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The three indexes measuring the progress a country makes with respect to price liberalization, privatization and institutional reform are summarized below. Progress with reform is defined in absolute terms, with respect to all of the necessary ‘ingredients’ of each reform component, for example, a list of laws that constitute institutional reform. Each index is based on a specific list of characteristics of the particular aspect of economic transition and reflects temporal and cross-country variation in the *scope* of policy reform.

Index of Price Liberalization (IPL)

This index captures executive actions¹ and decisions regarding *consumer* goods and services derived from the Classification of Individual Consumption According to Purpose (COICOP).² Theoretically, the index could take negative values.³ In practice, however, a country begins by increasing the scope of price liberalization (often dramatically), and subsequently alternates price reductions and controls with further increases and de-controls. Because of the initial high levels of the index, and its additive nature, occasional negative monthly values do not lead to negative annual ones. In order to capture the level of liberalization before political reforms began in the post-communist countries, price liberalization decisions for the 1975-2005 time period are coded. Although no prices were freed before 1989, in most countries (Hungary and Poland being obvious examples) subsidies for certain goods were gradually reduced prior to the beginning of political transition.

Coding Price Liberalization Events

Price liberalization events were coded using the following categorization:

- Decision-making regarding increased price liberalization
 - event category 9: government makes a decision about ending price controls or subsidies (weight 5)
 - event category 8: government makes a decision about increasing prices or reducing subsidies (weight 4)
- Policy formulation regarding increased price liberalization
 - event category 7: government discusses options for ending price controls or subsidies (weight 3)
 - Event category 6: government discusses options for increasing prices or reducing subsidies (weight 2)
- Agenda setting (neutral)

¹ The nature of price liberalization is such that it is decided overwhelmingly by the executive, not the legislature.

² Statistics Division of the United Nations Department of Economic and Social Affairs (accessed 10 January 2002).

³ The price liberalization events are coded and weighted both on a monthly basis and individually for each product listed in COICOP. For the individual events, the weights are summed up across products to come up with a total monthly score. The monthly values are then added up to form a cumulative annual IPL score. Finally, the annual values for each year are added to the liberalization score of each subsequent year.

- event category 5: policy change is in the agenda; government faces the need to change its pricing policy, either towards less or towards more price controls (weight 1/-1)
- Policy formulation regarding reduced price liberalization
 - event category 4: government discusses options for reducing prices or increasing subsidies (weight -2)
 - event category 3: government discusses options for re-introducing price controls or subsidies (Weight -3)
- Decision-making regarding reduced price liberalization
 - event category 2: government makes a decision about reducing prices or increasing subsidies (weight -4)
 - Event category 1: government makes a decision about re-introducing price controls or subsidies (Weight -5)
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The following principles are applied in assigning the weights to the different policy stages.

1. Government actions, which result in an increase in the level of price liberalization, are given a positive value. Government actions, which result in a decrease of the level of price liberalization, are assigned a negative value.
2. Based on the stage model of policy-making, which assumes a linear process, events of higher stages are assigned bigger weights.
 - a. Policy formulation events are weighted more than agenda setting events.
 - b. Decision-making events are weighted more than policy-making events.
3. Agenda setting and policy formulation events for the same goods or services category are counted only once until an event of higher stage is reported.
4. Each policy formulation event is assumed to be preceded by an agenda-setting event.
5. Each decision-making event is assumed to be preceded by a policy formulation event.

The specific numeric values of each weight are of little significance. Scaling them by a factor of two, for instance, does not affect the logic used in assigning these values, and also produces an index based on the same principles. Moreover, scaling the weights does not affect the annual and cross-country variations in the index values, which are the focus on this dissertation. What is important is that the weights reflect the assumed linear logic of economic policy-making, and that, lacking theoretical reasons to do otherwise, they leave equal 'space' between event categories. In other words, events of lower stage receive lesser weights, and the absolute value of the numeric distance between events of category one and two, for instance, is the same as the one between events of category eight and nine. In order to avoid artificially producing an index of an extremely large numerical value (which is associated with higher levels in price liberalization), I start the index at the beginning of the integer scale.

Rules four and five require a bit more clarification. It is inevitable that some events are more newsworthy than others. As it might be the case sometimes, the press reports when a government makes a decision, but fails to report that government is

pondering its policy options. In such a situation, I assume that the government has followed the linear stage model of policy-making, and the decision event is given the full weight of four, minus four, five or minus five, *even* if there is no report about preceding stages. However, when a decision event is preceded by a report about a policy-making event in the same direction, a full weight is given to the policy-making events, but only the complementary⁴ weight - to the decision event. The following examples help clarify the coding rules described above.

Example One. In December 1994, the government of Belarus decided to raise the price of butter. This is an event of category eight. Since this decision was not preceded by a reported discussion of raising the price of butter, the full weight of four is assigned to this event.

Example Two. In January of 1989, the government of Hungary discussed raising the price of electricity. With no decision taken at this point, the event is given a weight of two. In June of 1989, the price of electricity was increased. Only two points are added to the index to reflect the fact that this decision was already discussed five months earlier.⁵

Example Three. In May 1990, the Soviet Union government debated how much to increase the price of bread. No decision was taken at that point, and the topic is abandoned for a month. The event is given a weight of two. In January 1991, the topic of bread price increase was again on the agenda, and a decision was made in March of 1991. The event of discussing the increased price of bread is counted only once (the May 1990 one), although it was discussed twice. Subsequently, the March 1991 event is given a weight of two. This approach is adopted in order to avoid a situation in which a country which only discusses an issue for a long time (and all discussions are reported in the press) has a higher liberalization score than a country which debated the matter only once and took a decision immediately afterwards.

Index of Institutional Reform (IIR)

This index reflects a country's effort towards (or against) establishing the legal framework of a market economy, and is based on the following components on institutional reform.

- **Stock Exchange.** The ability to trade company shares is an integral part of the market economy. Stock exchanges do not exist under a command economy. The Law on Securities defines the rights and responsibilities of shareholders, while the Law on Stock Exchange provides the rules under which the stock exchange(s) operate. In order to capture not only the existence of the exchange but whether or not it is operational, the IIR accounts for when a stock exchange opens and when it begins trading. It is often the case that a law is passed long before the actual exchange opening or before trading has begun.

⁴ Here complimentary is used to mean the difference in absolute value between the weights of two consecutive code categories.

⁵ Of course, it is possible that in June 1989 the Hungarian government debated the issue *and* made a decision during the same session, so only the decision was reported. However, it is also likely that in January 1989, government formed a commission to study the issue and only in June of 1989 did the commission come up with a recommendation. Since there is no way to know what exactly happened, I adopt the more conservative approach and avoid artificially inflating the index, by taking into consideration only the reported information.

- **Tax Reform** in the transition economies has numerous aspects, such as establishing a progressive tax system, or changing accounting principles. Of these aspects, though, replacing the turnover tax with the Values Added Tax (VAT), thus resembling Western European capitalist economies is most consistent with the nature of the post-communist transition.
- **Bankruptcy Law** does not exist under a command economy. Transition to a market economy necessarily involves establishing guidelines for how to deal with insolvent companies and how to protect their partners and clients. Given the great number of state enterprises, which needed restructuring in Eastern Europe, bankruptcy legislation is a rather controversial and highly political issue.
- **Competition Policy** aims at protecting the established market principles and ensuring that all market participants enjoy fair competition, i.e. it “deals with the consequences of a failure of the free market” (Transition Report 1994, p. 76). Competition Law “prevents the creation of anti-competitive structures and anti-competitive behaviour [sic]” (Transition Report 1994, p. 76). A subset, nevertheless an important one, is the Anti-monopoly Law which exclusively deals with anti-competitive behavior of monopolistic entities. This aspect of competition policy is especially relevant to the transition economies, where under central planning virtually every state-owned enterprise was a monopoly. Finally, a Supervisory (Competition) Agency is needed to ensure that competition and anti-monopoly laws are enforced, and to levy “sanctions on offenders” (Transition Report 1994, 77).
- **Banking Sector Reform.** Establishing a two-tier banking system and an independent central bank are critical components of creating a market-based banking environment (Transition Report 1994, p. 15). Bank privatization and bank restructuring deal exclusively with reorganizing the banks which existed under command economy, and are the two most often used strategies to “establish incentives for banks to allocate their lending to those enterprises and individuals that can be expected to earn the highest return on their placements” (Transition Report 1994, p. 15).
- **Contract Law** provides the framework, which all contracts made in the economy, private or public, must follow. It also protects vulnerable individuals from being taken advantage of. The Civil Code regulates contracts among individuals, while the Commercial Code, contracts among commercial enterprises.
- **Company Law** “provides a legal framework for enterprise and trade” (Transition Report 1994, p. 77). It recognizes companies as legal persons, with all the rights and limitations of such.
- **Pledge Law** deals with provisions on extending debt to individuals and enterprises, and the various assets that might be pledged to guarantee the credit.

In order to capture the level of institutional reform before political reforms began, events for 1975-2005 time period are included in the measure of institutional reform.⁶ Compared with price liberalization, there are significantly fewer attempts to reform the

⁶ The institutional reform events are coded and weighted on a monthly basis and individually for each component of the above components. The weights are summed up across components to come up with a total monthly score. The monthly values are then added up to form a cumulative annual IIR score.

legal environment prior to 1989. These include the establishment of a two-tier banking system in some republics of the Soviet Union after perestroika began in 1985, and the introduction of some elements of market legal framework in Hungary, Poland and the former Czechoslovakia.

Coding Institutional Reform Events

Institutional Reform events were coded using the following categorization:

- Decision-making regarding increased level of institutional reforms
 - event category 7: passing of legislation to increase levels of institutional reform (weight 4)
- Policy formulation regarding increased level of institutional reforms
 - Event category 6: debate of legislation to increase levels of institutional reform (weight 3)
 - Event category 5: preparation of legislation to increase levels of institutional reform, i.e. a project is under way to develop relevant legislation; or government is working on a draft law/bill towards increasing levels of institutional reform (weight 2)
- Agenda setting (neutral)
 - event category 4: government recognizes the need for legal reform, either towards more or less market like legislation (weight 1/-1)
- Policy formulation regarding reduced level of institutional reforms
 - event category 3: preparation of legislation to reduce levels of institutional reform, i.e. a project is under way to develop relevant legislation; or government is working on a draft law/bill towards decreasing levels of institutional reform (Weight -2)
 - event category 2: debate of legislation (by parliament) about decreasing levels of institutional reform (weight -3)
- Decision-making regarding reduced level of institutional reforms
 - Event category 1: passing of legislation to decrease levels of institutional reform (weight -4)

The following principles are applied in assigning the weights to the different policy stages.

1. Activities aimed towards the creation of a legal framework compatible with market principles are given positive values. Moves away from a market-based legal framework are assigned negative values.
2. Based on the stage model of policy-making which assumes a linear process, events of higher stages are assigned bigger weights.
 - a. Stage one policy formulation events are weighted more than agenda setting events.
 - b. Stage two policy formulation events are weighted more than stage one policy formulation events.
 - c. Decision-making events are weighted more than stage two policy-making events.

3. Agenda setting and policy formulation events (of either stage) for the same component of institutional reform are counted only once until an event of higher stage is reported.
4. Each stage one policy formulation event is preceded by an agenda setting event.
5. Each stage two policy formulation event is preceded by a stage one policy formulation event.
6. Each decision-making event is preceded by a stage two policy formulation event.

As with price liberalization scaling the numerical values of the weights would not affect the principles upon which this measure is based: there is an equal numeric distance (in absolute terms) between event categories, and events of higher categories are assigned bigger values. These particular weight values were chosen in order to avoid artificially inflating the Index of Institutional Reform.

The logic for rules four, five and six is similar to the one used in developing the price liberalization index. In cases where only the decision-making event (but not the policy formulation ones) is reported, I assume that the government has followed the linear stage model of policy-making, and the decision event is given the full weight of four or minus four even if there is no report about preceding stages. However, when a decision event is preceded by a report about a policy-making event in the same direction, a full weight is given to the policy-making events, but only a complementary weight - to the decision event. The following examples help clarify the coding process.

Example One. In March 1990, a Securities Commission was established in Hungary. This is an event of category seven. Since the discussion on the need to establish such a commission, and the preparation of legislation was not reported, but undoubtedly took place, the full weight of four is assigned to this event.

Example Two. In December 1992, bankruptcy legislation was debated by the parliament in Bulgaria. A weight of two points is given to the event. Two points are added to the index in July 1994, when the law was finally passed.

Although this coding scheme allows for reform efforts to go in both directions, in reality it is extremely unlikely that a country will back off from market-oriented legal reforms. Countries are much more likely to delay adopting and implementing these reforms than to retract from previously adopted laws and regulations. In fact, in the information I have collected, there is only one instance, Ukraine in 1999 when it passed legislation limiting the independence of its central bank, of a country reducing the competitiveness of its legal market environment.

Index of Privatization (IP)

Privatization is defined as the process of transferring state-controlled property into private hands.⁷ The Index of Privatization captures developments in all major areas of privatization, small-scale and large-scale, privatization of land and housing, as well as restitution. Small scale privatization refers to the sale of small businesses such as retail stores, restaurants, and service shops. Large-scale privatization involves sale of large

⁷ Such definition is widely used in the literature on privatization in Eastern Europe and the rest of the world. Some examples of such works include Bortolotti *et al* (2000); Brune and Garrett (2000); Megginson and Netter (2000); Nellis (1991).

state owned enterprises, as well as the establishment of a supervision agency, i.e. Privatization Agency, without which the process would be hampered. Two other aspects of privatization, however, need to be completed “before the economies of the formerly socialist economies can be regarded as having made the transformation to private market status” (Fisher 1992, p. 242). These include the privatization of housing (Fisher 1992) and land (Fisher 1992 and Lazear 1995b). A survey of the privatization legislation in Eastern Europe would not be complete without the inclusion of one of the most salient issues, restitution (or re-privatization). It concerns the return of property (or compensation for such) to the original owners (or their heirs), which was nationalized, confiscated, or expropriated during the communist rule.⁸

Coding Privatization Events

Privatization events were coded using the following categorization:

- Decision-making regarding increased level of privatization
 - event category 7: passing of legislation to increase levels of privatization (weight 4)
- Policy formulation regarding increased level of privatization
 - Event category 6: debate of legislation to increase levels of privatization (weight 3)
 - Event category 5: preparation of legislation to increase levels of institutional privatization, i.e. a project is under way to develop relevant legislation; or government is working on a draft law/bill towards increasing levels of privatization (weight 2)
- Agenda setting (neutral)
 - event category 4: government recognizes the need for legal reform, either towards more or less market like legislation (weight 1/-1)
- Policy formulation regarding reduced level of privatization
 - event category 3: preparation of legislation to reduce levels of privatization, i.e. a project is under way to develop relevant legislation; or government is working on a draft law/bill towards decreasing levels of privatization (weight -2)
 - event category 2: debate of legislation (by parliament) about decreasing levels of privatization (weight -3)
- Decision-making regarding reduced level of privatization
 - Event category 1: passing of legislation to decrease levels of privatization (weight -4)
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The following principles are applied in assigning the weights to the different policy stages.

⁸ Similar to the other two indexes, privatization events are coded and weighted on a monthly basis and individually for each type of privatization. The weights are summed up across components to come up with a total monthly score. The monthly values are then added up to form an annual Index of Privatization score. Finally, each year's score is added to the following year's value to form a cumulative annual index. Information for the 1975-2005 time period is collected, however, Poland is the only country which in 1989 has a privatization score different from zero, due to the start of small-scale privatization in 1988.

1. Activities which results in increased levels of privatization are given positive values. Actions leading to a decrease in the privatization level are assigned negative values.
2. Based on the stage model of policy-making which assumes a linear process, events of higher stages are assigned bigger weights.
 - a. Stage one policy formulation events are weighted more than agenda setting events.
 - b. Stage two policy formulation events are weighted more than stage one policy formulation events.
 - c. Decision-making events are weighted more than stage two policy-making events.
3. Agenda setting and policy formulation events (of either stage) for the same component of privatization⁹ are counted only once until an event of higher stage is reported.
4. Each stage one policy formulation event is preceded by an agenda setting event.
5. Each stage two policy formulation event is preceded by a stage one policy formulation event.
6. Each decision-making event is preceded by a stage two policy formulation event.

As with the other two indexes, these particular weights were chosen in order to avoid artificially inflating the index value. Scaling the numerical values of the weights while assigning bigger numbers to events of higher categories and preserving an equal numeric distance between categories will also produce an index with the same annual and cross-country variations. Rules four, five and six are based on the assumption of the linear nature of policy-making. When events of lower order are not reported, higher order events receive a full weight. In cases, however, when lower order events are reported, only a complimentary weight is given to higher order events. The following examples help clarify the rules.

Example One. It was reported that in December 1991, the law regulating large scale privatization in Bulgaria was being prepared. This is an event of category five (stage one of policy formulation), and was assigned a weight of two. When the large privatization law was adopted in April 1992 (event of category seven), two points are added to the scale. Note that there is no information about the law being debated in the legislature, i.e. stage two of the policy-making.

Example Two. In July 1990, the Hungarian government began to plan legislation for restitution. This event of stage one policy formulation is given a weight of two. When in December 1991, the restitution plans went before parliament (event of category six), one point is added to the index. Legislation was adopted in December 1995 (event of category seven) and another point is added. Despite the fact that three years passed between the beginning of discussion and passage of legislation, discussion is counted only once, as rule three calls for.

Example Three. The Moldovan Privatization Agency was established in October 1995. There is no information about when plans were first drafted and when were they

⁹ Due to lack of sufficient information, in this index I account for only five components of privatization, small, large, restitution, land and housing. The index does not distinguish between, for instance, privatization of barber's shops and privatization of restaurants.

debated. Following the assumption of the policy-making model adopted here, the full weight of four is given to this decision-making event.