. Finally for Central Asia, we see reform-minded Kyrgyz receiving very strong donor support, especially in the later period.

Our survey question asked all the key donors in each country to score their organization's priorities in their host country for each reform area. We attempted to canvass the opinions of those in the local office familiar with their organization's activities for each reform category over the relevant time period. The reform categories are the same as those indicated for government objectives above. Permissible responses were:

- No donor active in country (0)
- Minimal assistance (0.66)
- Some assistance (1.33)
- Extensive assistance (2)

Looking first at the total donor commitments we see that the donors show the least enthusiasm in the EU Border States. On the other hand, they show the strongest interest in the Baltics, though with a slight downward trend. The other clusters all receive increasing donor interest over the reform period. Among all the non-Baltic FSU countries, donors show the most initial interest in the Western FSU at the start of the period and the least interest in this cluster by the end of the period. Finally, it is the Caucasus that show the greatest change in donor interest: they start with no interest and end the period with the greatest donor interest.

Figure 7: Inter-cluster differences in official aid per capita (USD) since the start of transition
Source: WDI.



Note: These figures do not include the former Yugoslavia republics: Croatia, Macedonia, Slovenia.

Figure 8: Intra-cluster differences in average official aid per capita (USD) for the periods 1992-94 and 1995-97. Source: WDI.

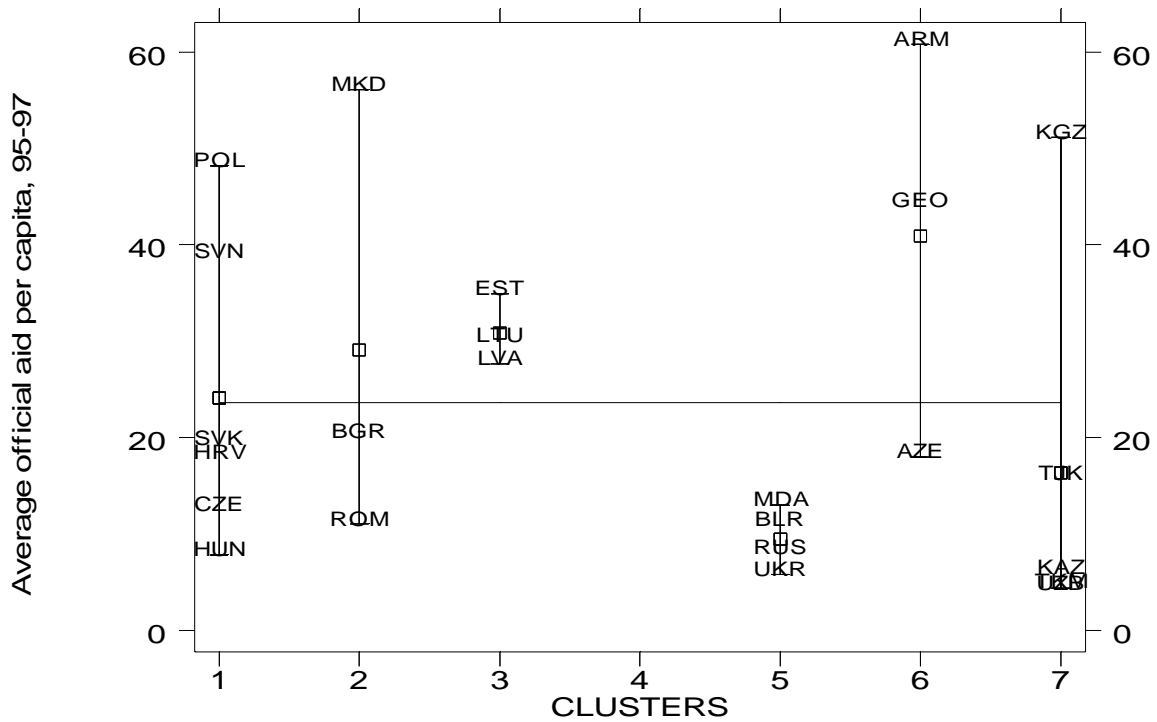
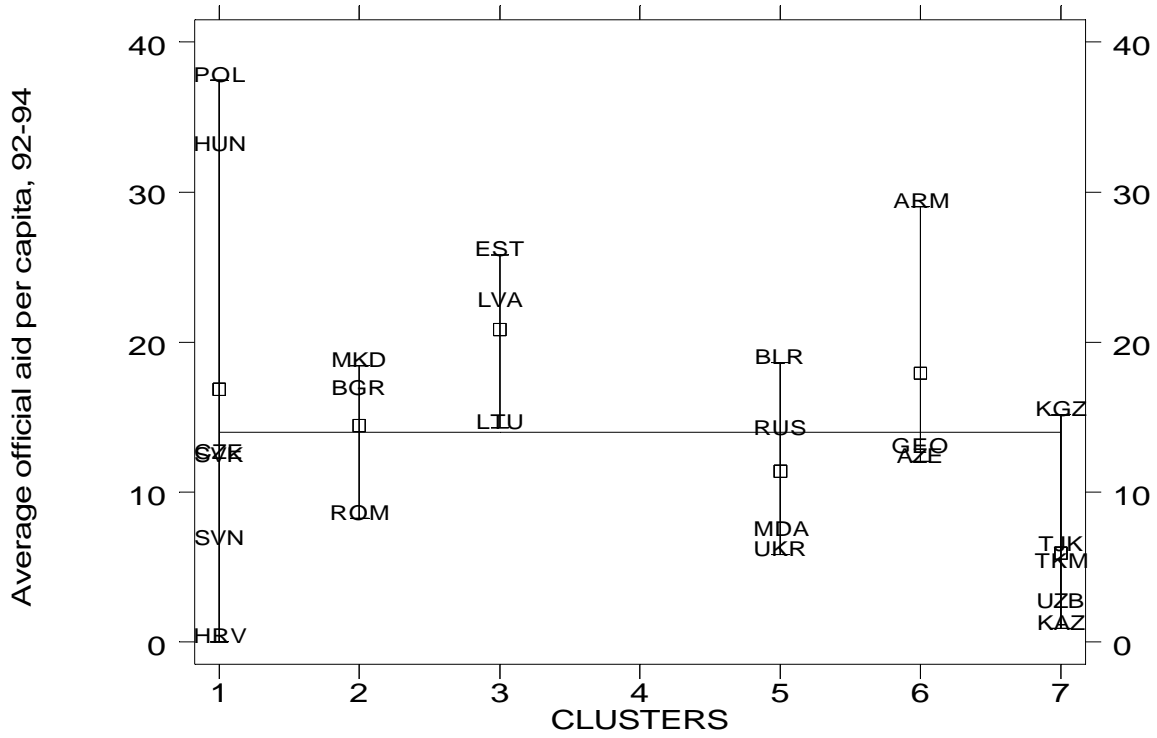


Figure 9: Aid donor commitment to technical assistance by cluster. *Source:* Survey and Authors' calculations.

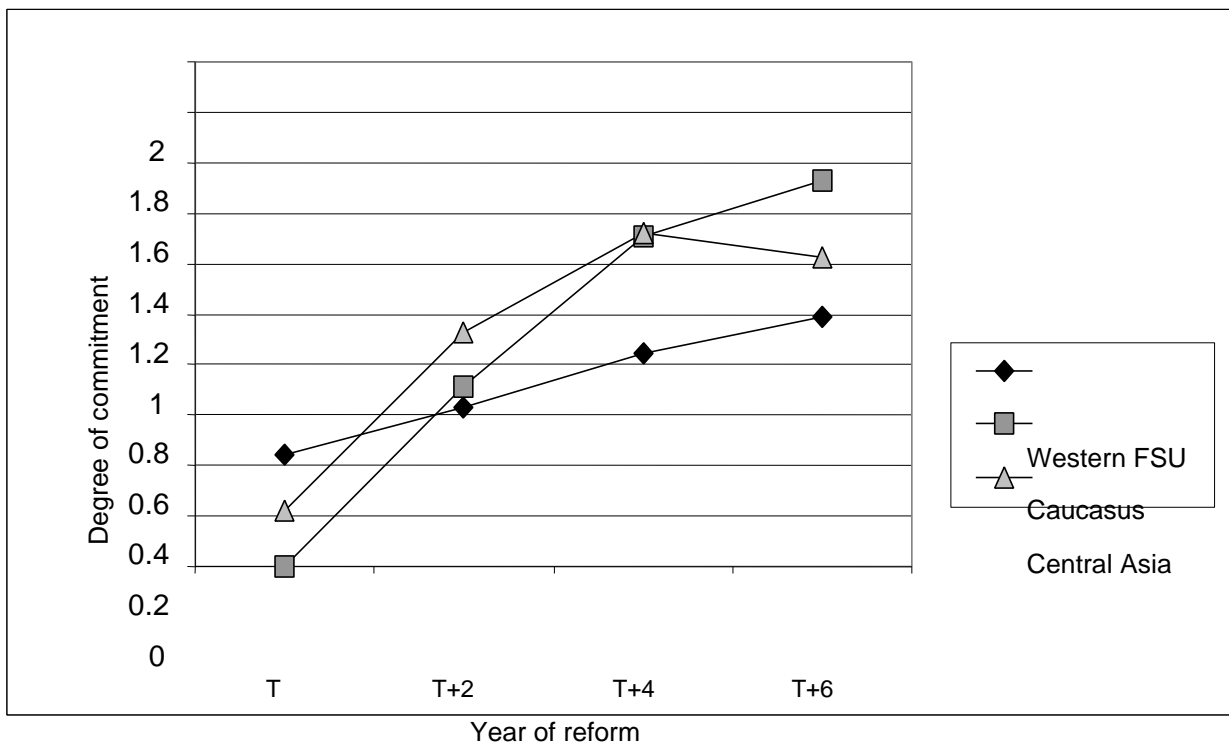
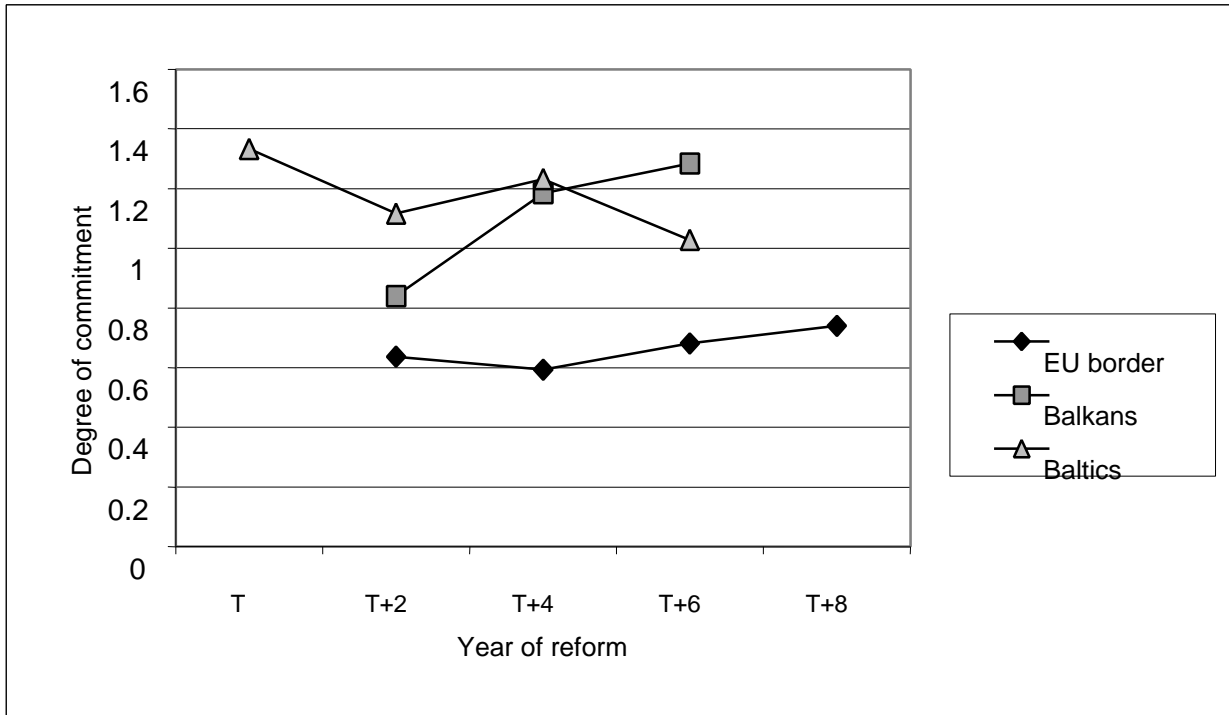
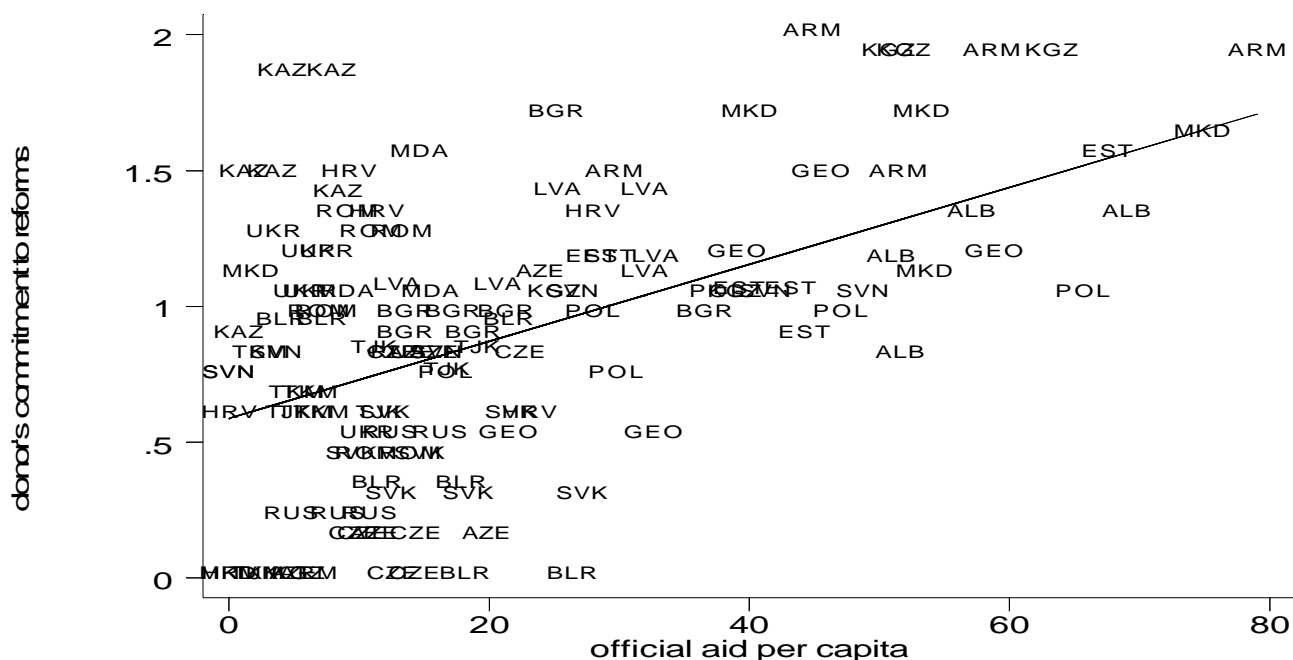


Figure 10: A comparison of aid per capita and donor reform commitment. Source: WDI and Authors' calculations.



In order to generate some confidence in the new aid commitment data, we compare it to the aid per capita figures from the earlier graphs. We do this in Figure 10 where we plot the two variables for the full panel dataset (so that countries appear several times)¹⁴. Here we see a strong, positive correlation between these two measures. The primary reason why the fit is not even better is because our donor commitment variable reflects only seven specific reform areas. There are other motivations for aid-giving besides these specific areas, e.g., water infrastructure investment

4.3 A comparison of government and donor priorities

While a rigorous econometric analysis is outside the scope of the present paper (see paper 3 of this series), it is useful to contrast the priorities of governments and the donors over time and by reform category. Ultimately, a number of direct questions would help to form a better understanding of the interaction between these key groups of decision makers.

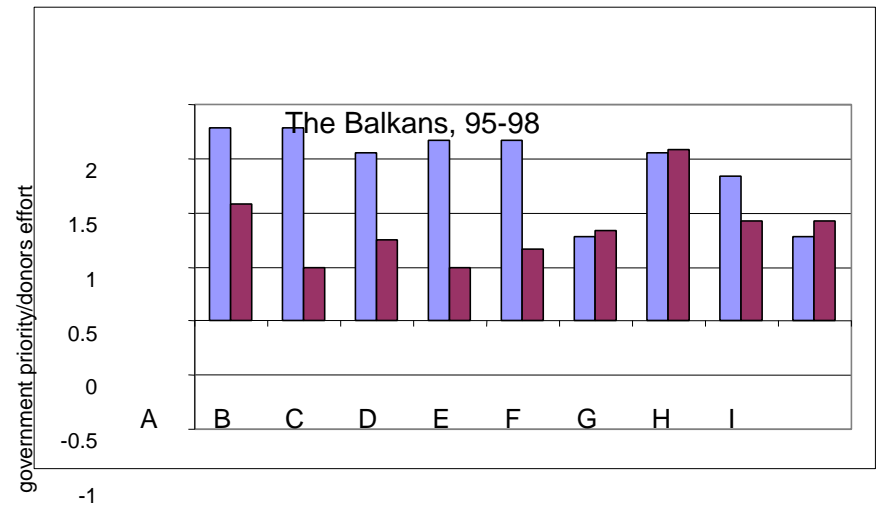
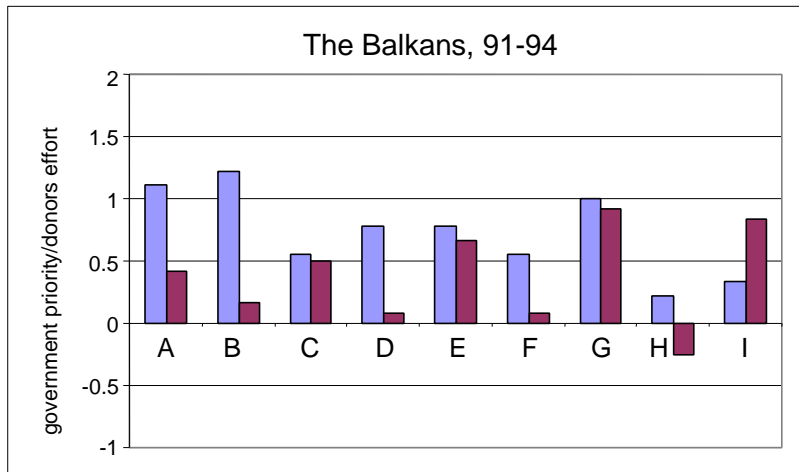
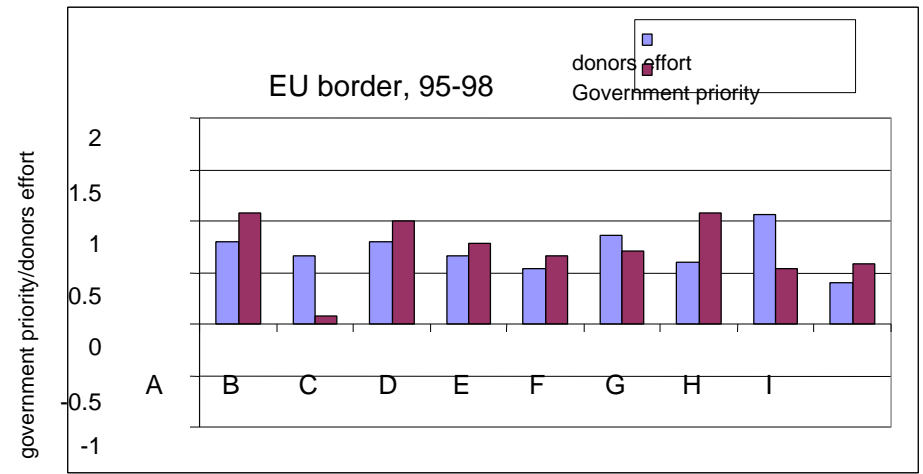
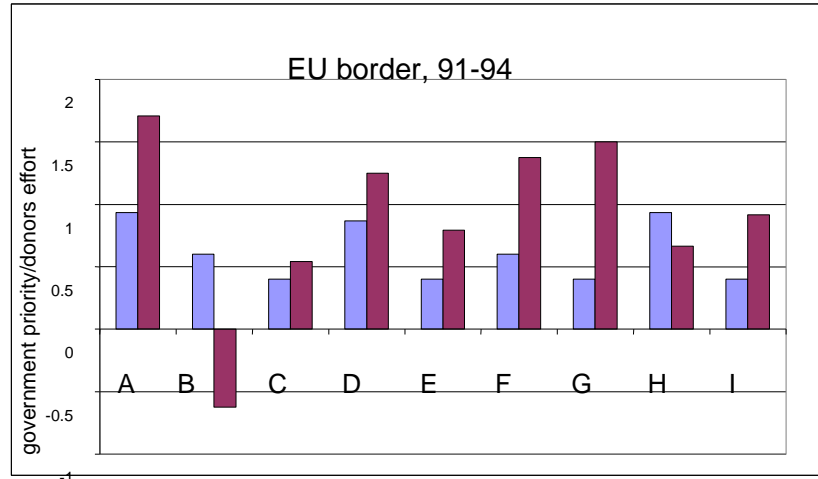
- What reforms show the most scope for controversy? For agreement?
- Is there learning, causing priorities to converge over time and if so which side “bends” (i.e., adopts the other’s orientation)?
- What reforms does each side see as the most important at the beginning of the reform cycle?
- Does zeal for reform increase or decrease over time?
- How does commitment change as reforms are carried out?

¹⁴ We have removed Poland for 1995 and Albania for 1991-3 from the graph since their aid per capita figures were so far out of line with the rest as to be considered outliers.

The graphs of Figure 11, however, do convey some clues to the answers to these interesting questions. First, it is clear that there is considerable divergence between governments and donors with respect to sectoral emphasis of commitment. This appears true especially in the first half of the reform period. With the exception of privatization in the Balkans, there does appear to be *convergence* in 1995-8 period. We also see that divergences were not equal on average across reform categories. The sector with the biggest divergence of interests is strategic sector privatization.

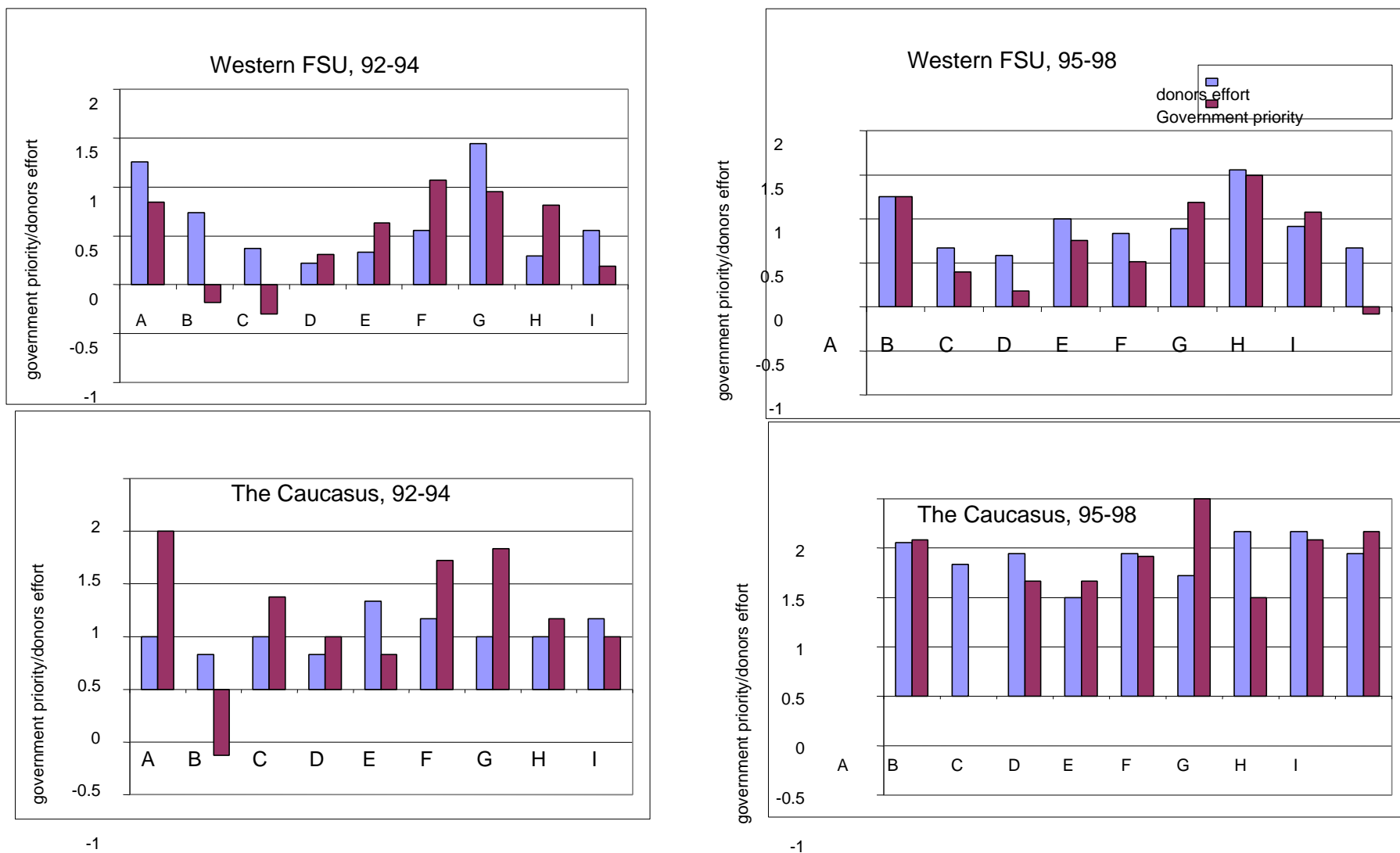
However, to best draw out the general tendencies, we summarize these graphs into two, one aggregating score differences across clusters in Figure 12 and the other across sectors in Figure 13. We see that stock market creation, as well as tax reforms in the first period of transition, seem to have shown the least divergence between the donors and governments while strategic privatization has the most divergence. We see that divergence has increased, however, in the areas of non-strategic privatization, tax reform and social safety net reform. With the exception of the Baltics (and the Balkans where there was no change in divergence over the two periods), governments' and donors' priorities have shown a definite convergence over time. This is seen in Figure 13 where the second period bars are smaller than those of the first period. The least divergence is found in the Caucasus.

Figure 11: A comparison of donor efforts and government priorities. *Source:* Survey and Authors' calculations.



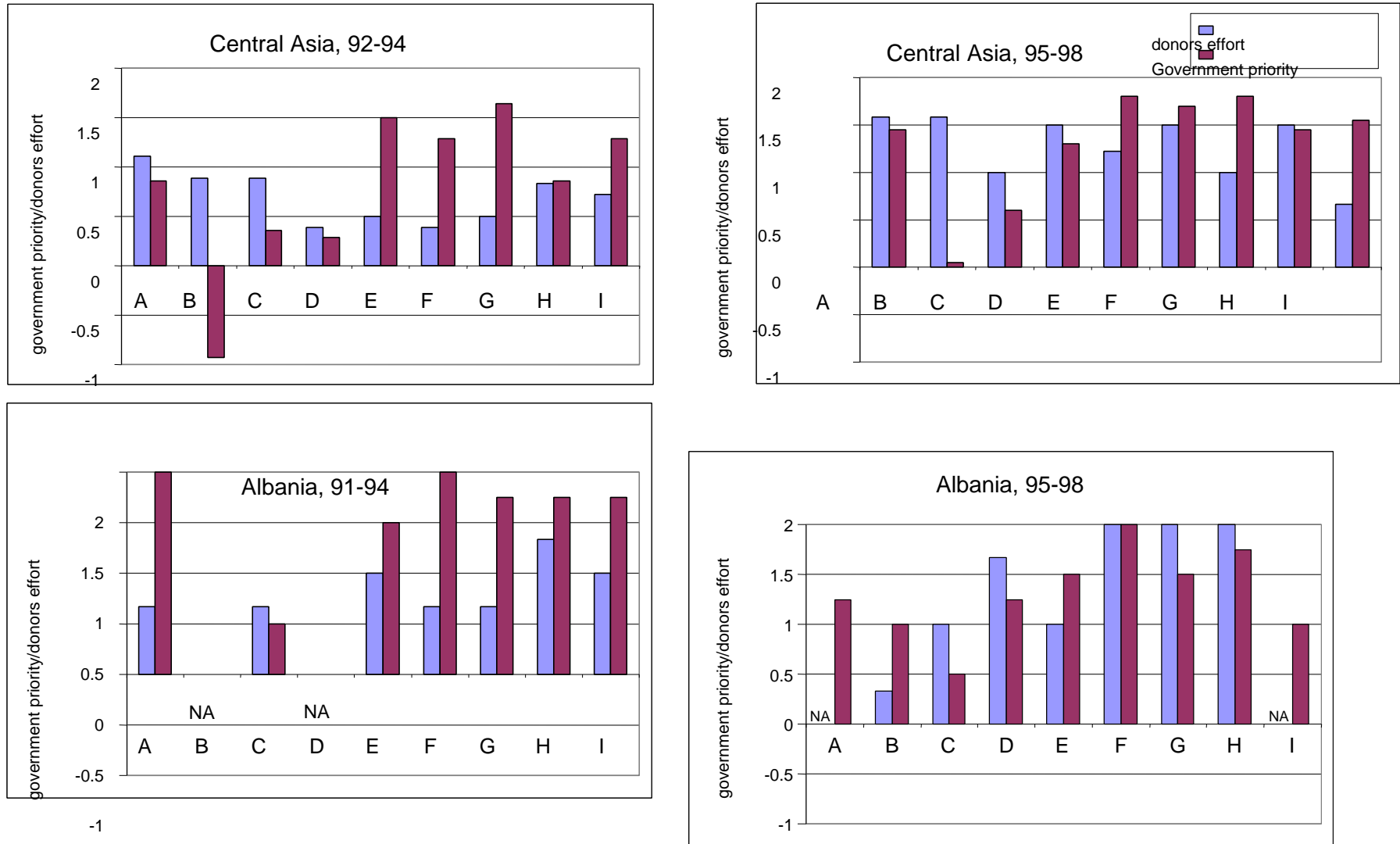
Notes: A=Non-strategic privatization, B=strategic privatization, C=Enterprise restructuring, D=Stock market creation, E=Judiciary reform, F=Tax reform, G=Social safety net, H=SME promotion, I=Trade liberalization.

Figure 11: A comparison of donor efforts and government priorities. *Source:* Survey and Authors' calculations. (continued)



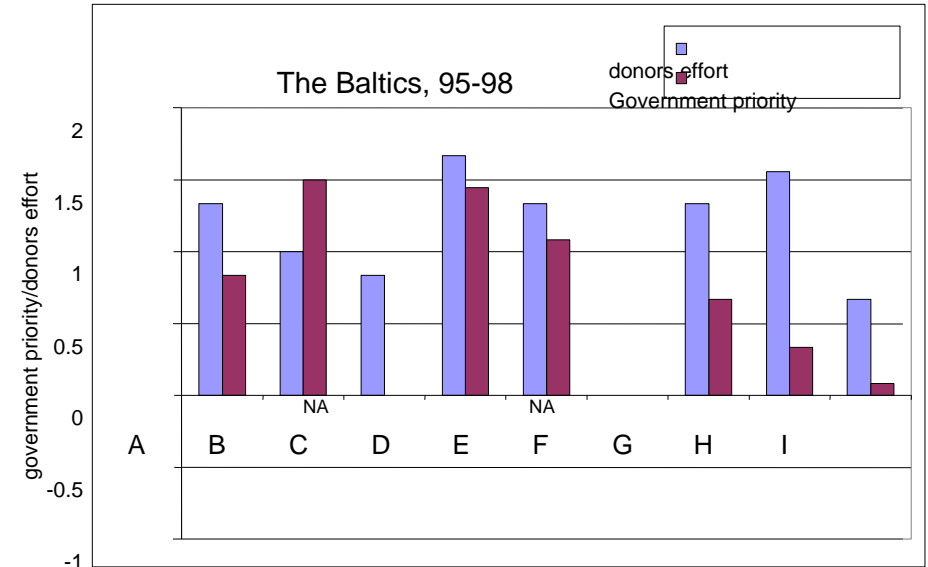
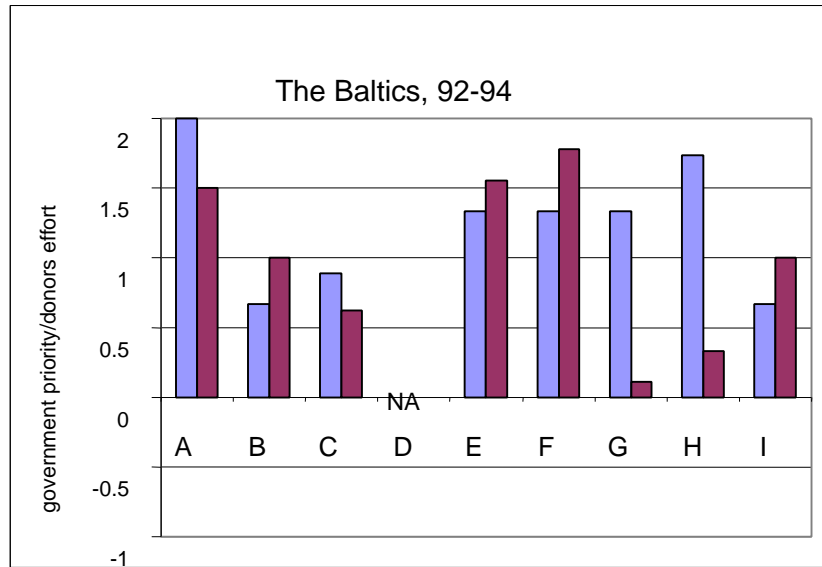
Notes: A=Non-strategic privatization, B=strategic privatization, C=Enterprise restructuring, D=Stock market creation, E=Judiciary reform, F=Tax reform, G=Social safety net, H=SME promotion, I=Trade liberalization.

Figure 11: A comparison of donor efforts and government priorities. *Source:* Survey and Authors' calculations. (continued)



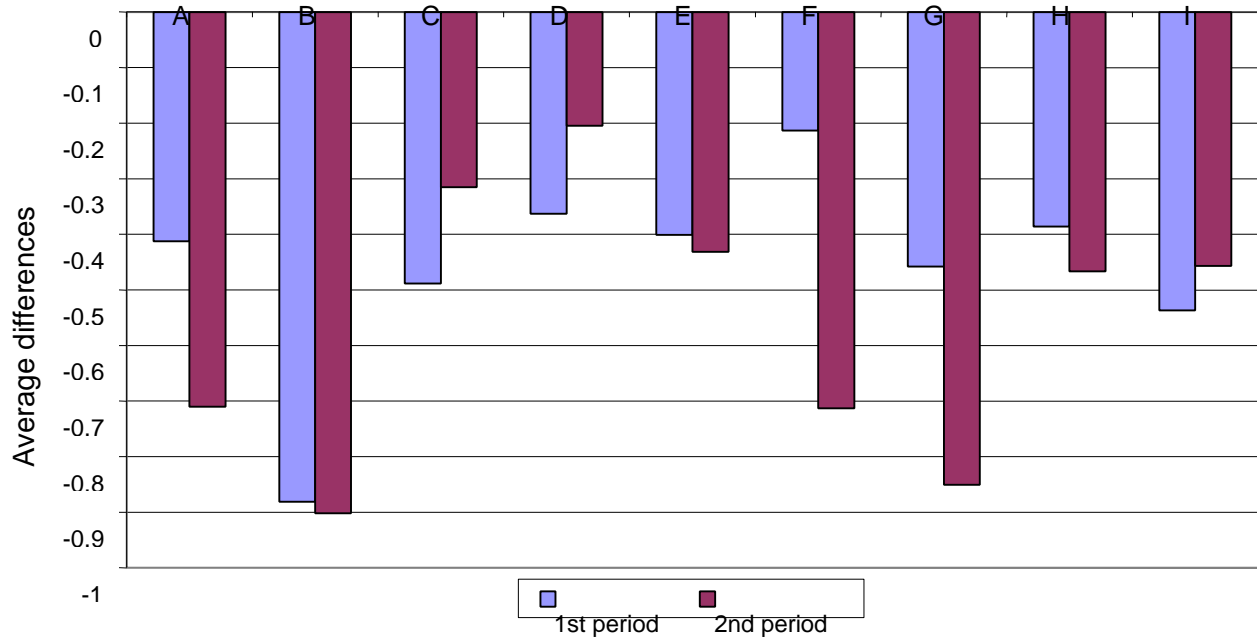
Notes: A=Non-strategic privatization, B=strategic privatization, C=Enterprise restructuring, D=Stock market creation, E=Judiciary reform, F=Tax reform, G=Social safety net, H=SME promotion, I=Trade liberalization.

Figure 11: A comparison of donor efforts and government priorities. *Source:* Survey and Authors' calculations. (continued)



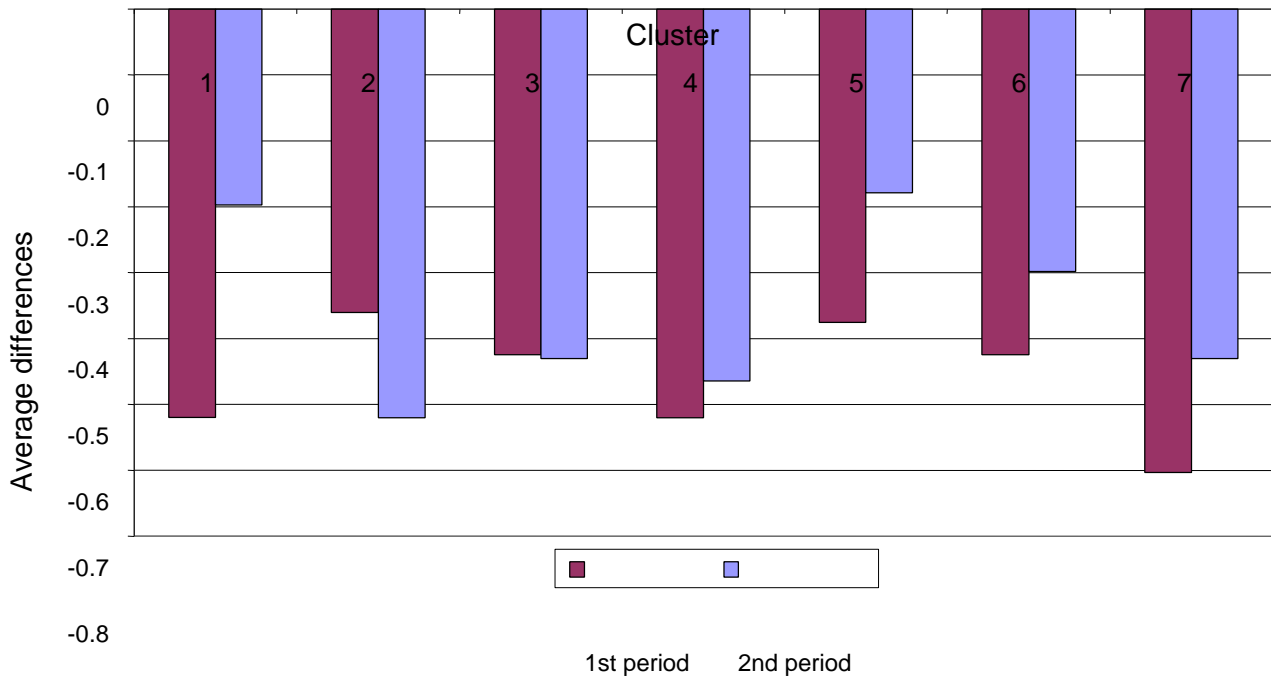
Notes: A=Non-strategic privatization, B=strategic privatization, C=Enterprise restructuring, D=Stock market creation, E=Judiciary reform, F=Tax reform, G=Social safety net, H=SME promotion, I=Trade liberalization.

Figure 12: Average degree of divergence across reform sectors and clusters. *Source:* Authors' calculations.



Notes: A=Non-strategic privatization, B=strategic privatization, C=Enterprise restructuring, D=Stock market creation, E=Judiciary reform, F=Tax reform, G=Social safety net, H=SME promotion, I=Trade liberalization.

Figure 13: Average government-donor differences by cluster. *Source:* Authors' calculations.



5 Transition policies and institutions

The production function in section 2.1 takes inputs and turns them into transition performance. Above we examined one set of important inputs, the objectives of decision-makers. In this section we develop and present the inputs that comprise policies and institutional changes as well as their direct impacts (e.g., a tariff reform and the amount of tariff revenues collected). We break our discussion into two parts. We first look at comprehensive measures of privatization that capture the full breadth of the term according to the recent economic literature. We then develop measures for the other USAID reform areas. For each part, we first present the “recipes” for the seven progress-in-reform indicators. Then we examine, as always the inter- and intra-cluster differences through time. These indicators may help us assess “graduation” points for technical assistance.

5.1 *Depth of Privatization*

Here we construct and examine indicators for the components of privatization policy that together dictate the performance that privatization engenders. We first motivate the constituent elements of the depth-of-privatization concept and then present “recipes” on the construction of the sub-indicators. The resulting indicators are then contrasted in terms of inter- and intra-cluster differences.

5.1.1 Constructing indicators

One of the key hypotheses (verified in paper 3 of this series) of this study is that change-of-title is not enough to generate the gains to privatization. Gains require “deeper” privatization than mere change of title. Economic theory (see, for example, Sheshinski and López-Calva 1999) suggests that the “depth” of privatization depends on addressing at least three other institutional and regulatory issues.¹⁵ Central among these are the firms’ budget constraint, agency problems, and the management objective function. Together we refer to these as “OBCA” reforms (from the first letter of each of these). The hardness of the budget constraint issue (see Kornai 1994) refers to the firm’s belief about whether it will be rescued by the government (or a donor) in case of financial distress, and, ultimately, allowed to go bankrupt. In other words, the degree a firm has to bear the consequences of its actions. The agency problem refers to whether the legal and regulatory regime provides the transparency, accountability and protection of shareholders (owners) to ensure adequate monitoring and control of the management they have hired to run the firm (see Shleifer and Vishny 1997) for a more detailed discussion of the issue). The management objective function issue refers to whether firms are run to maximize profits, revenues, employment, or particular political objectives (Kornai 1986). Each of these aspects is captured in a sub-indicator, which we ultimately aggregate to create the “OBCA” indicator.

¹⁵ See Sachs, Zinnes and Eilat (2000; vol. 3) for a detailed literature review concerning depth of privatization. See Frydman *et. al.* (1996) and Pistor (1999) on corporate governance issues.

Table 6: Depth of privatization indicators, 1990-1998.

<i>Category</i>	<i>Definition</i>	<i>Effect</i>	<i>Weight</i>	<i>Variable</i>	<i>Scoring</i>	<i>Availability*</i>	<i>Source</i>
Enterprise privatization (COT: Change Of Title)	Indicator	Pos	0.5	IDPcot	M0V1	0-8	Computed
	Large-scale privatization index	Pos	0.2	L_priv	1 to 4.33 (1 worst)	4-8	EBRD
	Small-scale privatization index	Pos	0.2	S_priv	1 to 4.33 (1 worst)	4-8	EBRD
	Percentage of small firms privatized	Pos	0.2	Acfmprv	Percent	0-8	Survey, WB
	Private sector employment share	Pos	0.2	pr_em	Percent	0-7	EBRD, WB
	Private sector GDP share	Pos	0.2	pr_seGdp	Percent	0-8	EBRD
OBCA (Privatization performance incentives)	Indicator	Pos	0.5	IDPin	M0V1	0-8	Computed
Budget constraint	Indicator	Pos	0.4	Hardbudg	M0V1	0-7	Computed
	Tax arrears / average GDP	Neg	0.2	TaxarAGd	Percent	0-6	WB, EBRD
	Budget subsidies / average GDP	Neg	0.3	BsubAGdp	Percent	1-7	EBRD
	Bad loans / Total loans	Neg	0.2	Badloan	Percent	0-8	EBRD
	Electricity tariff collection ratio	Pos	0.1	Collrat	Percent	4-7	EBRD
	Likelihood of mid-sized private firm being bailed out	Neg	0.2	BailG7b	0=very unlikely to 4=very likely	0-8	Survey
Agency problems/management objectives	Indicator	Pos	0.6	Agency	M0V1	4-8	Computed
	Existence of bankruptcy courts	Pos	0.1	BktyctB9	1=Yes, 0=No	0-8	Survey
	Governance/restructuring index	Pos	0.6	Govent	1 to 4.33 (1 worst)	4-8	EBRD
	Legal system for investment index	Pos	0.3	Leg	1 to 4.33 (1 worst)	5-8	EBRD

Notes:

<i>Abbreviation</i>	<i>Definition</i>	<i>Abbreviation</i>	<i>Definition</i>
*	The years of data availability (e.g., “2” is 1992).	Heritage	Heritage Foundation
@	Standardized by Havrylyshyn (see references)	IFS	IMF’s International Financial Statistics
Freedom	Freedom House (see references)	M0V1	Mean zero, variance 1
GFS	IMF’s Government Financial Statistics	Survey	HIID Competitiveness in Transition Survey of Foreign Institutes
Havrylyshyn	His paper (see references) uses IMF and national sources	WB	World Bank Enterprise Reform and Privatization Database
Hellman	See references	WDI	World Development Indicators, World Bank

The “recipe” for this set of indicators is given in Table 6. As is seen, the “depth-of-privatization” indicator comprises two sub-indicators, “change of title” and OBCA. The latter itself comprises the sub-indicators, “budget” and “agency/objectives”. Before continuing, let us explain how to read and interpret the sub-indicator tables. First note that all the categories and sub-categories of the table have weights listed in the column “Weight” and the direction of the impact of the variable on reform progress listed in the column “Effect”. These comprise hierarchical levels. For a given level the weights add up to unity (1). Take as an example, privatization performance incentives. Here, the weights for hardness of “budget” (0.4) and “agency/objective function problems” (0.6) add to 1, as do the weights of the five and three variables used within each of these two sub-categories.

5.1.2 Patterns of privatization

Figure 14 presents the progress in change-of-title privatization over the transition cycle by cluster. (See the appendix for the associated country-level graphs). First note that all the clusters display an upward trend on this measure. Next note that the trend shows strong signs of reaching an asymptote, especially for the best performers. This is to be expected since there is a natural upper bound to this indicator. We see that only the Baltics and the EU Border States achieve well above average results. For the little data available, we see that Albania has reached change of title privatization levels commensurate with the Baltics. The bottom panel of Figure 14 contains the within-cluster 1997 variation. Here we find reasonably tight clusters, with the exception of Belarus in the Western FSU, who shows little activity in this regard, and Central Asia. On the other hand, Kyrgyz Republic scores at a level equal to some Baltics and EU Border States.

Turning to OBCA reforms, a very different picture emerges, as we show in Figure 15. (See the appendix for the associated country-level graphs). Here only the Caucasus and the EU Border States show a strong upward trend improvement in these reforms, with the Baltics weighing in with tepid improvements over the period. This can perhaps be explained by the fact that the Caucasus start from a very low point while the Baltics start from a very favorable initial position. The Balkans, Central Asia and the Western FSU show little progress with the FSU actually deteriorating through the transition period. Comparing the 1998 levels, the clusters do not show much dispersion, with the exception of Belarus, which is again trailing behind its cluster mates. In the EU Border states the new states perform worst then the others.

This disparity between “change-of-title” and “OBCA” measures of privatization reform progress has profound implications and is explored econometrically in our paper 3 of this series, which assesses the relative importance these two indicators have in explaining country economic performance.

To conclude this section, we aggregate these two measures into a “depth-of-privatization” indicator. This is presented in Figure 16 (as well as at the country level in the appendix). In summary, the EU Border States and the Baltics finish the period with the deepest privatization reforms while the Balkans and the Caucasus reach scores that are slightly higher than the period average scores. The Western FSU and Central Asia are both below the period average. Turning to the within-cluster variation, we see no additional surprises not already discussed in the previous two sub-indicators. Hungary and the Czech Republic are the best performers overall, followed by Estonia. Note how in this case the EU Border States we see again the split, with the “new” states coming in last.

Figure 14: Inter- and intra-cluster variation of “change of title” indicator of privatization over the transition cycle and for 1998, respectively. *Source:* Authors’ calculations.

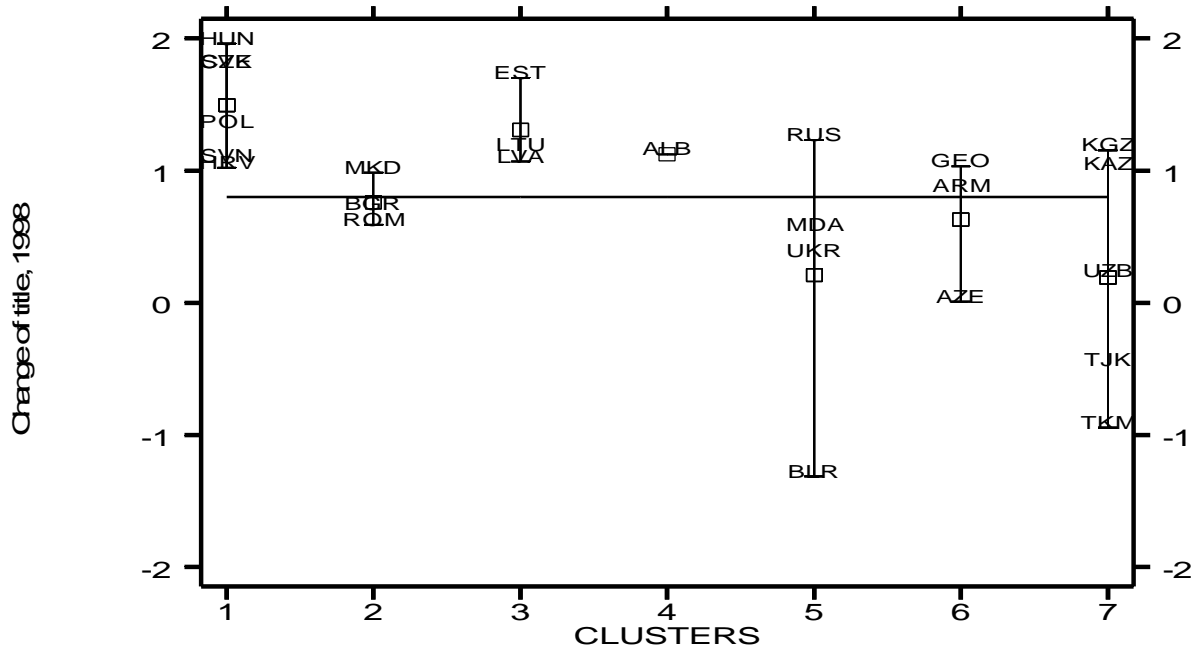
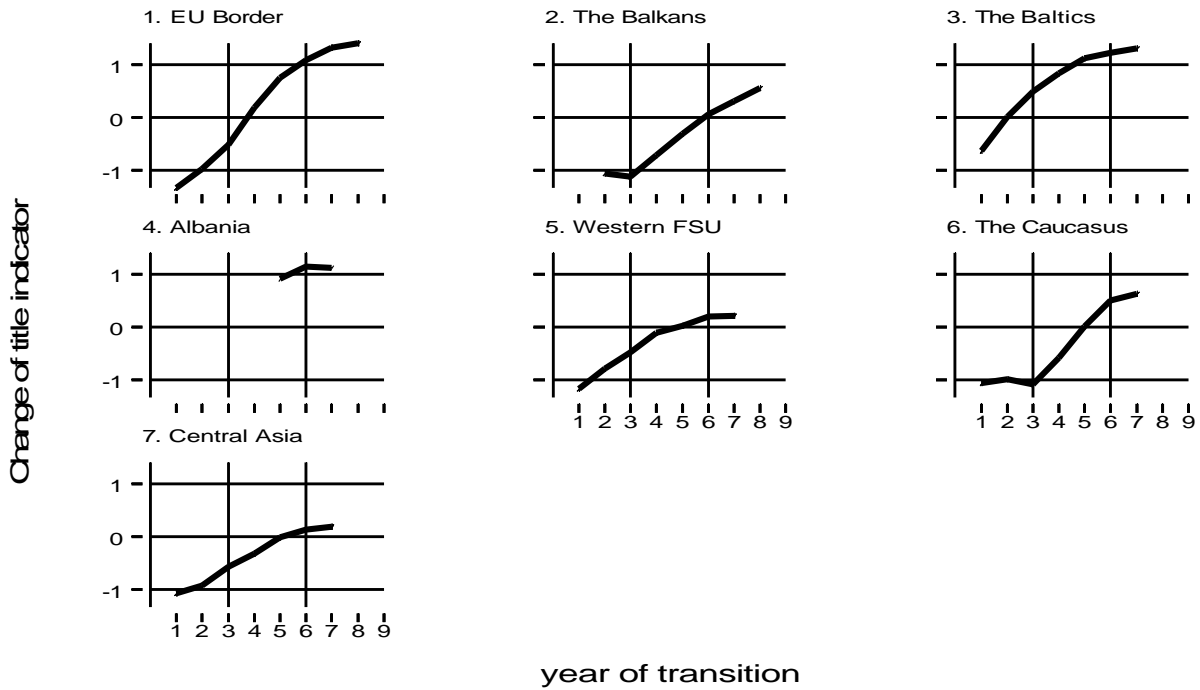


Figure 15: Inter- and intra-cluster variation of “OBCA” (firm incentives) indicator of privatization over the transition cycle and for 1998, respectively. Source: Authors’ calculations.

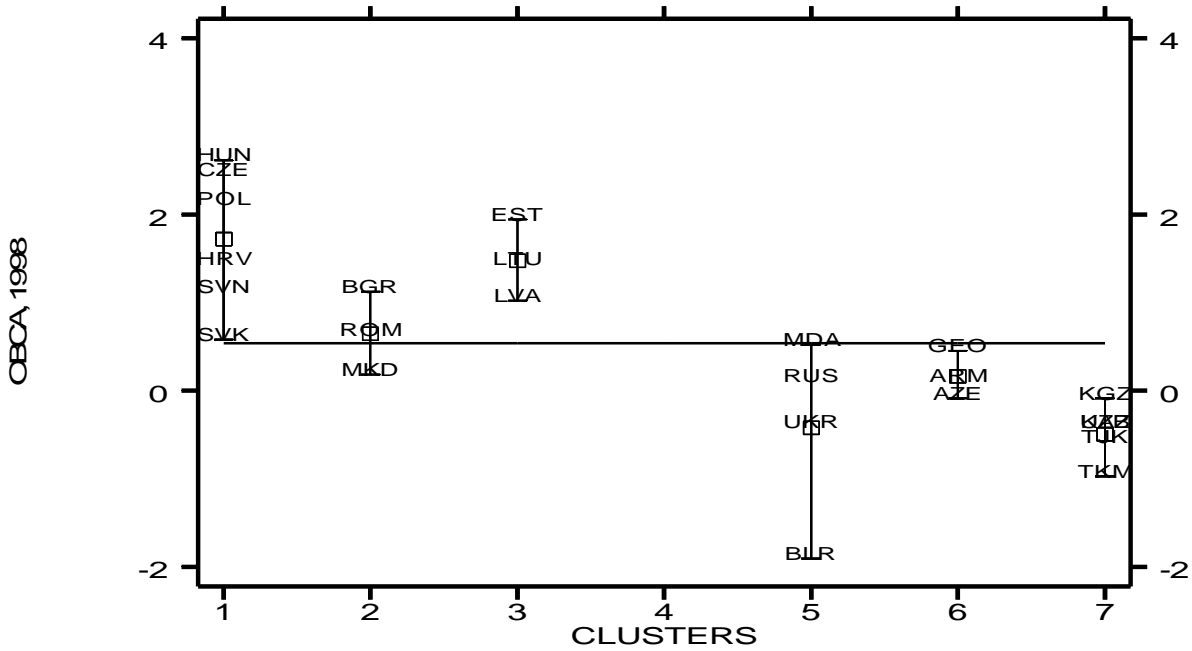
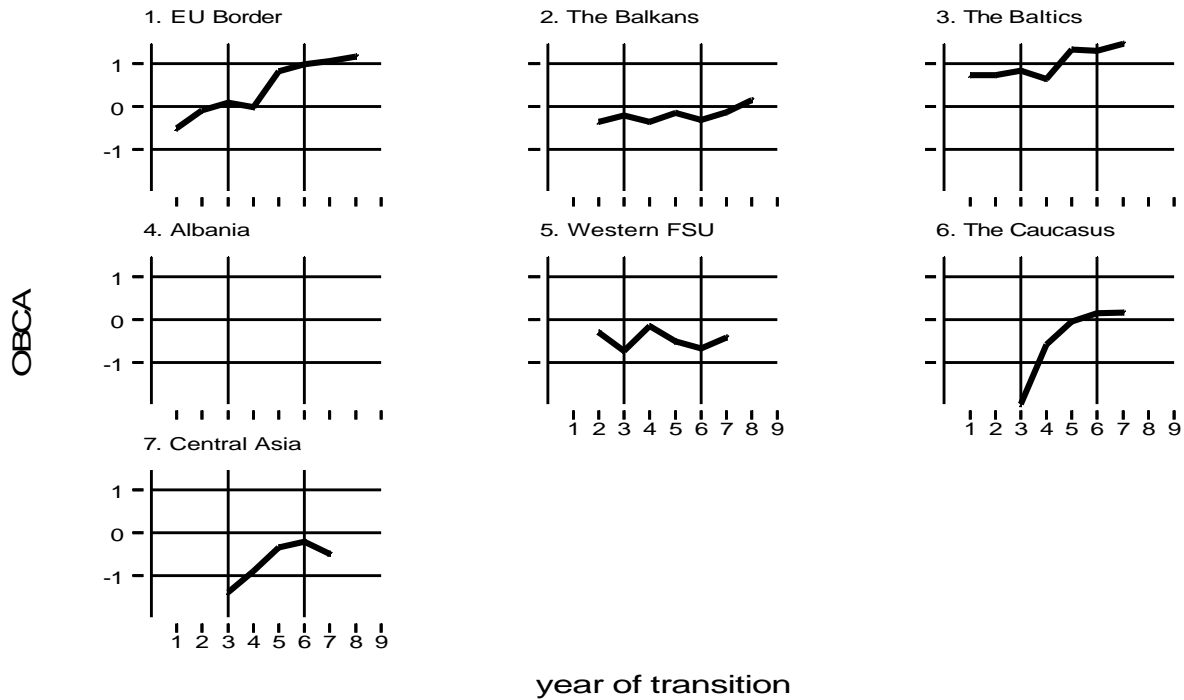


Figure 16: Inter- and intra-cluster variation of “Depth in Privatization” indicator over the transition cycle and for 1998, respectively. *Source:* Authors’ calculations.

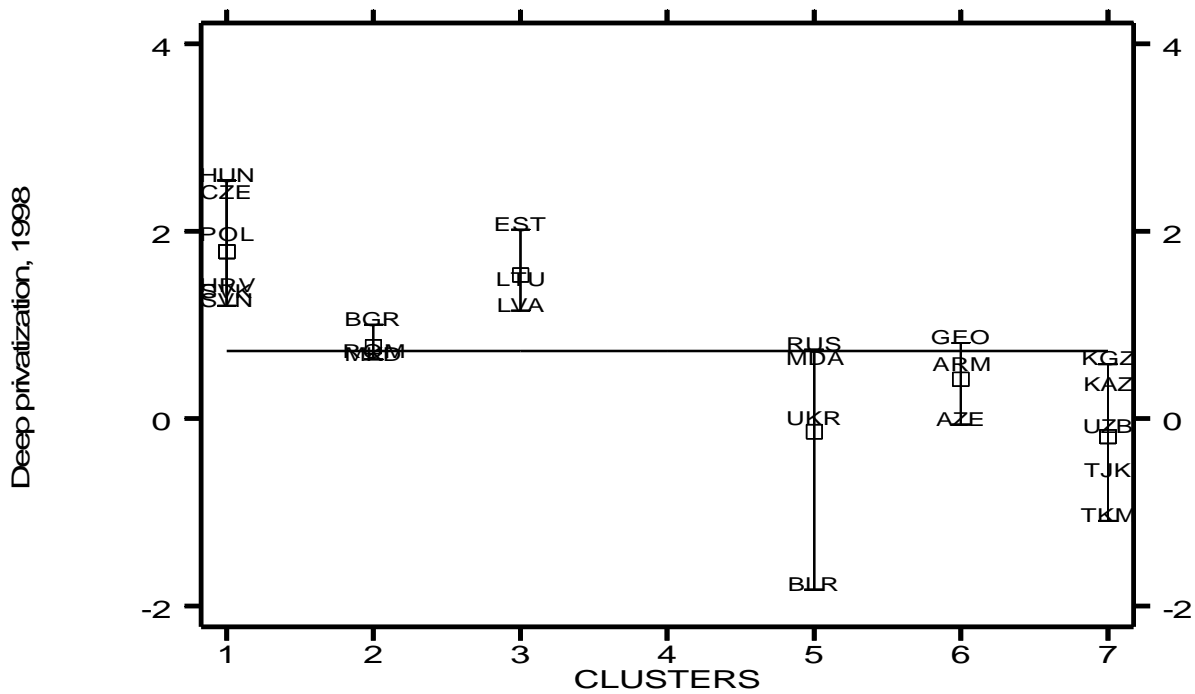
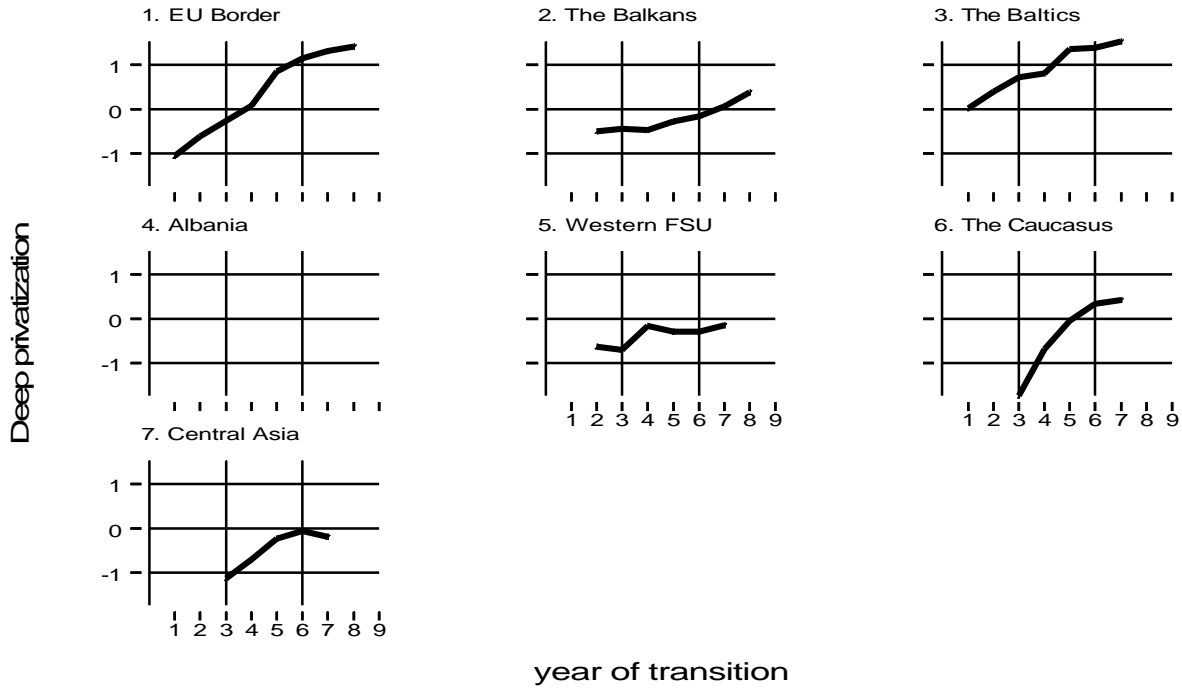


Table 7: Policy and institutional reform indicators, 1990-1998.

<i>Category</i>	<i>Definition</i>	<i>Effect</i>	<i>Weight</i>	<i>Variable</i>	<i>Scoring</i>	<i>Availability*</i>	<i>Source</i>
Social safety net (ssn)	Indicator	Pos	0.075	IPIssn	M0V1	0-8	Computed
	Unemployment program	Pos	0.2	UnemplF1	1=Yes, 0=No	0-8	Survey
	Early retirement program	Pos	0.2	RetireF2	1=Yes, 0=No	0-8	Survey
	Severance payment program	Pos	0.2	ServerF3	1=Yes, 0=No	0-8	Survey
	Working population with pension / labor force	Pos	0.2	PpensC10	Percent	0-8	Survey
	State retraining program	Pos	0.2	SttrgE11	1=Yes, 0=No	0-8	Survey
Price and wage liberalization and competition policy	Indicator	Pos	0.17	IPIpwc	M0V1	0-8	Computed
Prices	Indicator	Pos	0.4	Pricelib	M0V1	0-8	Computed
	Price liberalization index	Pos	0.7	Lip	0 to 1 (1 best)	0-8	Havry, EBRD
	No. of administrative prices in EBRD basket	Neg	0.3	Adpebrd	0 to 15	0-8	EBRD
Wages	Indicator		0.2	Wagelib	M0V1	0-8	Computed
	Existence of wage controls	Neg	0.5	WagconE7	1=Yes, 0=No	0-8	Survey
	Restrictions on hiring and firing	Neg	0.5	HirFiE10	0=minimal to 2=very restrictive	0-8	Survey
Competition	Indicator		0.4	Complib	M0V1	0-8	Computed
	Competition policy index	Pos	0.25	Comppl	1 to 4.33 (1 worst)	5-8	EBRD
	Competition law passed?	Pos	0.25	CmplwXE6	1=Yes, 0=No	0-8	Survey
	Aver. degree of competition in strat. & infrastructure sectors	Pos	0.25	CompetE1	0=none to 4=very competitive	0-8	Survey
	Monopoly commission?	Pos	0.25	McommE12	1=Yes, 0=No	0-8	Survey
Capital markets	Indicator	Pos	0.17	IPIkm	M0V1	0-8	Computed
General	IAS in force?	Pos	0.1	IASx	1=Yes, 0=No	0-8	EBRD
Security market	Indicator		0.25	Securmkt	M0V1	0-8	Computed
	Security markets index	Pos	0.50	Securt	1 to 4.33 (1 worst)	5-8	EBRD
	International corporate bond issued?	Pos	0.25	Intlcbnd	1=Yes, 0=No	0-8	EBRD
	Is there a T-bill market?	Pos	0.25	Tbills	1=Yes, 0=No	0-8	EBRD

Table 7 (cont'd): Policy and institutional reform indicators, 1990-1998.

<i>Category</i>	<i>Definition</i>	<i>Effect</i>	<i>Weight</i>	<i>Variable</i>	<i>Scoring</i>	<i>Availability*</i>	<i>Source</i>	
Stock market	Indicator	Pos	0.35	Istkmrk	M0V1	0-8	Computed	
	Is there a stock market?	Pos	0.3	Stockmkt	1=Yes, 0=No	0-8	Survey	
	Stock market capitalization / av. GDP	Pos	0.5	SmkcGdp	Percent	0-8	EBRD	
	Stock market activity (value of trades/market cap.)	Pos	0.1	SmtrPoC2	Fraction	0-8	Survey	
	No. of transactions in stock market / Ln(Pop)	Pos	0.1	SmtrpoC2	Number	0-8	Survey	
Non-bank financial institutions	Indicator	Pos	0.25	Inbfin	M0V1	0-8	Computed	
	Pensions	Are there private pension funds?	Pos	0.25	PrpenC11	1=Yes, 0=No	0-8	Survey
	Competit'n	Degree of competition in non-bank financial sector	Pos	0.25	Compnbf	0=none to 4 very competitive	0-8	Survey
	Insurance	Indicator	Pos	0.5	Inbins	M0V1	0-8	Computed
		Private sector share of insurance companies	Pos	0.2	InsprC76	Percent	0-8	Survey
		No. of insurance firms/Ln(population)	Pos	0.2	InscopC6	number	0-8	Survey
		Government a dominant firm in the insurance sector?	Neg	0.2	InsgvC9	1=Yes, 0=No	0-8	Survey
		No. of foreign insurance companies / Ln(population)	Pos	0.2	InsfgPC8	number	0-8	Survey
Has an insurance law been passed?	Pos	0.2	InslwX	1=Yes, 0=No	0-8	Survey		
Taxation	Indicator	Pos	0.17	IPItax	M0V1	4-7	Computed	
Collection	Indicator	Pos	0.5	Taxcoll	M0V1	4-7	Computed	
	Tax revenue / GDP	Pos	0.6	Taxrev	Percent	4-8	EBRD	
	Tax arrears / total tax revenues	Neg	0.1	Taxarr	Percent	0-6	WB,EBRD	
	Collection ratio of social security tax	Pos	0.3	EfSSCol	Percent	0-7	EBRD	
	Sophistication	Indicator	Pos	0.3	Taxsoph	M0V1	4-7	Computed
Is there a VAT?		Pos	0.5	VAT	1=Yes, 0=No	0-8	EBRD	
Tariff revenue/tax revenue		Neg	0.5	TrfTax	Percent	0-8	EBRD	
Tax reform#	Has major tax reform occurred?	Pos	0.2	TxrefG8	1=Yes, 0=No	0-8	Survey	
Banking sector	Indicator	Pos	0.17	IPBank	M0V1	4-8	Computed	
Competition	Indicator	Pos	0.7	Compbank	M0V1	4-8	Computed	
	State banks' percentage of assets	Neg	0.2	Asobanks	Percent	4-8	EBRD	
	Banking/interest rate index	Pos	0.3	Bnkirlib	1to4.33 (1 worst)	4-8	EBRD	
	Competition in the banking sector	Pos	0.25	ComBkE1j	0=none to 4 very competitive	0-8	Survey	

Table 7 (cont'd): Policy and institutional reform indicators, 1990-1998.

<i>Category</i>	<i>Definition</i>	<i>Effect</i>	<i>Weight</i>	<i>Variable</i>	<i>Scoring</i>	<i>Availability*</i>	<i>Source</i>
Competition (cont'd)	No. of banks / Ln(population)	Pos	0.15	BnksPop	Number	0-8	EBRD
	No. of foreign owned banks / Ln(population)	Pos	0.1	FgnbnkPo	Number	4-8	EBRD
Performance	Indicator	Pos	0.3	Perfbank	M0V1	0-8	Computed
	Domestic credit by banks / total investment	Pos	0.4	CreddC12	Percent	0-7	Survey
	Is there deposit insurance for banks?	Pos	0.4	DinsC17	1=Yes, 0=No	0-8	Survey
	Long-term lending to private sector / private sector value added	Pos	0.2	LtprlC14	Percent	0-8	Survey
Land Privatization	Indicator	Pos	0.075	IPiland	M0V1	0-8	Computed
Tradability restrictions	Indicator	Pos	0.8	Trdblty	M0V1	0-8	Computed
	Restrictions on sale of industrial land?	Pos	0.50	LsaliA26	0=not allowed to 3=no restrictions	0-8	Survey
	Restrictions on sale of agricultural land?	Pos	0.25	LsalaA26		0-8	Survey
	Restrictions on sale of residential land?	Pos	0.25	LsalrA26		0-8	Survey
Foreign ownership	Can foreigners own land?	Pos	0.2	FgnLdA25		0-8	Survey
Trade Liberalization	Indicator	Pos	0.17	IPltrd	M0V1	0-8	Computed
Regulatory environment	Trade and exchange rate liberalization index	Pos	0.35	Tfxlib	0 to 1 (1 best)	0-8	Havry, EBRD
Compliance with int'l standards	Indicator	Pos	0.25	Intlcmpl	M0V1	0-8	Computed
	Subscribe to Article 8?	Pos	0.35	Art8	1=Yes, 0=No	0-8	IMF
	Member of WTO?	Pos	0.35	WTO	1=Yes, 0=No	0-8	IMF
	Removal of state trading monopoly	Pos	0.3	Trdmonop	1=Yes, 0=No	0-8	Survey
Import barriers	Indicator	Pos	0.2	Impbarr	M0V1	0-8	Computed
	Tariff revenue / imports	Neg	0.5	Tarrev	Percent	0-8	
	Substantial removal of quantitative restrictions on imports	Pos	0.5	Mqntyres	1=Yes, 0=No	0-8	EBRD
Export promotion	Indicator	Pos	0.2	Xpromo	M0V1	0-8	Computed
	Substantial removal of quantitative restrictions on exports	Pos	0.6	Xqntyres	1=Yes, 0=No	0-8	EBRD
	Export credits as a % of total exports	Pos	0.4	EcrdtExp	Percent	0-7	

Notes: See Table 6 for abbreviations.

5.2 *Other policy and institutional reforms*

Here we construct and examine indicators of the components of the other, non-privatization, USAID reform areas, which focus on policy and institutions. These include price and wage liberalization, social safety net, tax reform, banking sector, capital markets, land privatization, and trade liberalization. We first present the “recipes” for the sub-indicators. We then contrast the resulting indicators in terms of inter- and intra-cluster differences.

5.2.1 Constructing indicators

In this sub-section we provide the “recipes” given in Table 7 for the indicators of the non-privatization, USAID reform areas.

The social safety net indicator captures three aspects of the government’s attempt to soften the negative social impacts of transition: unemployment, plant closure or worker redundancy (retraining and severance payments), retirement (income support). Price liberalization comprises not just liberalization in the prices of goods and service, but also liberalization of wages and the degree of competition in the markets. The capital markets indicator comprises sub-indicators for the stock market, securities market, and the non-bank financial institutions. Tax reform includes not just improvements in the tax code but also in its administration. Thus, this indicator includes components for the quality of tax collection efforts and the sophistication of the tax system. By sophistication we refer to whether modern low-distortionary revenue instruments are in place, as opposed to trade-distorting import tariffs and export taxes. The banking sector indicator focuses on the degree of competition in the sector and the degree the sector is providing economic agents with adequate credit and services. The land reform sub-indicator concentrates on measuring the degree that land markets function in a way consistent with the needs of a market economy. It also looks at the degree foreigners are excluded. Finally, turning to trade liberalization, we capture tariff and non-tariff barriers and compliance with the various international trade regimes on the import side and the degree there are restrictions or even promotion on the export side.

5.2.2 Patterns of reform

Figure 17 presents a summary of overall progress in transition across the various clusters as well as for their current position. To assist in the discussion, we provide a graph of inter-cluster differences as typified by the reform trajectory and a graph of intra-cluster differences for 1998 (or 1997 for taxation, the latest year for which data are plentiful). Clearly all the clusters have exhibited progress in their reform agendas. The EU Border States and the Baltics achieve the greatest degree of progress, with Central Asia and Albania exhibiting the lowest. Let us turn to within-cluster differences by 1998. Here the Baltics, the Caucasus and to a lesser extent the Western FSU, the Balkans and the EU Border are tight. The EU Border States have clearly bifurcated, with the “new” states doing the least well in the cluster. Central Asia is also bifurcated with Kazakhstan and the Kyrgyz Republic well above the rest of the cluster.

Now let us examine the reform trajectories and progress in transition according to each of the sub-indicators developed in section 5.2.1.

The social safety net indicators are presented, for completeness, in Figure 18, yet due to the scarcity of the variables that fit this category they should be interpreted with care.

Figure 19 presents the inter- and intra-cluster variation for the price and wage liberalization indicator.¹⁶ This indicator should show a strong tendency to asymptote since there is only so

¹⁶ See Sachs (1997) for a discussion of the issues.

much liberalization possible before being fully liberalized. As the figure confirms, we do see a tendency to this effect with the EU Border States, Baltics and the Caucasus all converging to similar (high) scores. Central Asia and the Balkans still have one standard deviation to go. The Western FSU seems to have floundered after making very respectable progress during the first three years of its transition. Albania started lower than the others (dropped from the figure to avoid distortion of the scale), and made a huge jump in 1992. Notable at the country level are the strong performances of the Czech Republic and Georgia (though special mention should be given to Moldova and the Kyrgyz Republic for the best performance in their respective clusters). The worst performer, Turkmenistan, was also shown in paper 2 of this series to be the least competitive country in the sample. Finally, Macedonia's very bad performance here sends a signal to donors as to where their efforts need to focus.

Figure 20 presents the inter- and intra-cluster variation for the tax reform indicator.¹⁷ While data limitations prevented this indicator from reaching back to the beginning of transition – though the recent years are available here, it still has a story to tell. What is most surprising here is the robust performance of the Western FSU, all the more so given the poor performances of the rest of the FSU clusters. The Baltics and the EU Border States predictably turn in best scores. Turning to the data for 1997, we see that the clusters are tight, with the exception of the EU Border States. Here, in spite of its good performance on many of the other indicators, Slovenia is dramatically lagging behind its cluster.

¹⁷ See McKinnon (1992) for a discussion of taxation issues in transition economies.

Figure 17: Inter- and intra-cluster differences in overall progress in reforms over the transition period and for 1998, respectively. *Source:* Authors' calculations.

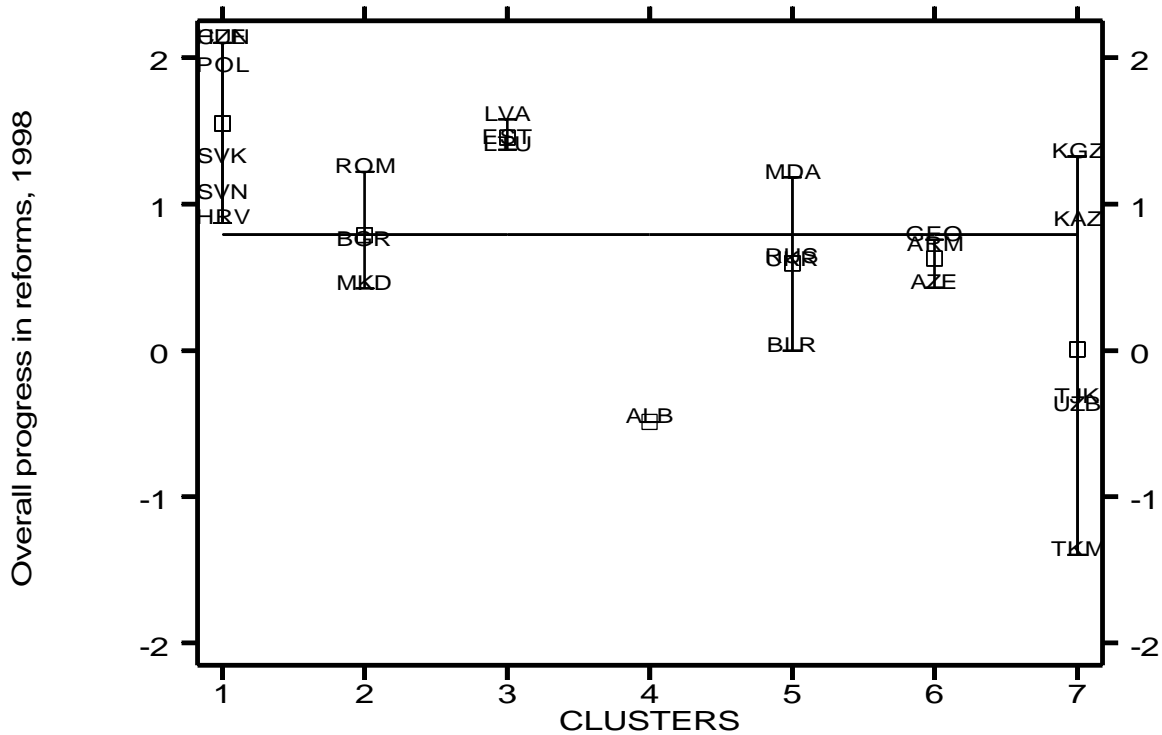
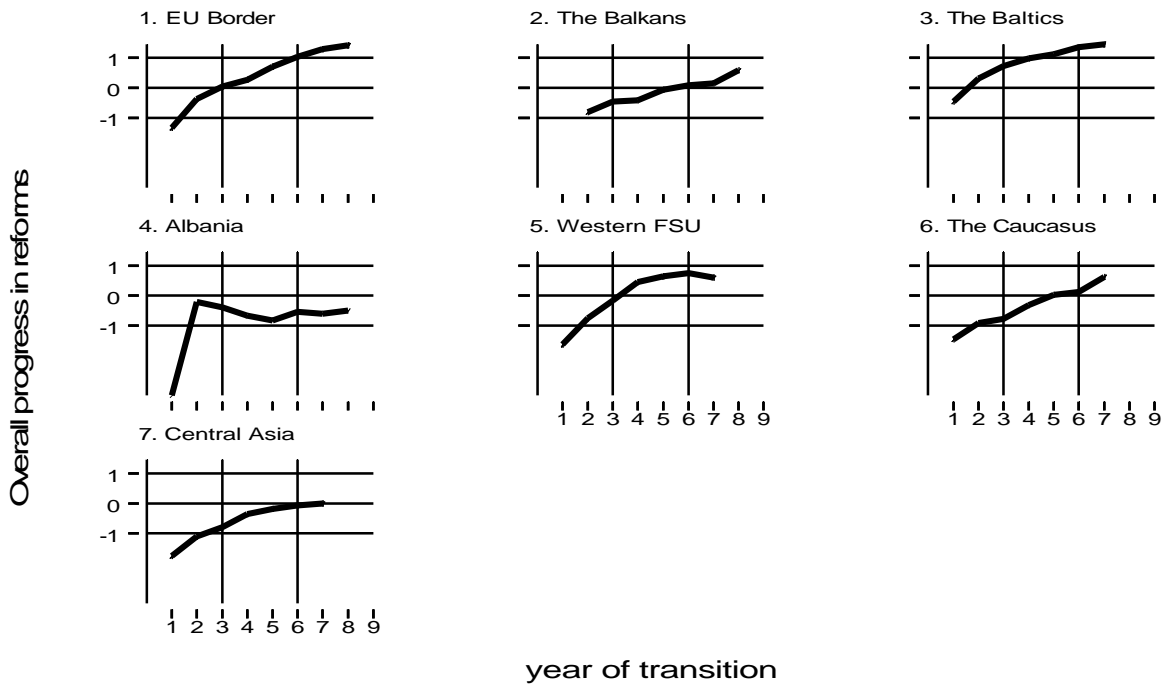


Figure 18: Inter- and intra-cluster variation for the social safety net trajectory and 1998, respectively. *Source:* Authors' calculations.

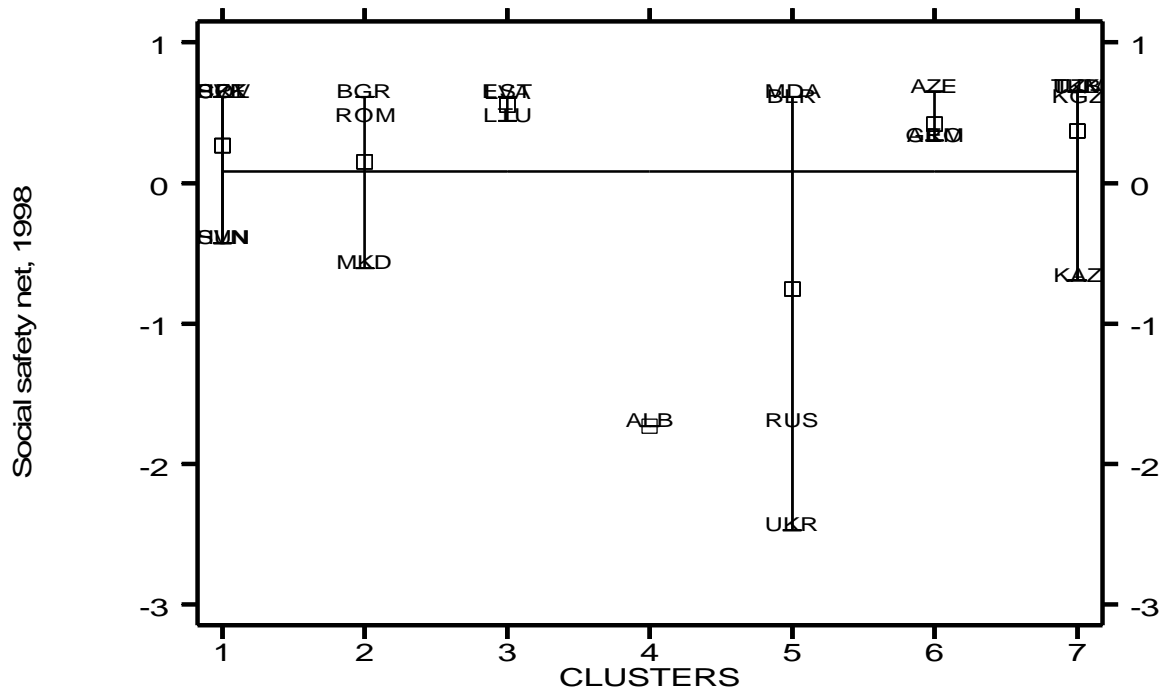
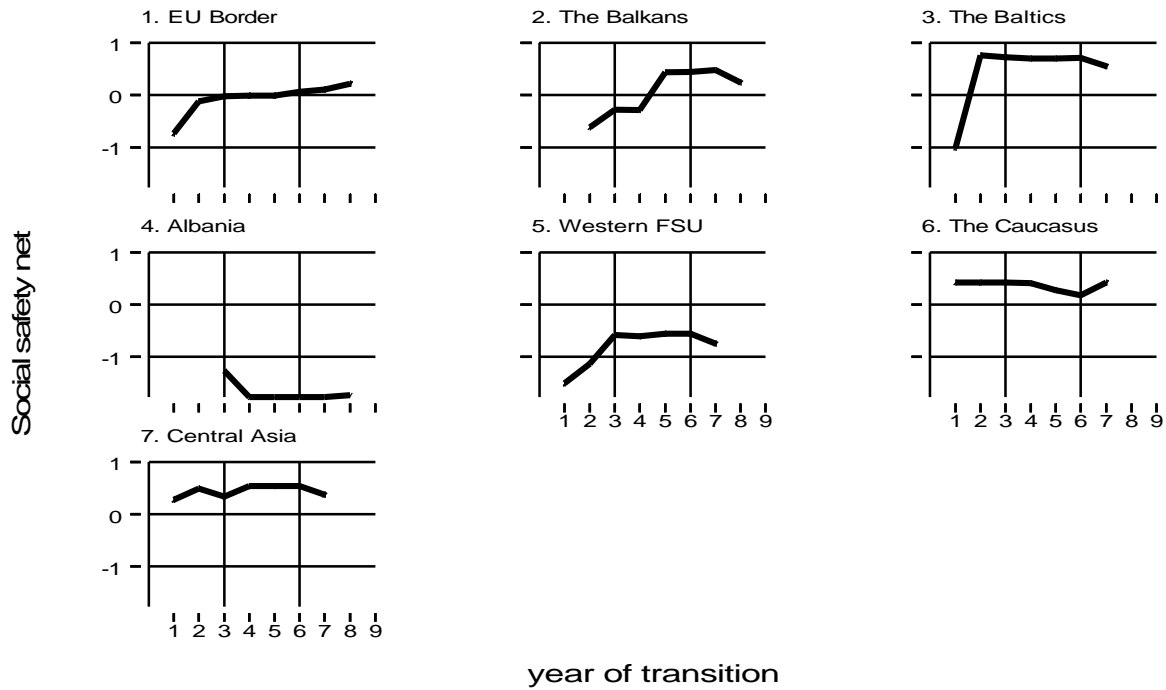


Figure 19: Price and wage liberalization inter- and intra-cluster variation for the transition period and 1998, respectively. *Source:* Authors' calculations.

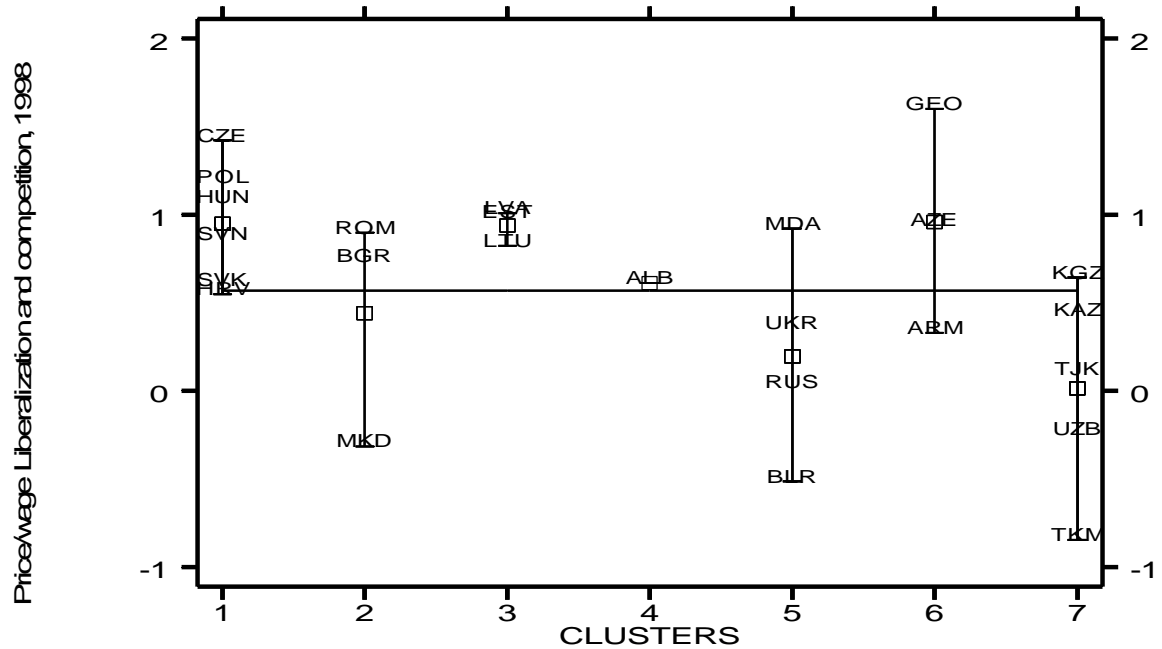
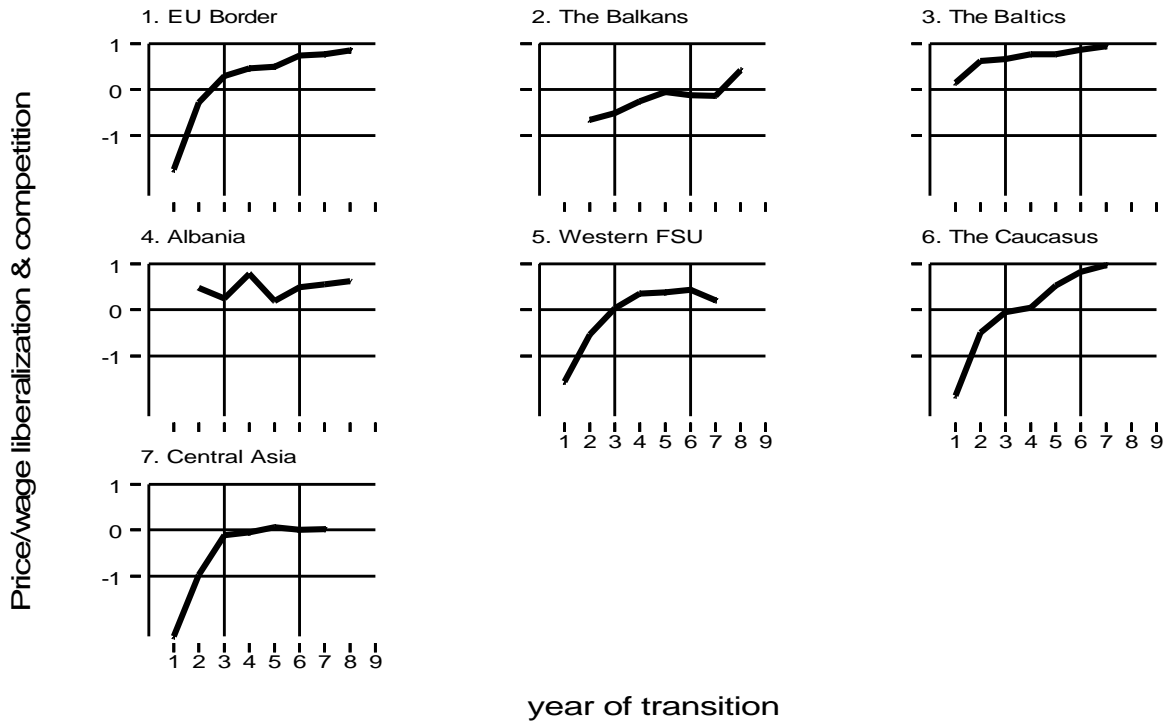


Figure 20: Tax reform inter- and intra-cluster variation for the transition period and 1997, respectively. *Source:* Authors' calculations.

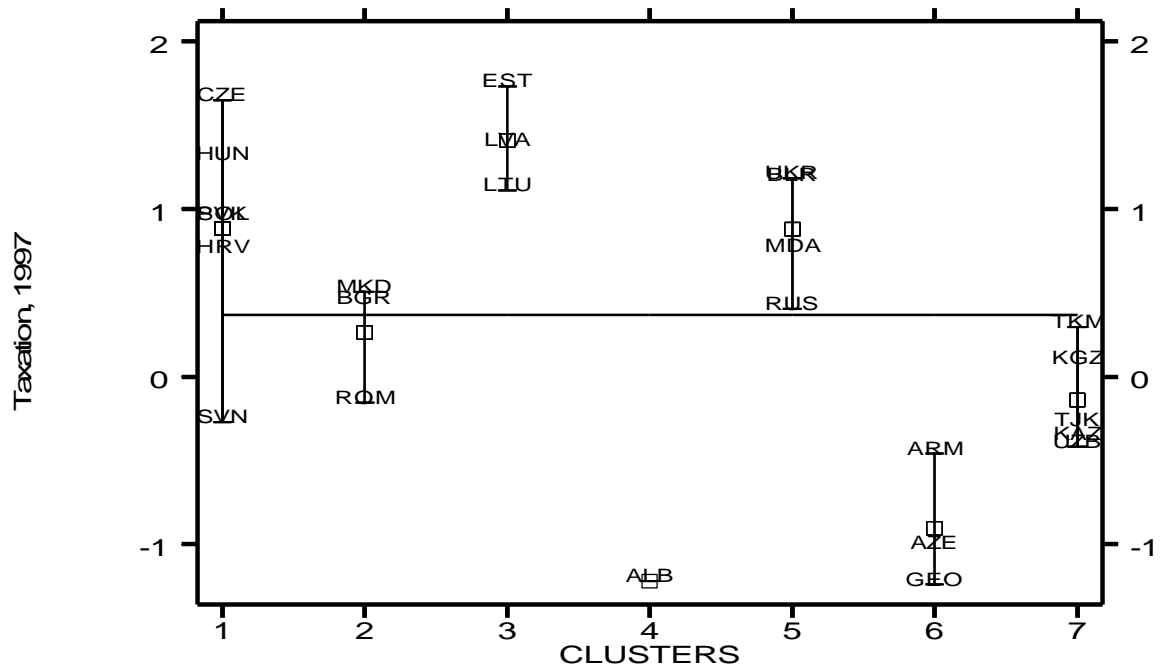
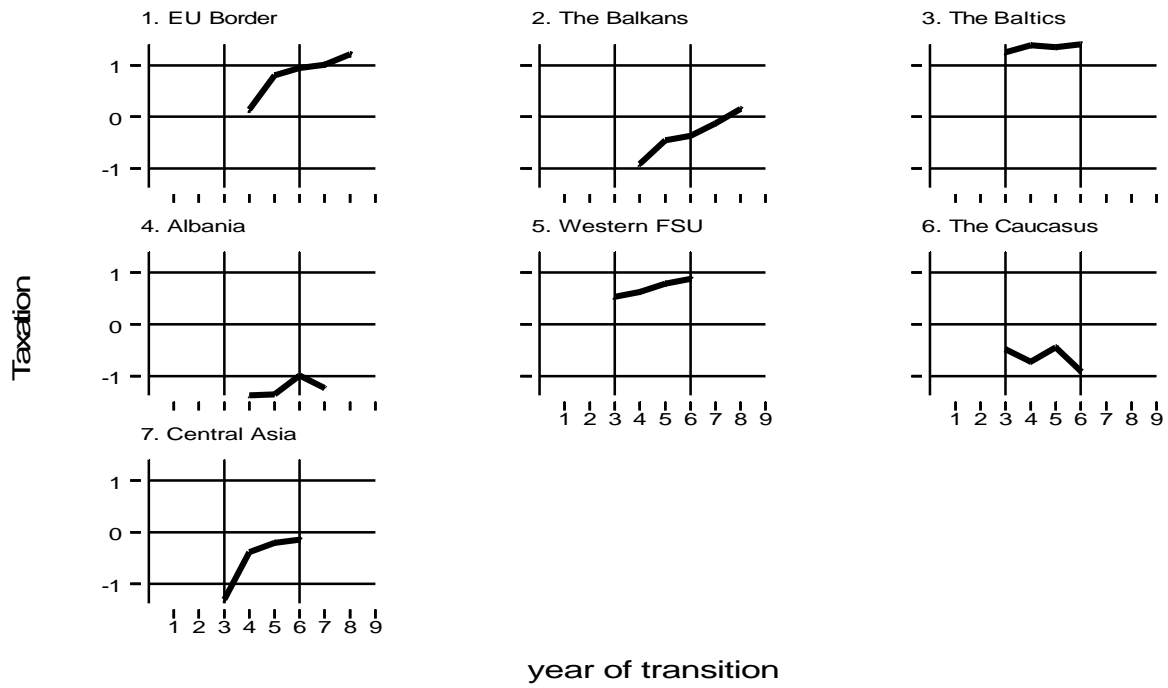


Figure 21 presents the inter- and intra-cluster variation for banking sector reform.¹⁸ Again, we see that the Baltics and EU Border have the best performance. The Balkans and the Western FSU (pulled up by pre-crisis-Russia) also weigh in with above-period-average scores. Central Asia and the Caucasus show only moderate progress, while Albania seems to remain static in this sector. The lower panel graph shows Hungary, Macedonia and the Kyrgyz Republic all stand out in their respective clusters. Interestingly, in spite of the extremely impressive foreign direct investment performance of Azerbaijan presented in the next chapter, it has the worst banking sector performance in the Caucasus.

Figure 22 presents the inter- and intra-cluster variation for capital market reform. Here the Western FSU, pulled by Russia, exhibit an impressive performance, as do the Baltics and the EU Border States. In fact Central Asia, the Caucasus and the Balkans all show almost unabated improvements in this reform category. Note how all clusters, with the slight exception of the Baltics begin transition at the same starting point. Oddly, in spite of such positive improvements over the period, the clusters are not as tight as in the case of the other reforms. In the case of the EU Border States, we see the not unusual occurrence that the countries bifurcate themselves into “old” states and “new” states. The Central Asia cluster also bifurcates into polar extremes, with Kazakhstan and the Kyrgyz Republic showing above-average performance. Finally, Latvia, Lithuania and Russia show good capital market performance by 1998.

Figure 23 presents the inter- and intra-cluster variation for land privatization. Here Central Asia shows no interest in much reform. The EU Border States, though having the second highest scores, reach this level already at the second year of transition. Both the Western FSU and the Caucasus, though, do show much progress, even if they do not reach the scores of the two front-runners. Turning to the intra-cluster 1998 data, we again see the “lumpiness” of the data, with most clusters having the same best-score value. We also see very loose clustering here, with the exception of Central Asia, where all countries score poorly. Noteworthy, though is the very bad performance of the Czech Republic and Armenia. Hungary also is rather weak, given it is a member of the EU Border States.

Figure 24 presents the inter- and intra-cluster variation for trade liberalization.¹⁹ With the exception of Central Asia, most of the clusters seem to have taken trade liberalization seriously, registering continuous improvements over the period. Having said this, the Baltics and the Western FSU do seem to have hit a glass ceiling at around the third year of their respective transitions. The lower panel confirms the seriousness the clusters have taken this reform, with their 1998 values being very close together. While these are unquestionably the tightest clusterings of the all our indicators, note that the same reform bifurcation seen above for Central Asia also occurs here; Kazakhstan and the Kyrgyz Republic almost two standard deviations better than the rest of the countries in their cluster. Belarus also belongs to this lower Central Asia country sub-group. Finally, the worst trade liberalization performance is, again, the country that scores worst on our paper-2 competitiveness indicator: Turkmenistan.

¹⁸ See McKinnon (1992) for a discussion of money and credit issues in transition economies.

¹⁹ See de Menil (1997), Bruno (1988) for discussions of trade liberalization in transition economies.

Figure 21: Banking sector Inter- and intra-cluster variation for the transition period and 1998, respectively. Source: Authors' calculations.

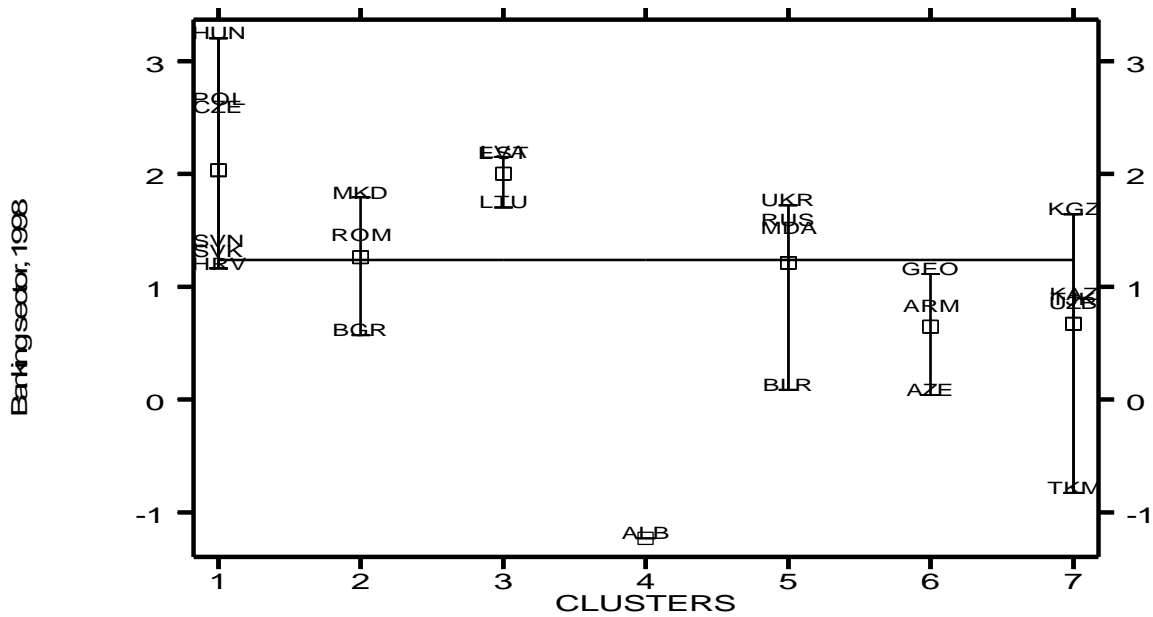
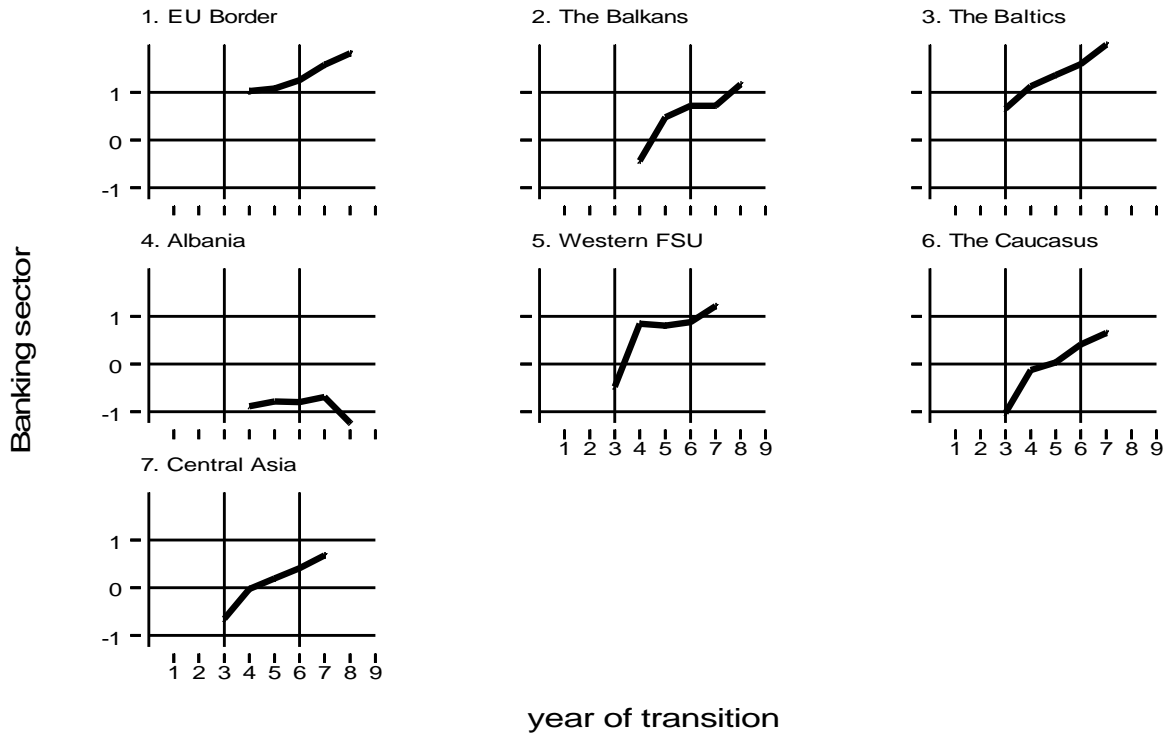


Figure 22: Capital market reform inter- and intra-cluster variation for the transition period and 1998, respectively. *Source:* Authors' calculations.

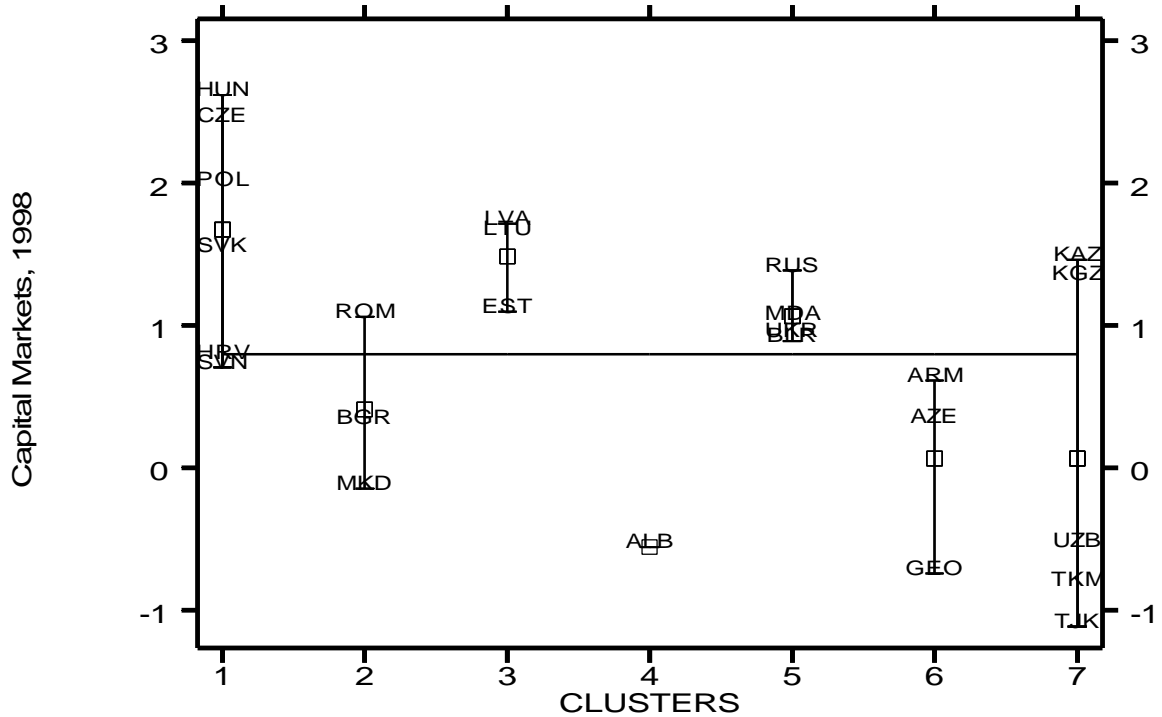
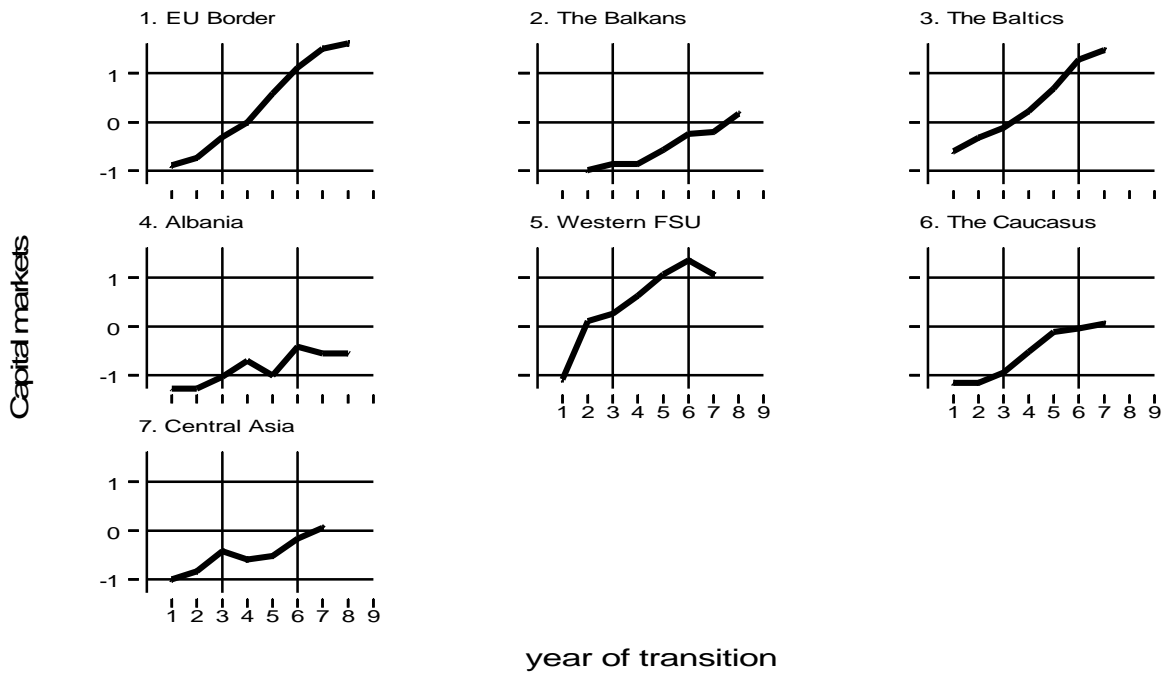


Figure 23: Land privatization reform inter- and intra-cluster variation for the transition period and 1998, respectively. *Source:* Authors' calculations.

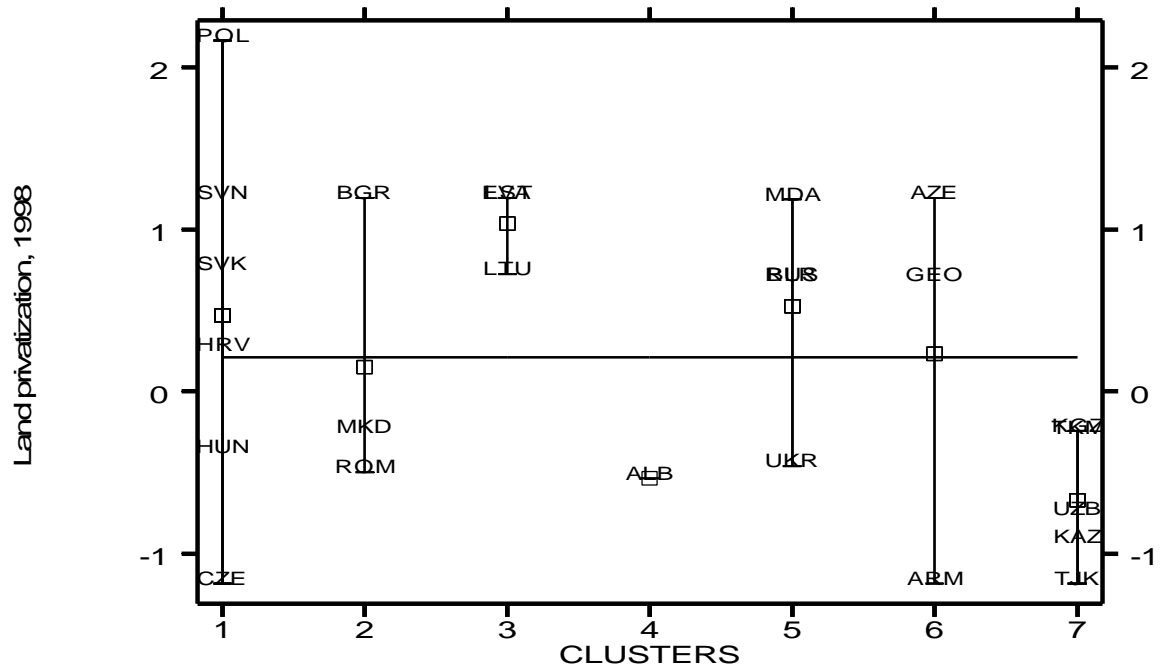
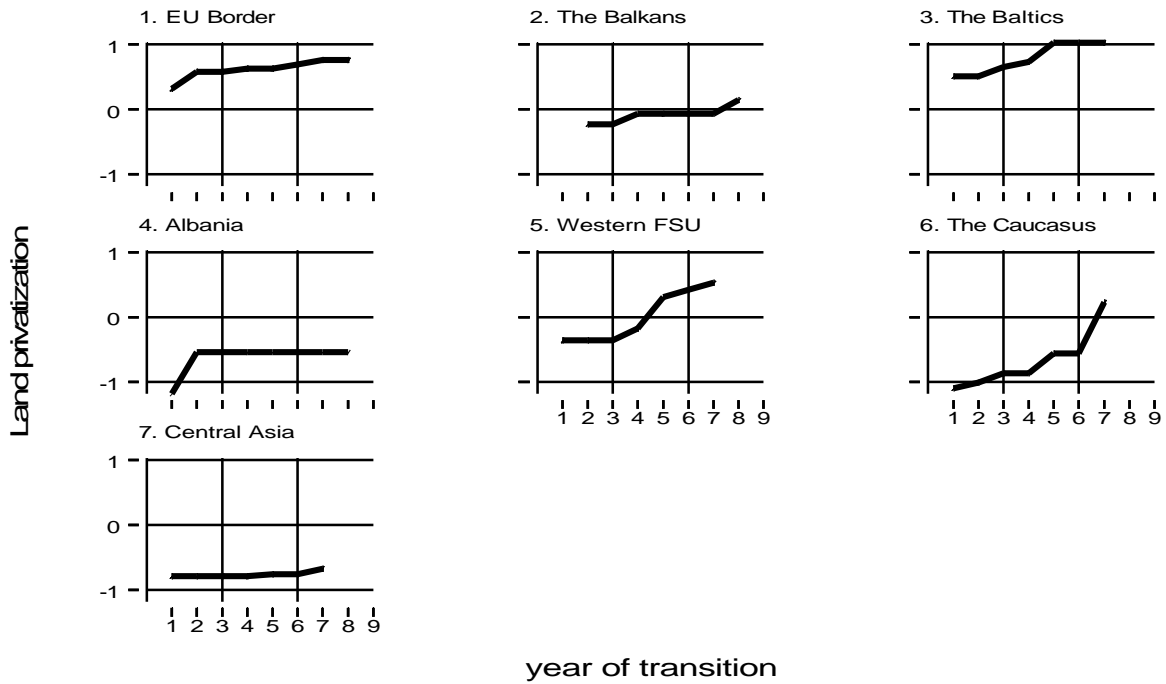
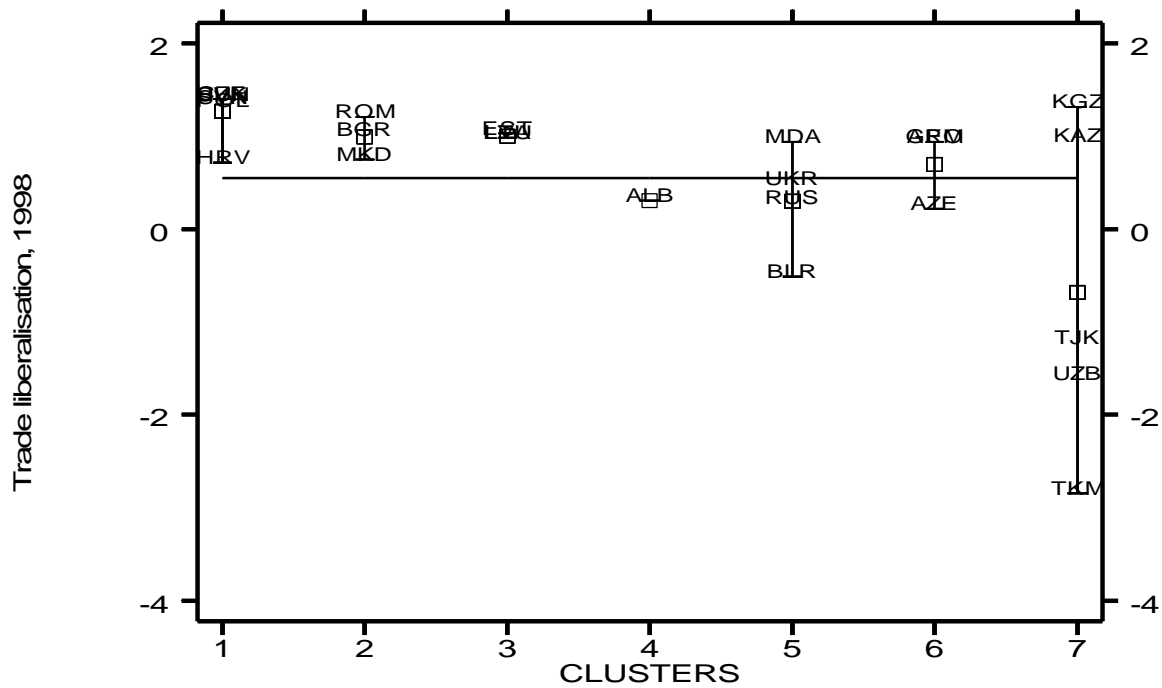
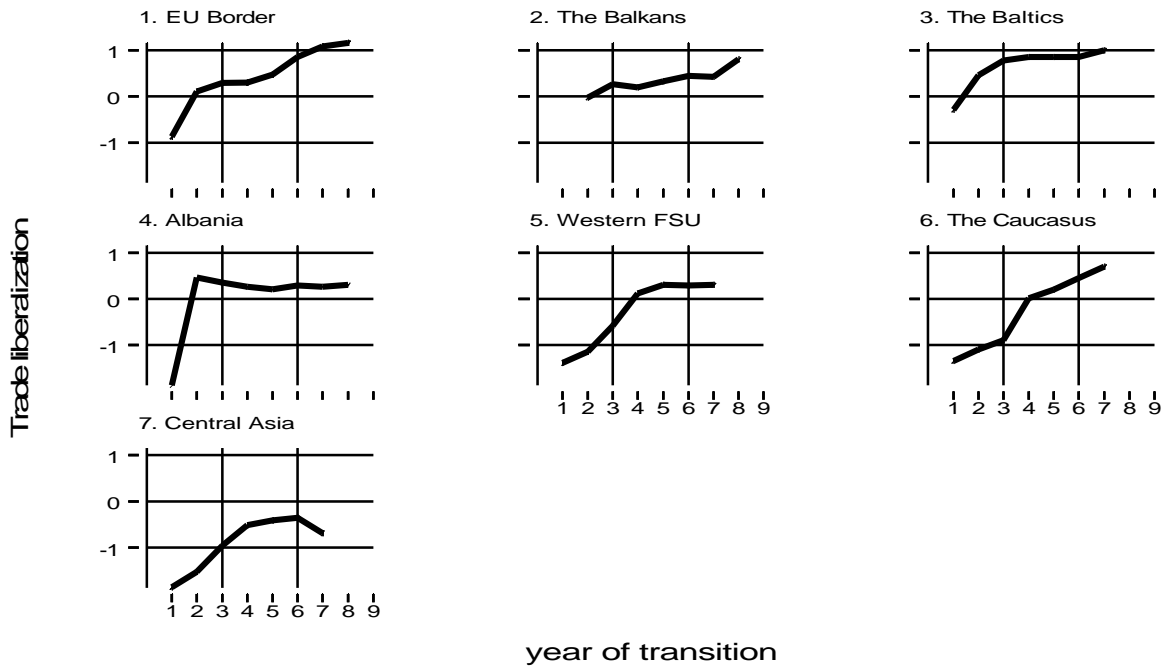


Figure 24: Trade liberalization inter- and intra-cluster variation for the transition period and 1998, respectively. *Source:* Authors' calculations.



6 Economic performance during transition

The determinants of transition described above have a major impact on the way firms are run, their ability to successfully develop and compete among themselves and, ultimately their chances of becoming internationally competitive. But country competitiveness is not easily observable by simply examining firm performance and is not assured through focussing on firm performance alone. A country's international competitiveness depends on the interactions and synergies among firms in an industry and the positive externalities between industries. Moreover, during transition, even those firms that are profitable may be so for the wrong reasons. Lack of competition, entry barriers, government restrictions, and other market distortions may mean that firm profits are not derived from their ability to use inputs most efficiently.

For these and other reasons (such as lack of comprehensive firm data across countries) we identify a number of micro, mezzo and macro economic variables that together better reflect the progress in country competitiveness. We follow the approach taken in the rest of this study by designing indicators in the interest of developing a coherent picture of country-level performance. Of particular focus will be to examine a subset of performance variables most related to the creation of an efficient, private sector economy. We do this in three ways. First, we describe the variables that characterizes private sector activity. Second, we will present some key medium-run, or what we called at the start of this chapter, "intermediate outcomes". Third, we will look at a limited number of variables that together characterize long-run economic performance. In each case we first present the design of the relevant indicators and then use graphs to show the inter- and intra-cluster differences over the transition period.

Finally, we will present the paths of the ratio of GDP per capita to its per transition level.

6.1 Constructing indicators of performance

In this section we provide the motivation and "recipes" for the indicators of economic performance of which there are three categories, private sector activity, medium-run activity, and long-run performance.

One of the central challenges of the transition process is to create a vibrant private sector.²⁰ This requires transferring the ownership and use of society's resources to private use. Our Private Sector Activity indicator, therefore, includes measures of the amount of value added due to private sector output as well as the amount of investment and credit going to private enterprise.

Besides private sector activity, medium-run performance needs to include micro-level domestic activity and efficiency improvements embodied in the creation of *de novo* firms as well as the activity of privatized firms.²¹ At the mezzo level it needs to include measures of international performance and foreign sector participation in domestic markets. Finally, it should include macro-economy aspects as capturing stability of prices and a low level of barter and unofficial activity.

For exports we used an average of two alternative measures: balance of payments data and trade authority data, corrected for country size (population). The theory behind this

²⁰ See Earle *et. al.* (1993), Johnson *et. al.* (1995), Johnson *et. al.* (1997)

²¹ We could not obtain, so far, an adequate *de novo* firm creation series. Constructing such a series is an important topic for further research.

correction is that small countries tend to have higher trade intensities, not because of their performance, as we want to capture it, but merely because of arbitrary borders (e.g., trade between the U.S. states is not considered international trade but trade between European states is). The correction is done by regressing trade per unit GDP for a sample of 200 countries against the log of their population. We then use the coefficients obtained to predict the “expected” level of exports a transition country should have, given its size. The difference between the actual and expected levels of trade becomes one variable we use as a measure of exports. We also use an additional measure: exports to non-transition countries (deflated by GDP). This is a better measure of openness since it reflects mainly post-Soviet trade relations, as opposed to Soviet era trade agreements.

For foreign sector participation in domestic markets we used FDI per capita.

The third component of the medium-run performance indicator captures improvements in economic efficiency by comprising various measures of average productivity, including average output per *employed* worker, average output per employed worker in industry, and the efficiency of energy use.²²

Our fourth component for the medium-term is macro performance. We capture this using inflation, unemployment,²³ monetarization of the economy, and credibility of the country’s international reserve position.²⁴

Turning last to the long run, we address this aspect of economic performance indirectly and directly. We first include real GDP per capita as an overall measure of the economy’s ability to provide goods and services to the population. We then consider two sets of more direct measures of well being. The first reflects material aspirations and includes narrow measures such as telephones and televisions per capita as well as broad measures like private consumption per capita and GDP per capita measured at purchasing power parity.²⁵ The second reflects non-material, quality-of-life measures such as life expectancy and level of spending on health and education.²⁶

²² See Aghion *et. al.* (1996).

²³ The unemployment variable is used to proxy for the rigidity of the labor market in the country. A high level of unemployment may indicate the existence of rigidities that do not allow the market to arrive at equilibrium (market-clearing). A low level of unemployment, on the other hand, also suggests labor rigidities since the high degree of economic restructuring necessary in a transition economy should cause high unemployment to be observed. We, therefore, chose to penalize a country for deviations from what we considered as a natural rate of employment, outside the range 8-12 percent

²⁴ See Fischer *et. al.* (1996)

²⁵ This “ppp” GDP measure is not the same as our real GDP, “indirect” measure. The former reflects all manner of goods and services, regardless of whether supplied through the market or via non-market services. The latter reflects only officially reported transactions. The reason the latter is still important is that it tends to better reflect economic growth.

²⁶ Note that while the UNDP’s “Human Development” indicator would be ideal to include here, it exists for a limited time period to be of use.

Table 8: Economic reform indicators, 1990-1998

<i>Category</i>	<i>Definition</i>	<i>Effect</i>	<i>Weight</i>	<i>Variable</i>	<i>Scoring</i>	<i>Availability*</i>	<i>Source</i>
Private sector activity	Indicator	Pos		IPSA	M0V1	0-8	Computed
	Private sector value added per capita	Pos	0.6	PrGdpPop	USD	0-8	EBRD
	Private sector investment per capita	Pos	0.2	PrinvPop	USD	0-7	WB
	Private sector credit / population	Pos	0.2	PrcrdPop	USD	0-8	WB
Medium run performance	Indicator	Pos		Iperfmed	M0V1	0-8	Computed
Exports	Indicator	Pos	0.25	IExp	M0V1	0-8	Computed
	Exports to non transition countries, as a % of GDP	Pos	0.5	ExpNTr	Percent	0-7	WDI, EBRD
	Exports as % of GDP (size adjusted)	Pos	0.5	ExpRel	Percent	0-8	WDI, EBRD
Foreign direct investment	Indicator	Pos	0.25	IFdi	M0V1	0-8	Computed
	FDI per capita	Pos	1	FdiPop	USD	0-8	EBRD
Productive efficiency	Indicator		0.25	Iprdneff	M0V1	0-7	Computed
	Labor productivity in industry	Pos	0.5	APLind	% of 90	0-8	EBRD
	GDP to energy ratio	Pos	0.25	Gdpenrgy	USD/kw	0-6	WDI
	GDP/employment	Pos	0.25	GdpLab	USD	0-7	EBRD
Macro-economy	Indicator	Pos	0.25	IMacro	M0V1	0-8	Computed
	Ln of Inflation rate(in absolute value)	Neg	0.4	LnInflat	number	0-8	EBRD
	Unemployment rate (deviation from 8-12 range)	Neg	0.2	UnempDev	percent	0-8	EBRD
	International reserves as a % of imports	Pos	0.2	RsrvImp	fraction	0-7	EBRD
	Monetarization	Pos	0.2	M2Gdp	fraction	0-8	EBRD

Table 8 (cont'd): Economic reform indicators, 1990-1998

<i>Category</i>	<i>Definition</i>	<i>Effect</i>	<i>Weight</i>	<i>Variable</i>	<i>Scoring</i>	<i>Availability*</i>	<i>Source</i>
Long run performance	Indicator	Pos	n.a.	Iperflgn	M0V1	0-7	Computed
Output	Real GDP per capita	Pos	0.5	Ypc_r	US dollars	0-8	EBRD
Population well-being	Indicator	Pos	0.5	Welbeing	M0V1	0-7	Computed
Consumption	Indicator	Pos	0.7	Consump	M0V1	0-7	Computed
	GNP per capita (adjusted for PPP)	Pos	0.35	Gnpcppc	USD	0-7	WDI
	Television sets per 1000 people	Pos	0.10	Telev	Number	0-6	WDI
	Telephone lines per 100 people	Pos	0.10	Teleph	Number	0-8	WDI, EBRD
	Vehicles per 1000 people	Pos	0.10	Vhcls	Number	0-7	WDI
	Private consumption per capita	Pos	0.35	PrconPop	USD	0-6	WDI
Health	Indicator	Pos	0.3	Health	M0V1	0-8	Computed
	Life expectancy at birth	Pos	0.5	Lifeexp	Years	0-8	WDI
	Expenditures on health and education per capita	Pos	0.5	hedexppc	USD	0-8	EBRD

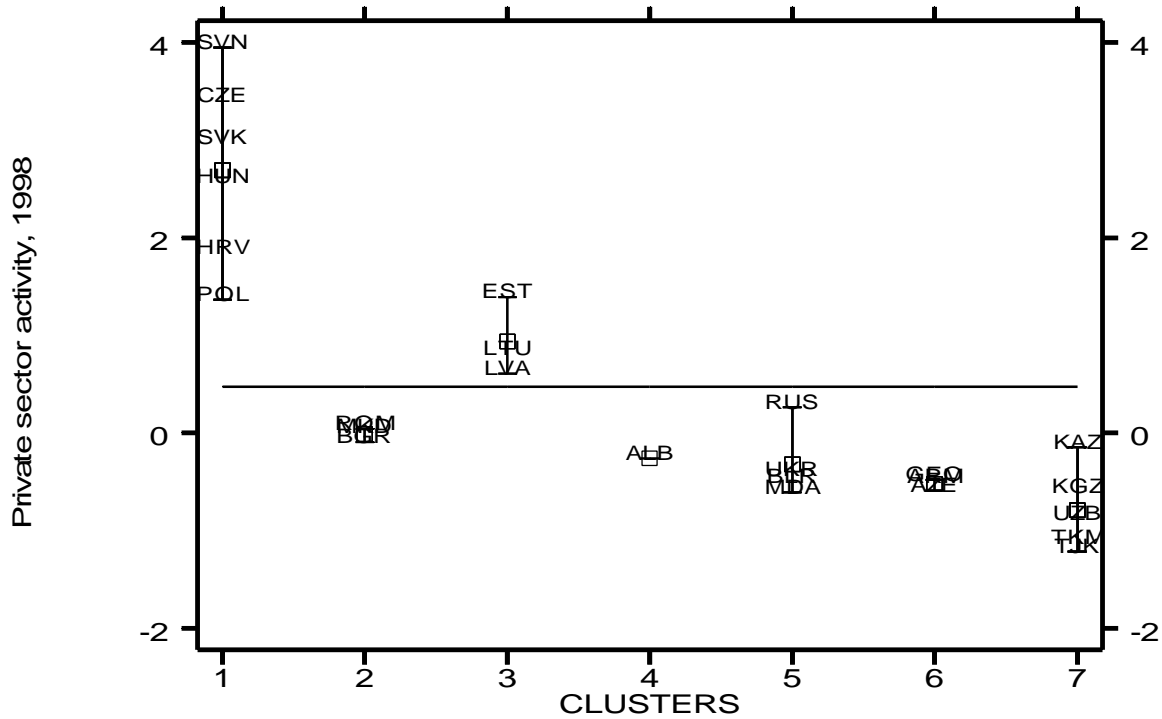
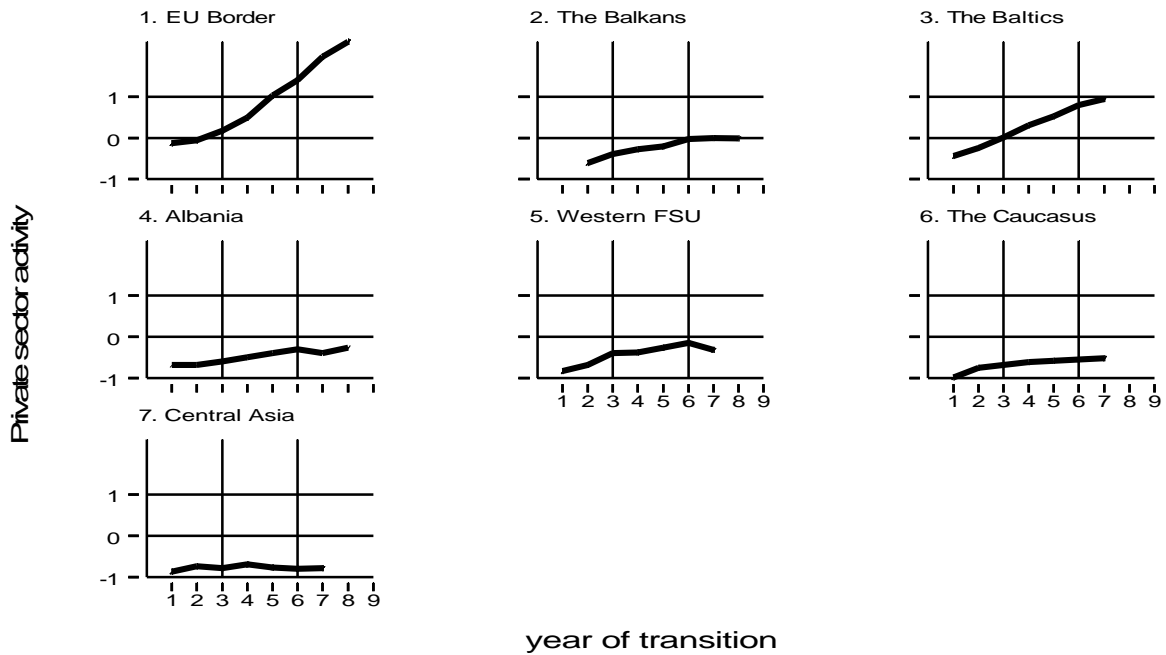
Notes: See notes at the end of table 6 for abbreviations.

6.2 *Patterns in private sector activity*

The inter- and intra-cluster performance of our private sector activity indicator as presented in Figure 25 reveals a somewhat sanguine situation. All clusters but Central Asia show some increasing trend in their transition period performance. While the EU Border States started out at almost period-average performance, it achieved within six years a level of performance equal to 1.5 to 2 standard deviations above the other clusters, except for the Baltics that are one standard deviation below. The Western FSU has struggled to achieve by the sixth year of transition a level of private sector activity only equal to the period average for the sample, and has experienced a certain decline in 1998. The Caucasus display especially disappointing results along the period.

Figure 25 also provides insight driving these results by showing individual country performance differences for 1998. With the exception of the Western FSU, we see a fairly tight cluster fit. The Czech Republic and Slovenia are the best in the sample. Estonia and Russia come out best in their respective clusters, as does Kazakhstan and the Kyrgyz Republic in Central Asia (which are also the most competitive in their cluster).

Figure 25: Inter- and intra-cluster differences in private sector activity for transition period and 1998, respectively. *Source:* Authors' calculations.



6.3 *Patterns of medium-term performance*

Here we consider the inter- and intra-cluster differences in performance as measured by exports, foreign direct investment, productive efficiency, and the macro-economy. Then we present the same comparisons for the summary medium-term indicator, itself. Note that in the two graphs presented for each sub-indicator the top one refers to years into transition while the bottom one is for 1997 or 1998. Since countries were at different points in their transition cycle in either of these two years, the two graphs are not directly comparable.

Export differences in performance are presented in Figure 26. Here we find that non of the clusters show improving performance over the transition period, with the latter starting (and ending) at a much lower point. Central Asia and the Caucasus, and to a lesser degree the Baltics, exhibiting a tendency of deteriorating export performance over the period. Turning to the lower graph panel, we see that the clusters lose their tightness. Poland and Croatia do the worst in their cluster. Estonia once again performs best in its cluster, as does Belarus (perhaps due to its trade with Russia), Tajikistan and Bulgaria.

Differences in foreign direct investment are presented in Figure 27. Here we find that it is the Caucasus (driven by Azerbaijan as the lower graph illustrates) the Baltics and the Western FSU who are the best clusters. The Western FSU and the Balkans, though both starting from the same initial point as the Caucasus, show very tepid improvements and do not even achieve average performance by the end of the period. Central Asia, while reaching period average performance levels early on, are unable to progress further over the transition period. Hungary, Azerbaijan, Kazakhstan and Lithuania outperform their clusters by far, the latter being the best in the sample. All other non Baltic FSU countries, the Balkans and Slovenia score poorly.

A comparison of performance of productive efficiency is presented in Figure 28. The best performance is from the EU Border States. Here we find all the FSU clusters, save the Baltics, turning in weak performance with hardly a tendency to increase, with Albania facing a collapse in 1997. Looking at the lower panel and the 1997 within-cluster differences, we see that with the exception of Slovenia and Russia who score relatively well, the clusters again exhibit a tight fit. Slovenia is again the best performance of the entire sample.

Figure 29 illustrates the performance differences with respect to the macro-economy. Again clusters are adequately tight. Here we see that all the clusters have improved their performance over the transition period. Moreover, the Balkans, the Caucasus, Albania, and to a lesser extent the EU Border States all experienced troughs in their macro performance from which they then recovered. The Balkans experienced a second decline after the 6th year. The best country performers are both halves of Czechoslovakia and Azerbaijan. Note how Bulgaria is the odd man out in the Balkans, and so is Turkmenistan in Central Asia.

These various intermediate outcome variables can be aggregated into a single indicator of medium-term performance. This summary indicator is presented in Figure 30. All clusters, with the exception of the Caucasus and Albania, show trend improvement over the period, albeit from different starting points and with different growth. Albania's early gains are lost in 1996 and 1997 though. The Baltics and the EU Border States are the clear best performers. Looking at the within-cluster differences we see that the resulting clusters for 1997 are extremely tight, with the exception of the EU Border States, where Slovenia turns in the best performance.

Figure 26: Export sector (medium-term) performance trajectory over the transition period, and within-cluster for 1997. *Source:* Authors' calculations.

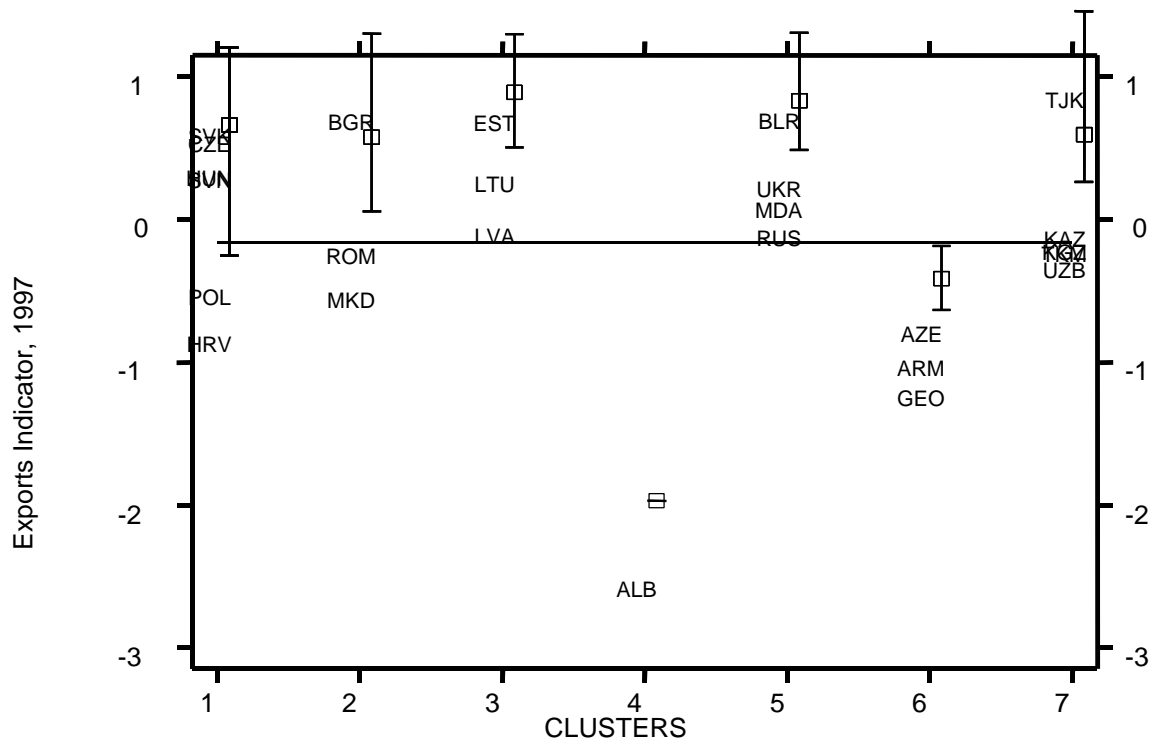
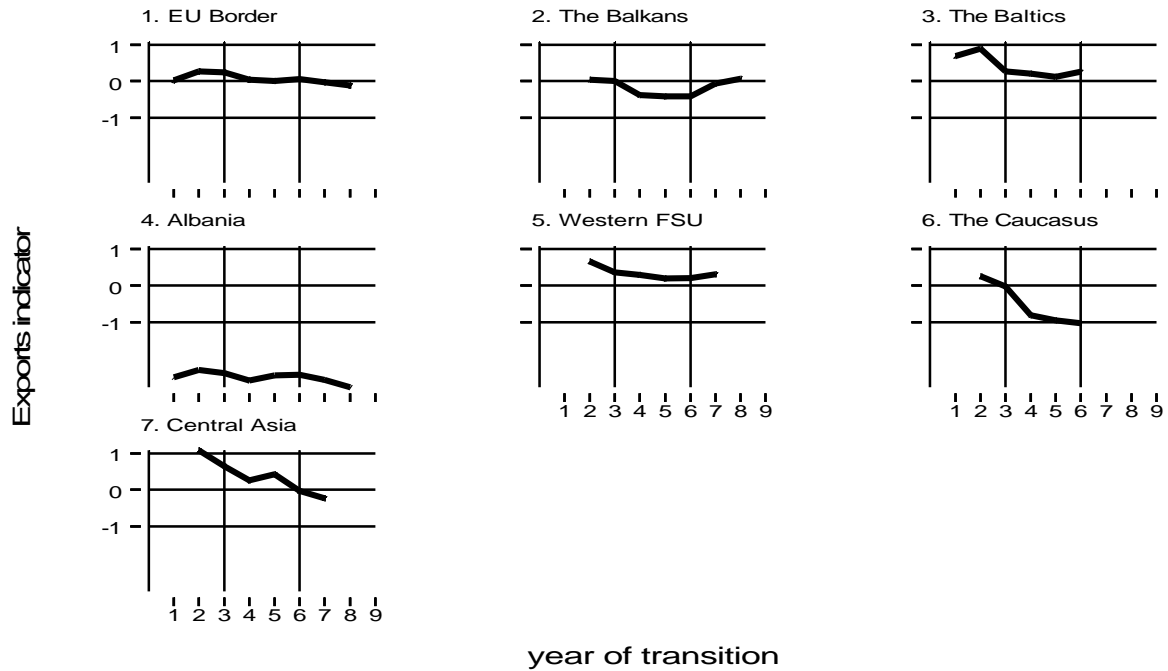


Figure 27: Foreign direct investment (medium-term) performance trajectory over the transition period, and within-cluster for 1998. *Source:* EBRD and authors' calculations.

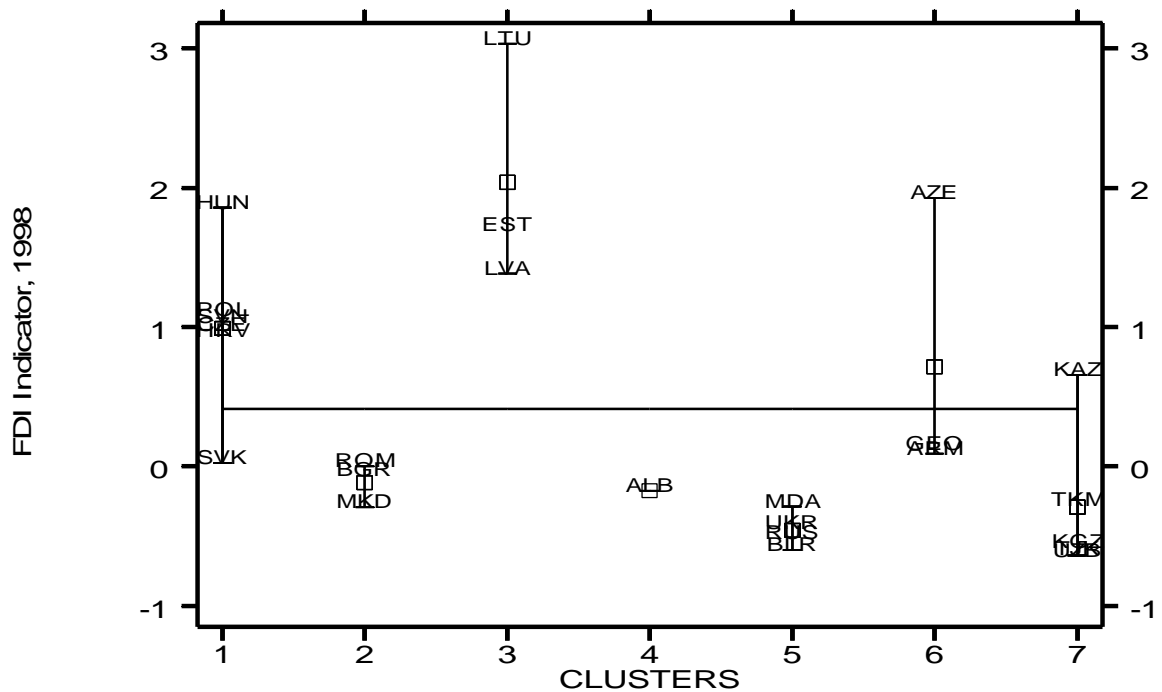
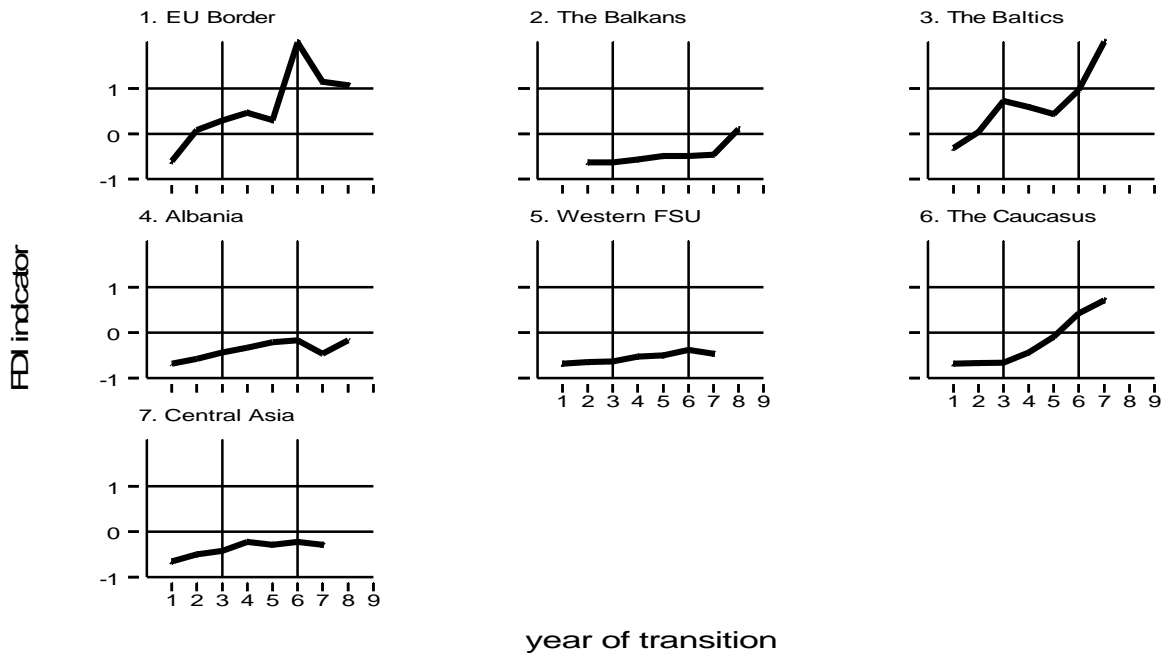


Figure 28: Productive efficiency performance (medium-term) trajectory over the transition period, and within-cluster for 1997. *Source:* Authors' calculations.

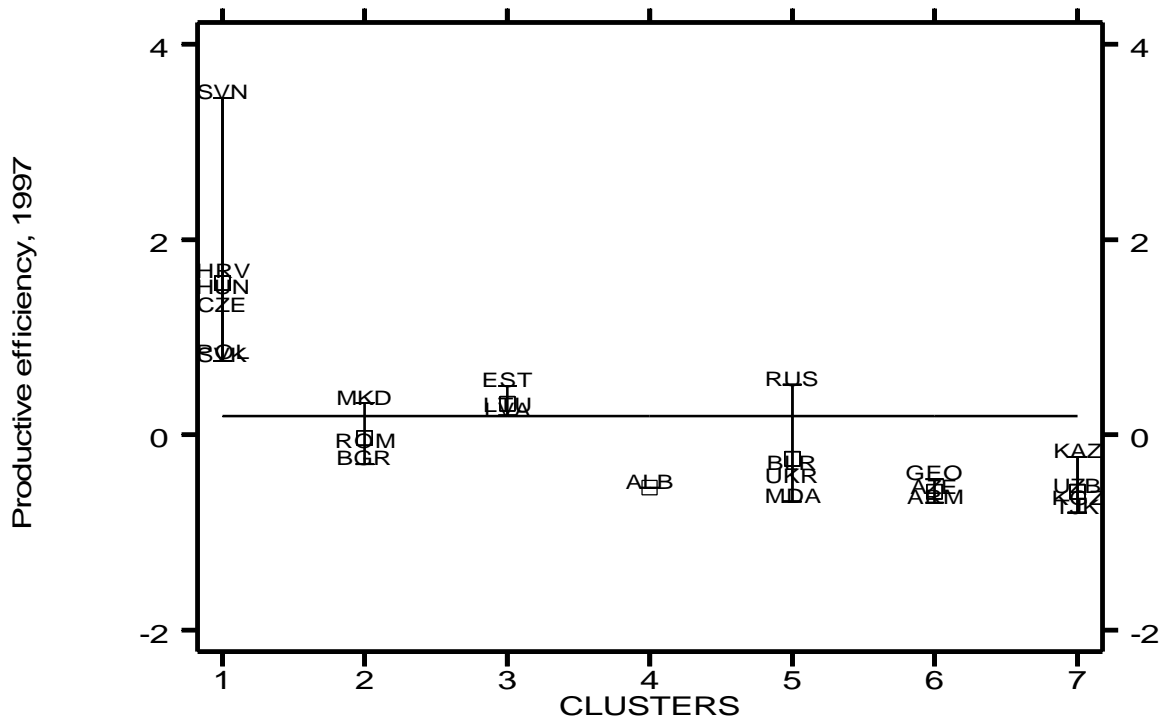
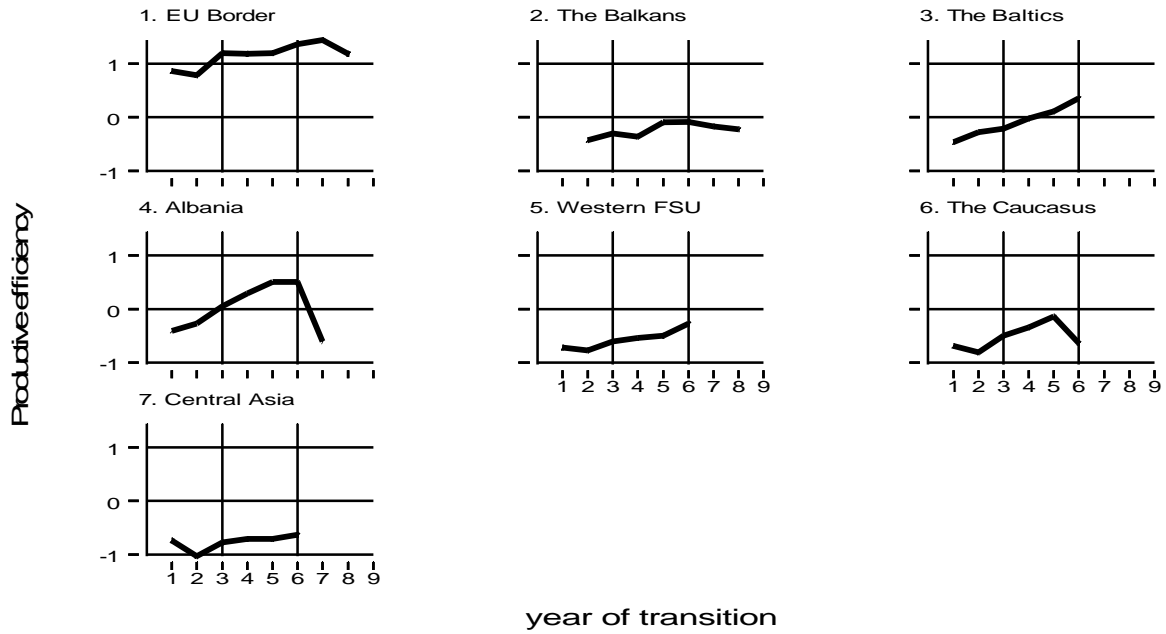


Figure 29: Macro-economy (medium-term) performance trajectory over the transition period, and within-cluster for 1998. *Source:* Authors' calculations.

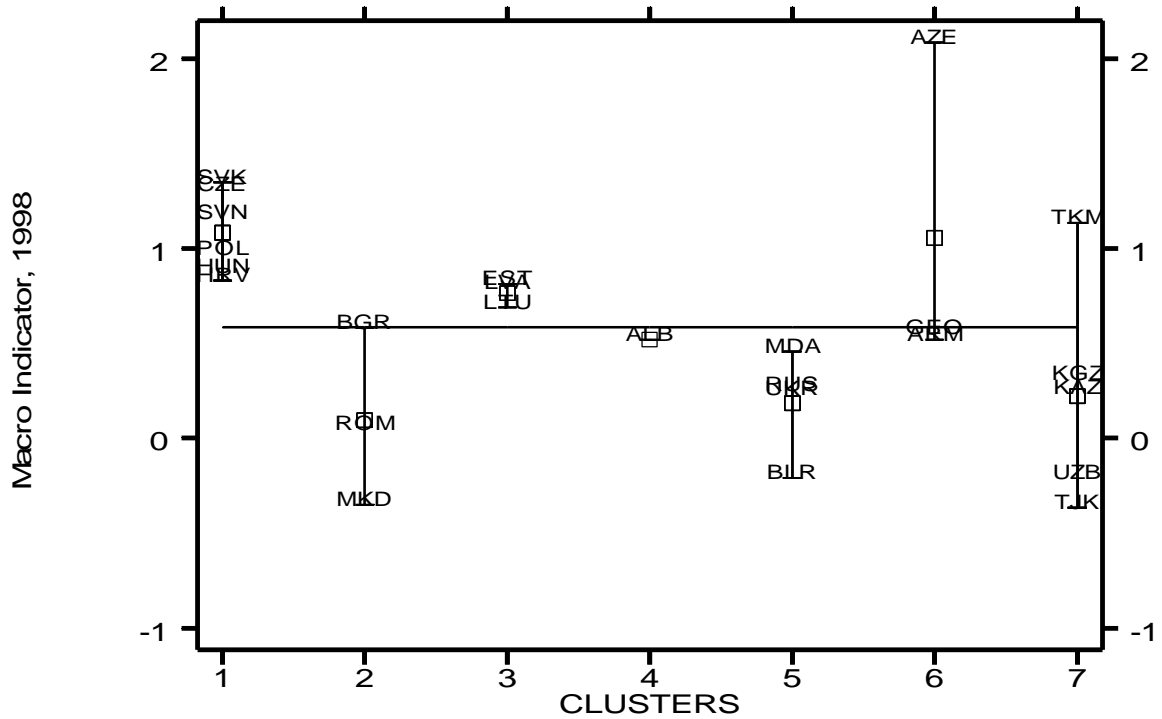
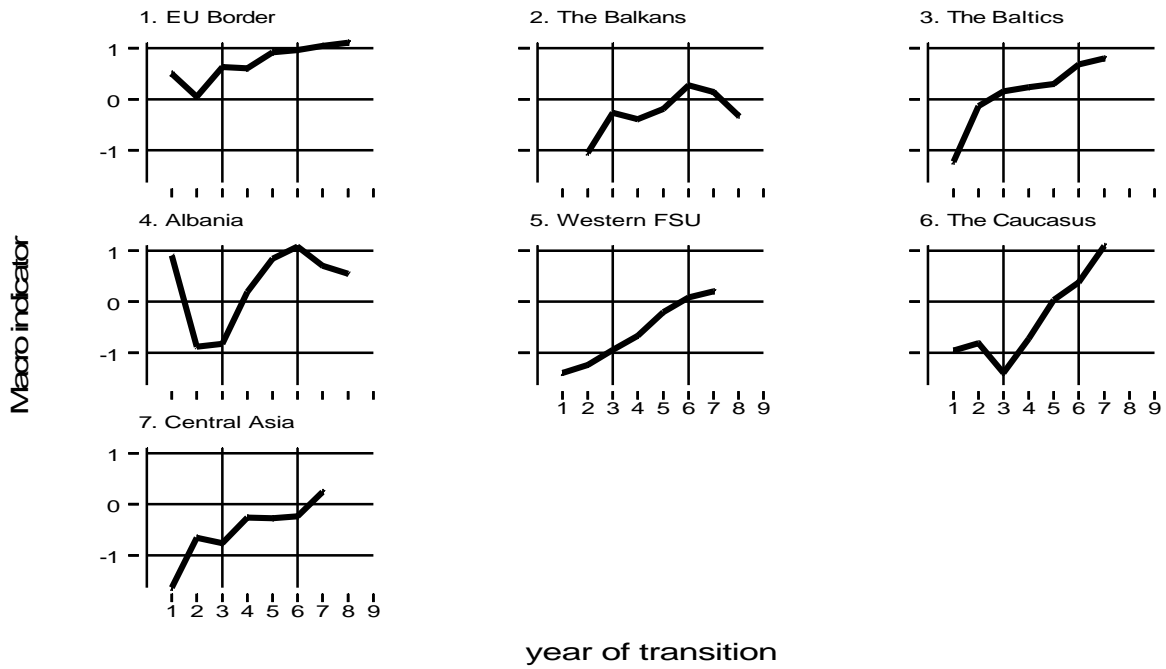
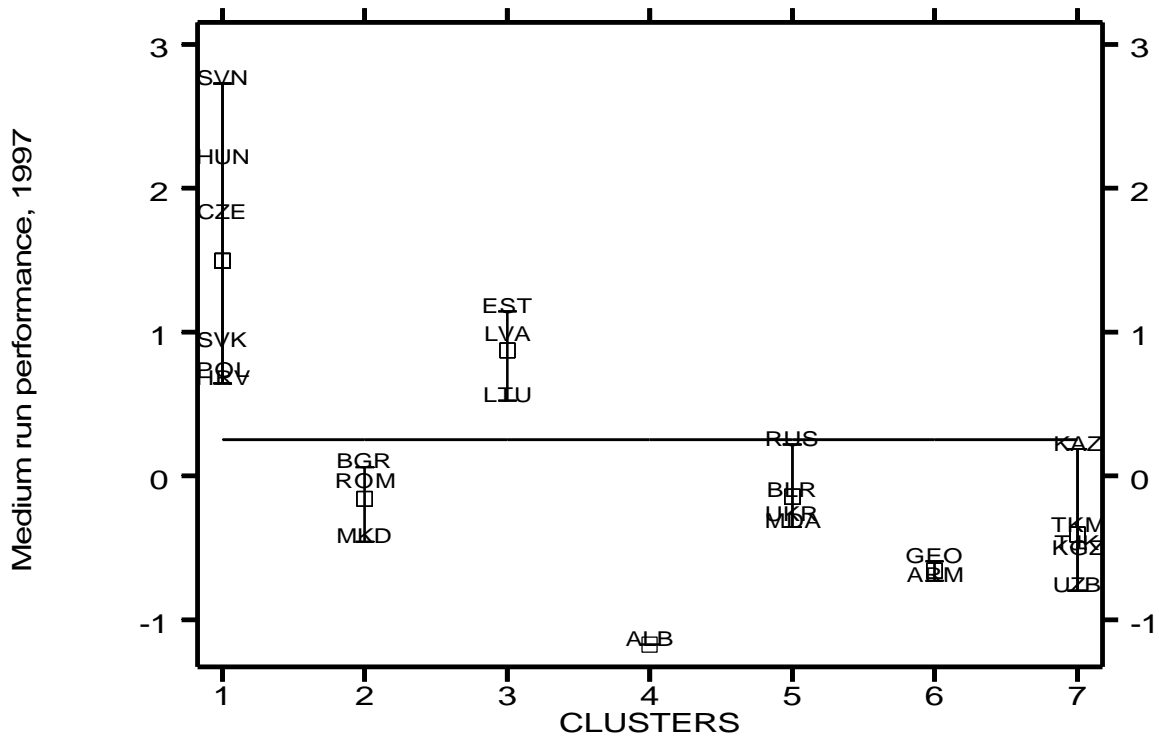
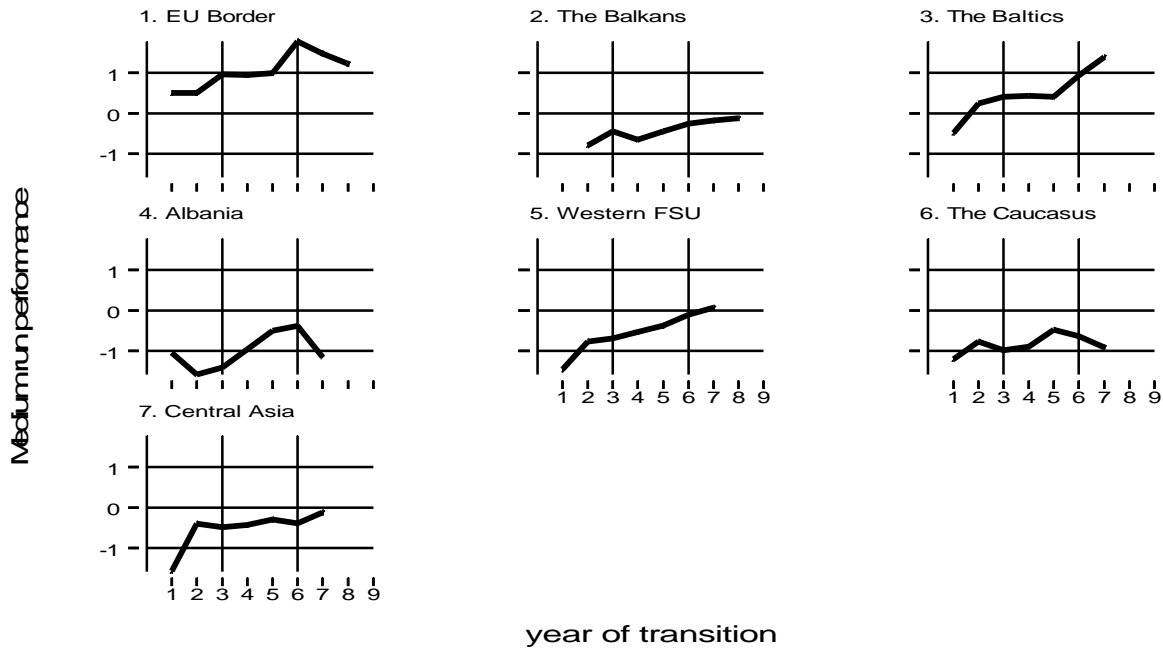


Figure 30: Aggregate medium-term performance indicator trajectory over the transition period, and within-cluster for 1997. *Source:* Authors' calculations.



6.4 Patterns of long-term performance

No study on patterns would be complete without a presentation of the GDP path. Thus, in Figure 31 we show the path of real GDP (as a percentage of the pre-transition, 1989 level) over the transition period by cluster. Here we see that all clusters go through 3 to 5 years of negative growth at the start of transition. The EU Border States, Baltics and the Caucasus appear to have reached positive rates of growth. The Western FSU, the Balkans and Central Asia seem to have climbed out of the period of deep negative growth and now have to concentrate on making growth positive.

GDP growth, however, is an admittedly narrow view of long-term performance. For this reason we develop the additional long-run performance indicator to help create a wider picture. As shown in Figure 32, our long-run performance indicator trajectories exhibit tight clustering and suggest a similar story to that of medium-term performance. Many clusters experience a “dip” in their performance, no doubt reflecting the short-term performance losses associated with the initial trauma of changing economic regimes at the start of transition. While the EU Border States end best, they also started in the most favorable position. The Baltics, on the other hand, start well below average but manage to turn in second-best long-term performance scores. Slovenia, as it did in the medium run, also has the best long-run performance of the sample.

Figure 31: Real GDP per capita as a percent of 1989 over the transition period, and within-cluster for 1998. *Source:* EBRD and authors' calculations.

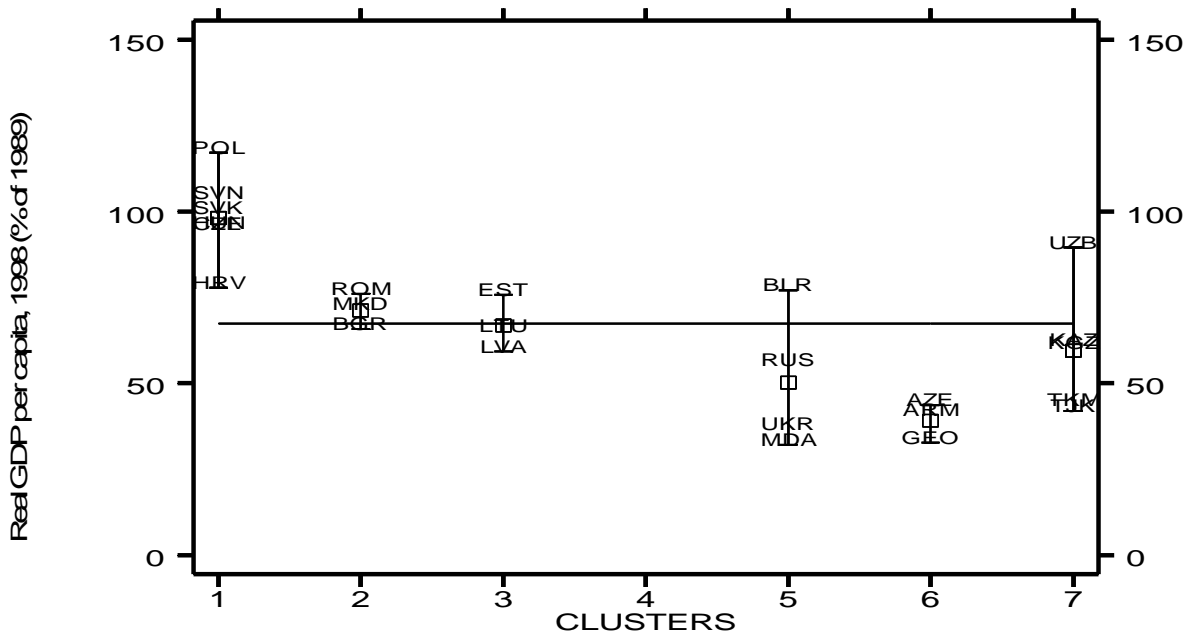
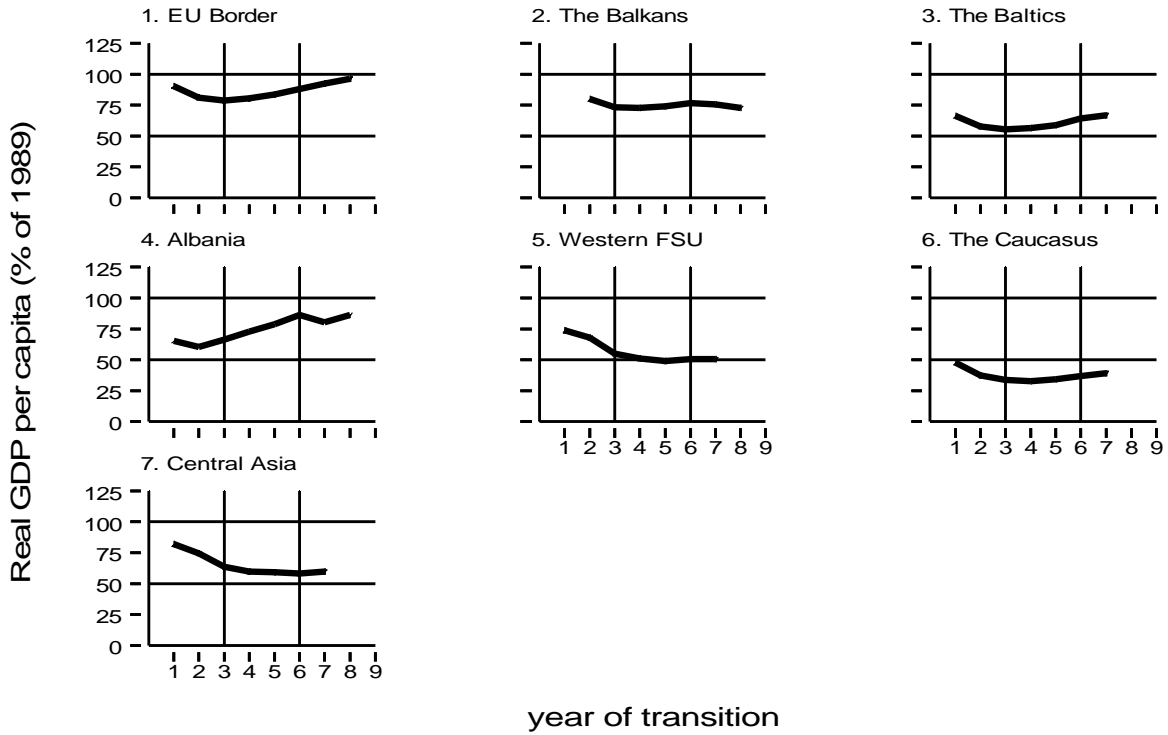
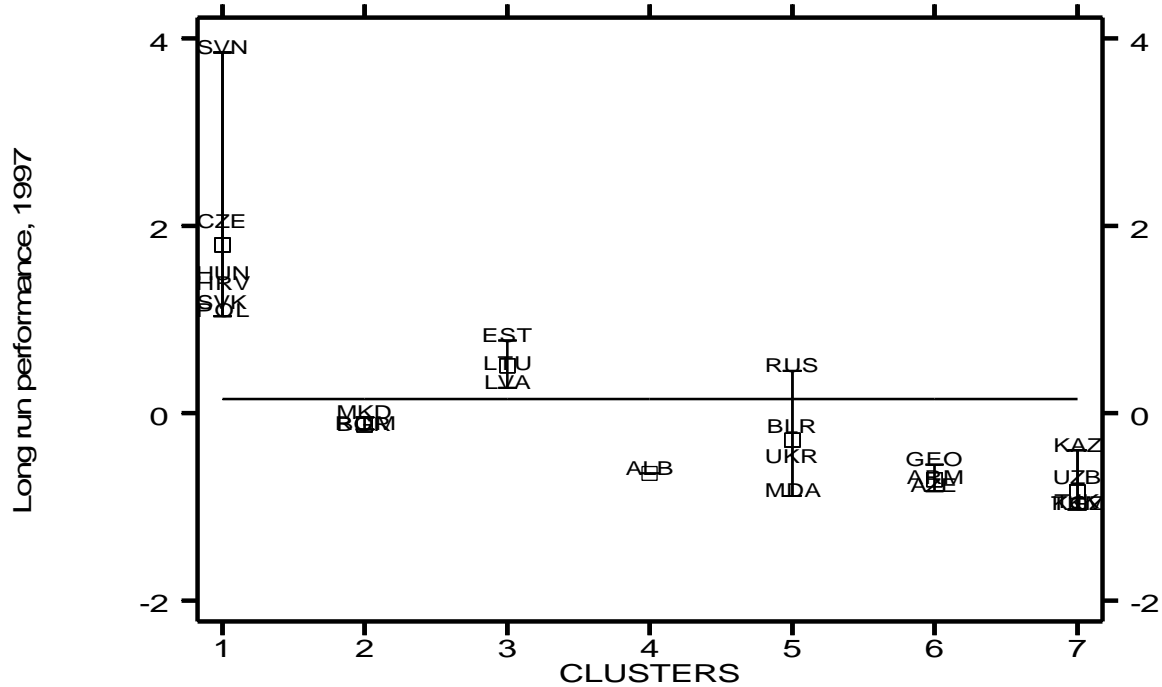
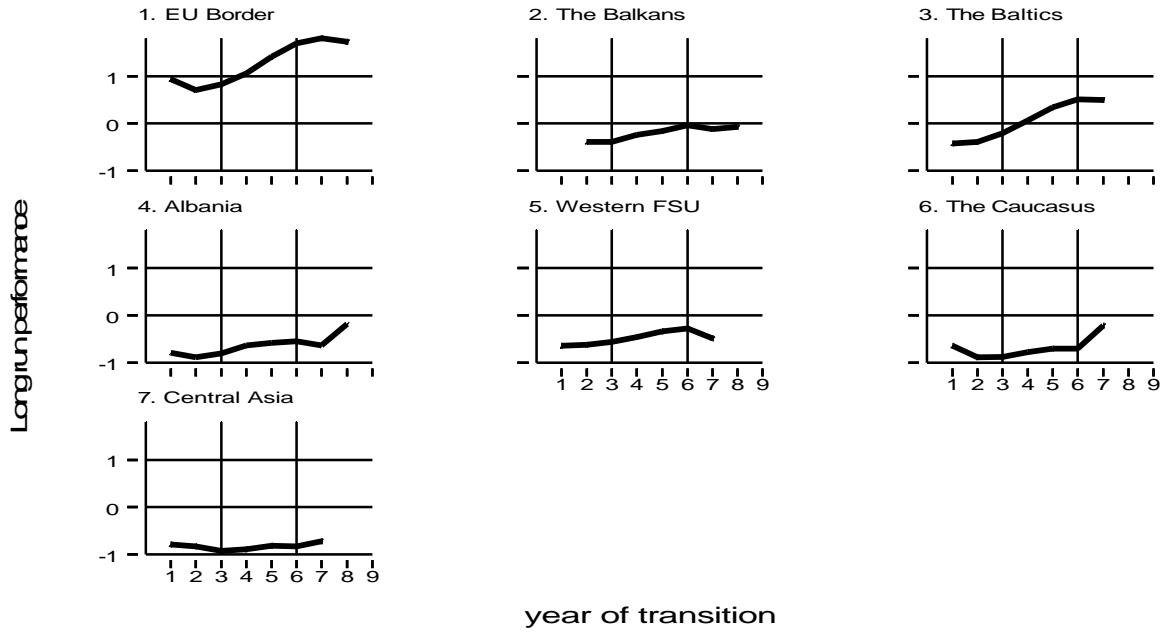


Figure 32: Aggregate long-term performance indicator trajectory over the transition period, and within-cluster for 1998. *Source:* authors' calculations.



Data sources for initial conditions

Table 9: Data sources for initial conditions.

<i>Source</i>	<i>Variables</i>
WDI – World development indicators, World Bank:	Resource balance, Domestic absorption, Gross domestic savings, Physicians, Domestic investment, Vehicles, Televisions, Telephone lines, Commercial energy use, Electricity consumption, Infant mortality, Life expectancy, Hospital beds, Private consumption, Paved roads, Birth rate, Population growth, Urbanization, Consumption, Public health expenditures, Fixed domestic investment, Share of services in GDP, GNP per capita 89,PPP adjusted, Working age population, Energy imports, Fertility rate, urban population growth, working age population, old population
De Melo, Denziger, Gelb and Tenev, Circumstance and Choice, World Bank, 1997	Natural resource abundance, Share of industry in GDP, Black market premium, Industrial overload, Trade, Share of agriculture in GDP, first principal component, second principal component, Income per capita, 1987-1990 repressed inflation, Period under central planning, economic freedom index
Human Development report statistics, UNDP	Education index, School participation, Human development index
National authorities & IMF staff	GDP Growth, 1990 inflation, Government expenditures
Growth file, Sachs/Amar, HIID	Distance to major ports, Landlocked population
Fischer, Sahay, Vegh, (1996)	Share of exports to CMEA countries
World Bank	% Muslims, % Christians, % Orthodox, Government revenues
Freedom House	Democratic rights index

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SYSTEMIC TRANSFORMATION IN TRANSITION ECONOMIES

Volume I (Annexes)

**Patterns and Determinants of Economic Reform in
Transition Economies: 1990-1998**

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Harvard Institute for International Development

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A1. Cluster means and standard deviations of initial conditions

Table 10: Cluster means (centroids) and within-cluster standard deviations of initial condition variables. *Sources:* see Table 9.

		Cluster	EU Border States	The Balkans	The Baltics	Albania	Western FSU	The Caucasus	Central Asia	Total
		Countries	Czech Rep, Croatia, Hungary, Poland, Slovakia, Slovenia	Bulgaria, Romania, Macedonia	Estonia, Latvia, Lithuania	Albania	Belarus, Moldova, Russia, Ukraine	Armenia, Azerbaijan, Georgia	Kazakhstan, Kyrgyz Rep., Tajikistan, Turkmen- istan, Uzbekistan	
Physical Geography	Distance of capital to major port (km)	Mean	1016.66	1760.00	1340.00	1640.00	1862.50	3320.67	5007.00	2379.48
		Std. Dev.	172.70	55.68	130.77		274.76	278.21	367.65	1519.88
	% of population within 100 km from	Mean	88.17	40.33	69.67	88.00	67.50	10.33	0.00	49.92
		Std. Dev.	11.70	24.66	18.88		41.32	17.90	0.00	40.02
	Natural resource index	Mean	0.17	0.33	0.00	0.00	0.75	1.00	1.00	0.52
		Std. Dev.	0.41	0.58	0.00		0.96	1.00	1.00	0.77
	Energy imports (% of commercial energy use),	Mean	36.64	32.18	*58.02	-0.82	55.10	58.28	3.78	*35.23
	Std. Dev.	25.69	34.21	13.37		48.48	37.95	16.51	34.48	
Resource balance (% of GDP), 89	Mean	*2.00	*0.49	*-4.30	-2.78		*-6.41	*-15.19	*-4.67	
	Std. Dev.	3.55	3.16	5.75			5.28	5.57	7.70	
Macro- economics Variables	Inflation (%), 90	Mean	220.27	49.20	14.00	15.00	4.62	7.13	3.78	63.40
		Std. Dev.	273.38	62.32	7.95		0.67	3.55	0.70	155.54
	Total consumption (% of GDP), 90	Mean	*71.27	77.91	71.25	79.02	72.66	*69.63	*84.71	*75.25
		Std. Dev.	3.59	1.35	8.79		3.06	7.71	9.71	7.62
	Average growth 85-89 (%)	Mean	1.23	0.70	1.98	3.60	4.12	1.97	4.06	2.47
		Std. Dev.	1.15	1.80	1.42		1.58	1.02	1.32	1.81
Domestic absorption (% of GDP), 89	Mean	*97.99	*99.51	104.31	102.78		*106.41	*115.19	*104.67	
	Std. Dev.	3.55	3.15	5.74			5.28	5.57	7.70	
Gross domestic savings (% of GDP), 89	Mean	*32.92	*30.44	29.87	28.94		*31.67	*17.51	*28.19	
	Std. Dev.	6.56	1.32	7.01			8.99	6.30	8.14	

Table 10 (continued)

			EU Border States	The Balkans	The Baltics	Albania	Western FSU	The Caucasus	Central Asia	Total
Macro- economics Variables (continued)	Government Expenditures (% of	Mean	*47.33	*52.30		62.10			*37.77	*46.93
		Std. Dev.	6.03	19.23					6.12	10.86
	Black market premium (%), 90	Mean	124.62	558.67	1828.00	434.00	1828.00	1828.00	1828.00	1211.11
		Std. Dev.	105.49	470.44	0.00		0.00	0.00	0.00	795.05
	Repressed inflation 87-90	Mean	2.62	15.60	25.70	4.30	25.70	25.70	25.70	18.09
		Std. Dev.	10.88	3.17	0.00		0.00	0.00	0.00	11.41
	Share of services in GDP, 90	Mean	0.44	0.34	0.33	0.37	0.33	0.34	0.35	0.36
	Std. Dev.	0.09	0.10	0.05		0.04	0.01	0.05	0.07	
Government consumption (% of	Mean	*17.92	12.55	14.55	18.52	21.32	*14.27	*18.70	*17.15	
	Std. Dev.	4.99	6.06	5.55		2.99	5.71	8.74	5.84	
Government revenues (% of GDP), 89	Mean	46.83	49.00	48.33	48.00	35.00	36.66	37.40	42.32	
	Std. Dev.	18.32	12.12	4.72	0.00	6.48	13.61	3.78	11.90	
Demographics and Health	Fertility rate (births per women), 89	Mean	1.82	2.06	2.08		2.13	2.51	4.10	*2.50
		Std. Dev.	0.22	0.15	0.12		0.25	0.35	0.88	0.96
	Life expectancy at birth, 89	Mean	71.29	71.17	70.57	72.48	70.04	71.26	67.73	70.32
		Std. Dev.	1.06	1.44	0.80		1.27	0.92	1.56	1.79
	Urban population (% of total population), 89	Mean	57.98	58.88	70.19	35.52	63.35	59.05	42.72	56.59
		Std. Dev.	5.53	6.60	1.88		11.43	7.20	9.33	11.69
	Urban population growth (%), 89	Mean	0.64	0.33	1.34	3.40	1.61	1.28	2.13	1.33
		Std. Dev.	0.40	0.91	0.66		0.81	0.17	0.34	0.90
	Infant mortality rate (per 1,000), 89	Mean	12.60	26.00	13.87	30.80	*14.2	22.07	38.74	*22.02
		Std. Dev.	3.24	11.18	0.85		3.17	3.60	10.99	11.93
	Labor force (% of total population), 90	Mean	0.49	0.47	0.53	0.48	0.51	0.46	0.41	0.48
		Std. Dev.	0.03	0.03	0.02		0.02	0.04	0.04	0.05
Working age population (% of total population),	Mean	0.66	0.66	0.66	0.62	0.66	0.64	0.57	0.64	
	Std. Dev.	0.02	0.00	0.00		0.01	0.02	0.04	0.04	
Old population (% of total population), 90	Mean	0.11	0.10	0.12	0.05	0.10	0.07	0.04	0.09	
	Std. Dev.	0.01	0.03	0.01		0.02	0.02	0.01	0.03	
Population growth, 89	Mean	0.08	-0.40	0.75	2.89	0.60	0.84	2.24	0.82	
	Std. Dev.	0.29	0.79	0.23		0.15	0.30	0.77	1.05	
Public Health expenditures (% of	Mean	6.28	4.95	2.56	3.35	*2.70	*2.97	4.18	*4.28	
	Std. Dev.	1.84	2.67	0.49		0.24	0.05	0.64	1.90	

Table 10 (continued)

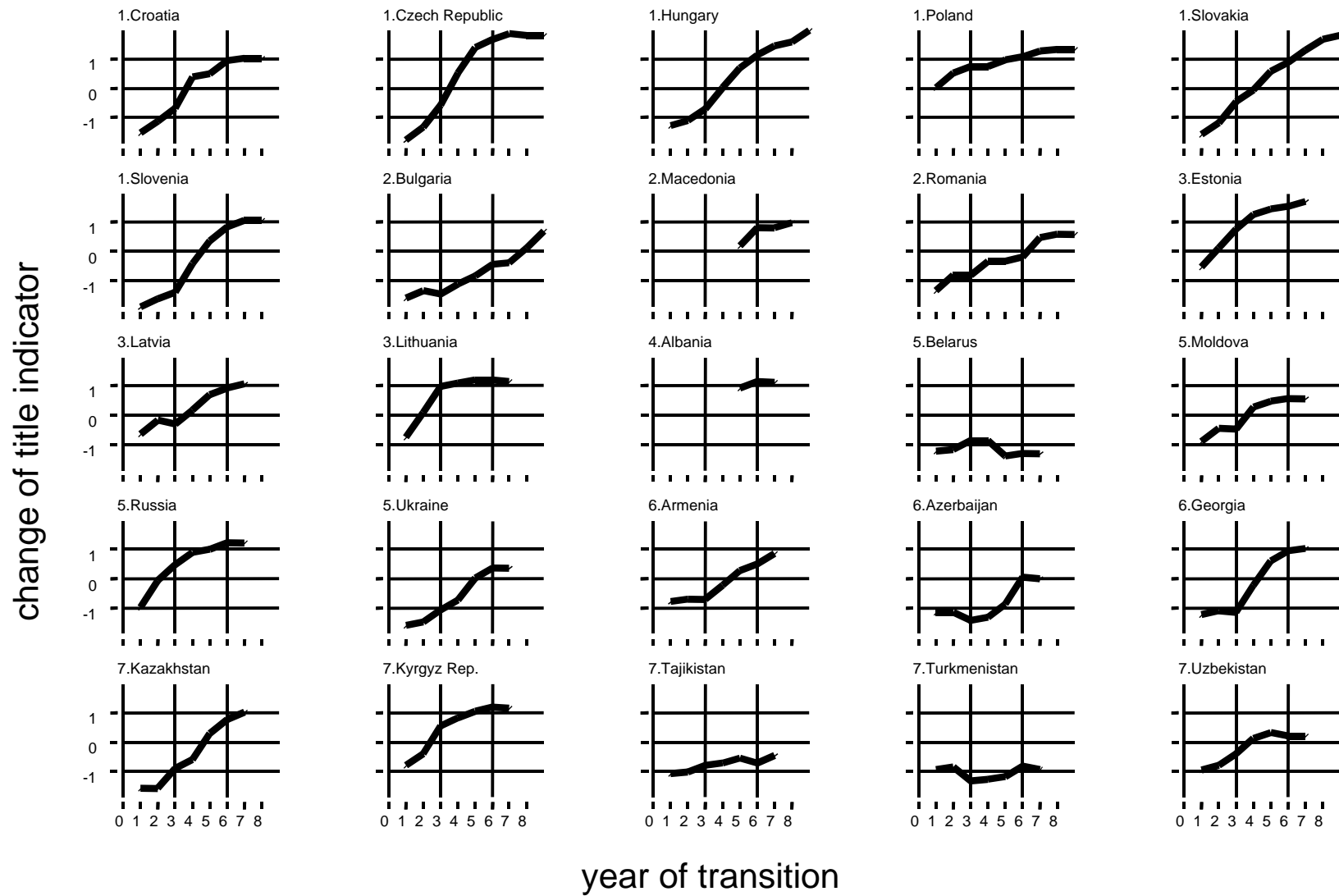
			EU Border States	The Balkans	The Baltics	Albania	Western FSU	The Caucasus	Central Asia	Total
Trade and Trade Orientation	Trade (% of GDP), 90	Mean	*57.33	55.77	*106.95	38.10	70.83	*83.5		70.27
		Std. Dev.	6.23	13.49	14.50		29.84	3.11		23.23
	Exports to CMEA (% of GDP), 90	Mean	9.35	8.07	30.73	2.30	27.95	24.50	23.76	19.16
		Std. Dev.	4.20	6.37	3.29		11.49	7.53	5.94	11.13
Infrastructure	Electricity Consumption (kwh per capita), 89	Mean	3827.84	*3536.43	3664.16	967.17	4000.78	2728.88	3132.15	*3410
		Std. Dev.	1007.46	1038.58	575.07		1544.22	81.52	1561.37	1218.48
	Hospital beds (per 1,000), 90	Mean	7.62	8.45	12.68	4.03	13.07	9.41	12.03	10.15
		Std. Dev.	1.43	1.92	1.24		0.10	0.71	1.10	2.77
	Paved roads (%), 90	Mean	77.12	*75.25	49.00		*85.00	*96.5	73.84	*75.11
Std. Dev.		19.89	23.12	34.29		9.92	3.82	12.69	21.22	
Telephone lines (per 1000), 89	Mean	143.08	163.00	215.00	12.20	134.50	114.60	65.26	128.51	
	Std. Dev.	47.24	70.87	15.13		20.42	37.26	13.18	60.53	
Industrial- ization	Share of Industry in GDP, 90	Mean	0.47	0.54	0.45	0.37	0.45	0.47	0.35	0.44
		Std. Dev.	0.11	0.09	0.01		0.05	0.07	0.03	0.09
	Industrial overhang, 90	Mean	0.10	0.18	0.10	0.03	0.06	0.12	-0.01	0.08
		Std. Dev.	0.10	0.08	0.00		0.04	0.07	0.04	0.08
	Commercial energy use (kg oil equivalent per Share of Agriculture in GDP, 90	Mean	3025.44	2359.07	*1981.81	759.13	4715.21	2425.61	6289.28	*3647
Std. Dev.		1385.19	1549.53	2381.71		2764.98	1614.88	9030.24	4371.49	
	Mean	0.09	0.12	0.22	0.26	0.23	0.18	0.30	0.19	
	Std. Dev.	0.04	0.02	0.04		0.07	0.06	0.02	0.09	
Wealth	Income per capita, 89	Mean	7255.17	3954.67	7973.33	1400.00	6270.00	5246.67	3658.00	5593
		Std. Dev.	1517.58	906.08	1345.52		1361.15	543.54	998.13	2111.82
	GNP per capita, PPP adjusted (current	Mean	*6827.5	*4665	5546.67		5105.00	5053.33	3490.00	*5062
		Std. Dev.	1965.41	586.90	162.58		1246.23	744.13	1021.98	1545.67
	Vehicles (per 1,000), 90	Mean	217.19	119.58	168.32	11.36	*58.72	54.74	*40.58	*120.02
		Std. Dev.	51.71	45.89	38.52		5.16	51.36	35.50	83.62
Television sets (per 1,000), 90	Mean	*309.24	*224.55	353.36	85.13	316.20	203.33	214.59	*260.46	
	Std. Dev.	102.18	36.35	12.31		42.76	6.77	41.99	81.92	
Private consumption (% of GDP), 89	Mean	*53.66	*60.18	54.88	62.25		*52.89	*65.54	*57.58	
	Std. Dev.	5.33	1.88	2.58			13.78	10.96	8.87	

Table 10 (continued)

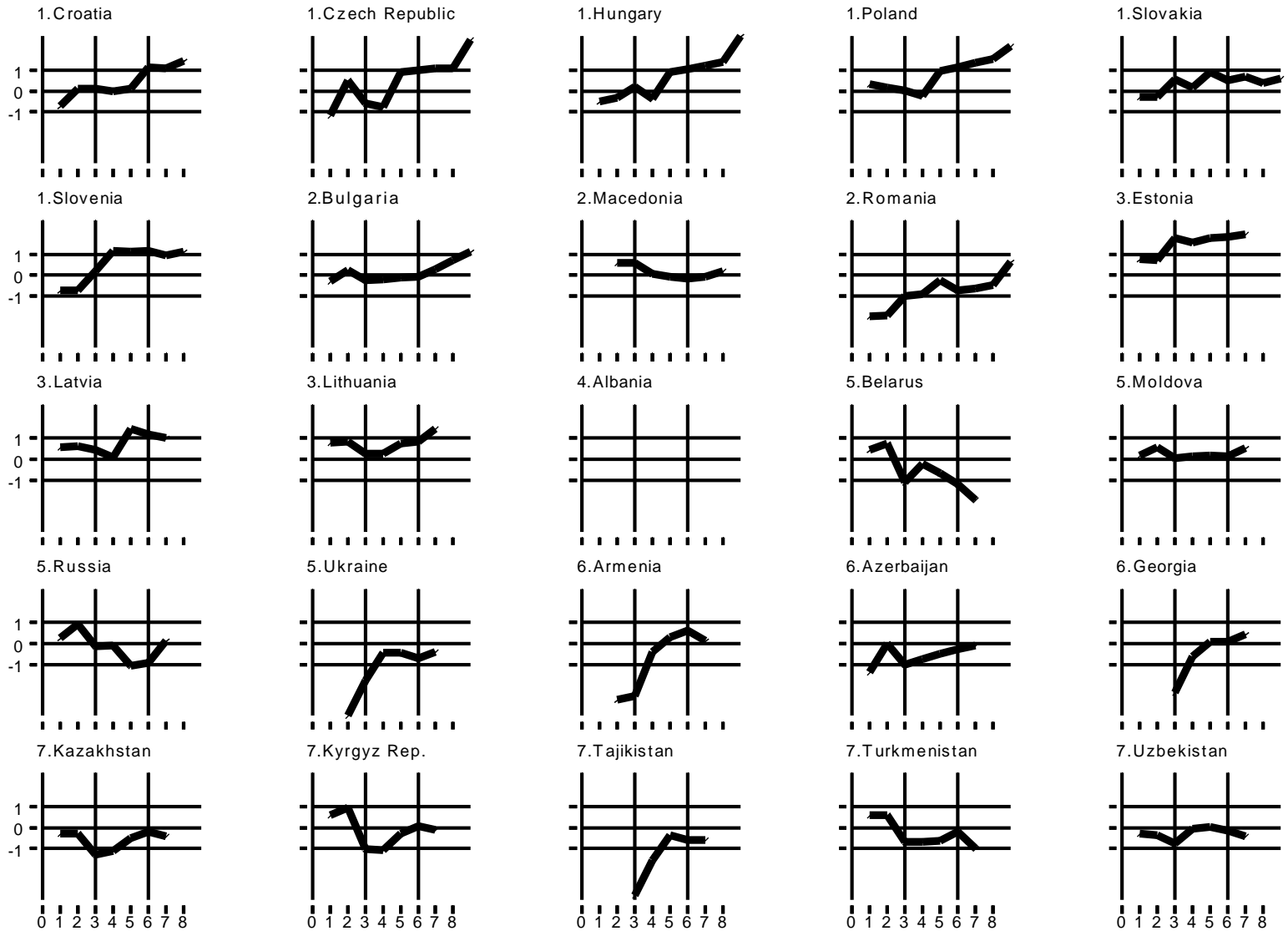
			EU Border States	The Balkans	The Baltics	Albania	Western FSU	The Caucasus	Central Asia	Total
Human Capital	School enrolment ratio, 95	Mean	71.50	62.67	69.67	59.00	75.25	73.00	75.60	71.32
		Std. Dev.	4.59	3.06	2.52		5.74	4.58	8.23	6.76
	Education index, 98	Mean	0.89	0.85	0.89	0.76	0.91	0.90	0.91	0.89
		Std. Dev.	0.02	0.02	0.01		0.02	0.02	0.03	0.04
Human development index, 95	Mean	0.85	0.77	0.74	0.66	0.71	0.64	0.64	0.73	
	Std. Dev.	0.05	0.02	0.03		0.08	0.03	0.04	0.09	
Physicians (per 1,000), 89	Mean		*2.47	*4.7		4.29	4.61	3.58	*3.88	
	Std. Dev.		1.00	0.17		0.33	1.05	0.44	0.88	
Market Memory	Years under central planning	Mean	43.17	44.00	51.00	47.00	67.75	70.33	71.00	57.12
		Std. Dev.	2.23	2.65	0.00		11.21	0.58	0.00	13.31
	Economic freedom index, 89	Mean	24.33	18.66	3.00	0.00	3.00	3.00	3.00	9.88
		Std. Dev.	20.21	22.05	0.00	0.00	0.00	0.00	0.00	14.87
Democratic rights index, 89	Mean	39.00	14.00	25.00	0.00	25.00	25.00	25.00	26.04	
	Std. Dev.	18.48	24.28	0.00	0.00	0.00	0.00	0.00	14.46	
Physical Capital	Gross domestic investment (% of GDP),	Mean	*30.91	*29.95	34.17	31.72	*30.65	*38.08	*32.7	*32.56
		Std. Dev.	5.59	4.47	1.51		4.51	14.26	3.32	5.29
	Gross domestic fixed investment (% of GDP),	Mean	*22.32	19.23	25.17		21.60	*34.00		*23.84
	Std. Dev.	6.71	2.36	3.13		5.84	14.63		7.00	
Culture	Muslims (% of population)	Mean	0.45	13.97	0.00	80.00	2.83	34.80	75.40	24.69
		Std. Dev.	0.70	14.74	0.01		5.65	51.05	17.47	35.82
	Christians (% of population)	Mean	71.85	4.37	71.00	7.00	3.85	0.33	1.00	27.42
		Std. Dev.	14.30	5.49	17.69		6.80	0.58	2.24	34.96
Orthodox (% of population)	Mean	27.70	81.67	29.00	13.00	93.33	64.87	23.60	47.88	
	Std. Dev.	14.39	11.49	17.69		7.73	50.82	15.47	34.43	
de Melo et.al. principal components	First Principal Component	Mean	-1.27	-0.76	0.44	-1.12	0.81	0.88	1.11	0.07
		Std. Dev.	0.15	0.20	0.10		0.35	0.11	0.11	1.02
	Second Principal Component	Mean	0.62	0.31	1.10	-1.15	0.31	0.44	-0.73	0.23
		Std. Dev.	0.50	0.24	0.17		0.46	0.49	0.28	0.73

* representst a missing country in the cluster/sample, respectively. If half or more of the countries in a cluster are mising, the cluster was excluded.

A2. Country-level progress-in-privatization paths

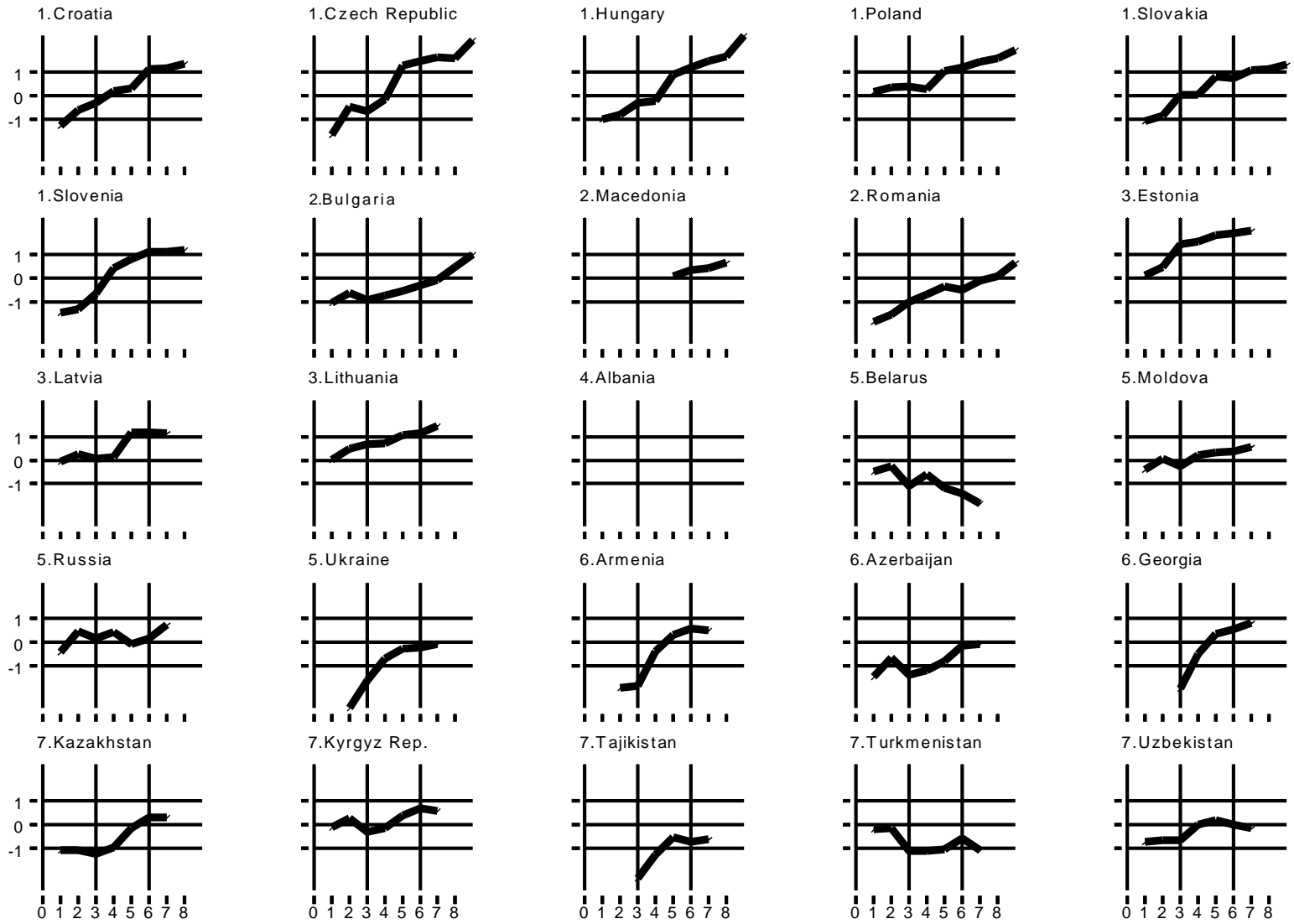


OBCA indicator



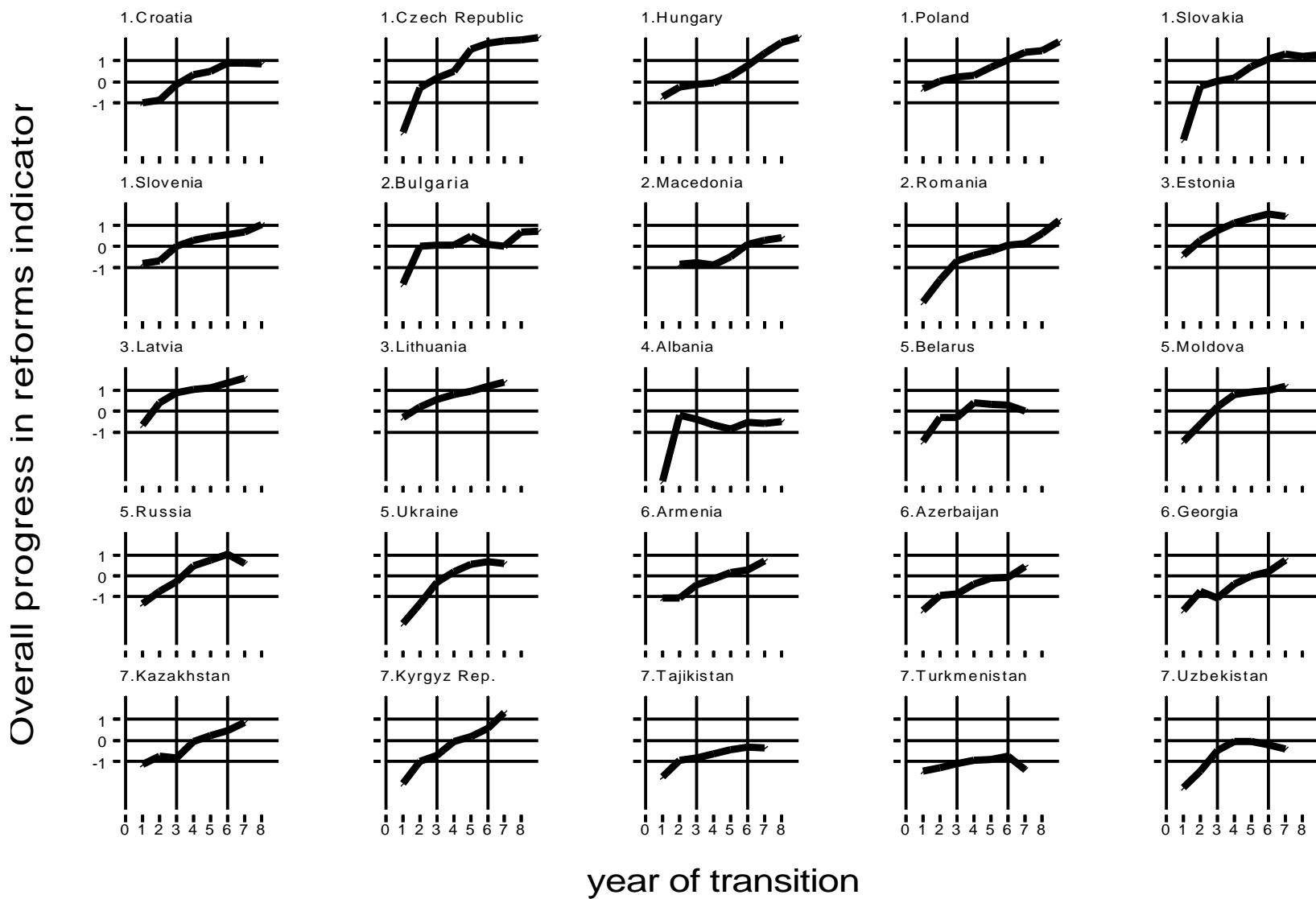
year of transition

Deep privatization indicator

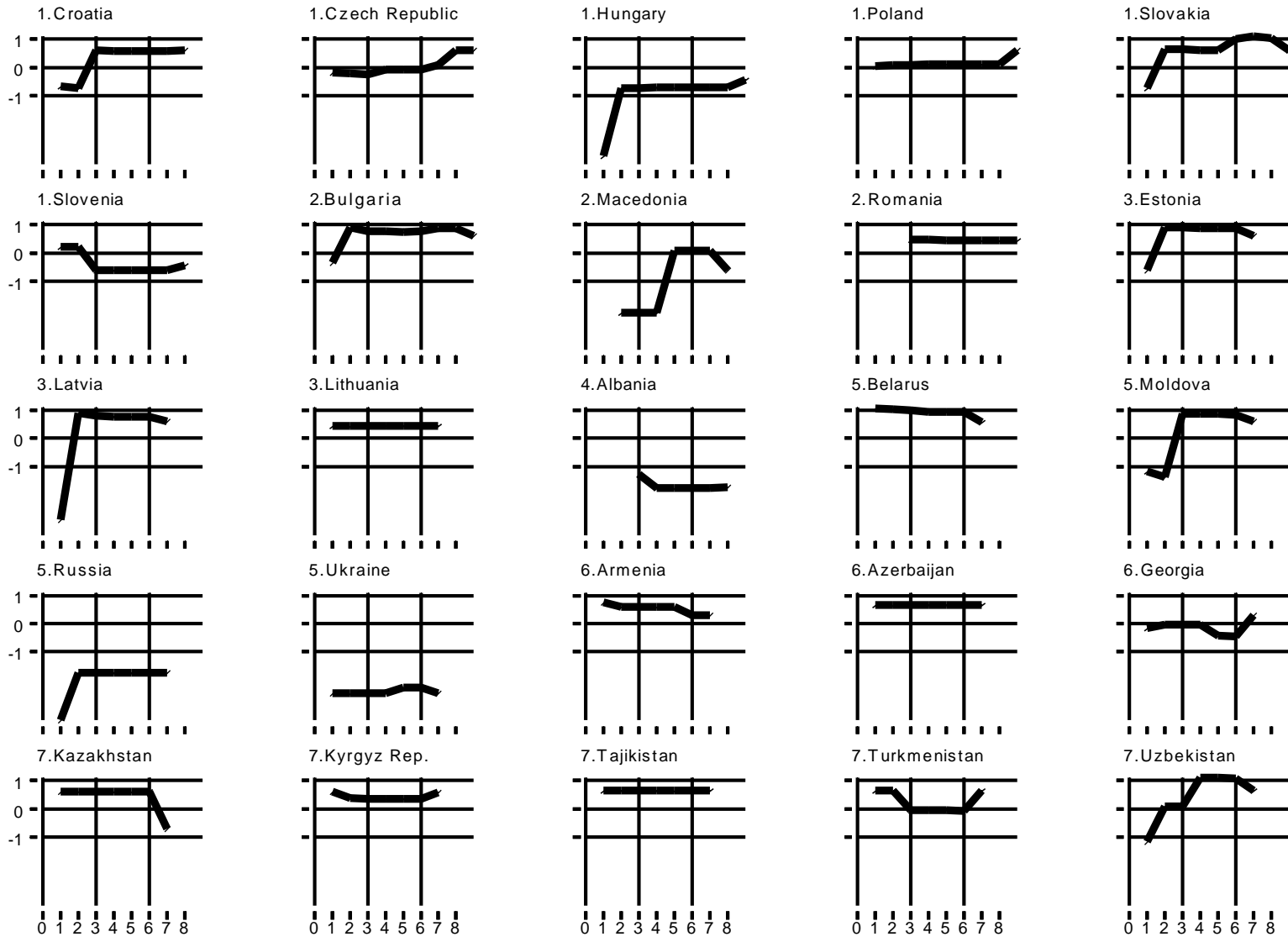


year of transition

A3. Country-level progress-in-transition-policy paths

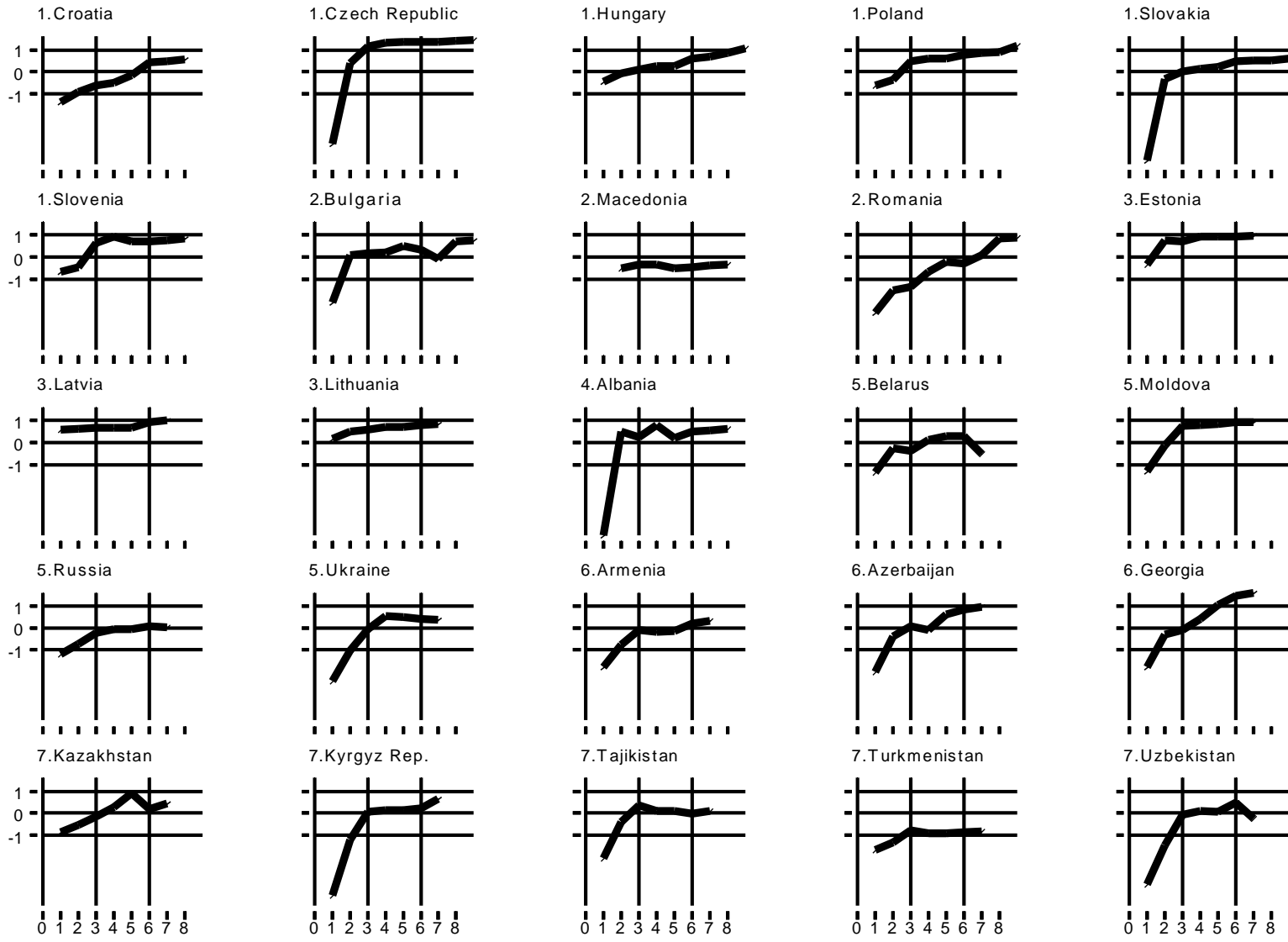


Social safety net indicator



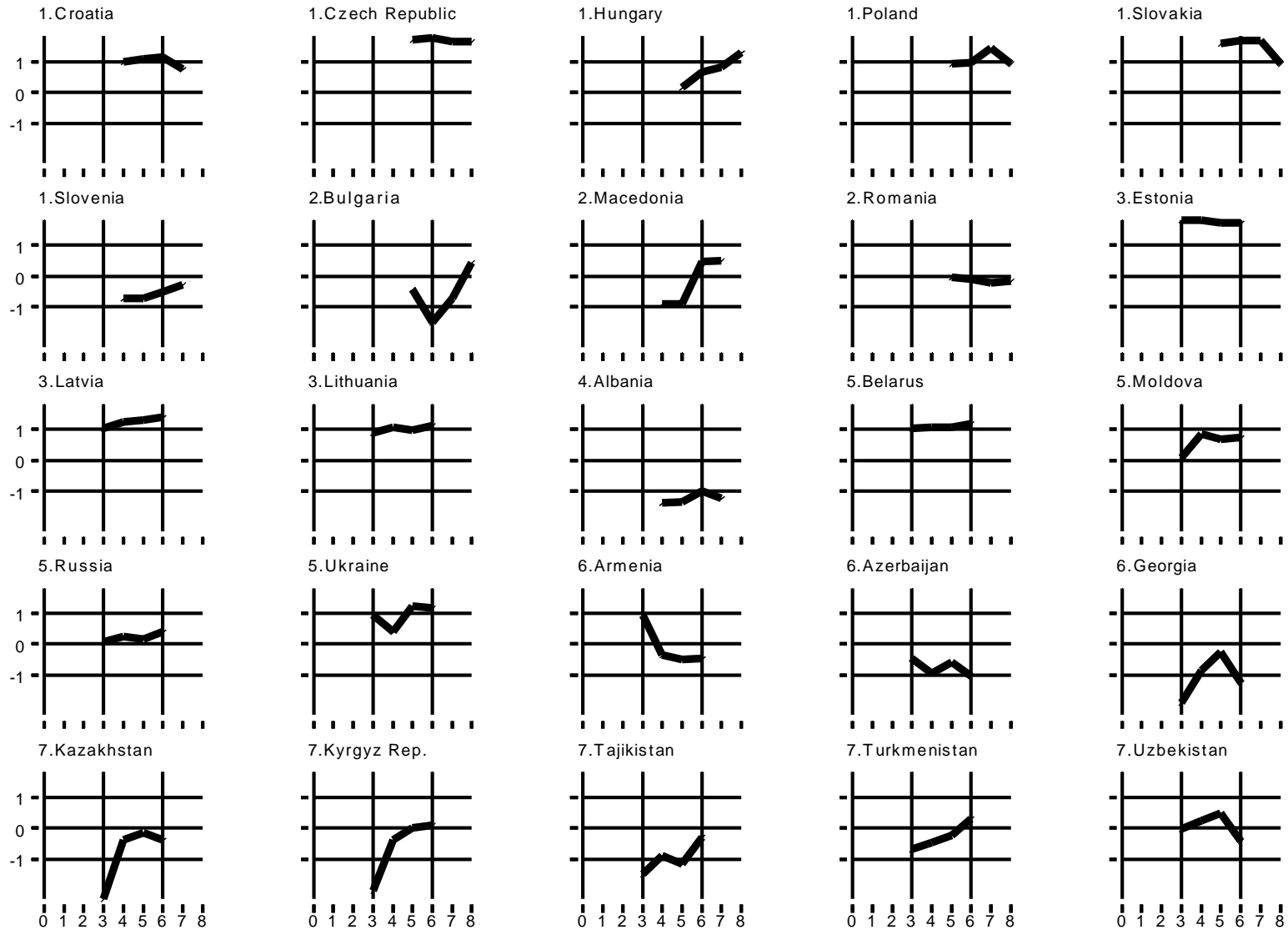
year of transition

Price/wage liberalization & competition



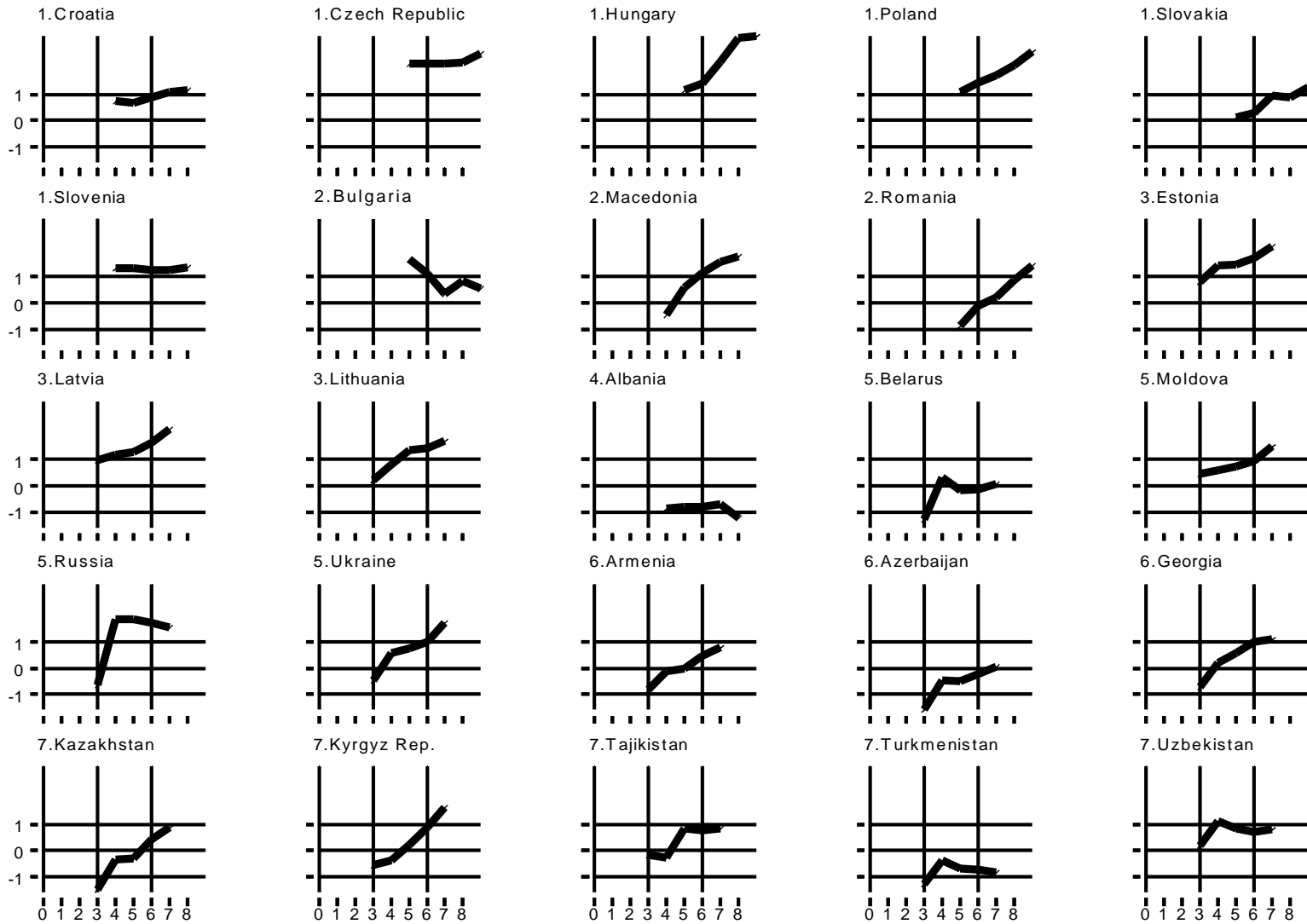
year of transition

Taxation indicator



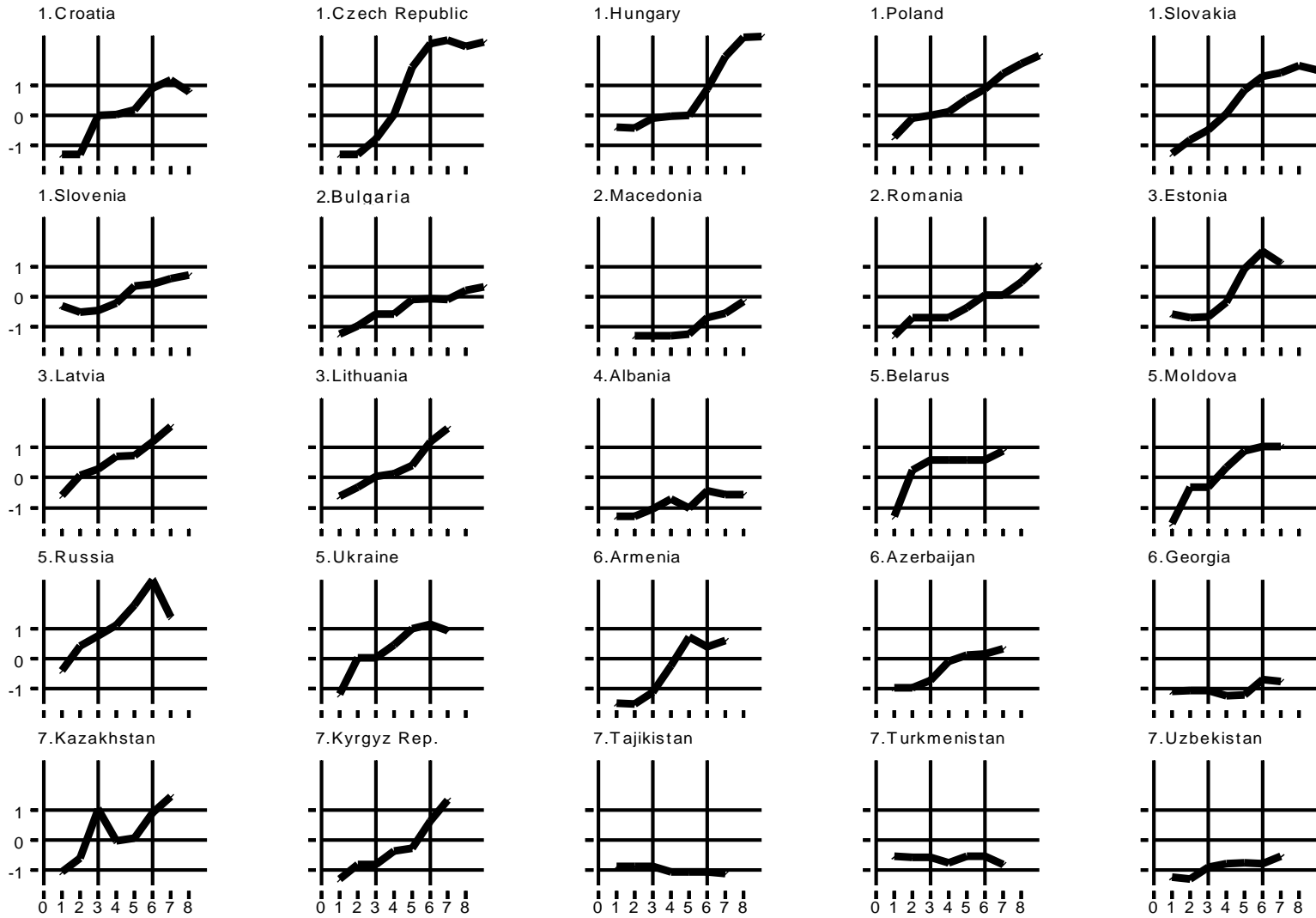
year of transition

Banking sector indicator



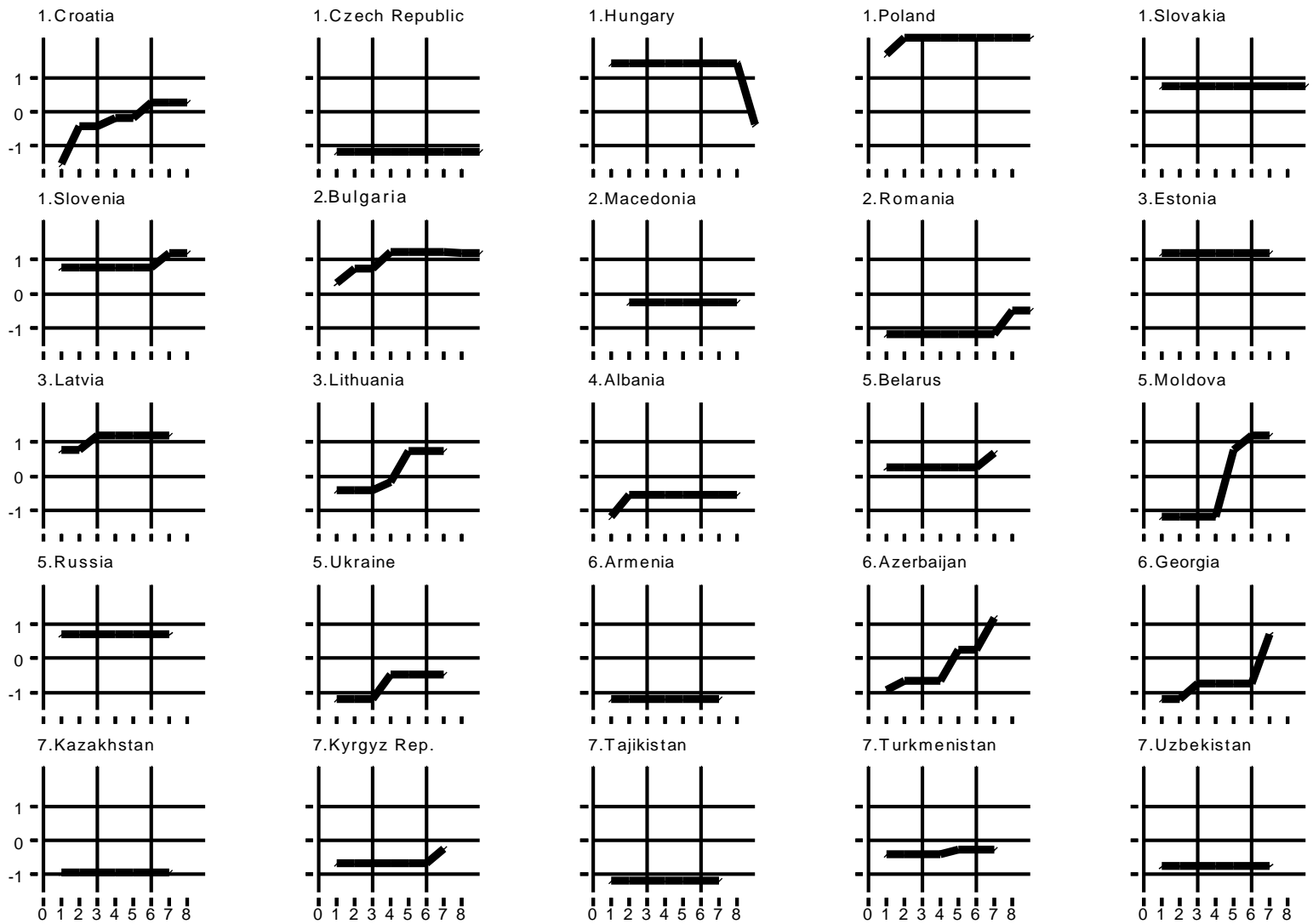
year of transition

Capital markets indicator



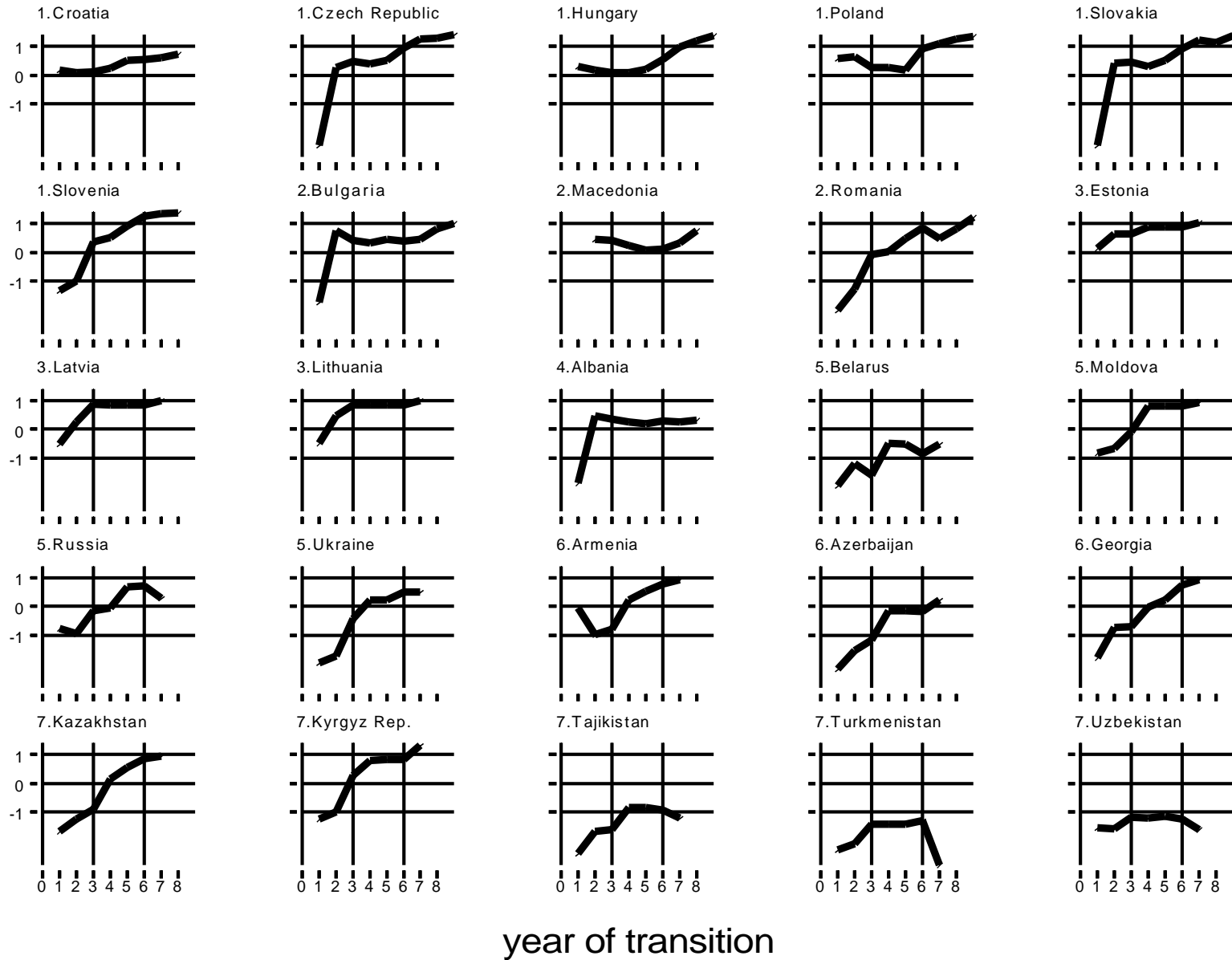
year of transition

Land privatization indicator

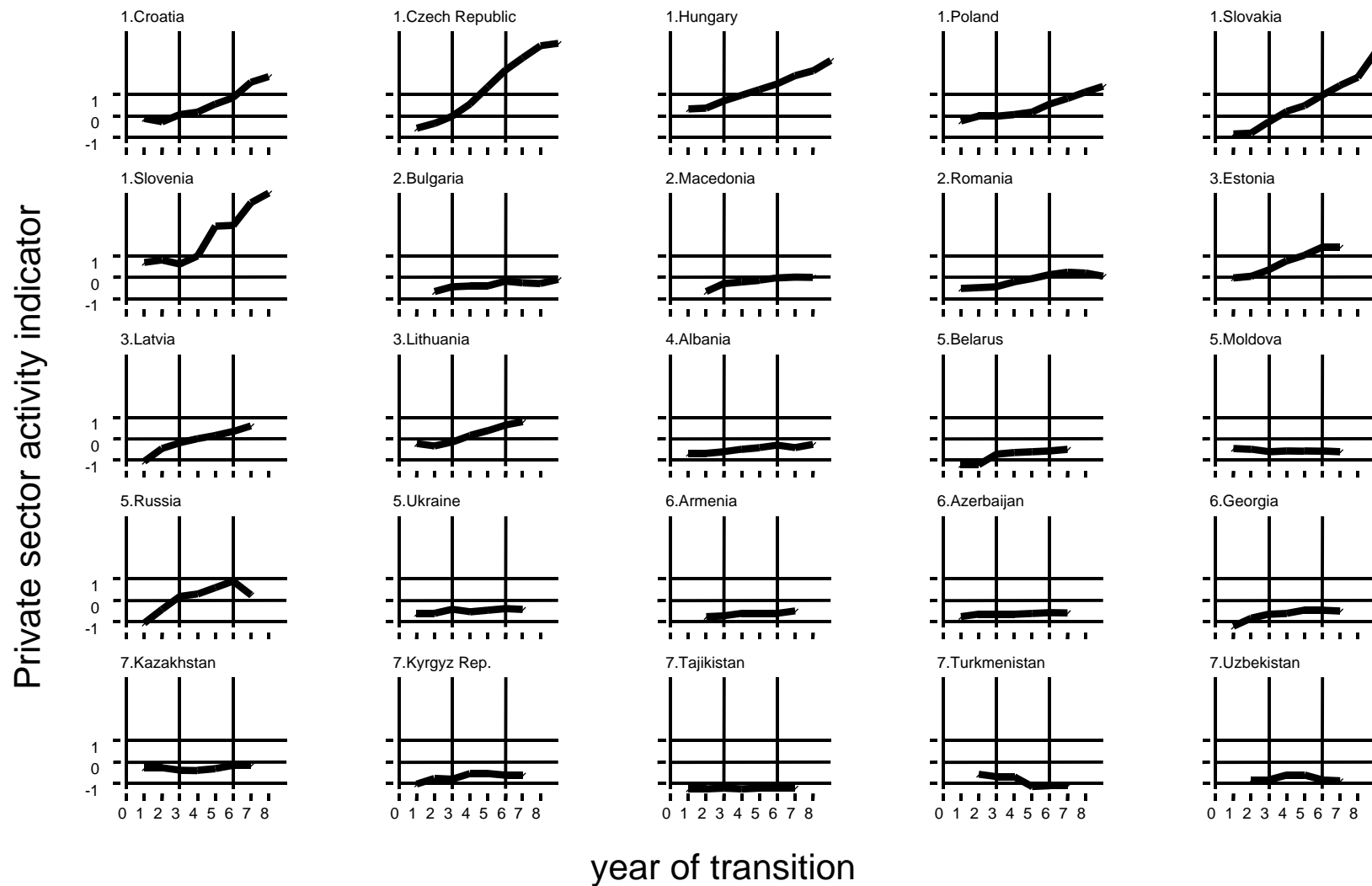


year of transition

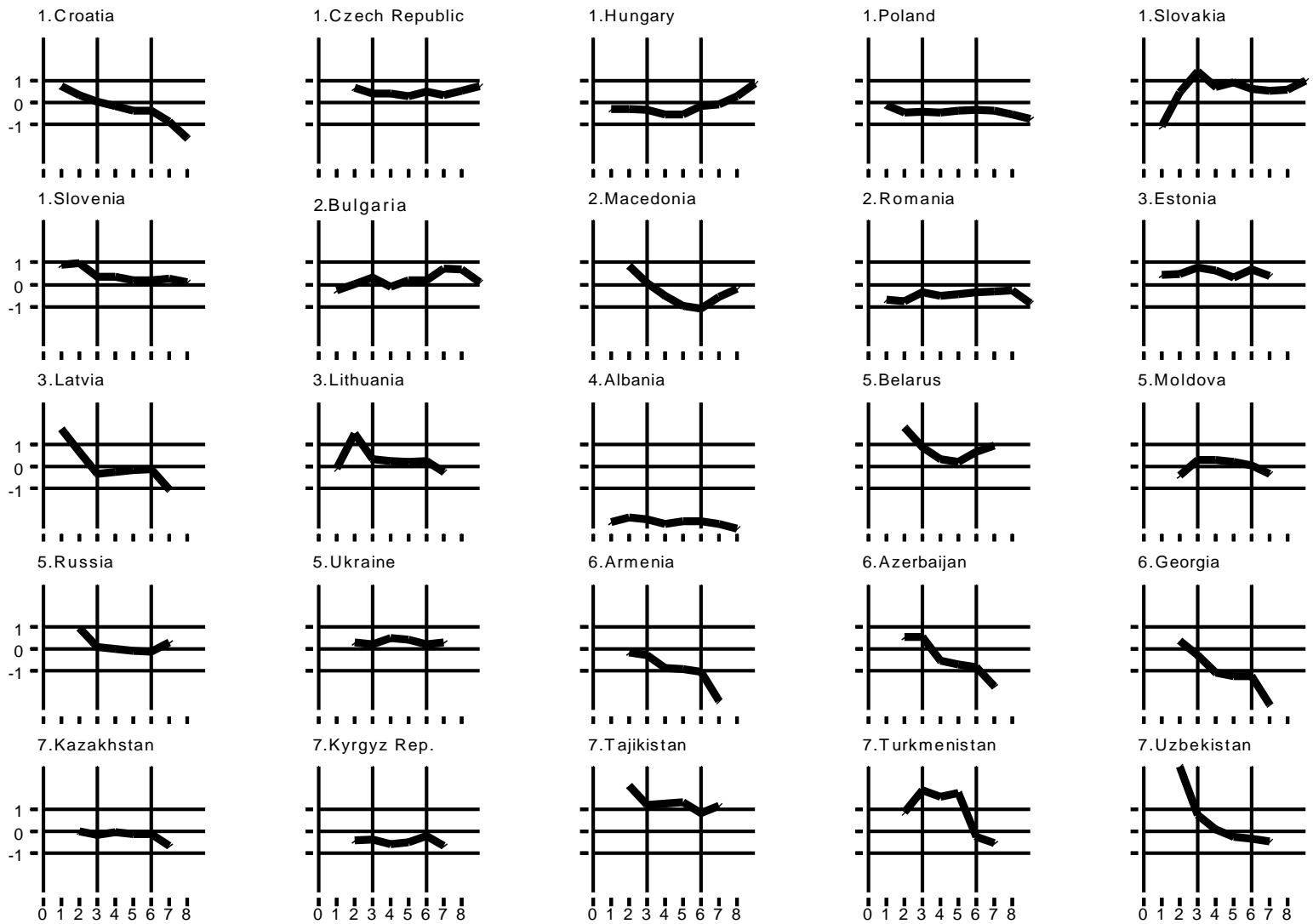
Trade liberalization indicator



A4. Country-level performance paths

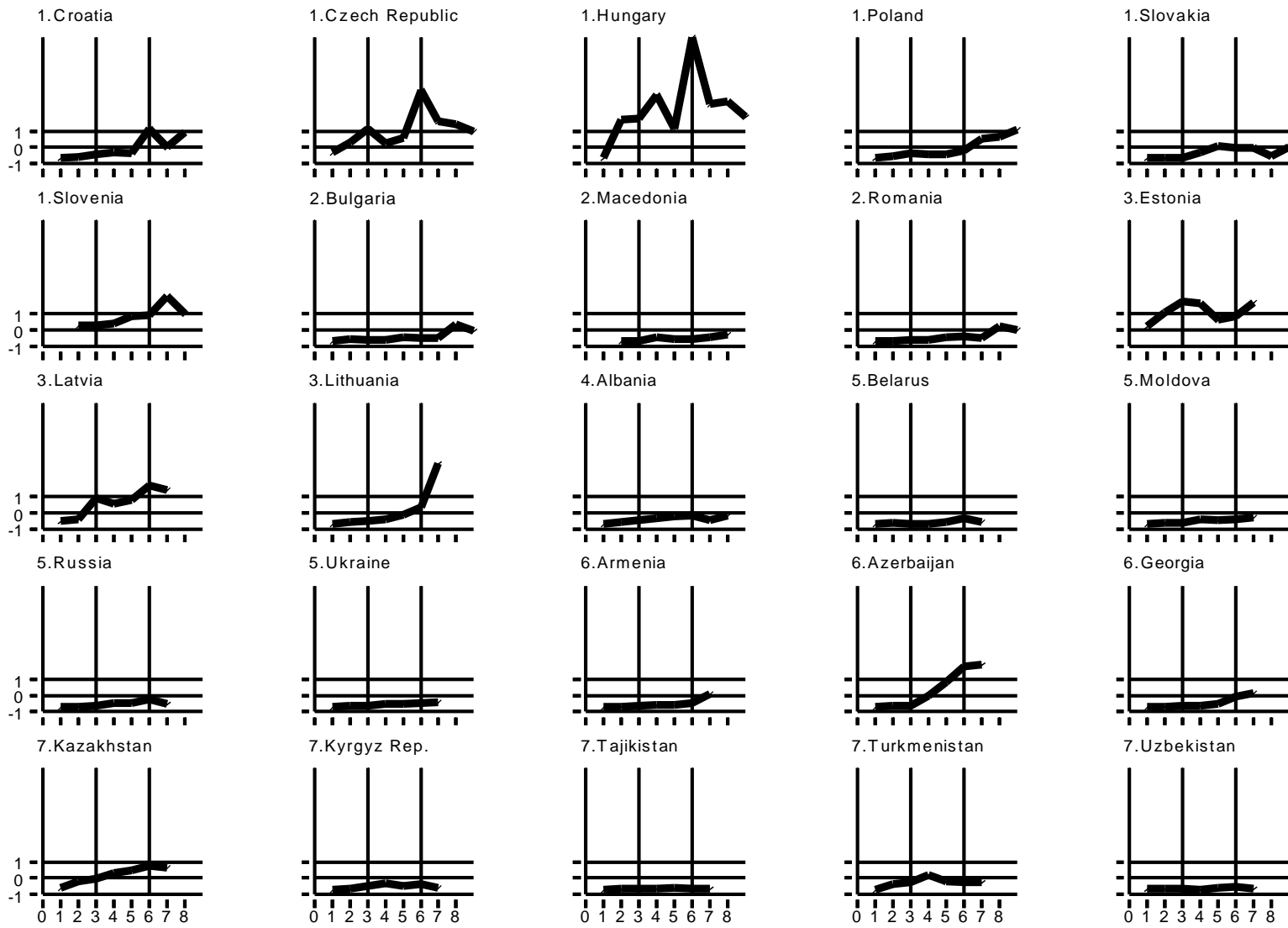


Exports indicator



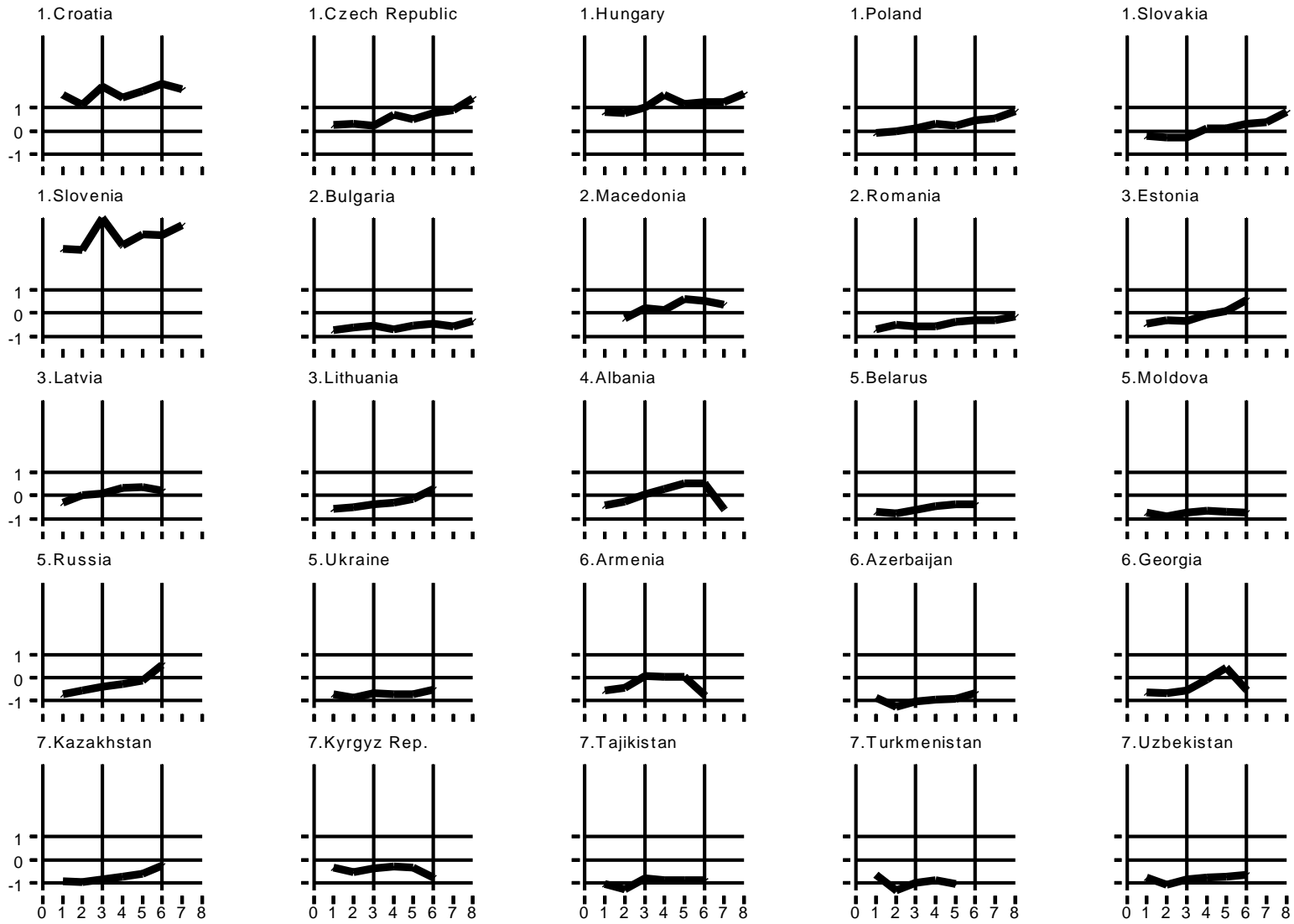
year of transition

FDI indicator



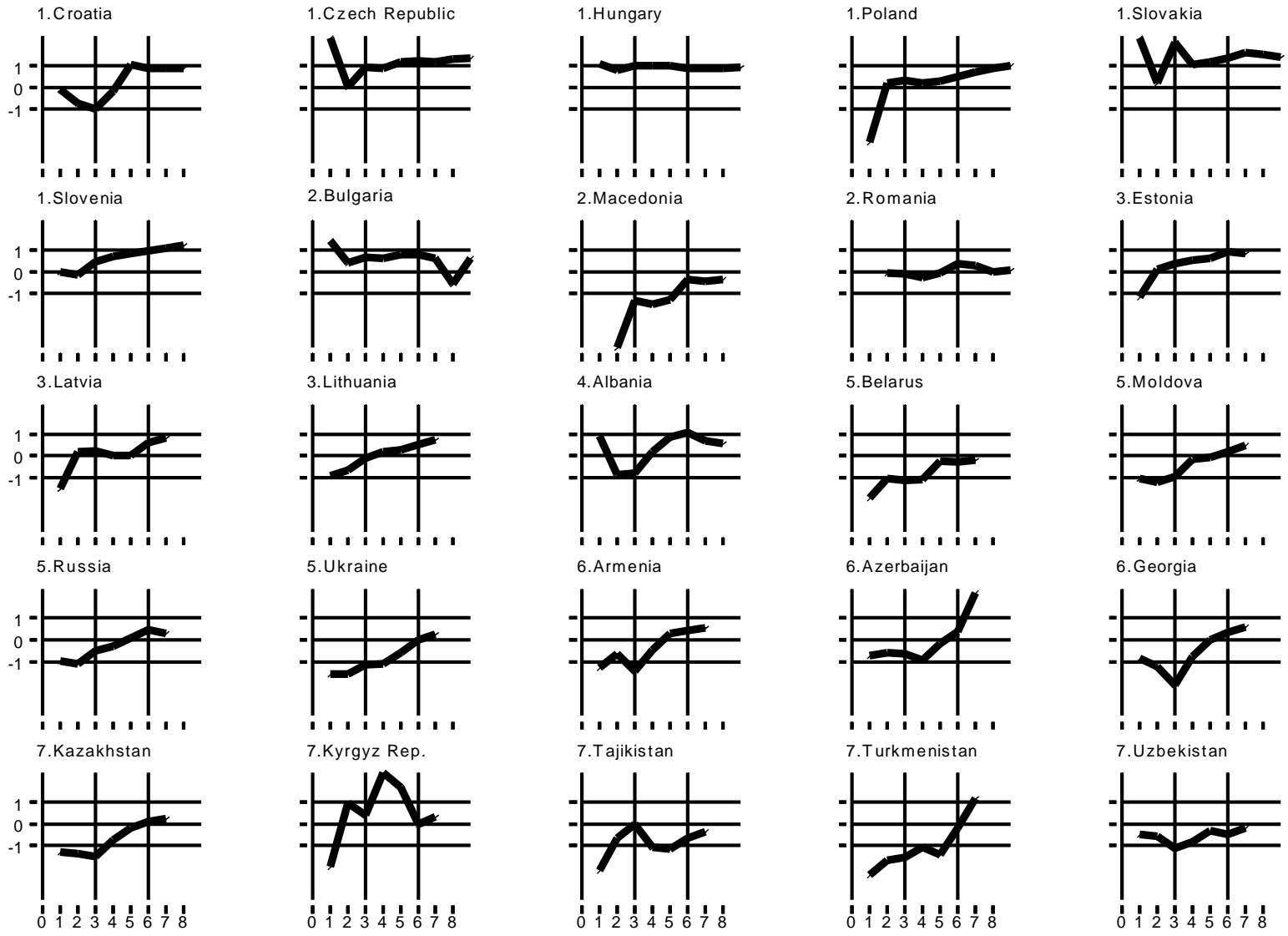
year of transition

Productive efficiency indicator



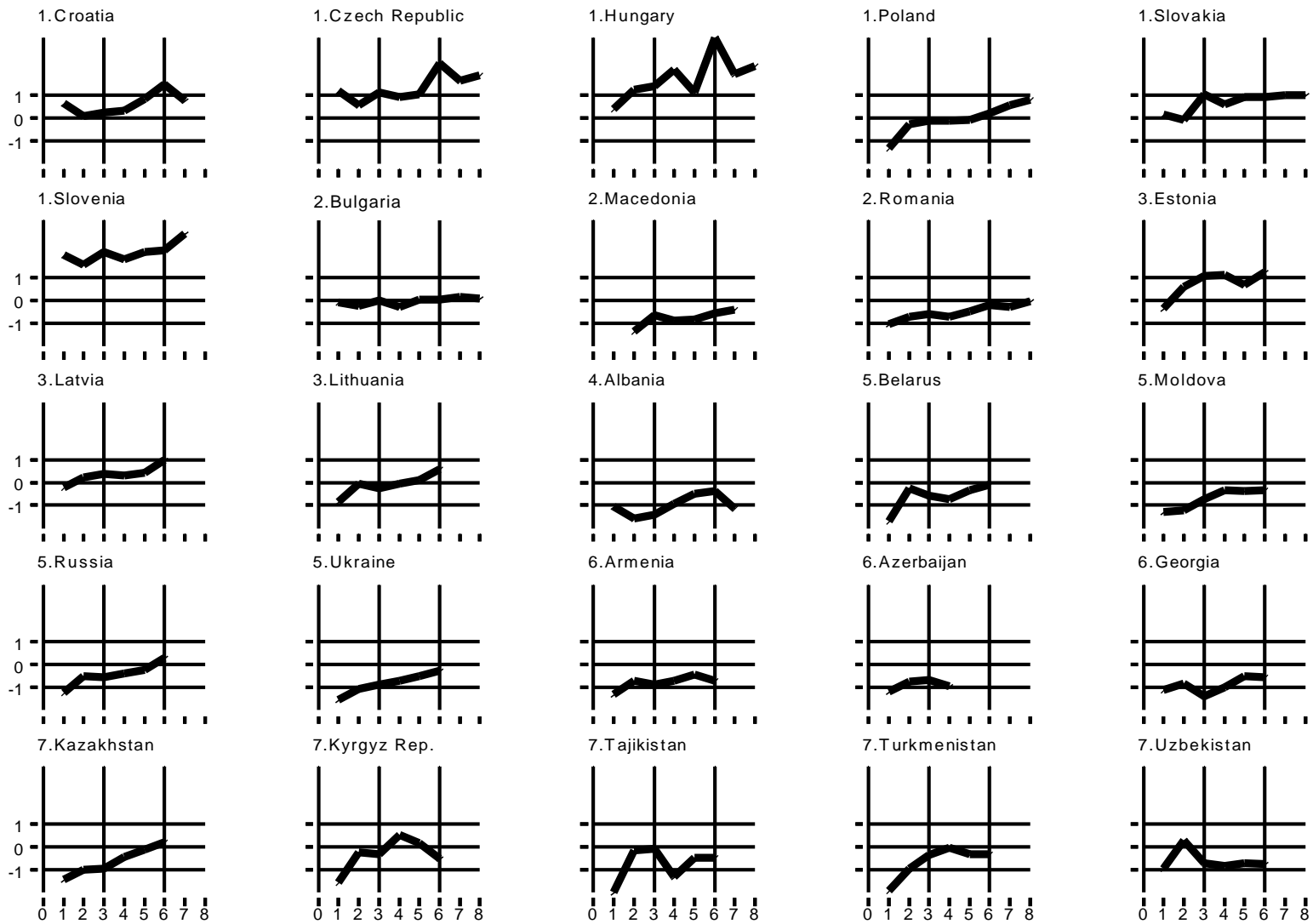
year of transition

Macro indicator



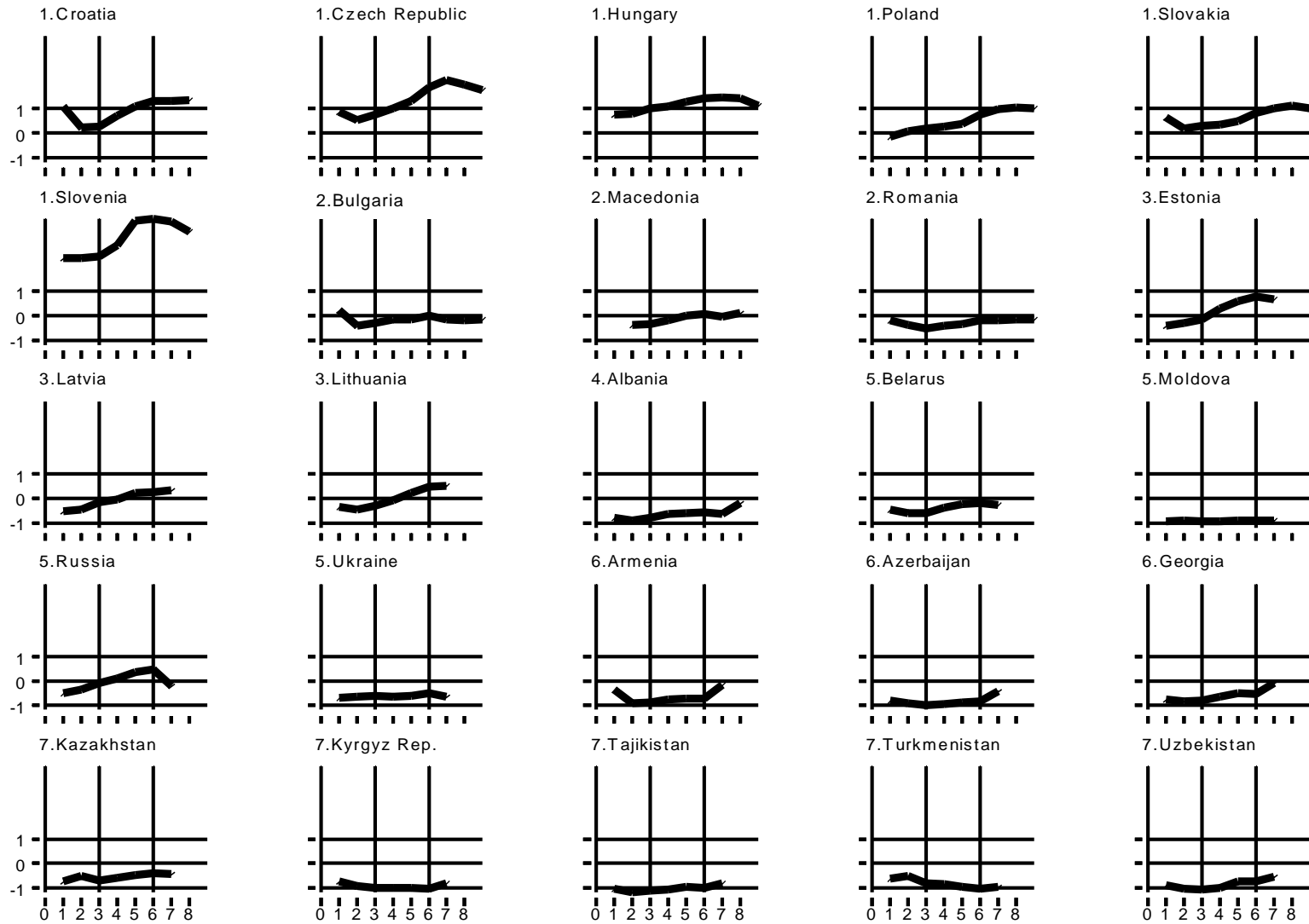
year of transition

Medium run performance indicator



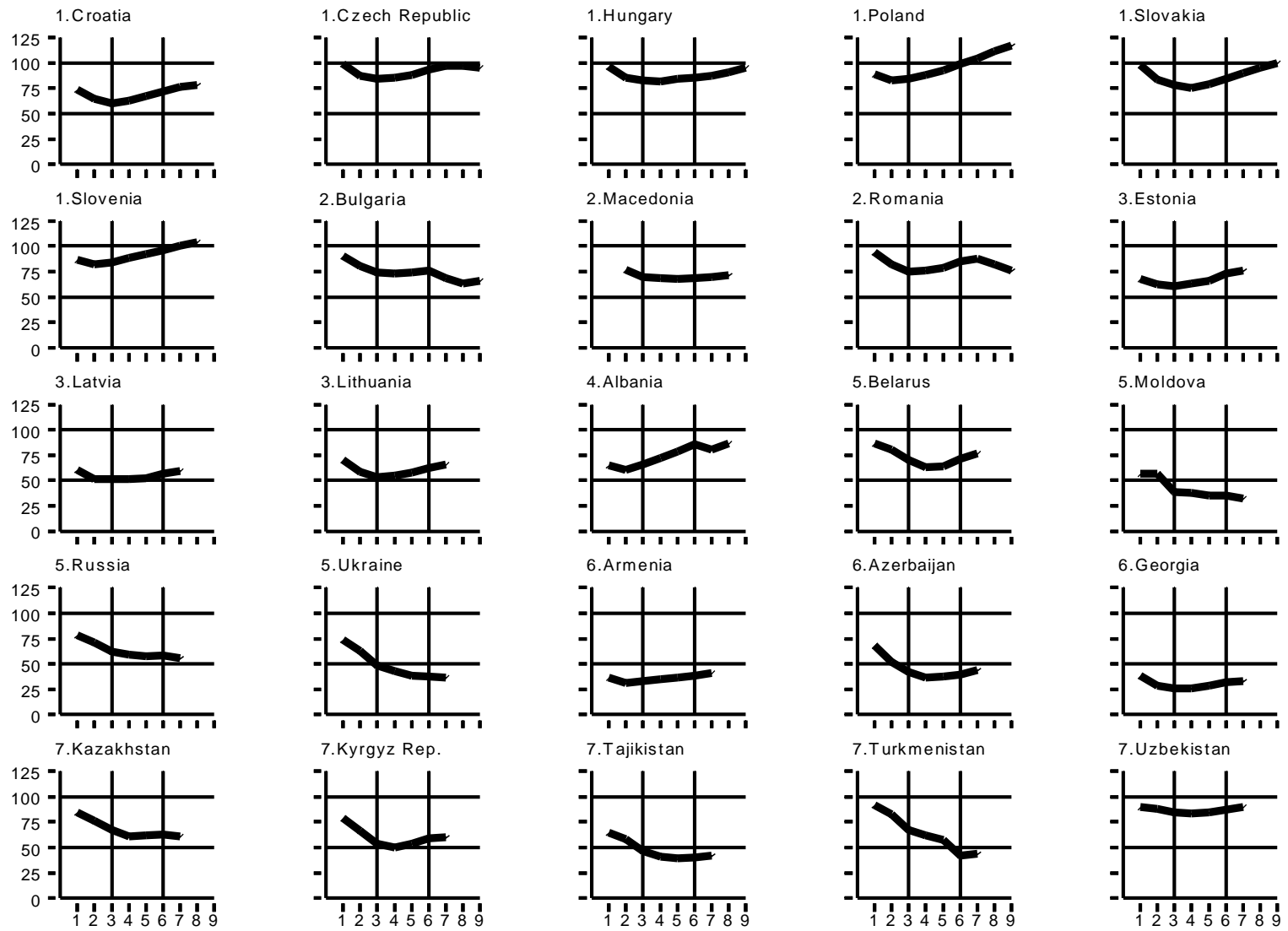
year of transition

Long run performance indicator



year of transition

Real GDP per capita (% of 1989)



A5. Names and addresses of foreign institute collaborators

COUNTRY	CONTACT INSTITUTION	CONTACT NAME	PHONE	FAX	ADDRESS
Albania	Albanian Center for Economic Research	Mr Zef Preci	(355-38) 2020 344	Tel/fax: (355-42)25021	A. Frasheri Street, Bldg. no.4, 3rd Entrance, Apt. 24, Albania
Armenia	Individual	Mr. Artashes Kazakhetsyan	(3742) 26-8423	n.a.	6 Sose Str., apt.# 14, Yerevan 375019, Armenia
Azerbaijan	Research Center for Development and International Collaboration "Sigma"	Mr. Rasim Ramazanov	994-12-928595	994-12-390-060	4 Sheykh Shamil Street, Apt 19, Baku 370001, AZERBAIJAN
Belarus	IFC's Small-Scale Privatization Project	Ms. Nezhdana Bukova	Tel: (375 17) 228-18-38	375 17- 222-74-40	Partizanskyj Prospect 6-A, 3rd floor, Minsk 220033, BELARUS
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Croatia	Institute for International Relations	Ms. Nevenka Cuckovic	Tel: +385-1-4826-522	385-1-4828-361	Lj. F. Vukotinovica 2/2, 10 000 Zagreb, Croatia
Czech	Center for Economic Research and Graduate Education of Charles University (CERGE-EI)	Mr. Jan Hanousek	tel: ++420-2-240 05 174	420-2-242 27 143	Politických veznu 7, PO Box 882, 111 21 Prague 1, Czech Republic
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Georgia	Georgian Center for Transition Economic and Sustainable Development	Mr. Revaz Cheishvili	(995-32) 33-70-42 office, 22-62-33 home	995-32-932414	4 K. Gamsakhurdia Av., Tbilisi, Republic of Georgia
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Kazakhstan	CPO IIE-EcoLinks/Kazakhstan	Ms. Gulia Yessengali	7-3272-631-472	tel/fax: 7-3272-631289	pr.Seifullina 531 suite 807 Almaty 480083 Kazakhstan
Kyrgyzstan	External Affairs Department, JSC Kyrgyzenergo	Ms. Chynar Meimanalieva	Tel: (996-312)66-11-52 (office), 42-51-12(home),	996-312-62-06-69	Mikrorayon 10, dom 9, kvartira 17, Bishkek720 023, Kyrgyz Republic
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Lithuania	Hansabank Markets	Mr. Urmas Riie	Tel: 372 6 131 664	372-613-1545	Liivalaia 8, 15040 Tallinn, Estonia

COUNTRY	CONTACT INSTITUTION	CONTACT NAME	PHONE	FAX	ADDRESS
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Moldova	Moldo-American Center for Private Initiative	Ms. Elena Kishlaru, Director	Tel: (3732) 24-52-11 (office), 29-23-21 (home)	3732-24-54-53	ASEM, Banulescu-Bodoni Street, 59, block B, Chisinau-2005, MOLDOVA
Poland	Agencja Rynku Rolnego	Mr. Jacek Bukowski	tel. +48 22 623 1078, or 48-501-499-059	48-22 -623 1452	00930 Warszawa, ul. Wspolna 30, Poland
Romania	Individual	Ms. Alina Andrei	40.1.315.10.03	n.a.	Str. Paris nr. 45, ap. 10, Bucharest, Romania
Russia	SKATE	Mr. Alex Vasiliev		7-095-7847-188	5 Gaziyetnii Pereulok Moscow 103918, Russia
Slovakia	M.E.S.A.10	Mr. Martin Strieborny	tel +421-7-54435328	421-7-54432189	Hviezdoslavovo nam c.17, 81102 Bratislava, Slovakia
Slovenia	CEEPN (Central and Eastern European Network)	Mr. Marko Simoneti	tel.: (386 61)1683 396	386 61-346 660	Dunajska 104, 1001 Ljubljana, PO Box 2518 , Slovenia
Tajikistan	Asia Plus Info Agency	Mr. Zafar Abdulloev	(3772) 510136	7-3772-217-863	35/1 Bokhtar street 8th floor, Dushanbe, Tajikistan
Turkmenistan	Individual	Mr. Ruben Agajanov	(993 12) 51 23 60	993 12- 51 19 96	2 Pomma St., Dept. of State Property, Ministry of Economy, Ashgabat 744000, Turkmenistan
Ukraine	HIID	Mr. Volodymyr Dubrovsky	Tel: (380-44) 228-1349, 228-8660, 462-0792, 229-5467	n.a.	Kreshchatyk, 10-B, 7th floor Kyiv, UKRAINE
Uzbekistan	Scientific Information Center of Interstate Coordination Water Commission	Ms. Irina Avakyan	(998-712) 65-16-54 (office), 90-23-60 (home)	998-712- 653-245	B 49/45, Kyuluk-5, Tashkent 700198, Uzbekistan

A6. Field survey questionnaire

Section A: Privatization											
PERFORMANCE											
No.	Item	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998
1	Enterprises converted to joint stock company	Number of firms									
2a	Enterprises prepared for privatization, of which	Number of firms									
b	Small (specify)	Number of firms									
c	Medium (specify)	Number of firms									
d	Large (specify)	Number of firms									
e	Very large (specify)	Number of firms									
3a	Privatizations completed, total, of which	Number of firms									
b	Small (specify)	Number of firms									
c	Medium (specify)	Number of firms									
d	Large (specify)	Number of firms									
e	Very large (specify)	Number of firms									
4	Privatizations completed, (from question 3), of which										
a	Public auction	Number of firms									
b	Public tender (including investment funds)	Number of firms									
c	Direct sales, total	Number of firms									
d	Direct sales to foreign investors	Number of firms									
e	MEBO	Number of firms									
f	Restitution	Number of firms									
g	Other methods (excluding bankruptcy)	Number of firms									
5	Bankruptcies and liquidations in privatization process										
a	Number filed	Number of firms									
b	Bankruptcies, liquidations, dissolved (completed)	Number of firms									
6	Number of firms included in the voucher (mass) program	Number of firms									
7	Share of SOE equity distributed through voucher program	Percent by 1998									
8	Share of privatized capital value that is:	Percent	100	100	100	100	100	100	100	100	100
a	sold to foreign investors	Percent									
b	sold to managers/employees	Percent									
c	sold to other domestic investors	Percent									
n.a.	Sales revenues and commitments										
9	Privatization revenues	Local currency									
10	Privatization revenues	US dollars									
11	Value of investor investment commitments/social outlays	Local currency									
12 a	Strategic and infrastructure privatizations, total	Number of firms									
b	of which: Banking	Number of firms									
c	Energy	Number of firms									
d	Water	Number of firms									
e	Gas	Number of firms									
f	Telecom	Number of firms									
g	Railroads, airlines, transport	Number of firms									
h	Insurance/non-financial	Number of firms									

No.	Item	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998
13a	Enterprises in which State has control (>33% ownership)	Number of firms									
b	Small (specify)	Number of firms									
c	Medium (specify)	Number of firms									
d	Large (specify)	Number of firms									
e	Very large (specify)	Number of firms									
14	Enterprises in which managers/workers have control (>33%)	Number of firms									
15	Enterprises in which foreign investors have control (>33%)	Number of firms									
n.a.	Property privatizations										
16	Number of farm privatizations	In thousands									
17	Percent of total farms remaining in state hands	Percent									
18	Land area privatized	Thousands of hectares									
19	Percentage of arable land privatized	Percent									
20	Residences (apartments, houses, etc.) privatized	Thousands of units									
21	Percent of total residency units in state hands	Percent									
22a	Number of workers in enterprises at the moment of privatization	Thousands									
b	of which: workers from direct sales privatizations	Thousands									
c	workers from auctions	Thousands									
d	workers from public tenders	Thousands									
e	workers from MEBO	Thousands									
23a	Number of workers in firms privatized in previous years, total	Thousands									
b	of which: workers from direct sales privatizations	Thousands									
c	workers from auctions	Thousands									
d	workers from public tenders	Thousands									
e	workers from MEBO	Thousands									
POLICY											
No.	Item	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998
24	What is the <i>main</i> reason privatization didn't go more quickly?	0=Government didn't want to, 1=insufficient political support, 2=lack of implementation resources, 3=lack of skills/knowledge, 4= weak investor demand, 5=other (and indicate reason)									
25	For each year, describe how foreigners were allowed to own land	0=Not allowed, 1=only as a minority owner, 2=Yes, with restrictions, 3=Yes, no restrictions									
26	Are there restrictions on the sale of previously privatized land?										
a	Industrially zoned land	0=Not allowed, 1=minor restrictions, 2=major restrictions									
b	Agriculturally zoned land										
c	Residentially zoned land										
INSTITUTIONS											
No.	Item	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998
27	Number of employees in privatization agencies (national & local)	Thousands of persons									

Section B: Firm creation/destruction (restructuring)

PERFORMANCE

No.	Item	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998
1a	Registered firms, total	In thousands									
b	of which: State-owned enterprises	In thousands									
c	of which, Majority-owned	In thousands									
d	Privately owned	In thousands									
e	of which, Foreign controlled	Number									
f	Insider-controlled (e.g. MEBO)	Number									
2	Registered firms, total (from line 1),										
a	of which: Small	In thousands									
b	medium	In thousands									
c	large	In thousands									
d	very large	Number									
3a	Number of private firms <i>before</i> transition, total	In thousands			Give reference year:						
b	of which: Small	In thousands									
4a	Enterprise arrears, total, of which										
b	to workers	Local currency									
c	to government (taxes, fees, social security, etc)	Local currency									
d	to utilities (energy, water, etc)	US dollars									
e	to banks	US dollars									
f	to other enterprises (SOEs and private sector)	Local currency									
5	Number of bankruptcies/liquidations filed	Number									
6	Number of bankruptcies/liquidations completed	Number									
7	Number of bankruptcies not from privatization process (specify in "Notes-respondent" whether refers to filed or completed)	Number									
8	Share of GDP (value added) in service sector	Percent									

INSTITUTIONS

No.	Item	Possible response	Answer	1990	1991	1992	1993	1994	1995	1996	1997	1998
9	Since when are there special bankruptcy courts?	Year or "None"										
10	Number of firms receiving direct assistance from government-subsidized SME programs. If number not available, then indicate the years such a program was in operation.	Number of firms. Or place "X" in years program operated										

OTHER

No.	Item	Possible responses	2nd year of transition	5th year of transition	1999
11	For each period, indicate the major obstacles to firm creation				
a	Biggest obstacle	0=credit, 1= corruption, 2= lack of demand, 3=			
b	2nd biggest obstacle	government fees and regulations, 4= poor infrastructure, 5= other (indicate obstacle)			

Section C: Capital markets, insurance and banking

PERFORMANCE

No.	Item	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998
n.a.	Stock market										
1a	Volume of shares traded, end-of-year	Number of shares									
b	Value of shares traded, end-of-year	Local currency, mlns									
2	Number of transactions made, end-of-year	Number of trades									
3	Market capitalization, end-of-year	Local currency, mlns									
4	Number of shares existing, end-of-year	Thousands									
5	Number of firms listed, end-of-year	Number of firms									
n.a.	Insurance markets										
6	Number of insurance companies	Number									
7	Number of private insurance companies	Number									
8	Number of private <i>foreign</i> insurance companies	Number									
9	Is the government company the dominant firm?	Y=yes, N=no									
n.a.	Pension funds										
10	Working age population with a pension	Thousands									
11	Are there private pension funds?	Y=yes, N=no									
n.a.	Banking										
12	Ratio of domestic credit to GDP	Percent									
13	Share of domestic credit going to private sector	Percent									
14	Long-term lending to private sector	US dollars									
15	Number of long-term loans to private sector	Number									

POLICY

No.	Item	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998
16	When was the insurance law passed?	Year or "None"									
17	Has there been deposit insurance?	"X" in year(s) or "None" in 1999									
18	Share of state bank enterprise lending on less than commercial terms	Percent									
19	Current account convertibility	0=Limited, 1=Full									

INSTITUTIONS

No.	Item	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998
20	Since when is there a housing mortgage market?	"X" in year(s) or "None" in 1999									
21	Has the insurance sector undergone major restructuring?	"X" in year(s) or "None" in 1999									
22	Since when is there a regulatory agency for insurance?	"X" in year(s) or "None" in 1999									
23	How independent (from the government) is the central bank?	0=Not independent, 1=limited autonomy, 2=independent									
			Answer								
24	In what year did the country begin having a two-tier banking system?	Year or, if <1980 then "1980"									

Section D: Trade and investment

PERFORMANCE

No.	Item	Units	Transition years 1-3	Transition years 4-5	1998-99						
1	What have been the main sectors receiving FDI:										
a	Biggest share	I=infrastructure, B=banking, A=agriculture, L=light									
b	2nd biggest share	manufacturing, H=heavy manufacturing, E=energy,									
c	3rd biggest share	T=tourism, N=natural resources/forestry									
2	What has been the primary purpose of FDI in these periods?	0=Domestic sales, 1=Production for export, 2=assembly/re-export, 3=other (specify)									
3	Main channel for FDI in each period	P=privatization, G=greenfield, X=purchase of existing private firm, J=joint venture									
No.	Item	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998
4	Private sector share of gross domestic investment	Percent									
5	Foreign-owned share of banking sector assets	Percent									
6a	Number of infrastructure firms, total (indicating the number of which with foreign ownership participation)	Number of firms (with number with foreign ownership participation in parentheses)									
b	of which: Energy										
c	Water										
d	Gas										
e	Telecom										
f	Railroads, airlines, transport										
g	Insurance/non-financial										
No.	Item		Possible responses	Answer							
7	How many "Western" investments in excess of US\$5 million were in operation in 1988?	Number									
8	Value of foreign-owned assets in 1988	US dollars									

INSTITUTIONS

No.	Item	Possible responses	Answer
9	When did the State export market board/agency lose its monopoly on major export sectors?	Year	

OTHER

10	For the period 1997-8, select from the list of a) to p) the three biggest obstacles to greater foreign investment in the country.	Possible responses:	
a	Biggest obstacle	a) Excessive tax burden b) Political instability c) Unclear, changing, or arbitrary regulatory environment d) Inadequate banking infrastructure e) Poor marketing/distribution channels f) Poor physical infrastructure (ports, telecoms, roads, elect/water etc.) g) Profit repatriation restrictions/capital controls h) Threat of inflation i) Negative government attitude toward FDI j) Currency risk k) Weak/uncertain contract enforcement l) Corruption m) Poorly qualified or disciplined labor force (lack of management skills) n) Land ownership restrictions or weak property rights protection o) Difficulty in import /export (due to customs handling or trade restrictions) p) Other (specify in answer)	Biggest obstacle:
b	Second-biggest obstacle		2nd biggest obstacle:
c	Third-biggest obstacle		3rd biggest obstacle:

Section E: Competition, productivity and labor

PERFORMANCE

No.	Item	Units	1st year of transition	Transition years 4-5			1998-1999				
1	Is there competition in the strategic and infrastructure sectors?										
a	Telephony (voice, data)	0=none,									
b	Television, radio	1=limited									
c	Power/energy	(state									
d	Water	dominant),									
e	Gas	2=limited									
f	Airlines	(private firm									
g	Railroads	dominant),									
h	Marine transport	3=competition									
i	Transport (trucking, busing etc.)	exists, 4=very									
j	Banking	competitive									
k	Insurance/non-financial										
			1990	1991	1992	1993	1994	1995	1996	1997	1998
2	Difference between bank lending and borrowing rates (indicate exact rates in "Notes-respondent")	Percentage points									
3	Unemployment rate (from a non-government source)	Percent									
4a	Labor force, total	In thousands									
b	employed by government	In thousands									
c	employed by cooperative	In thousands									
d	employed by private sector	In thousands									
e	employed by mixed entities	In thousands									
5	Non-state (non-government) sector employment	In thousands									

POLICY

No.	Item	Possible responses	Answer			2nd year of transition	5th year of transition	1999
6	When was the law on competition passed?	Year or "None"						
7	Are there wage controls (e.g., minimum wage)?		Y=yes, N=no					
8	Describe mandatory employer payroll tax contribution (highest rate, if more than one)		Indicate rate or fixed contribution					
9	Describe mandatory employee payroll tax contribution (highest rate, if more than one)		Indicate rate or fixed contribution					
10	Describe the restrictiveness of hiring and firing regulations		0=minimal, 1=moderate, 2=very restrictive					

INSTITUTIONS

No.	Item	Possible responses	1990	1991	1992	1993	1994	1995	1996	1997	1998
11	Number of workers passing through government-subsidized retraining program. If number not available, then indicate years in which there was a program.	Thousands or "X" in years a program existed or "None" in 1990									
No.	Item	Possibilities		Answer							
12	When was an anti-monopoly or competition commission or regulatory body established?	Year or "None"									

Section F: Social safety net and rule of law

PERFORMANCE											
<i>No.</i>	<i>Item</i>	<i>Unit</i>	1990	1991	1992	1993	1994	1995	1996	1997	1998
1	Persons receiving unemployment compensation (otherwise indicate the years in which there was a functioning program, national or local)	Number (or place "X" in years with a program)									
2	Workers receiving early retirement benefits (otherwise indicate the years in which there was a functioning program, national or local)	Number (or place "X" in years with a program)									
3	Workers receiving severance payments (otherwise indicate the years in which there was a functioning program, national or local)	Number (or place "X" in years with a program)									
4	Provide measure of dispersion of household wealth, expenditure or income (e.g., Gini coefficient)	Describe measure chosen in "Notes-respondent"									
5	Number of sitting judges	Number									
6	Number of lawyers "on the bar". If unavailable, indicate with Y/N the years in which there was a bar	Number (or Y=Yes, N=No)									
POLICY											
<i>No.</i>	<i>Item</i>	<i>Possible response</i>	1990	1991	1992	1993	1994	1995	1996	1997	1998
7	Share of state budget to health and education	Percent									

Section G: Fiscal reform

PERFORMANCE

No.	Item	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998
1a	Number of central government-paid government employees	Number									
b	of which: Number in Ministry of Finance	Number									
c	Number in Ministry of Industry, Mining, and Energy	Number									
2	Number of prosecutions initiated for profit (or turnover) tax evasion by the central tax administration	Number (and specify tax type)									

POLICY

No.	Item	Possible response	Answer				
3	Date of promulgation of property value tax	Year or "None"					
4	Date of local public finance reform/law	Year or "None"					
5	Date of promulgation of corporate income tax	Year or "None"					
6	Date of promulgation of personal income tax	Year or "None"					
No.	Item	Possible response	Transition years 1-3	Transition years 4-5	1998-1999		
7	For the following cases, what is the likelihood that a firm in a non-strategic sector with 1000 employees in one location would receive financial assistance from the state if its liquidity problems would necessitate plant closure?						
a	The firm is a state-owned enterprise	0=Very unlikely, 1=Unlikely, 2="50-50", 3=Likely, 4=Very likely					
b	The firm is wholly private-owned						

INSTITUTIONS

No.	Item	Possible response	1990	1991	1992	1993	1994	1995	1996	1997	1998
8	Year of tax administration creation and period(s) of comprehensive reform	Place "X" for relevant years									
9	Period of comprehensive civil service reform	Place "X" for years of implementation									
		Possible response						Transition years 1-3	Transition years 4-5	1998-1999	
10	What is the main reason preventing better tax compliance?	1=poor (legally weak) tax law, 2=no political will, 3=poor staff training, 4=lack of resources, 5= inadequate information systems, 6=ineffective courts, 7=corruption, 8=excess taxation									

Section H: Objectives

PERFORMANCE

No.	Item	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998
1	We are interested in alternative measures of population "well being" over the transition period.										
a	Refrigerators purchased	Number									
b	Vehicles purchased	Number									
c	Televisions purchased	Number									
2	Provide scores from an existing household opinion survey regarding household "well being" (Indicate question in "Notes-respondent")	To be provided by in "Notes-respondent"									
3	Provide scores from existing household "attitude" surveys regarding their interest/agreement with the items below. (Indicate exact survey question in "Notes-respondent") .										
a	Privatization	To be provided by respondent in "Notes-respondent"									
b	Foreign investment										
c	Donor assistance										
d	Entrepreneurship (or business)										

POLICY

No.	Item	Possible responses	1990	1991	1992	1993	1994	1995	1996	1997	1998
4	After following the interview procedures in the sheet, "Notes-HIID", indicate the priority (based on <i>efforts</i> , not results) the government at the time placed on:										
a	Enterprise privatization (non-strategic sectors)	0=strongly against, 1=against, 2=not a priority, 3=low priority, 4=high priority									
b	Enterprise privatization (strategic sectors)										
c	Pre-privatization enterprise restructuring (non-strategic sectors)										
d	Stock market creation										
e	Judiciary reform										
f	Reform of tax code and administration										
g	Social safety net creation (worker severance pay, unemployment insurance, etc.)										
h	SME promotion										
i	Trade liberalization										

DONOR ACTIVITY

No	Item	Possible responses	1991-1992	1993-1994	1995-1996	1997-1998
5	Using the procedures in "Notes-HIID", indicate the degree of donor effort the government received in each of the following.		(Score) Major donors	(Score) Major donors	(Score) Major donors	(Score) Major donors
a	Enterprise privatization (non-strategic sectors)	0=minimal	()	()	()	()
b	Enterprise privatization (strategic sectors)	assistance,	()	()	()	()
c	Pre-privatization enterprise restructuring (non-strategic sectors)	1=some assistance,	()	()	()	()
d	Stock market creation	2=extensive	()	()	()	()
e	Judiciary reform	assistance, N=No	()	()	()	()
f	Reform of tax code and administration	donor active in	()	()	()	()
g	Social safety net creation (worker severance pay, unemployment insurance, etc.)	country; For major donors, list top two	()	()	()	()
h	SME promotion	and use	()	()	()	()
i	Trade liberalization	abbreviations	()	()	()	()