

To appear in Nauro Campos and Jan Fidrmuc (eds.), "Political Economy of Transition and Development: Institutions, Politics and Policies." ZEI Studies in European Economics and Law, Kluwer Academic Publishers, Boston/Dordrecht/London.

The Relative Levels and the Character of Institutional Development in Transition Economies

Peter Murrell*

Department of Economics
University of Maryland
College Park, MD 20742
murrell@econ.umd.edu

Final draft: September 23, 2002

*Thanks are due to Steve Fish, Harry Kelejian, Steve Knack, and Dan Vincent for helpful advice. Helpful comments were provided by Maja Micevska, the discussant, and participants at the conference on "Political Economy of Transition: Institutions, Politics and Policies" May 24-25 in Bonn. I gratefully acknowledge the support of the U.S. Agency for International Development (USAID) through the Center on Institutional Reform and the Informal Sector (IRIS) at the University of Maryland. The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors and do not necessarily represent the views of IRIS or USAID.

The Relative Levels and the Character of Institutional Development in Transition Economies

Abstract. Institutional quality in transition countries is roughly as expected given per capita incomes. Institutions are improving continuously. Given prevailing assumptions that the institutional situation is dismal, the developments giving rise to this surprising finding must be investigated more fully. This investigation begins by cataloging the mechanisms that could have improved institutional indexes. Then, evidence is examined on the relative strengths of each of these mechanisms. Formal institutions have contributed more than informal ones. The largest contributions have come from formal institutions separate from the state administrative structure. Political institutions, legal systems, and independent governmental agencies have been important.

Journal of Economic Literature Classification Numbers: P5, K0, N4, O57

Keywords: Institutions, transition, law, legal systems, administration, social capital

1. Introduction.

At present, there is no generally accepted accounting of the institutional strengths and weaknesses of the transition economies. The first goal of the paper is to fill this gap by assessing current levels of institutional development. Given that this assessment is quite positive, the question arises as to the sources of institutional quality. Therefore, the second task of the paper is to examine which types of institutional mechanisms make relatively strong contributions.

Section 2 provides the assessment of where the transition countries now stand. Given the starting point in the early 1990's, the relatively short amount of time since the fall of communism, and given current presumptions, one would expect the results to show that the transition countries lag. However, levels of measured institutional development are roughly as expected given levels of development. Moreover, there is continuing improvement in most countries and on most institutional indexes. Even if the situation was bleak a decade ago, now it is not.

The paper then turns to an examination of how transition countries managed to achieve their current institutional performance. To answer that question, it is necessary to reflect on exactly what has been achieved: what is measured on institutional indexes? Section 3 argues that these indexes measure how well a country solves a certain class of problems, designated institution-applicable problems. These can be solved in diverse ways, as when traders freely cooperate or when laws and the legal system secure the flow of finance to businesses large and small.

As the example of cooperation between traders suggests, informal mechanisms can solve institution-applicable problems. However, when social scientists discuss the development of institutions, their focus is usually on those solutions to institution-applicable problems whose origin lies somehow in the state. In this paper, these will be called formal institutions, with the word

formal here connoting state involvement in the construction or the running of the institution.¹

The question to be investigated, then, is to what degree formal institutions contributed to transitional country performance on the standard institutional indexes. To provide an answer, it is necessary to delineate the full complement of mechanisms, including formal institutions, that could have contributed. Section 3 lays out a simple schema that lists those mechanisms.

The list of mechanisms provides the structure for Section 4 of the paper, which reviews existing evidence on how transition countries solve institution-applicable problems in the economic arena. The available evidence is spotty, unsystematic, full of holes, and sometimes contradictory. Thus, it is difficult to draw definitive conclusions. Nevertheless, the weight of evidence suggests that formal institutions have contributed more than informal ones. The largest contributions have come from those formal institutions that are separate from the state administrative structure.

2. Past Progress and Present Status.

Campos's (1999) data set covers political and economic institutions for 25 countries from 1989-1997. There are four separate indexes: the quality of the *bureaucracy*, the rule of *law*, *transparency* of policy-making and accountability of the executive, and strength of *civil* society. They are scored on a scale from 0 to 10, with 10 indicating highest quality institutions. Figure 1 shows progress on the four measures, grouping 11 countries in the CIS separately from 14 in Eastern Europe. The strongest impression from the figure is of significant increases over time, which occur in all time periods for all measures (except for strength of civil society in the CIS).

The measures popularized by Knack and Keefer (1995), produced as part of the International Country Risk Guide (ICRG, see Coplin et al. 1996), focus more narrowly on economic issues. These data are available in a consistent manner only up to 1997 and only include 7 transition

¹The distinction made here between formal and informal is the same as the distinction between institutions made by state and made by society (without state involvement). This seems to capture well North's (1990) central distinction

countries back to 1989 (Albania, Bulgaria, Hungary, Mongolia, Poland, Romania, Yugoslavia.) Five different series are most pertinent for economic issues: *law and order*, *corruption* within the political system, institutional *strength of the civil service*, *risk of repudiation* of contracts, and *risk of expropriation* of investment. On Figure 2, the data have been rescaled from 0 to 10.

Figure 2 imparts the same impression as Figure 1. There have been large continuing improvements in institutional quality, with one exception, corruption, which by 1997 is almost back at its 1989 level.² The scores for these seven transition countries, on average, are as good as those of Malaysia and South Korea in their high growth 1980s and better than Spain, Portugal, and Greece as they entered European Common Market.

Figures 1 and 2 establish that the transition countries have made substantial progress in just a few short years. The comparison with successful countries in East Asia and Southern Europe suggests success in a relative sense. To examine this issue further, systematic cross-country comparisons are useful. For this purpose, the measures produced by Kaufmann, Kraay and Zoido-Lobaton (KKZ, 2000, 2002) are probably the most complete. They aggregate many indicators, producing scores for a large number of the world's countries, for 1997-8 and 2000-1. Their six indexes reflect *voice and accountability*, *political instability and violence*, *government effectiveness*, *regulatory burden*, *rule of law*, and *graft*.

How do transition countries fare on these indexes relative to other countries? The answer depends on what expectations one sets. What is a reasonable expectation? We know that institutional quality is highly correlated with development. Therefore, it is reasonable to analyze levels of transition country institutions relative to those of countries at similar levels of per capita income. Some simple regressions accomplish this. These are descriptive, impressionistic

that institutions consist of both informal constraints (sanctions, customs, etc.) and formal rules (constitutions, laws, and property rights).

regressions with no attempt made to capture structural relationships. OLS is used, since there is no reason to believe that it is inferior to other methods in the present context.³ The two regressions are:

$$\text{Institutional quality in year } t = a + b \cdot \text{GDP in year } t-1 + c \cdot \text{TRANS}$$

$$\text{Institutional quality in year } t = a + b \cdot \text{GDP in year } t-1 + d \cdot \text{EE} + e \cdot \text{FSU}$$

where a, b, c, d, and e are parameters to be estimated. TRANS is a dummy variable denoting a transition country, EE is a dummy variable for Eastern Europe, and FSU is a dummy for the former Soviet Union. GDP is a PPP measure and is lagged one year to reduce the effects of overly optimistic or pessimistic assessments of institutions that are based solely on current performance.

In all, 24 regressions are estimated. The results appear in Tables 1 and 2. Only 4 of the 12 coefficients on TRANS are positive. However, for 2000-1, two of six are positive and one is not distinguishable from zero, while only one is significantly negative. For EE, 8 of 12 coefficients are positive. None are significantly negative while 3 are significant and positive at the 5% level. For the FSU, only 2 of the 12 coefficients are positive and 4 are significantly negative at the 5% level, while none are positive and significant. The FSU evidences relative failure on government effectiveness, regulatory burden, and graft, all areas where governmental administrative mechanisms are important. Eastern Europe also fares less well in these areas.

Further perspective can be gained because the KKZ methodology produces scores that offer relative comparisons over time. For each measure and each time period, the scores have the same distribution across the world's countries. Hence, one can compare dummy variable coefficients between time periods to make judgments on whether transition countries are improving relative to the rest of the world. The comparison leads to a positive assessment. Two-thirds of the eighteen

² This is a feature also of the ICRG corruption data for all countries together, and might simply be a reflection of heightened concerns about corruption arising in the mid 1990s.

³ The exercise is analogous to forecasting. When the model is unknown, forecasts based on OLS estimates of simple models can be better than those based on more sophisticated approaches (Kelejian and Vavrichek, 1981).

dummy coefficients are increasing from 1997-8 to 2000-1.

One can also examine country scores on each of the 6 indicators in each of 1997-8 and 2000-1 to examine the relative progress of individual countries. Table 3 lists the direction of change on each indicator for each country, aggregating this information in several different ways. The overall impression is of solid improvement. A majority of countries is improving, measured by the number of improving indicators or by aggregate score. There is improvement on a majority of the indicators.

When summarizing this section's results, it is crucial to remember context. Just over a decade ago, capitalism and democracy did not exist in meaningful forms in the countries examined here. Then there was a mammoth fall in national income, most often attributed to institutional lacunae (Roland, 2000, p. 193). The transition economies experienced an "institutional collapse" (Campos and Coricelli, 2002). Subsequently, according to the EBRD (2000, p. 23-5), institutional reform has been slow and has lagged other reforms. Svejnar (2002, p. 7) summarizes the current consensus: "Virtually no transition country succeeded in rapidly developing a legal system and institutions that would be highly conducive to the preservation of private property and the functioning of a market economy...This lack of a market-oriented legal structure appears to have been the Achilles' heel of the first dozens years of transition."

Someone seeking optimism would not expect to find it in the first decade of institutional performance in transition. Yet, this is exactly where this section identifies cause for optimism. There were remarkable improvements in institutional measures over the 1990s. By the beginning of the present century, the quality of institutions in transition countries was roughly as expected given levels of development. There are strong signs of continuing improvement. Even if the institutional situation was bleak a decade ago, now it is not

3. Where does measured institutional performance come from?

To learn more from the above, it is necessary to deliberate on the meaning of the data that was

used. Consider some of the inputs into the KKZ measures: expert ratings on adherence to the rule of law, analysts opinions on the levels of crime, surveys of companies on whether financial assets are well protected, beliefs of citizens on whether the country is governed according to the will of the people, etc. These reflect institutional outputs, not inputs. They capture features of a society that institutions help to produce, rather than measures of institutions per se. Thus, institutional indexes measure the quality of the solutions to a certain class of problems, which will be called *institution-applicable problems* in the following. In using this terminology, there is no assumption that institutions help to solve these problems, or that they are solved. The assumption is simply that institutions could address them in some conceivable world.

The paper's goal is to investigate the contributions of formal institutions in solving these problems. However, mechanisms other than formal institutions could help provide solutions. For example, the law and order component of the ICRG measure reflects, inter alia, popular observance of the law. Many factors only loosely related to formal institutions affect popular observance of the law. General cultural mores would be one example.

Thus, any attempt to isolate the contribution of formal institutions leads to deliberations on a much broader question: what mechanisms can solve institution-applicable problems? It is only by understanding which mechanisms could have produced solutions that one can construct an accounting of how solutions were produced. To set up a systematic inquiry, it is necessary to specify the full complement of mechanisms that could address institution-applicable problems.

Although such mechanisms are much discussed in the literature, there exists no agreed upon cataloging. Therefore, Tables 4.A and 4.B provide this paper's own catalog.⁴ The pertinent institution-applicable problems assumed within these tables are standard business problems that

⁴ The table adapts and develops one first appearing in Hendley, Murrell, and Ryterman (2000). The conjectural nature of this table must be emphasized, since it is an initial attempt to provide a comprehensive list of the various mechanisms that can solve institution-applicable problems in the economic arena.

intrinsically involve two parties, for example, a buyer and seller, lender and borrower, shareholder and corporation, etc. The problems to be solved are the typical generic problems that institutions could ameliorate, for example, avoiding hold up, transmitting information about a product, encouraging lending, closing the gap between ownership and control, promoting invention, etc.

4. Sources of Solutions to Institution-Applicable Problems in Transition Countries

Section 2 established that the performance of transition countries in solving institution-applicable problems was surprisingly good. Section 3 provided the framework to investigate the sources of this performance, identifying the mechanisms on which evidence should be presented. The following subsections examine the evidence on each of the mechanisms in turn.

4.1. Personal trust

Personal trust is transmitted from the past. It can come either in a general form, where a certain culture breeds implicit trust among all society's members, or in an individualized form, where past experiences lead particular individuals to trust each other.

The continuing stability of interactions greatly affects the amount of personal trust that derives from past interactions (McMillan and Woodruff, 1999). If an agent is no longer trading with those familiar from the past, and if all contacts are new, then no individualized personal trust can exist. The amount of individualized personal trust will also depend upon some continuity in the type of interactions. A trusted employee does not necessarily become a trusted supplier.

In the 1990s, transition countries experienced less continuity than did other countries. There were huge recessions, changes of ownership affecting more than half of the assets in the economy, and a large set of economic interactions that became feasible for the first time (with foreigners, employer-employee, capitalist supplier with capitalist buyer). Assuming economic agents in transition countries generate personal trust from past interactions in the same way as agents in other countries, then it is inconceivable that the 1990s could have seen the transition countries with a

abundance of inherited, individualized personal trust.

There is also non-individualized personal trust, that based on inherited cultures. History does not offer optimism on this score. The cultures of transition were partially produced by communist experience, which probably fostered distrust between citizens (Rose 1993).

Fortunately, there is evidence on generalized trust. In 1991, citizens in many countries were asked the following question as part of the World Values Survey (1999): "Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?" The percentage of people who chose the "most people can be trusted option" was 25% in transition countries, relatively low for countries at analogous levels of development. Raiser et al. (2001) use the same source, plus updated survey information for 1995, to conclude that generalized trust in the transition countries is much lower than in the OECD, and declining in the early 1990s.

There is one other major source of personal trust, the family. According to Burkart, Panunzi, and Shleifer (2002): "Most firms in the world are controlled by their founders, or by the founders' families and heirs. Such family ownership is nearly universal among privately held firms, but also dominant among publicly traded firms. In Western Europe, South and East Asia, Middle East, Latin America, and Africa, the vast majority of publicly traded firms are family controlled." They argue persuasively that family ownership is an imperfect substitute for laws protecting shareholders.

What is the heritage of socialist times in family matters? In the early Soviet Union, there was a determined effort to remove the extended family from its role in social organization (Zickel, 1989). Although this policy was partially reversed in later years, the goal was to strengthen the nation rather than to create independent units. Many of the measures that weakened the family remained, for example, easy divorce, civil marriage, and greater income security. Divorce rates and female labor-force participation rates were comparable to those of the most developed countries, not to countries at similar levels of development.

Additionally, the very low population growth rates (before and during transition) imply that the extended family is less extended than elsewhere. During the 1980s, the average population growth rate for middle income countries was 1.8%, but for the transition countries it was only 0.5%. One-child families generate no siblings or first cousins, but three-child families generate eight, implying remarkable differences in the possibilities for corporate control and small-firm growth in a world where corporate governance laws do not work.⁵ Interestingly, Poland's population growth rate was considerably higher than in comparable transition countries and it was widely recognized as having the most vibrant small firm growth in early transition.

Thus it is safe to conclude that the transition countries are not well endowed with personal trust. The few pertinent empirical studies are consistent with this conclusion. McMillan and Woodruff (1999) find only a small role for family networks in facilitating transactions in Vietnam. Lee and Meagher (2001) identify a minor role for family finance in Kyrgyz firms. Hendley et al. (2000) find that personal relationships are of little importance in inter-firm transactions in Russia.

4.2. Calculative trust

Calculative trust occurs where the generation of cooperative solutions to institution-applicable problems follows bargaining between two independent parties. Therefore, large amounts of calculative trust, per se, should not necessarily result in better scores on the institutional measures examined in Section 2. For example, consider the law and order element of the ICRG measure, which reflects expert assessments of the strength and impartiality of the legal system and popular observance of the law. If party A bargains privately with party B and they generate a productive transaction as a solution to a non-cooperative game, with A calculating that implementation of the solution is in B's self-interest, there is no reason why A would attribute any of B's actions to law and

⁵ There is an additional factor that has limited the family's role. The process of generating corporations in transition countries has not been conducive to family governance. Corporations were not built by genetic growth under

order. Thus, on a priori grounds, we can conclude that the generation of calculative trust would not usually lead to better scores on the standard institutional measures.

Nevertheless, it is still useful to examine whether the transition countries are likely to have generated relatively large amounts of calculative trust. Here, the argument again seems clear. Productive bargains will be easier to reach when the parties are dealing with a repetition of an old scenario. But in the transition countries, completely new forms of interactions have been made possible, between private firm and state firm, between foreign company and domestic company, between shareholder and manager, etc. Certainly, the degree of novelty in roles in the transition countries is greater than in countries at comparable levels of development.⁶

In sum, calculative trust could not have produced the positive conclusions of Section 2.

4.3. Economic networks

There is a burgeoning literature on what are variously called networks or groups. There are strong claims on the importance of these, both in general (Uzzi, 1996), and in transition (Grabher and Stark 1997, McDermott 2002). According to one assessment: "Diversified business groups are a highly visible and dominant organizational form in most emerging markets." (Yafeh and Khanna 2000). But there might be less here than meets the eye. In Khanna and Palepu (1999), 95% of the groups are supported by family affiliations. Given the comments made above about transition-country families, perhaps the more general literature on groups is not relevant to transition.

In transition economies, there is some weak evidence that networks, mostly originating in the old socialist systems, have a role in the new economies (Grabher and Stark 1997, McDermott

family control but rather by dividing the shares of state-owned enterprises between individuals. With concentrations of wealth within families not significant when this happened, control by extended families is a non-issue.

⁶ The argument here is akin to the analysis of the effect of uncertainty on bargaining. In a buyer-seller interaction, Myerson and Satterthwaite (1983) show that commonly known valuations will lead to efficient agreements, but that private knowledge means inefficient trades. Since the move from common to private knowledge is akin to an increase in uncertainty, this suggests that the mechanisms of calculative trust are less likely to be productive the more uncertainty there is in the economic environment. The transition countries have had relatively high degrees of uncertainty.

2002).⁷ Indeed, Grabher and Stark (1997) adopt the startling premise that the actual unit of entrepreneurship in transition is not the natural or legal personality but rather the network.

McDermott (2002) claims that network linkages mediated delivery disputes and managed inter-firm debts in the Czech Republic. Hendley et al. (2000) observe third-party enterprises playing a role in contract enforcement in Russia, as do Lee and Meagher (2001) in the Kyrgyz. McMillan and Woodruff (1999) find that business networks support the extension of trade credit in Vietnam.

These networks sometimes gelled into formal groups, such as trade associations or financial industrial groups. There is some evidence that these helped solved institutional-applicable problems. Recanatini and Ryterman (2000) argue that business associations emerged spontaneously in response to a demand for information and for coordination of production and trade. Their estimates suggest that these new coordinating mechanisms reduced the initial output decline. Similarly, Perotti and Gelfer (1998) show that the investment expenditures of members of financial-industrial groups in Russia are less dependent on internal funds than are the expenditures of unaffiliated companies, suggesting that these groups are providing substitutes for capital markets.

In contrast, however, Hendley and Murrell (2002) find little evidence of the effect of economic networks and/or trade associations on the enforcement of agreements in Romania. Hendley et al. (2000) find no effect of trade associations or financial-industrial groups on the enforcement of agreements in Russia, a result consistent with that of Lee and Meagher (2001) for the Kyrgyz.

In sum, there is only weak evidence that networks have played a significant role in transition economies. Moreover, these results are centered on Russia, which does not fare well on the institutional measures. Changes through time suggest weakening of these effects. Whereas the Recanatini and Ryterman (2000) results point to the importance of trade associations in early transition, the Hendley et al. (2000) evidence points to lessening significance a few years later.

⁷ The adjective weak is used because the reader who is skeptical of the importance of networks will not be

With the evidence weak, centered on a country with poorer institutional performance, and derived from early transition, it does not seem likely that networks contributed to the results of Section 2.

Finally, there is a fundamental question whether effective networks would actually lead to a country increasing its score on institutional measures. The argument is the same as the one on calculative trust in Section 4.2: if a network solves a problem, then observers would not necessarily attribute the success to institutional quality: "It is perhaps sensible to see groups acting as substitutes for missing institutions..." (Khanna 2000). Furthermore, when there are missing institutions, groups can exploit the gap, rent seek or exploit minority shareholders, and contribute to a generally poor assessment of institutions in a country (Yafeh and Khanna 2000).

4.4. Social networks

Social capital arising out of social networks has received considerable attention lately in discussions of the performance of transition economies (Paldam and Svendsen 2001; Raiser 2001, Raiser et al. 2001). This section, consistently with that literature, argues that social capital could not account for the results of Section 2. There are two reasons, for this: social capital is less effective in times of change and it is at low levels in the formerly socialist countries.

Even if social capital were at normal levels in transition countries, it would be less important in solving institution-applicable problems in those countries than elsewhere, because of the radical changes that are occurring. The argument is similar to the one in Section 4.1 on personal trust. Social networks are backward looking phenomena, which are less effective in times of change (Greif, 1996, 254-257). In fact, Paldam and Svendsen (2001) argue that the old networks are negative social capital. Gehlbach (2001) theorizes that the old networks facilitate corruption.

The amount of social capital generated under socialism is probably quite low. Social capital is a threat to a dictatorship (Paldam and Svendsen, 2001). Cooperation outside the current political

context can lead to cooperation against the political regime, spurring control of associational activities by the state. "Associational life was kept largely outside the public sphere – circle of friends mattered more than involvement in football clubs, which might be exposed to political infiltration." (Raiser, 2001). The dictatorships did not bequeath much social capital.

The pertinent evidence is clear. Raiser et al. (2001) document key facts about the transition economies. Circles of friends are relatively circumscribed. Participation in clubs and associational groups is low (and lower in 1995 than in 1990). Membership in groups with direct economic or political significance, such as unions or professions, is also low. Rose (1999) documents the lack of Russian social capital producing organizations. Siisiäinen (1999) compares three Scandinavian countries with three Baltic countries and shows that there is much less social capital in the latter.

4.5. Private supply, informal

The private suppliers of informal solutions to institution-applicable problems that have received most attention are the enforcers of contracts by strong arm means. But they have received much more attention than they deserve, empirically speaking (Hendley et al. 2000). Moreover, their existence indicates the absence of effective institutions. A rich man who felt perfectly safe because bodyguard services were cheap would probably not rate his country very high on safety.

There are purely private mechanisms that do provide solutions to institution-applicable problems and would lead to a higher rating for a country's institutions, for example, credit-rating services and trade associations facilitating the setting of standards. Evidence on these mechanisms is limited. In Russia, Hendley et al. (2000) find over five times as many enterprises using the government as a source of information on transactional partners as using credit-rating services or business associations. A survey of 254 Romanian enterprises (Murrell, 2002a) finds that city governments are a more important source of information on trading partners than are credit-rating agencies, while regional governments are used as much as business associations.

It is unlikely that Section 2's results can be explained by the presence of private suppliers of informal solutions to institution-applicable problems.

4.6. Private supply, formal

Again, the amount of evidence is limited. Private arbitration courts are the paradigmatic example of a provider of solutions to institution-applicable problems whose functioning depends ultimately on state power. Hendley et al. (2000) and Pistor (1996) find that few enterprises use private arbitration courts in Russia. Murrell (2002) finds that only a small proportion of Romanian firms frame their contracts so that disputes enter the private arbitration courts. The effectiveness of arbitration courts is rated much lower than the effectiveness of the standard state courts.

The evidence on trade associations presented above is also relevant here, since such associations sometimes have a state sanctioned role in contract enforcement. That evidence suggests that such a role is unimportant in the transition economies.

4.7. Political institutions

Strong evidence on the relative performance of political institutions appears in the results using the KKZ indexes that appear above. In order of the relative success of the transition countries, the indexes are voice and accountability, political instability and violence, rule of law, graft, government effectiveness, and, last, regulatory burden. Political institutions are most directly implicated in the first two of these and partially in the third. It is therefore safe to conclude that political institutions are making a large contribution to the measured relative institutional performance of the transition countries.

4.8. Governmental administration

The logic on governmental administration is the same as in the previous sub-section, but with the opposite conclusion. The three indexes in Section 2 on which governmental administration is likely to have the strongest influence are governmental effectiveness, regulatory burden, and graft.

The results in Tables 1 and 2 show poor performance on these three measures. One can move quickly to a conclusion: effective governmental administration is not a comparative advantage of the transition countries. This accords well with the observation that the executive branch under communism was extremely remote from the ideal of a neutral, efficient civil service and that reforms of that branch have lagged other reforms (Nunberg, 1999).

4.9. Independent governmental agencies

Because of the political economy of bureaucratic organization, it would be easiest to create effective independent governmental agencies in areas that were completely unknown before transition, for example, privatization agencies or stock market regulators. Such agencies have often attracted the most talented reformers, because of the glamour and importance of these new jobs. They are therefore likely to be more effective than other institutional mechanisms.

However, there is no systematic empirical evidence on how well these independent agencies have performed. There are examples of strong performance. Early in transition, Poland's new anti-monopoly office was a strong catalyst for pro-competitive policies (Murrell, 1996). Poland's Commissioner for Civil Rights Protection played an important role in protecting civil rights against administrative actions (Nunberg, 1999). Mongolia's privatization agency, cum stock-market, implemented a privatization program that was remarkable for its speed and relative lack of corruption (Anderson et al. 2000). Currency boards in Estonia and Bulgaria accomplished the tasks assigned to them. Djankov and Murrell (2002) show that the granting of independence to old state enterprises had surprisingly strong results, from Central Europe to China.

Pistor (2001) documents institutional influences on equity market development in Central Europe. Hungary and Poland set up independent agencies to supervise stock markets and to implement investor protection rules. Their stock markets fared much better than did the Czech market, despite the fact that Czech privatization created a large pool of firms that should have

stimulated the stock-market growth:

"The existence - or lack thereof - of an independent supervisor of stock markets is where the three countries differ the most. Hungary and Poland established an independent supervisory agency at the beginning of reform. In both countries, this agency is charged with supervising capital markets. Moreover, its actions can have ramifications for the position of issuers and traders at stock exchanges, even if they operate under their own set of rules. In contrast, in the Czech Republic the task of supervising the fledging financial market was left with the Ministry of Finance, which pursued a hands-off policy. Only after abuses of investor rights became rampant and there was clear evidence that the public was losing confidence in the market, was an independent commission established in April of 1998." (Pistor 2001)

Although independent agencies congregate in new areas, there is one area of existing activity in which they have made great strides, in central banking. Central bank operations needed to be completely revamped, and fast. Johnson (2002) lays out a fascinating story of how this happened, focusing on the role of the international central banking community, which devoted large resources to remolding the old central banks in the Western model. Johnson concludes that the reforms were successful in the 19 post-communist democracies that she studied, in the sense that the reformed central banks quickly adopted Western banking standards and practices. Additionally, it is worth noting that the BEEPS survey (Hellman et al. 2000, p. 17) generally rates central banks as superior to other central government institutions in the overall quality and efficiency of their services.

4.10. The legal system

The paragraphs below examine six types of evidence. First, there is comparison between the performance of legal systems and other institutions within transition countries, using the qualitative judgments of enterprises. Second, there are facts on legal procedures that characterize transition country legal systems relative to those in other countries. Third, microeconomic evidence from

firm behavior is presented. Fourth, current views on corporate governance are examined to assess whether poor corporate governance particularly reflects the inadequacies of legal systems. Fifth, there is information on the developments of legal protections for investors and creditors. Sixth, the paper highlights new information on legal interactions between the state and enterprises.

The BEEPS study (Hellman et al. 2000) provides information that facilitates comparison of different elements of the institutional framework. The information reflects the judgments of firms in 20 transition countries. Firms do not rate the quality and efficiency of the judiciary highly. However, the functioning of the judiciary is regarded as less of a problem for businesses than are other institutions. Law and order issues rate below both micro and macro governance as obstacles to growth. Corruption in the courts has less impact than corruption elsewhere. On balance, the legal system is one of the better performing elements of the institutional structure.

Djankov et al. (2002) collect data on highly specific aspects of the functioning of the legal system. They quantify the legal procedures involved in evicting a tenant and in collecting on a bad check. They match the extensiveness of these procedures against a model process, thereby making judgments on whether the regulation of legal process is greater than needed for the purposes of justice and efficiency. They score countries on seven criteria.

Djankov et al. (2002) treat ex-socialist countries as a separate category when they investigate variations in the regulation of legal process. The ex-socialist group fares reasonably well, with results that are better than those for French-origin countries and slightly better than those for German-origin countries. That is, the ex-socialist legal systems are slightly better than those derived from origins that would have provided their legal heritage had it not been for the socialist interlude. This raises the possibility that the effects of socialism and the reforms of the 1990's have led to legal systems with less onerous procedural elements than would otherwise have developed.

Microeconomic studies of firm behavior provide complementary evidence. On the basis of a

survey of 328 Russian enterprises, Hendley et al. (2000) conclude that: "Contrary to common wisdom, Russian enterprises do not reject the use of law and legal institutions when disputes arise. Many enterprises use the courts." An econometric analysis of the same data (Hendley et al. 2001) suggests that: "The institutional environment rewards enterprises that pay attention to the legal side of their operations...providing evidence that law and legal institutions add value to the Russian economy." These results are consistent with an OECD (2002) survey in Russia, which found "an explicit formulated agreement" roughly as important as long-term business ties in enforcing contractual agreements, with threat of violence, cross-ownership, and administrative intervention much less important. Murrell (2002) presents results for Romania that are consistent with these.

Johnson et al. (2002) come to similar conclusions when examining enterprises in five transition countries. In Poland, 72.9% of firms say the courts can enforce contracts, with corresponding figures of 67.9% in Slovakia, 86.9% in Romania, 55.8% in Russia, and 54.6% for Ukraine. Johnson et al. (2002) conclude that: "The courts also significantly affect contracting. Entrepreneurs who say the courts work behave differently from those who say they do not work." These results suggest, as do general perceptions and Table 2, that the microeconomic results on Russia summarized in the previous paragraph do not present an overly optimistic view.

In several other domains, consistent results are obtained. Berkowitz (2001) finds that a Russian law had major effects on the allocation of oil pipeline capacity. Using evidence from the experience of foreign litigants in Russia's *Arbitrazh* (i.e. business) courts, Hendrix (2001, p.112) concludes that "...the likelihood of a foreign party obtaining a fair outcome in the Russian court system is greater than generally believed... [F]oreign companies having business dealings in Russia should consider making greater use of the Russian courts". Lee and Meagher (2001, pp. 157-9) find that legalistic enforcement of contracts is widely used in the Krygyz and considered more effective than anticipated, with *Arbitrazh* courts rated as a highly effective in enforcing contracts.

The foregoing microeconomic results focus on mundane contract enforcement issues. One would expect that the legal system would perform less well on more complicated and contentious issues. For example, Frye (2001) argues that the courts are not important in protecting the property rights of small shopkeepers in Warsaw and Moscow. However, even in this instance, nearly two-thirds of Warsaw shopkeepers say they could take local government to court if property rights were violated, while even one-quarter of Moscow shopkeepers express the same belief.

The degree of protection of the property rights of investors in large enterprises is also questionable. There are many claims that the failure of corporate governance institutions has been of great importance. However, there is little hard empirical evidence.⁸ In a series of papers driven by the observation of the low valuations of privatized Russian firms, a massive failure to solve an institution-applicable problem has been suggested (Heller 2001, Black, Kraakman, and Tarassova 2000, Black 2001). For example, Black (2001) shows that the assets of firms with good corporate practices are valued 600 times more than the assets of firms with bad practices. These estimates are suggestive of the improvements that might be stimulated by more effective institutions.

What is the source of this institutional failure? "[Russia] has decent corporate and securities laws, but the laws are unenforced and widely ignored. Cultural norms among managers and large shareholders reinforce bad rather than good behavior. Self-dealing and often outright looting is the norm, not the exception." (Black, 2001). Black et al. (2000) attribute this situation not specifically to the legal environment, but rather more generally, to the nature of the privatization process, to the sequencing of legal development and privatization, and to the broader institutional framework: "First, mass privatization of large enterprises is likely to lead to massive insider self-dealing unless...a country has a good infrastructure for controlling self-dealing...Second, the profit incentives to restructure privatized enterprises (instead of looting them)...can be swamped by a

⁸ Anderson, Korsun, and Murrell (1999) show that corporate governance laws work poorly in Mongolia.

hostile business environment. In Russia, that environment includes a punitive tax system, official corruption, organized crime, an unfriendly bureaucracy, and a business culture in which skirting the law is seen as normal...Third, corrupt privatization of large firms can compromise future reforms...In a vicious circle, dirty privatization also reinforces corruption and organized crime..." Hence, the rampant failure of corporate governance mechanisms is not specifically pertinent to evaluating the quality of Russian legal institutions, but rather is a reflection of the overall institutional environment and the process of privatization.⁹

If the process of privatization and broader aspects of the institutional structure are so important, then it is difficult to draw conclusions from these outcomes specifically on legal system quality. Pistor et al. (2000) provide an alternative method, looking at inputs, the quality of shareholder and creditor rights that have been enacted. Such rights are a product of both political institutions and legal systems, since many statutes are formulated in an apolitical process that reflects the arguments of legal scholars and the skills of legal drafters rather than the politicking of legislators.

On shareholder rights, Pistor et al. (2000) conclude that the scope of legal change is truly impressive. Shareholder rights in transition countries surpass those achieved by countries whose legal systems derive from French, German, or Scandinavian origins.¹⁰ Creditor rights in transition countries score higher than rights in all other sub-groups of countries, when the groups are defined in terms of the legal origins from which the countries' legal systems emanate. This performance was achieved essentially in a matter of six years.

However, as Pistor et al. (2000) make clear, the law on the books can be very different from the law in action, since formal rights will not be important unless embedded in a system of legality, with enforcement a possibility. They find that transition countries are less successful on the

⁹ Heller (2001) comes to similar conclusions.: "Neither markets nor subsequent regulation will reliably convert an anticommons into useful property, even if rights are "clearly defined" and subject to the "rule of law"."

¹⁰ These comparisons match transition countries against a group in which OECD members are in the majority.

effectiveness of law than on legislating formal rights. However, enactment of rights is a first step in making rights effective. The identified gap between rights and enforcement could be a result of a natural progression of the development of institutions, in which enforcement follows enactment.

Perhaps the touchstone of whether the law in action is catching up with the law on the books is whether law affects state behavior. An essential element of the rule of law is the ability to protect property rights against the state. Therefore the ability to sue the state is an important test of the development of the rule of law.

Hendley (2002) presents a fascinating study of the interaction between the state and the courts in Russia. The number of *Arbitrazh* court cases involving the state has been rapidly increasing. One source of the increase is cases brought by the state to seize property from delinquent taxpayers. This use of the courts is a response to a Constitutional Court ruling that it is illegal to confiscate the property of tax delinquents without prior court approval. Also increasing are cases in which firms sue the state in order to obtain reversals of administrative regulations or decrees. These cases show the willingness of firms to use the courts to challenge the state.

Hendley concludes: "A few tendencies are indisputable. [Cases involving the state and enterprises] have increased steadily since the inception of the *arbitrazh* courts, not only for cases brought by the state, but also for those brought by enterprises...[E]nterprises are confronting the state in court. More impressive, they are doing so in ever greater numbers and with a respectable rate of success..." It is notable that Russia scores very low on the legal effectiveness measures used by Pistor et al. (2000), and therefore one could expect to see even more hopeful developments in other countries. For example, Poland's Administrative Court has been credited with having played a substantial role in bolstering the rule of law against administrative infringements (Nunberg, 1999).

5. Summary

The goals of this paper have been to establish some basic facts about levels of institutional

development in the transition economies and to consider which institutional mechanisms contributed to the attainment of those levels. The results diverge starkly from the presumptions that are current in the literature. Three central results should be emphasized:

1. Indexes of institutional levels are no worse than would be predicted on the basis of the overall level of development of the transition countries. Institutional levels are better than would be expected from a current reading of the literature.
2. Formal institutions account for the better than expected performance, not informal institutions.
3. Political and legal institutions and independent governmental agencies contributed to institutional development. Administrative bodies of the state detracted from it.

It is necessary to close with a few notes of caution on interpretation of the results. First, this paper uses conventional indexes of institutional levels. The validity of the results rises and falls with the validity of those indexes, which quantify some intrinsically difficult-to-measure concepts. Second, there is no claim that institutional levels in transition countries are high, in an absolute sense. Perhaps, institutions are abysmal in all but the richest nations and the transition countries have simply reached these abysmal levels. Third, there is very incomplete evidence on the contributions of the different institutional mechanisms. This would be true for any similar analysis conducted anywhere in the world. More work is necessary on the micro-mechanisms that contribute to aggregate institutional performance. Fourth, an institution can be judged to be of high quality and yet might contribute little to overall economic performance. This would be the case if adapting to a new institutional framework is an inherently complex task and if firms adjust only slowly. In other work, I have raised the possibility that the institutional problem in transition countries might not be the development of institutions per se, but rather the ability of firms to use institutions in the first few years after their creation (Murrell 2002b, 2002c).

References

Anderson, James H., Georges Korsun and Peter Murrell. "Ownership, Exit, and Voice after Mass Privatization: Evidence from Mongolia," *Economics of Transition* 7:1, pp. 215-43, 1999.

Anderson, James H., Young Lee and Peter Murrell. "Competition and Privatization Amidst Weak Institutions: Evidence from Mongolia," *Economic Inquiry* 38:4, pp. 527-549, 2000.

Berkowitz, Daniel. "Does Russian Legal Reform Matter? Evidence from Crude Oil Export Allocations." In Peter Murrell ed., *Assessing the Value of Law in Transition Economies*, Ann Arbor: University of Michigan Press, 2001.

Black, Bernard, Reinier Kraakman, and Anna Tarassova, "Russian Privatization And Corporate Governance: What Went Wrong?" *Stanford Law Review* July, 2000.

Black, Bernard. Does Corporate Governance Matter? A Crude Test Using Russian Data. 149 *U. of Pennsylvania Law Review*, 2001

Burkart, Mike, Fausto Panunzi, and Andrei Shleifer "Family Firms" Harvard University, 2002.

Campos, Nauro. "Context Is Everything: Measuring Institutional Change In Transition Economies" CERGE-EI, October, 1999.

Campos, Nauro and Coricelli, Fabrizio. "Growth in Transition: What We Know, What We Don't, and What We Should." CEPR Discussion paper 3246, March 2002.

Coplin, William D., Michael K. O'Leary, and Tom Sealy, *A Business Guide to Political Risk for International Decisions* Syracuse, NY: Political Risk Services, 1996.

Djankov, Simeon and Peter Murrell "Enterprise Restructuring in Transition: A Quantitative Survey," *Journal of Economic Literature*, forthcoming 2002.

Djankov, Simeon, Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer. "Courts: the Lex Mundi project." Harvard, 2002.

EBRD *Transition Report – 2000*. EBRD, London 2000.

Frye, Timothy, "Keeping Shop: The Value of the Rule of Law in Warsaw and Moscow," in Peter Murrell ed., *Assessing the Value of Law in Transition Economies*, Ann Arbor: University of Michigan Press, 2001.

Gehlbach, Scott. "Social Networks and Corruption." Berkeley, 2001.

Grabher, Gernot and David Stark. *Restructuring Networks in Post-Socialism: Legacies, Linkages, and Localities*, Oxford: Oxford University Press, 1997.

Greif, Avner. "Contracting, Enforcement, and Efficiency: Economics beyond the Law" in Michael Bruno and Boris Pleskovic, eds., *Proceedings of the World Bank Annual Conference on Development Economics 1996*. Washington, D.C.: The World Bank, 1996.

Heller, Michael. "A Property Theory Perspective on Russian Enterprise Reform." in Peter Murrell ed., *Assessing the Value of Law in Transition Economies*, Ann Arbor: University of Michigan Press, 2001.

Hellman, Joel S. , Geraint Jones, Daniel Kaufmann, And Mark Schankerman "Measuring Governance, Corruption, And State Capture How Firms And Bureaucrats Shape The Business Environment In Transition Economies" World Bank, 2000.

Hendley Kathryn, and Peter Murrell "Which mechanisms support the fulfillment of sales agreements? Asking decision-makers in firms." *Economics Letters*, 2002.

Hendley, Kathryn, Peter Murrell, and Randi Ryterman. "Law, Relationships, and Private Enforcement: Transactional Strategies of Russian Enterprises." *Europe-Asia Studies*, 2000.

Hendley, Kathryn, Peter Murrell, and Randi Ryterman, "Law Works in Russia: The Role of Law in Interenterprise Transactions", in Peter Murrell, ed. *Assessing the Value of Law in Transition Economies*, University of Michigan Press, 2001.

Hendley, Kathryn, "Suing The State In Russia." *Post-Soviet Affairs*, 2002.

Hendrix, Glenn. "The Experience of Foreign Litigants in Russia's Commercial Courts", in Peter Murrell ed., *Assessing the Value of Law in Transition Economies*, Ann Arbor: University of Michigan Press, 2001.

Johnson, Juliet. "Agents Of Transformation: The Role Of The West in Post-Communist Central Bank Development." NCEEER Working Paper, Washington D.C. 2002.

Johnson, Simon, John McMillan and Christopher Woodruff. "Courts And Relational Contracts," *Journal Of Law, Economics, and Organization* 18:1, Pp. 221-277, 2002.

Kaufmann, Daniel, Aart Kraay and Pablo Zoido-Lobaton. "Governance Matters". World Bank Policy Research Department Working Paper No. 2196, 1999.

Kaufmann, Daniel, Aart Kraay and Pablo Zoido-Lobaton "Governance Matters II: Updated Indicators for 2000/01". World Bank Policy Research Department Working Paper, 2002.

Kelejian, Harry and Bruce Vavrichek "An Evaluation of the Forecasting Performance of Macroeconomic Models, with Special Emphasis on Model Size." In J. Kmenta and J. B. Ramsey eds. *Large Scale Macro-Econometric Models: Theory and Practice*. North-Holland, Amsterdam, 1981. pp. 93-122.

Khanna, Tarun And Krishna Palepu, "Policy Shocks, Market Intermediaries, And Corporate Strategy: The Evolution Of Business Groups In Chile And India." *Journal Of Economics and Management Strategy* 8, No. 2 1999.

Khanna, Tarun. "Business Groups And Social Welfare In Emerging Markets: Existing Evidence And Unanswered Questions." *European Economic Review* 44 748-761, 2000.

Knack, Stephen and Philip Keefer, "Institutions and Economic Performance: Cross-Country Tests Using Alternative Institutional Measures", *Economics and Politics*, 7 (3), pp. 207-227, 1995.

Lee, Young, and Patrick Meagher "Misgovernance or Misperception? Law and Finance in Central Asia", in Peter Murrell ed., *Assessing the Value of Law in Transition Economies*, Ann Arbor: University of Michigan Press, 2001.

McDermott, Gerald. *Embedded Politics: Industrial Networks and Institution Building in Post-Communism*. Ann Arbor: University of Michigan Press, forthcoming, 2002.

McMillan, John, and Christopher Woodruff, "Interfirm Relationships and Informal Credit in Vietnam", *Quarterly Journal of Economics*, **114**, 6: 1285-1320, November 1999.

Murrell, Peter. "How far has the transition progressed?", *Journal of Economic Perspectives*, 10(2), 25-44, Spring 1996.

Murrell, Peter. "Enforcement of Agreements in Romania." University of Maryland, 2002a.

Murrell, Peter. "Institutions and Firms in Transition Economies," in *Handbook Of New Institutional Economics*, edited by Claude Ménard and Mary Shirley, Kluwer Academic Press, forthcoming, 2002b.

Murrell, Peter. "Firms Facing New Institutions: Transactional Governance in Romania." University of Maryland, 2002c.

Myerson, R.B. and M.A. Satterthwaite, "Efficient Mechanisms for Bilateral Trading." *Journal of Economic Theory*, 1983.

North, Douglass C., *Institutions, Institutional Change, and Economic Performance*, Cambridge University Press, 1990.

Nunberg, Barbara. *The State After Communism : Administrative Transitions In Central And Eastern Europe*. Washington, D.C. : World Bank, 1999.

OECD. *OECD Economic Surveys 2001-2002: Russian Federation*. OECD Paris, 2002.

Paldam, Martin and Gert Tinggaard Svendsen "Missing social capital and the transition in Eastern Europe." *Journal for Institutional Innovation, Development and Transition*, vol 5, 2001.

Perotti, Enrico and Stanislav Gelfer. "Investment Financing In Russian Financial Industrial Groups." University Of Amsterdam, 1998.

Pistor, Katharina. "Supply and Demand for Contract Enforcement in Russia: Courts, Arbitration, and Private Enforcement." *Review of Central and East European Law*, 22:1, 1996.

Pistor, Katharina. "Law as a Determinant for Equity Market Development: The Experience of Transition Economies." In Peter Murrell ed., *Assessing the Value of Law in Transition Economies*, Ann Arbor: University of Michigan Press, 2001.

- Pistor, Katharina, Martin Raiser, and Stanislaw Gelfer. "Law and Finance in Transition Economies." *Economics of Transition* 8(2):325–368, 2000.
- Raiser, Martin. "Trust in Transition," EBRD Working Paper, No. 39. 2001.
- Raiser, Martin, Christian Haerpfer, Thomas Nowotny and Claire Wallace. "Social Capital in Transition: A First Look at the Evidence" EBRD Working Paper No. 62, February 2001
- Recanatini , Francesca and Randi Ryterman "Disorganization Or Self-Organization?" World Bank, 2000.
- Roland, Gerard. *Transition and Economics: Politics, Markets, and Firms*. MIT Press, Cambridge, Mass. 2000.
- Rose, R. "Rethinking Civil Society: Postcommunism And The Problem Of Trust." *Journal Of Democracy* 1(1): 18-29, (1993).
- Rose, R., "Getting Things Done In An Antimodern Society: Social Capital Networks in Russia." In Dasgupta, P. & Serageldin, I., eds., *Social Capital: A Multifaceted Perspective*, pp. 147-71, World Bank: Washington, DC., 1999.
- Siisiäinen, M., "Voluntary Associations and Social Capital In Finland." in Deth, J.W.V., Maraffi, M., Newton, K., and Whiteley, P.F., eds. *Social Capital And European Democracy*. pp. 120-43, Routledge: London, 1999.
- Svejnar, Jan. "Transition Economies: Performance and Challenges." *Journal of Economic Perspectives*, 16(1), 3-28, Winter 2002.
- Uzzi, Brian. "The Sources and Consequences of Embeddedness for the Economic Performance of Organizations: The Network Effect." *American Sociological Review*, 61:4, pp. 674-98, 1996.
- World Values Study Group. World Values Survey, 1981-1984 And 1990-1993 Ann Arbor, MI: Inter-university Consortium for Political and Social Research, 1999.
- Yafeh, Yishay And Tarun Khanna " Business Groups And Risk Sharing Around The World" Harvard Business School, Competition & Strategy Working Paper Series Number: 01-041, 2000.
- Zickel, Raymond E. Ed. "Soviet Union: A Country Study", Federal Research Division, Library Of Congress, Washington D.C. May 1989.

Figure 1: Measures of the strength of political and economic institutions in the transition countries.
 Averages for 14 Eastern European (EE) countries and 11 CIS countries, 1989-1997

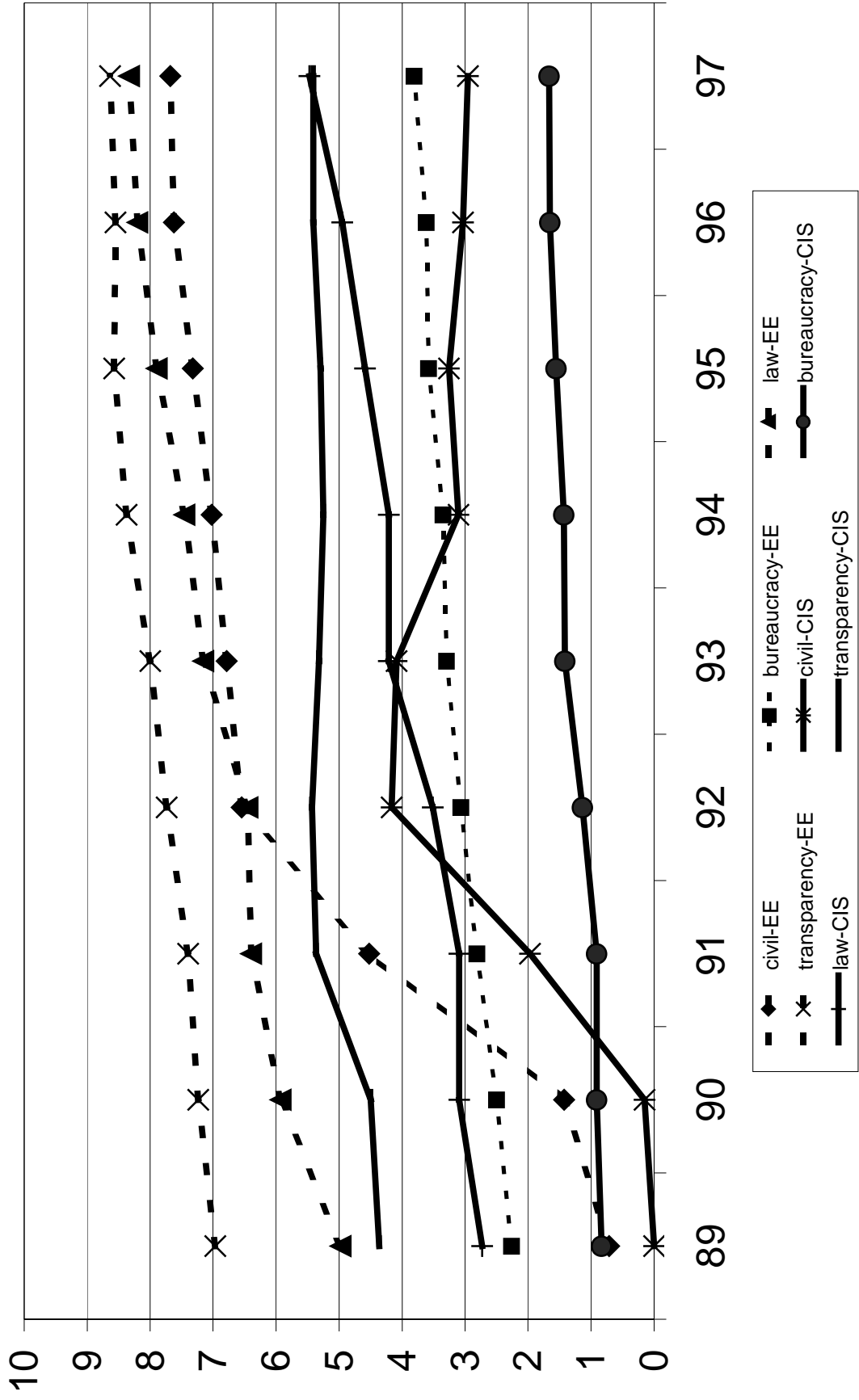


Figure 2: Measures of the strength of economic institutions in the transition countries.
 Averages for 7 transition countries, 1989-1997

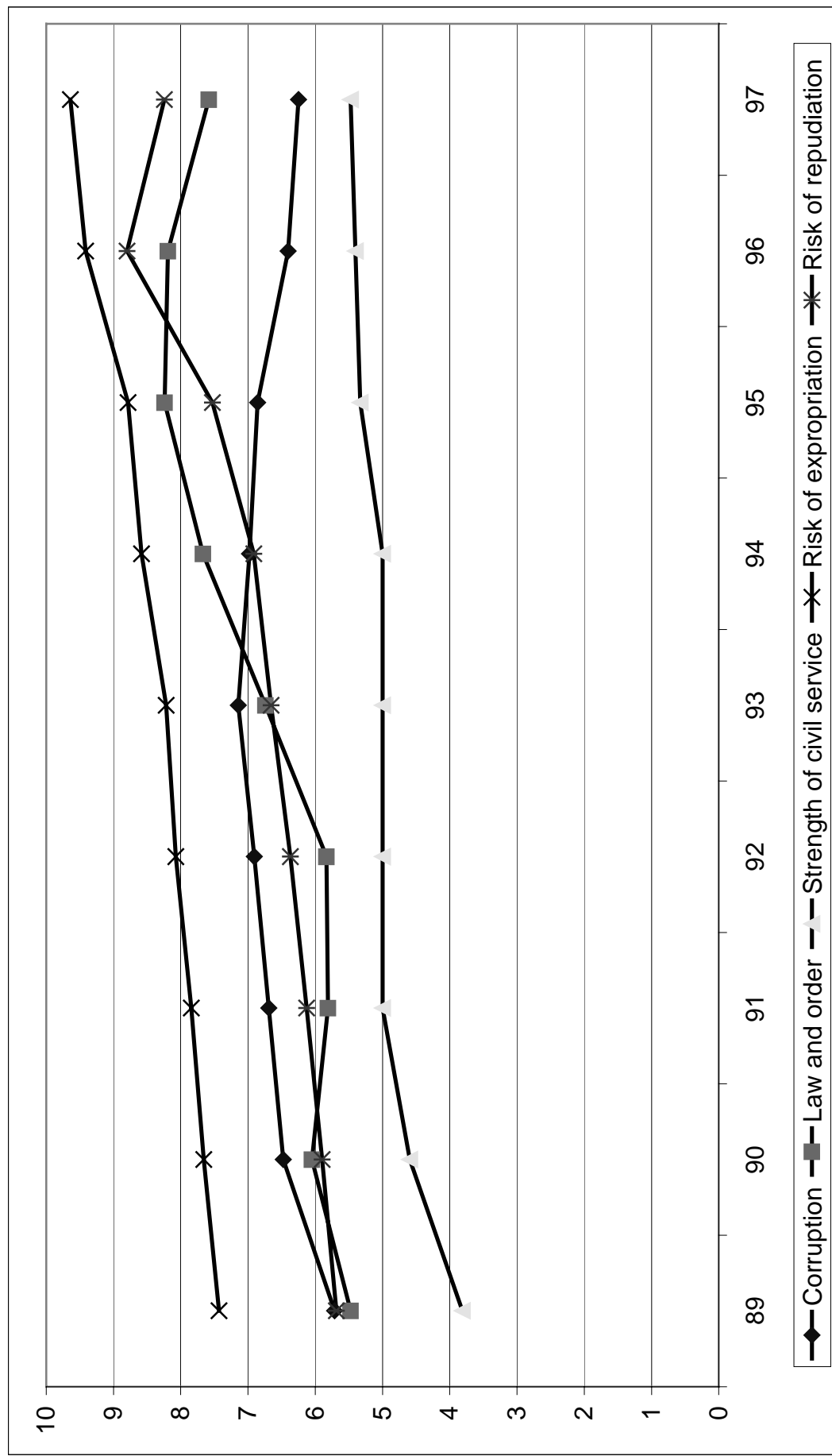


Table 1: The relative quality of transition-country institutions: regressing institutional quality on transition-country dummy variables

Dependent variable	Region of dummy variable	Coefficient on dummy when dependent variable measures institutional quality in:		Change in institutional quality
		1997/8	2000/1	
<i>Voice and accountability</i>	TRANS	0.120 (0.85)	0.207 (1.47)	improving
<i>Political instability and violence</i>	TRANS	0.286 (2.10)	0.068 (0.51)	declining
<i>Government effectiveness</i>	TRANS	-0.249 (-2.29)	-0.195 (-1.71)	improving
<i>Regulatory burden</i>	TRANS	-0.312 (-2.52)	-0.379 (-3.03)	declining
<i>Rule of law</i>	TRANS	-0.045 (-0.41)	-0.008 (-0.07)	improving
<i>Graft</i>	TRANS	-0.231 (-2.13)	-0.167 (-1.42)	improving

Notes:

1. t-statistics in parentheses

2. Intercepts and GDP-per capita are included in the regression, but information on the coefficient estimates is omitted from the above table.

Table 2: The relative quality of transition-country institutions: regressing institutional quality on Eastern-European and former-Soviet-Union dummy variables.

Dependent variable	Region of Dummy variable	Coefficient on dummy when dependent variable measures institutional quality in:		Change in institutional quality
		1997/8	2000/1	
<i>Voice and accountability</i>	FSU	-0.092 (-0.52)	-0.040 (-0.23)	improving
	EE	0.431 (2.06)	0.569 (2.76)	improving
<i>Political instability and violence</i>	FSU	0.197 (1.16)	0.020 (0.12)	declining
	EE	0.414 (2.07)	0.138 (0.70)	declining
<i>Government effectiveness</i>	FSU	-0.333 (-2.46)	-0.261 (-1.83)	improving
	EE	-0.128 (-0.80)	-0.099 (-0.59)	improving
<i>Regulatory burden</i>	FSU	-0.572 (-3.78)	-0.651 (-4.28)	declining
	EE	0.064 (0.36)	0.016 (0.09)	declining
<i>Rule of law</i>	FSU	-0.121 (-0.88)	-0.116 (-0.86)	improving
	EE	0.064 (0.39)	0.150 (0.94)	improving
<i>Graft</i>	FSU	-0.293 (-2.16)	-0.268 (-1.83)	improving
	EE	-0.142 (-0.89)	-0.021 (-0.12)	improving

Notes:

1. t-statistics in parentheses
2. Intercepts and GDP-per capita are included in the regression, but information on the coefficient estimates is omitted from the above table.

Table 3: Institutional changes between 1997/8 and 2000/1, for 27 countries and for 6 institutional measures.

I = improving D = declining

	<i>Voice and account- ability</i>	<i>Political instability and violence</i>	<i>Government effectiveness</i>	<i>Regulatory burden</i>	<i>Rule of law</i>	<i>Graft</i>	Number of institutional measures increasing (of 6)	Aggregate score for the country on all 6 measures
Albania	I	I	D	I	I	I	5	I
Armenia	D	D	D	I	D	I	2	D
Azerbaijan	I	D	D	I	D	D	2	I
Bulgaria	D	D	I	D	I	I	3	I
Belarus	D	I	D	D	I	I	3	D
Czech Republic	D	D	D	D	I	D	1	D
Estonia	I	D	I	I	I	I	5	I
Georgia	I	D	D	I	I	I	4	D
Croatia	I	D	D	D	I	I	3	I
Hungary	D	D	D	I	I	I	3	D
Kazakhstan	D	I	I	D	D	I	3	I
Kyrgyz	D	D	D	I	D	D	1	D
Lithuania	I	D	I	I	I	I	5	I
Latvia	I	I	I	D	I	I	5	I
Moldova	D	D	D	D	D	D	0	D
Macedonia	D	D	D	I	D	I	2	D
Mongolia	D	I	I	D	I	D	3	I
Poland	I	D	D	D	I	D	2	D
Romania	I	D	I	D	I	D	3	D
Russia	D	I	I	D	D	D	2	D
Slovakia	I	D	I	I	I	I	5	I
Slovenia	I	D	I	D	I	I	4	I
Tajikistan	I	I	I	I	I	I	6	I
Turkmenistan	I	I	I	I	D	I	5	I
Ukraine	D	D	I	D	I	D	2	D
Uzbekistan	I	D	I	I	I	I	5	I
Serbia/Montenegro	I	I	D	I	D	D	3	I
Total number of countries for which the institutional score is improving	15	9	14	14	18	17		15
Aggregate score for all countries	I	D	I	D	I	I	I	I
% of countries improving	0.56	0.33	0.52	0.52	0.67	0.63	0.54	0.56

Table 4.A: The sources of solutions to institution-applicable problems: solutions not involving formal institutions

	General source	Specific mechanism	Processes	Examples
0	Problem not addressed	Short-term non-cooperative solution	--	Unproductive reinvestment of retained earnings; unfulfilled transactions; capital accumulated for hold-up; inventions not invented.
1	The concerned parties alone	Backward-looking personal trust, divorced from future economic rewards	Two parties trust each other to play by a set of implicit rules, to fulfill agreements, and to resolve problems in mutually beneficial ways.	Marriage; family corporations; long-standing business ties generate implicit trust in good faith of other party.
2		Self-enforcement: narrow self-interest in the shadow of the future; calculative trust	Two parties bargain to the long-term cooperative solution.	Employees keep inventions secret from competitors; self-enforcing transactions.
3	Third-party externalities in society and economy	Economic networks	Interaction between two parties affected because they both interact (directly or indirectly) with members of the same group of economic agents.	A debtor repays to maintain reputation because lenders share information; a product (e.g. software) becomes a standard through network effects.
4		Social relationships, social networks	Interaction between two parties affected because they both interact (directly or indirectly) with members of the same group in society in general.	Shame when breaching an agreement with a member of same ethnic or religious group; sharing of information on markets between members of a social community.
5	Private suppliers, informal role	Institutional mechanisms bought by individual agents or groups of agents, without state involvement	One or both agents involved in an interaction pay for the services of a third-party to solve some problem.	Standards set by trade associations; big guys enforcing contracts; credit bureaus sharing information.

Table 4.B: The sources of solutions to institution-applicable problems: solutions involving formal institutions

	General source	Specific mechanism	Processes	Examples
6	Private suppliers, formal role.	Private action promoted or facilitated by the state.	One or both agents involved in an interaction pay for the services of a third-party, which has been given a formal role by the state.	Self-regulation of stock markets; arbitration courts; private bailiffs; accounting standards set by private board.
7	The state	Political institutions.	Selection of leaders and legislatures, followed by production of laws, statutes, rules by the leaders and legislatures. Implementation of political processes by leaders and legislatures.	Elections; formulation of laws within legislatures; decisions of elected officials to follow constitutions, electoral laws, etc.
8		Government administration.	Bureaucratic actions undertaken by central and local administrative bodies, which ultimately can use state power for enforcement.	Criminal law enforcement by justice departments; product safety and health standards by ministries; patent registration by a patent office.
9		Independent quasi-governmental bodies.	Actions by bodies created by the state, part of the state, but given express autonomy from state administration; ultimately have recourse to state power.	Central banks issuing money and regulating banks; stock-market regulators affecting corporate governance; bureaus setting standards.
10		Legal system	Formulation of aspects of statutes, rules etc that lie outside the political process. Enforcement of statutes, rules etc by the judiciary.	Contract law for transactions; systems of definition and enforcement of property rights; patent law establishing basis of suits for infringement; corporate governance law and enforcement.