

**UNDERSTANDING PUBLIC SECTOR PERFORMANCE
IN TRANSITION COUNTRIES –
AN EMPIRICAL CONTRIBUTION**

June 30, 2003

Poverty Reduction and Economic Management Unit (ECSPE)
Europe and Central Asia Region



Acknowledgements

This report was prepared by James Anderson, Gary Reid, and Randi Ryterman. We are grateful to Fabiano Bastos for research assistance. We are also grateful to Sebnem Akkaya, Sandra Bloemenkamp, Jit Gill, Joel Hellman, Allister Moon, Helga Muller, Ekaterine Vashakmadze, and Tony Verheijen for comments on earlier drafts, and to the peer reviewers Steven Knack, Barbara Nunberg, and Andrew Stone for valuable comments. We are also grateful to participants in the review meetings of both the concept paper and the final report.

The report draws on surveys and earlier reports undertaken each of the three countries under study. We are grateful to the teams that prepared the reports, especially to Azamat Abdymomunov, Dorel Abraham, Bogdan Cosmaciuc, Ivan Dianiska, Phyllis Dininio, Yuri Gerasimchuk, Olga Gyarfasova, Eugen Jurzyca, Sebastian LazaroIU, Maria Mamlouk, Gustav Mathiek, Amitabha Mukherjee, Emilia Sicakova, Bert Specter, Kathy Stermer, Daniela Zemanovicova, and Pablo Zoido-Lobaton, and to the survey research firms that collected the data, M-Vector (the Kyrgyz Republic), CURS (Romania), and Focus (the Slovak Republic). We are also grateful to our partners in some of these endeavors, the United States Agency for International Development (USAID), and Management Systems International (MSI). Lastly, we are grateful to the more than 3,000 households, 1,200 enterprise managers, and 1,050 public officials who participated in the surveys.

Table Of Contents

Executive Summary	vii
Methodological Findings	viii
Policy Findings	ix
Chapter 1. Introduction.....	1
Chapter 2. Three Contrasting Cases.....	5
History of State Administration.....	6
Economic Development	7
Social Cohesion.....	9
Civil Liberties	10
Legal Traditions	12
External Factors	12
Conclusion	13
Chapter 3. The Performance of Public Sector Bodies.....	15
The Dimensions of Public Administration and Performance	17
Empirical Evaluation.....	24
Empirical Results	28
The Universal Importance of Meritocracy.....	35
Creating an Enabling Environment through Administrative Procedures	36
The Surprising Lack of Importance of Performance Management	36
Implications for Reform Sequencing.....	38
Quality and Integrity are Not Always Driven by the Same Factors	39
Chapter 4. The Public-Private Nexus.....	41
The Market for Influence	43
Evaluating Impact on Performance.....	48
A Demand-driven, Not Supply-driven, Approach to Complaint Systems.....	58
Conclusions and Recommendations	67
Chapter 5. Lessons for Bank Operations	69
The 10 Most Important Lessons	69
Implications for the Design of Public Sector Reforms	70
Conclusion	71
Annex 1. Special Issues in the Analysis of the Performance of Public Sector Bodies	73
Econometric Issues	73
Subjective perceptions and self-assessments	75
Summary of Recommendations for Improving this Methodology	77

Estimation of the full model, including financial management	78
Survey Questions on Public Sector Performance and its Factors	85
Annex 2. Special Issues in the Analysis of the Public-Private Nexus	92
Country-Specific Regressions Explaining the Decision to Make Political Party Contributions, Join Business Associations, and Lodge Complaints	95
References.....	105
Endnotes.....	111

List of Figures

Figure 1. A Framework of Institutions, Performance, and Feedback	3
Figure 2. NGOs by Country.....	11
Figure 3. Foreign Aid.....	13
Figure 4. Government Effectiveness.....	14
Figure 5. Performance Index.....	19
Figure 6. Personnel Management Systems	20
Figure 7. Performance Management Systems	21
Figure 8. Administrative Systems	22
Figure 9. Financial Management System.....	23
Figure 10. Intermediate Inputs and the Production of Performance	25
Figure 11. Performance in Three Disparate Countries	34
Figure 12. Concentration of Influence	44
Figure 13. Incidence of Bribery.....	45
Figure 14. Membership in Business Associations	48
Figure 15. Firm Financing of Political Parties	46
Figure 16. Use of Complaint Systems	46
Figure 17. Quality of the Judicial System.....	47
Figure 18. Mechanisms of Influence.....	49
Figure 19. The Decision of the Firm.....	50
Figure 20. Complaint Systems and Complaints.....	59
Figure 21. Collaborators, Victims, Avoiders, Enforcers	64

List of Tables

Table 1. Economic Indicators	8
Table 2. Social Indicators.....	9
Table 3. Ranking of Countries Based on the Factors that Affect Public Sector Performance	14
Table 4. Summary Statistics on Key Variables in Public Sector Performance	27
Table 5. Explaining the Level of Performance	28
Table 6. Explaining the Level of Quality.....	29
Table 7. Explaining the Level of Bribery	30
Table 8. Explaining the Merit-Orientedness of Personnel Management Systems*	31
Table 9. Explaining the Quality of the System of Administrative Procedures	32
Table 10. Explaining the Quality of the System of Performance Management	33
Table 11. Definitions of Dependent Variables.....	52
Table 12. Definitions of Independent Variables	53
Table 13. Explaining the Decision to Bribe in the Kyrgyz Republic	54
Table 14. Explaining the Decision to Bribe in Romania	55
Table 15. Explaining the Decision to Bribe in the Slovak Republic	56
Table 16. Tests of Factors that Explain Bribery	57
Table 17. Test of Factors that Explain Use of Instruments to Influence the State	58

Table 18. Definitions of Dependent Variables for Analysis of Corruption in Tax Administration	61
Table 19. Performance of Tax Authorities.....	62
Table 20. Definitions of Dependent Variables.....	64
Table 21. Strategies for Dealing With the State.....	65
Table 22. Model of Performance Including Financial Management	78
Table 23. Model of Quality Including Financial Management	79
Table 24. Model of Bribery Including Financial Management	80
Table 25. Model of Personnel Management Systems Including Financial Management ..	81
Table 26. Model of Administrative Procedures Including Financial Management	82
Table 27. Model of Performance Management Including Financial Management	83
Table 28. Explaining the Quality of Financial Management Systems*	84
Table 29. Hypothetical Example of Bribery in Three Regions	93
Table 30. Explaining the Decision to Make a Political Party Contribution in the Kyrgyz Republic	95
Table 31. Explaining the Decision to Make a Political Party Contribution in Romania ..	96
Table 32. Explaining the Decision to Make a Political Party Contribution in the Slovak Republic	97
Table 33. Explaining the Decision to Join a Business Association in the Kyrgyz Republic	98
Table 34. Explaining the Decision to Join a Business Association in Romania	99
Table 35. Explaining the Decision to Join a Business Association in the Slovak Republic	100
Table 36. Explaining the Decision to Complain in the Kyrgyz Republic	101
Table 37. Explaining the Decision to Complain in Romania	102
Table 38. Explaining the Decision to Complain in the Slovak Republic	103

Executive Summary

1. Organizational change is a central part of many World Bank operations. Whether trying to improve the delivery of vital health services to the poor or introducing competition in a heavily monopolized energy sector, many of our projects aim to change the basic behavior of public sector and private sector bodies. Yet changing the behavior of organizations is notoriously complex. Politics, informal incentives, and capacity constraints all contribute to the greater difficulty of successfully completing projects involving organizational reform.

2. This report develops and tests a methodology that can be used to guide the design of public sector reform (PSR) efforts in any given country. Because initial conditions vary across countries, it is important to have a methodology that allows one to tailor advice to a country's unique circumstances. This methodology provides such a tool. It can be used to estimate country-specific parameters that highlight the broad sorts of interventions that are most likely to yield discernable impacts on the performance of public entities in a particular country. Such country-specific parameter estimates can then guide the design of PSR interventions in that country. Importantly, this is a replicable methodology. Where the measured variables included in the three countries examined in this report are imperfect, the survey instruments can be redesigned to collect data that would allow better modeling in later applications of this methodology. In short, we are proposing and testing a diagnostic methodology that (a) can provide a systematic tool for conducting a country-specific PSR "what matters?" assessment, and (b) can be continuously improved.

3. Several important questions are of interest to reformers – and to Bank staff advising reformers. Which institutions within the public sector have the strongest marginal influence on public sector performance? How do the institutions work together? In what sequence should reforms of these institutions be introduced? How does society and, in particular, the business community affect the performance of the state? What are the roles of political parties, business associations, complaint systems, and courts in mediating the public-private nexus? How can the business community best be mobilized to support the process of public sector reform?

4. In this report, we introduce an empirical approach that seeks to shed light on these questions. We use survey data from three countries – the Kyrgyz Republic, Romania, and the Slovak Republic – at different levels of development and with different public administration legacies.¹ Precisely *how* institutions in the public and private sectors affect public sector outcomes may be strongly influenced by historical, economic, and social factors, factors which we refer to collectively as the enabling environment for public sector reform. An examination of these interactions in three dissimilar countries can provide insights into how the enabling environment alters the effectiveness of distinct institutional reforms.

5. This research serves two distinct but complementary purposes: methodological and policy. In what follows we briefly summarize the key findings under each of these two purposes.

Methodological Findings

6. To address the first set of questions on the way that public sector institutions affect public sector performance, we use data from public officials surveys. The approach, which is described in detail in the text, fits an econometric model of performance as a function of different types of intermediate outcomes, such as meritocracy and performance management systems, each of which depends on the others as well as upon specific public sector institutions, such as the formalization of rules for personnel policies. Both institutions and performance are influenced by leadership and organizational culture, factors which, if omitted, could seriously bias the results. There are a number of empirical challenges to implementing this approach, including the fact that institutions may be mutually endogenous and the obvious drawback that the approach relies on subjective self-assessments. The empirical approach controls for these drawbacks to the extent possible. While acknowledging these drawbacks, however, we argue that other approaches also have drawbacks and that the new approach nevertheless provides insights that complement our understanding of public sector performance.

7. To address the second set of questions on coping strategies firms pursue when faced with weak public sector performance, we use data from enterprise surveys to fit an econometric model in which a firm's choice of mechanisms for influencing the state, such as collective action, formal channels, connections, or bribes, is determined by a number of factors, including characteristics of the firm and of the respondent, as well as the firm's assessment of the business environment, political stability, and level of competition. As with the first set of questions, this approach also faces challenges of self-reporting and endogeneity, both of which are addressed to the extent the data allow.

8. The *methodological lessons* from this research are fourfold:

- a) *Survey-based econometric modeling of the performance of public organizations as a function of underlying institutions and their sub-elements is both feasible and capable of yielding useful insights about which institutions matter under what conditions* (see the summary of policy lessons, below, for details). Such modeling provides an important complement to the case study analyses that are more typical in the literature on institutional reform. Moreover, the findings reported in this paper are consistent with findings of other similar research in this field.²
- b) *Impacts of particular institutions and their sub-elements can, and often do, vary across countries; i.e., across enabling environments* (see the summary of policy lessons, below, for details). Because of this, a replicable methodology, such as that developed in this paper, can provide a powerful tool for assessing which institutional reforms are likely to be most promising within a particular country or enabling environment.

- c) *Better data could improve the precision and usefulness of the models developed in this paper.* In particular, (a) better measures of certain of the sub-elements of the institutions (e.g., public expenditure management institutions) could allow more precise estimation of their impacts, (b) time series data could allow better analysis of sequencing issues, as well as more reliable estimation of the parameters; and (c) larger and more carefully designed sampling could enhance the usefulness of the survey data required for such analyses.

- d) *Integrating the supply of and demand for public sector institutions into a single analysis would provide better insight into the conditions under which top-down reforms produce good outcomes.* The performance of public sector organizations derives both from the technical qualities of public sector institutions and from their effective use, especially institutions mediating the public-private nexus. Integrating information about both the technical quality and use of institutions would permit an evaluation of how each effect the other and both contribute to organizational outcomes. This approach would be especially critical to understanding the drivers of performance of organizations that interact with the public, such as regulatory and service delivery bodies.

Policy Findings

9. The *policy lessons* are summarized for each of the two distinct modeling exercises: the modeling of the performance of public organizations and the modeling of the interface between the public and the private sectors.

Public Sector Performance

10. *Building a meritocratic civil service is of universal importance to performance.* In all three countries, meritocracy, our indicator of the overall quality of the system of personnel management, exerts a strong effect on public sector performance. Of the four aspects of public administration, meritocracy was the only consistent influence on overall public sector performance. This result is consistent with cross-country empirical studies and has important implications for the Bank's work in public administration. The strength of the relationship confirms the importance of a merit-oriented civil service as a development issue.

11. *A well-functioning system of administrative procedures lays the foundation for meritocracy.* Although administrative procedures exert a weak direct effect on public sector performance, the most important contribution to be made by administrative procedures is the indirect effect on performance, working through the enabling environment it creates for building meritocracy. In sequencing Bank interventions in public administration, therefore, strengthening systems of administrative procedures should be among the earliest components.

12. *Performance management systems demonstrated remarkably little influence on anything.* With the exception of a mutually supportive role with respect to personnel management in the Slovak Republic, performance management had either no effect at all,

or a negative effect. Indeed, in the Kyrgyz Republic, our proxy for good performance management was positively associated with the level of bribery in public sector bodies. Certain aspects of performance management, in particular the existence of complaint systems, have an influence on performance in reduced form estimations, but only in the two European countries with the stronger effect being in the Slovak Republic. These findings suggest that instituting performance management in environments where the foundations of public administration have not been established may be inconsequential, at best, or risky at worst.

13. The systems of public administration generally contribute to performance, both directly and indirectly, but their contributions vary across countries. Those systems contribute most significantly in the Slovak Republic, followed by Romania. In the Kyrgyz Republic, where formal institutions are weakest, leadership and organizational culture play more important roles in the performance of individual public entities. Thus, although organizational culture has a role in all countries, the effect is strongest when formal institutions are weakest. When the enabling environments are weak, the idiosyncrasies of managers and leaders tend to drive performance. The implications for Bank operations are that implementing system-wide reforms will be difficult in less hospitable enabling environments, such as in the Kyrgyz Republic, and that finding entry points in bodies or sectors with positive organizational cultures can reduce the chance of failed projects in such environments. It also suggests that leadership and culture bear the lion's share of the burden for establishing meritocratic and performance-oriented organizational behavior when formal institutions are nascent. It is likely that sustained leadership aimed at creating more meritocratic and performance-oriented organizational behavior is required both to establish well functioning formal institutions as well as to create such organizational behavior.

14. *Sequencing matters.* Differences in the findings for the Kyrgyz Republic versus the other two countries suggest that transparent, competitive recruitment and selection procedures should probably be among the earliest civil service reform efforts. While those reforms will need to be complemented with efforts to establish personnel performance evaluation practices, our findings on performance management systems suggest that reformers will need to keep expectations regarding the likely impacts of this aspect of the civil service management system quite modest during the early stages of such reform efforts. Similarly, freedom of information acts should be pushed early in a reform effort, but their impacts should not be expected to be important until both administrative procedures and the press and NGO sector are functioning reasonably well.

15. *Impacts vary across countries and across performance dimensions:* One key result that is apparent is that the determinants of the *quality* of organizational performance are different in the Kyrgyz Republic than in the other two countries, and within the Kyrgyz Republic, the determinants of *quality* are different from the determinants of *integrity*, as measured by the incidence of bribery. In the Kyrgyz Republic, administrative procedures are weakly important for producing quality, while in Romania and the Slovak Republic it is meritocracy in the personnel management system that is important. In the Kyrgyz Republic, the country with weaker public sector institutions, quality is primarily driven by variations in organizational culture and leadership, perhaps precisely because formal

institutions are weaker. In such an environment, bringing formality to informal public administration systems may be the first priority for improving performance. These empirical results suggest that leadership is key to bringing formality to informal public administration systems – a sequencing point again.

The Public-Private Interface

16. *Use of complaint systems improves public sector performance.* Use of institutional mechanisms such as complaint systems generally appear to be effective instruments for discouraging poor public sector performance such as bribery. At the same time, building a complaint system is not sufficient to encourage use of the system; economic incentives play a large role in determining when a firm is willing to use the system to lodge a formal complaint. A supply driven approach to building these systems, which does not give adequate attention to the underlying incentives for firms to use these systems, may be one reason we find that simply building mechanisms for user oversight does not have a significant effect on performance.

17. *Effective courts help to check poor government performance.* Complaint systems are not the only institutional mechanisms that appear to discourage bribery: courts play an important role as well. A one percent increase in the quality of courts results in a 22 percent decrease in the probability the firm will pay a bribe. The effect of courts is particularly strong in the Kyrgyz Republic and Romania.

18. *Collective action plays a very particular and not always beneficial role in each of the three countries.* Business associations and political parties do not uniformly reduce the incentive of firms to bribe. While business associations decrease bribery in Romania, they increase it in Slovakia. And, while political parties decrease bribery in the Kyrgyz Republic, they increase it in Romania. However, in all three countries, business associations and political parties appear to play at least one beneficial role. While they might not always reduce corruption in the aggregate, they appear to target specific public sector bodies whose behavior has the most adverse consequences for most of their members and supporters and get them to treat firms better. For example, business associations appear to reduce the number of contacts with tax inspectorates and both forms of collective action decrease the probability a bribe will be paid.

19. *Economic incentives matter.* Pressure from unfair competition creates an incentive for firms to pay bribes. This effect is not small. A one percent increase in the manager's perception that unfair competition is an obstacle to the firm results in a 17 percent increase in the probability that the manager will pay a bribe. This points to the importance of government policies that make the playing field level for all firms. Incentives arising out of political instability also appear to play an important role in determining how firms will influence the state. In the Kyrgyz Republic, political instability increases the likelihood of bribery, joining a business association, and possibly lodging complaints; in Romania it increases the probability of making a complaint and possibly paying a bribe. In contrast, political instability in Slovakia appears to discourage interest in influencing the state, especially through bribery and membership in

business associations. The differences in this effect between countries might be due to differences in the underlying reasons for instability in each setting.

20. *Government commitment to anticorruption encourages firms to bribe less.*³ While government commitment to anticorruption does not appear to influence the manager's willingness to report corruption to authorities, government commitment does play a fairly direct large role in discouraging bribery. A one percent increase in the manager's evaluation of the Government's commitment to anticorruption reduces his or her willingness to pay a bribe by 22 percent. This suggests the importance of the Government taking concrete actions to convince the business community that it is committed to and intends to follow through with anticorruption.

21. *Corruption is used more frequently by the very firms that should be the engine of future growth.* Newer firms and firms with younger managers are more likely to resort to bribery. Although it is not possible to establish with certainty if these effects are transitory, they do raise a concern that the process of entry and the demands of the first years of operation socialize firms into corruption.

22. *Effects within countries may be different than across countries.* Many of the results of this research generally apply to all three countries, albeit to different degrees. However, there are many country-specific aspects to understanding the public-private interface. Certainly, the level of development of different institutions within the private sector such as business associations and complaint systems vary markedly by country, with the lowest levels in the Kyrgyz Republic and highest levels within the Slovak Republic. This alone suggests differences in the cumulative impact of these institutions. Perceptions of the business environment have very different effects in each of the countries, possibly because the phenomena they measure differ from country to country. The causes of political instability or the drivers of unfair competition may be different in important ways. The institutions that seem most prone to country context are those designed to foster collective action – political parties and business associations – possibly because they are truly endogenous institutions shaped by the local environment. The more formal institutions – such as complaint systems and courts – seem to have a uniform impact, possibly because they are more standardized in design. More investigation is needed to understand the differing roles played by private sector institutions in each of the countries.

23. Because of this, and consistent with a well-established doctrine, country strategies for public sector reform need to be tailored to the specific conditions within the country. The level of development of different institutions within the private sector such as business associations and complaint systems vary markedly by country, with very different implications for their efficacy in dealing with the state.

24. A number of recommendations follow from these findings.

25. *Country strategies for public sector reform need to more actively plan for the development of complaint systems and capacity within courts to hear administrative cases as well as cases of corruption.* A basic assessment tool is needed to identify the

extent to which complaint systems and judicial procedures to hear administrative and corruption cases are in place and are actually being used to introduce changes that will improve the performance of public sector organizations. Incentives for firms and other constituencies to use these mechanisms need to be identified and strategies for strengthening these incentives need to be developed and implemented.

26. Country strategies for public sector reform also need to more actively plan for the implementation of pro-competition policy and other reforms such as greater participation in legal drafting that will make the playing field more level for all firms. Achievements in this area need to be publicized using media that reach managers, so that their views about the fairness of the business environment perceptions can be altered.

27. Anticorruption programs may need to target newer firms, to reduce their dependence on bribery as their main form of influencing the state. Otherwise there is a risk that corruption may become even more institutionalized.

28. Country strategies for public sector reform programs might benefit from more actively considering how best to mobilize the public in support of the program. Firms that report corruption and resist paying bribes are too few to be the foundation of support. One possible strategy is to try to elicit firms that avoid paying bribes, yet do not report corrupt officials – which are a majority of firms – to become more willing to come forward through a public relations campaign targeted at the geographic centers where such firms are concentrated.

Chapter 1. Introduction

29. Organizational change is a central part of many World Bank operations. Whether trying to improve the delivery of vital health services to the poor or introducing competition in a heavily monopolized energy sector, many of our projects aim to change the basic behavior of public sector and private sector bodies. Yet changing the behavior of organizations is notoriously complex. Politics, informal incentives, and capacity constraints all contribute to the greater difficulty of successfully completing projects involving organizational reform.

30. These complexities are manifest nowhere more clearly than in the transition from communism, where early projections of the challenges ahead proved naïve and the disappointments many [Murrell 1995]. Among the many challenges of the transition, reform of public administration has reached prominence only after initial emphasis on macroeconomic stabilization and public enterprise privatization [Nunberg 1999]. Bureaucracies previously tailored to execute central planning and other forms of socialism have had to be reengineered to carry out public functions consistent with a market economy. The World Bank, for its part, has made public sector reform a key element of its assistance and dialogue with client countries. Indeed, good governance and public sector performance – reducing corruption and improving the quality and accessibility of public services – are now widely viewed as essential for reducing poverty.⁴

31. The range of areas tackled in the context of public sector reform has been quite extensive. They include building an honest, efficient, decently paid, and client-oriented public service; strengthening financial planning and control; simplifying administrative procedures to reduce regulatory obstacles to private sector development; and creating capacity to design and implement workable sector policy. In some cases, governments have tried to introduce comprehensive public sector reforms, especially countries aiming at EU accession. In many other cases, these different elements of public sector reform were addressed only in isolation, due in part to the practical need to keep interventions focused. As a result, different countries within ECA now have very different mixes of public sector institutions, with very different results in terms of public sector outcomes.

32. This diversity of practice creates an opportunity as well as a need to evaluate how effectively the different institutional arrangements in countries are working to produce successful public sector outcomes. Enough time has now elapsed that we can provide our clients with feedback about which types of reforms have produced the most beneficial results and which we might recommend they consider next, recognizing that the advice we provide to each client may be unique. Countries in ECA vary markedly in terms of their historical, economic, and social development, which we know from other research has an important effect on the way in which public sector institutions can be expected to function. The way in which important social groups, such as the business community, engage the public sector can affect the course of institutional development within the public sector over time.

33. Evaluations of the efficacy of different institutional arrangements, however, can be undertaken in a number of ways, each with advantages and disadvantages. Expert opinions, relying on theory and history, often form the basis of our policy advice in this area. In any science, however, our understanding of the world improves with a balance of both theory and empirical evidence, each advising the other. Empirical support for advice on how to improve public sector performance often derives from private sector data and examples [OECD 1993]. The use of private sector data derives in part from the more clearly established understanding of operational goals in private sector bodies [Wilson 1989]. Without detracting from the essential character of well-informed expert opinion, empirical validation or refutation of those opinions through replicable econometric modeling would provide a useful tool by which we could continuously advance our understanding of public sector performance. This report proposes such a complimentary empirical approach, based on surveys of public officials and enterprise managers, and uses that approach to draw lessons for Bank operations aimed at improving governance and public sector performance.

34. More specifically, this report develops and tests a methodology that can be used to guide the design of public sector reform (PSR) efforts in any given country. Because initial conditions vary across countries, it is important to have a methodology that allows one to tailor advice to a country's unique circumstances. This methodology provides such a tool. It can be used to estimate country-specific parameters that highlight the broad sorts of interventions that are most likely to yield discernable impacts on the performance of public entities in a particular country. Such country-specific parameter estimates can then guide the design of PSR interventions in that country. Importantly, this is a replicable methodology. Where the measured variables included in the three countries examined in this report are imperfect, the survey instruments can be redesigned to collect data that would allow better modeling in later applications of this methodology. In short, we are proposing and testing a diagnostic methodology that (a) can provide a systematic tool for conducting a country-specific PSR "what matters?" assessment, and (b) can be continuously improved.

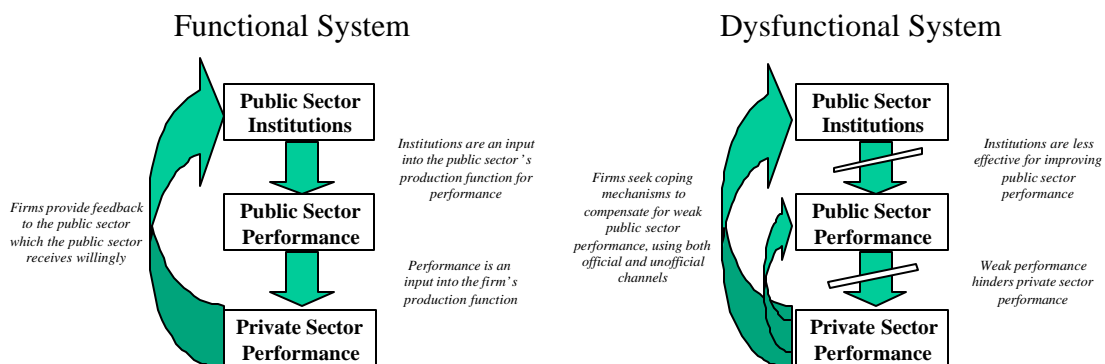
35. The framework that we use for this study is a very simple one, which is implicit in the way we design many public sector operations. This framework is depicted in Figure 1 which describes how public sector performance and private sector influence interact in both a well functioning system and a dysfunctional system. In a well functioning system, public sector institutions such as procedures for managing personnel, carrying out the work of the organization, monitoring performance, controlling the budget, and setting policy, all serve as inputs in the public sector body's production function for performance, where performance is an intentionally general term used to describe the quality of work and level of integrity with which it is provided. Public sector performance, in turn, serves as an input into the firm's profit function.⁵ Since firms have a stake in the quality of public sector performance, they provide feedback to public sector bodies through collective or individual action, which can help them improve their performance further. In a dysfunctional system, by contrast, public sector institutions are less effective at producing public sector performance. The weaker output of the public sector, in turn, imposes drag on the firm's profit function. Faced with such a situation, the firm seeks coping strategies that may include the official feedback channels that are

also present in a well-functioning system, but may also include personal connections and bribery.

36. Within this framework, several important questions are of interest to reformers – and to Bank staff advising reformers. Which institutions within the public sector have the strongest marginal influence on public sector performance? How do the institutions work together? In what sequence should reforms of these institutions be introduced? How does society and, in particular, the business community provide feedback to the state? What coping strategies do firms use when faced with weakly performing public sector bodies? How can the business community best be mobilized to support the process of public sector reform?

37. In this report, we introduce an empirical approach that seeks to shed light on these questions. We use survey data from three countries – the Kyrgyz Republic, Romania, and the Slovak Republic – at different levels of development and with different public administration legacies.⁶ Precisely *how* institutions in the public sector affect public sector outcomes and, in turn private sector coping strategies, may be strongly influenced by historical, economic, and social factors, factors which we refer to collectively as the enabling environment for public sector reform. An examination of these interactions in three dissimilar countries can provide insights into how the enabling environment affects the linkages depicted in Figure 1.

Figure 1. A Framework of Institutions, Performance, and Feedback



38. To address the first set of questions on the way that public sector institutions affect public sector performance, we use data from public officials surveys. The approach, which is described in detail in the text, fits an econometric model of performance as a function of different types of intermediate outcomes, such as meritocracy and performance management systems, each of which depends on the others as well as upon specific public sector institutions, such as the formalization of rules for personnel policies. Both institutions and performance are influenced by leadership and organizational culture, factors which, if omitted, could seriously bias the results. There are a number of empirical challenges to implementing this approach, including the fact that institutions may be mutually endogenous and the obvious drawback that the

approach relies on subjective self-assessments. The empirical approach controls for these drawbacks to the extent possible. While acknowledging these drawbacks, however, we argue that other approaches also have drawbacks and that the new approach nevertheless provides insights that complement our understanding of public sector performance.

39. To address the second set of questions on coping strategies firms pursue when faced with weak public sector performance, we use data from enterprise surveys to fit an econometric model in which a firm's choice of mechanisms for influencing the state, such as collective action, formal channels, connections, or bribes, is determined by a number of factors, including characteristics of the firm and of the respondent, as well as the firm's assessment of the business environment, political stability, and level of competition. As with the first set of questions, this approach also faces challenges of self-reporting and endogeneity, both of which are addressed to the extent the data allow.

40. The empirical approach used in this report is admittedly experimental, and influenced to a large extent by data availability. While we still view the methodology and results as interesting and useful, we encountered several instances in carrying out this study in which we would have preferred to have had somewhat different variables at our disposal. At the relevant places in the report, we will indicate how the first-best approach might have looked.

41. Since the novelty of the methodology is of interest in its own right, this report includes detailed descriptions of both the methodology and the implications found in the data for the three countries. The report is organized in such a way as to allow readers to skip the methodology if they prefer to focus on the results. Chapter 2 describes the enabling conditions for public sector reform for the three countries in this study. Chapter 3 introduces the methodology used to evaluate how public sector institutions affect public sector performance in each of the three countries, while a description of the qualitative findings of this methodology can be found in Chapter 4. Chapter 5 introduces the methodology used to identify the ways in which private sector institutions affect public sector outcomes, while Chapter 6 describes the key findings from this analysis. Chapter 7 summarizes the important implications of this report for the ways in which we design Bank operations.

Chapter 2. Three Contrasting Cases

42. The analysis presented in this report is based on case studies of three countries: the Kyrgyz Republic, Romania, and the Slovak Republic. We selected these countries in part because of data availability, but also because we believe they broadly represent important classes of our clients in ECA, in terms of the factors that influence the capacity of a country to undertake public sector reform. In this report, we refer to these factors as the *enabling environment* for public sector reform.

- The ***Kyrgyz Republic*** is one of the poorest countries in the region and is located in Central Asia. Liberal economic reforms implemented in the early part of transition did not produce the anticipated increases in living standards for much of the population. Both poverty and public debt have reached worrying levels. Unemployment in the remote southern and eastern parts of the country has been two to three times higher than the national average. The Government has responded to terrorism, border disputes, and other social unrest in the south and east by increasing security measures and curtailing some civil liberties. Yet in comparison to other neighboring countries, civil liberties remain fairly well protected. NGOs continue to be active, Parliament contains many vocal opposition voices, and the Government is increasing its efforts to develop policies in an inclusive manner.
- ***Romania*** has a low to moderate level of per capita income and is located in south eastern Europe. In 1989, it entered transition violently, with more than 1000 people dead as a result of the overthrow of dictator Nicolae Ceausescu. Yet, despite this terrible legacy, it has been able to create a fairly stable political system where the turnover of political power, which has taken place four times, occurred peaceably. It is the only one of the three countries in this study to have been an independent state prior to transition. Its strategy for public sector management is strongly influenced by the centralist tendencies of the former Communist Party, which held political prior to 1996 and is currently in power. Romania has taken a fairly slow approach to liberalization, privatization, and economic restructuring.
- The ***Slovak Republic*** is a central European country with a moderate level of per capita income. It is the richest of the three countries, with the brightest prospect for integration into the European Union. The period 1994 to 1998 was marked by sharp political confrontation over economic and social policy, centralism, and the introduction of changes in electoral procedures to weaken the opposition's chances to gain seats in Parliament. The situation changed dramatically after the Parliamentary elections in 1998, when four opposition parties successfully formed a new government. The constitution was amended to strengthen institutions for government oversight and limit Presidential discretion. Regional governments were created, and public administration became more decentralized. This new government has introduced liberal economic reforms, including privatization and the restructuring of Slovakia's banking sector.

43. Differences in the economic, political, and social dynamics of these three countries are striking. In this chapter, we elaborate on these dynamics, focusing on factors that other research has identified as potentially important to public sector outcomes. These factors, which may affect the state's decision to engage in particular public sector reforms as well as its capacity to implement them successfully, include the country's history of state administration, level of economic development, civil liberties and the concentration of political power, legal traditions, and external factors.

44. We do not claim in this report to isolate with certainty the particular factors that have influenced public sector outcomes in each of these countries; there are far too many differences between the countries to be able to do this with any scientific accuracy. Rather our approach is to empirically model how public sector and private sector institutions are shaping public sector performance in each of the three countries (see Chapters 3 and 4), and then draw on the "enabling environment" information presented here to make sense of differences in our findings across countries (see Chapter 5).

History of State Administration

45. A country's history of occupation is known to have an important effect on the quality of public services it delivers today [La Porta 1998; Treisman 2000; World Bank 2000; Easterly and Levine 2002]. Although the precise mechanism is unknown, it is believed that, by imposing its system of public administration, the occupying nation establishes institutions that survive at least in some form to today. The three empires that have had the strongest influence on the countries in this study are the Russian (and later Soviet) empire, the Austro-Hungarian empire (and its predecessors the Hungarian and Hapsburg empires), and the Ottoman empire. Empirical research suggests that countries that were part of the Austro-Hungarian empire tend to have better systems of public administration than those under the rule of either the Russian or Ottoman empires [La Porta et al 1998; World Bank 2000]. As described below, each of the countries in the study have quite distinct historical legacies.

46. *The Kyrgyz Republic has a long-standing tribal legacy, with institutions strongly influenced by the Russian and later Soviet empires*⁷. The formation of state structures in the Kyrgyz Republic began in 4th century BCE, consisting of strong nomadic tribal unions. In the 2nd century BCE the Kyrgyz tribes organized their first formal state and the Kyrgyz Khanate. By the 5th century, the nomads inhabiting northern Kyrgyz began to settle down. During the next 500 years the Kyrgyz Republic expanded through conquest and trade. Beginning in the 10th century, the Kyrgyz people began to lose their regional dominance, but managed to preserve their ethnic autonomy. In 1863 northern Kyrgyz Republic and in 1876 southern Kyrgyz Republic became part of the Russian empire and, later, part of the USSR. The Kyrgyz Republic achieved its independence from the Soviet Union in 1992. One legacy inherited from the Soviet period is the dispute over country's boundary with China and Uzbekistan, which has been a continuing source of political and social unrest.

47. *Romania was at the cross-roads of the Austro-Hungarian, Ottoman, and Russian Empires*⁸. Nation-building in Romania began in the 10th century, with the formation of 'tari' or lands. State structures evolved first in Transylvania, then in Wallachia and Moldavia. In the 16th century, Transylvania, Wallachia, and Moldavia fell to the Ottoman Empire. They were forced to pay the sultan an annual tribute, but were allowed to maintain their state identity and their own political, military, and administrative structures. As the Ottoman empire weakened, Transylvania fell under Austrian rule and Wallachia and Moldavia became part of a Russian protectorate. A revolution in 1848 and the Crimean War resulted in Romania coming under the collective protection of European states, paving the way to the setting up of the modern Romanian state. In 1859, Moldavia and Wallachia were unified, joined by Transylvania after the first World War. In 1944, a pact between Stalin and Churchill allowed Romania to become part of the Soviet sphere of influence. Romania remained a socialist state until its violent revolution in 1989.

48. *Slovakia formed the center of the Hungarian Empire*⁹. Slavs first occupied the region known today as Slovakia in the 7th century. Two separate principalities emerged on each side of the Carpathian Mountains, Moravia and Nitra, which united in the 9th century. A century later, they were conquered by the Magyars, or Hungarians, who settled in Slovakian lands. Withstanding the Turkish invasion that had conquered Hungary, Slovakia came to be the center of the Hungarian empire, which later became part of the Hapsburg empire and, then, the Austro-Hungarian Empire. In the 19th century, Hungary began to pass new laws to wipe out non-Magyar cultures in Hungary, which accelerated Slovak calls for independence. Slovakia became part of Czechoslovakia in 1918. As the smaller, less educated, less developed part of the country, Slovakia was not as ready for self-government and played a lesser role in governing the country. Czechoslovakia became and, except for the Prague Spring in 1968, remained part of the Soviet sphere of influence. Slovakia became fully independent from the Czech Republic in a velvet divorce in 1993.

Economic Development

49. Although some evidence has recently emerged to the contrary [Kraay and Kaufman 2002], economic development has long been believed to increase the quality of government services [Mauro 1995]. The greater the GDP per capita, the greater the availability of human and financial resources for financing public service delivery. An open economy also tends to promote better public sector performance. Table 2.1 provides statistics that describe each country's level of economic development, openness to trade, as well as other economic indicators.

Country	Kyrgyz Republic		Romania		Slovak Republic	
	1997	2000	1997	2000	1997	2000
GDP per capita (Atlas method US\$)	380	280	1,520	1,690	3,860	3,700
GDP growth (annual %)	9.9	5.4	-6	2	6	2
Inflation rate (GDP deflator %)	19.3	27.2	..	44.1	..	6.4
Exports of goods & services (% of GDP)	38	42	29	34	58	74
Imports of goods & services (% of GDP)	46	48	36	40	68	76
Tax revenues (% of GDP)	13	12	24	..	33	31
Expenditures, total (% of GDP)	29.3	28.1	32	..	40	40
Overall Budget deficit (incl.grants)	-9.0	-9.6	-4	..	-4	..
Foreign direct investment, net flows (% of GDP)	83	-2	3	3	1	11
Unemployment, total (% of total labor force)	5.7	7.5	6	11	12	19
Population, total (million)	4.7	4.9	22.5	22.4	5.3	5.4

World Bank data

50. *The Kyrgyz Republic is the poorest of the three countries.* Per capita income in the Kyrgyz Republic is just \$326 per year in 2002, and half of the population lived below the poverty line. GDP growth of 6.7 percent in 2001 and macroeconomic stability helped to reduce this share from an even higher level. In the first years of transition, the Kyrgyz Republic introduced liberal macroeconomic and microeconomic reforms. More recently, the Kyrgyzstan government has adopted a more conservative approach to reform, although in September 2001 it did become the first country in Central Asia to permit the buying and sale of land, among other reforms.

51. *Romania has a low to moderate income.* Per capita income in Romania is about \$1700 per year. Romania's macroeconomic performance until about two years ago was relatively weak. Compared to the other two countries in this study, Romania has had relatively high levels of inflation and, until this year, low levels of growth. The Romanian government has taken a fairly conservative approach to privatization and other structural reforms.¹⁰ While almost 7,500 enterprises have been privatized, 600 of the largest loss makers continue to operate under state ownership and with significant budgetary support. Subsidies for heat, electricity, and other utilities were recently eliminated, although the cost of these services is more than many Romanians can afford. Business regulations continue to be burdensome – for example, to open a business 83 pages of forms must be completed – although some tax simplification has taken place.

52. *Slovakia is the wealthiest of the three countries, and the one most open to international trade.* Per capita income in Slovakia is almost \$3,700 per year. Economic policies in 2000 focused on restoring macroeconomic stability, restructuring the corporate and banking sectors, and reducing barriers to competition and anticompetitive practices in the private sector. Trade has become increasingly more open, with imports and exports at about 80 percent of GDP. Public finance reform focused primarily on revenue policy; reforms are needed to improve the efficiency of public spending. Slovakia's approach to privatization has been predominantly direct sales to strategic foreign investors.

Social Cohesion

53. Research indicates that countries with greater social, ethnic, class, or other distinctions tend to deliver public services at a lower level of quality [La Porta et al 2002; Alesina et al 2002]. The explanation usually given is that these differences make redistributive policies more difficult to implement [Easterly and Levine 1997; Alesina et al 1997]. In this report, we focus on two types of distinctions in society – economic class and ethnicity. Table 2 provides some indicators of income inequality and the consequences of poverty in each country.

Table 2. Social Indicators			
Indicator	Kyrgyz Republic	Romania	Slovak Republic
Percent of population that lives below the poverty line	47.6 (2001)	21.5 (1994)	--
Share of national income earned by poorest 20 percent of population	7.6 (1999)	8 (1998)	11.9 (1990)
Life Expectancy at birth, total (yrs)	68.5 (2000)	70 (2000)	73 (2000)
Infant mortality (per 1000 births)	23 (2000)	19 (2000)	8 (2000)

World Bank data

54. *The Kyrgyz Republic has significant ethnic diversity and large regional disparities in economic development.*¹¹ Of the three countries, the Kyrgyz Republic is the only one with considerable ethnic diversity. Fifty-two percent of the population is Kyrgyz, 18 percent Russian, 13 percent Uzbek, 3 percent Ukrainian, and 14 percent various other ethnic groups. The government has adopted a policy of multiculturalism, which has given rise to nationalistic opposition parties. Ethnic minorities tend to support centrist political parties.

55. Regional clans, roughly divided along north-south lines, play an important role in political life. Local politicians claim that securing clan support is more important than

securing support from political parties. The economic divide approximates clan divisions. Seventy percent of foreign investment is in the Chui oblast in the north, where Bishkek is located. Unemployment is often two to three times higher in the poorest parts of the Kyrgyz Republic, which are in the south and east.

56. *Romania is the most homogeneous of the three countries*¹². Ninety percent of the Romanian population is Romanian; seven percent Hungarian, and the remaining three percent German and Roma. Ethnic minorities are represented in Parliament. The Hungarian party, which is one of the most disciplined, advocates autonomy and decentralization and was recently able to obtain passage of a law that allowed public officials to speak Hungarian in districts in which the ethnic share is at least 20 percent. Romania's economic hardships have primarily affected the working class and pensioners.

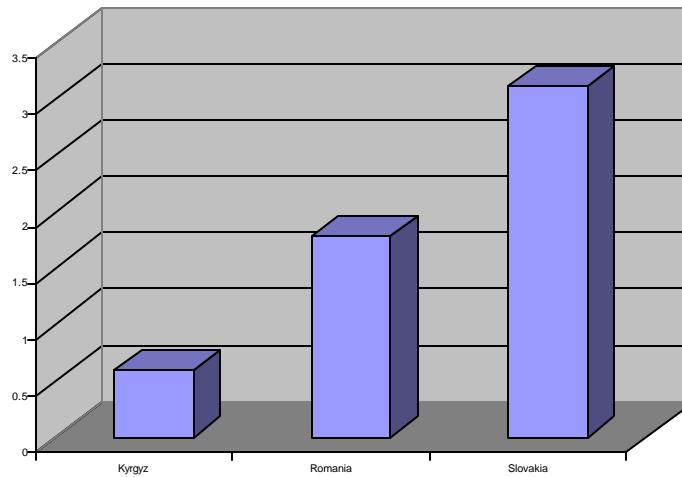
57. *Slovakia is also fairly homogeneous*¹³. Eighty-six percent of the population is Slovak, 11 percent is Hungarian, two percent is Roma, and one percent is various other groups including Czech. The Hungarian minority is a member of the ruling coalition and holds three cabinet seats and several important parliamentary posts, including parliamentary vice chairman. The Romany and other minorities are far more politically fragmented.

Civil Liberties

58. Civil liberties provide the public with the legal right to monitor and, if necessary, criticize the performance of the public sector. Exercising these rights naturally requires capacity, in the public sector to consult with the public and provide it with information about state activities, and in society at large to marshal the resources that are needed to collect the information and disseminate it widely. Research is just beginning to emerge on the role of civil liberties in improving the quality of public service delivery. Treisman [2000a] finds that at least 20 years of continuous democracy has a significant impact on the reduction of corruption, suggesting that the institutions that are needed to build the requisite capacity take several decades to develop. Other research also suggests that civil liberties and other mechanisms of voice and accountability play an important role in reducing corruption [EBRD 1999; Kaufmann et al 2000; and the World Bank 2000].

59. *Capacity to exercise oversight over the state is much more underdeveloped in the Kyrgyz Republic than in either Romania or Slovakia.* Early in transition political liberalization and donor funding led to an explosion of NGOs in all three countries. Today many of these NGOs have become unsustainable, particularly those that have been unable to diversify their sources of funds away from donor financing toward other forms of financing. Many NGOs continue to be located in or near the capital city, although NGOs are playing a role in delivering much needed services in poverty stricken areas such as in rural communities in southern Kyrgyz Republic.

Figure 2. NGOs by Country



60. Figure 2 depicts the number of registered NGOs per 1000 persons in the country.¹⁴ This ratio for Slovakia is approximately 5 times greater than for the Kyrgyz Republic, and almost twice as great as Romania. Part of the explanation for this difference is that the rate of volunteerism in NGOs is much greater in Slovakia. Sixteen percent of adult Slovaks are members of associations, while only six and five percent are members in Romania and the Kyrgyz Republic, respectively. Part of the explanation is the willingness of the state to tolerate criticism. In the Kyrgyz Republic new restrictions in 2001 on the registration of mass media, the closure of prominent opposition newspapers, and continued libel cases against independent journalists and media contributed to a deterioration in freedom of the press. Compare this to Romania, where a coalition of leading NGOs in 2001 supported the adoption of a law guaranteeing access to information, and prevented the government from introducing restrictions on this law. The issue of the capacity of civil society to exercise oversight over the state is a theme taken up again in Chapters 5 and 6, when we explore the role of the business community in influencing public sector performance.

61. Some experts argue that public oversight over the state is more effective at local levels of government, where the government is more directly accountable to the local electorate, assuming, of course, that the officials are elected. Others argue that patronage, inadequate controls over procurement and the budget, and other institutional weaknesses make many local governments more susceptible to corruption. The empirical evidence regarding which of these effects dominates is mixed. While Huther and Shah [1998], De Melo and Barenstein [2001], and Fisman and Gotti [2002] each find that fiscal decentralization strengthens public sector performance, Treisman [2002b] decomposes decentralization into different types and finds that most forms of decentralization actually exacerbate corruption.

62. *Although all three countries have moved toward decentralization, the Slovak Republic has made the greatest strides in this respect.* Decision-making in all three countries remains fairly centralized, although recently Slovakia has adopted a set of reforms that will dramatically change this situation. The Slovak system of public

administration is based on the principle of subsidiarity, which requires government functions to be carried out at the lowest possible level. In July 2001 Parliament passed a law creating eight self-governing regional bodies. Between 2001 and 2004, more than 300 functions will be delegated to regional and local governments, in the fields of education, social assistance, health care, culture, transport, environmental protection, and regional economic development. Revenue collection by regional and local governments is anticipated to increase from 6 percent to 54 percent of all revenues.¹⁵

Legal Traditions

63. Earlier we identified a country's history of state administration as having an important influence on the quality of government today. A related factor is a country's legal tradition. Research suggests that a country's legal tradition is important to government performance, because it determines the extent to which the power of the executive is constrained. In this regard, common law systems – which have stronger protections of individual rights – are perceived to be superior to civil law traditions. Both are presumed to be superior to socialist legal traditions, in which the state was primal. Within the civil law system, Germanic and Scandinavian legal traditions are believed to be superior to the French legal system, largely because of the closer *de facto* integration of the executive and judiciary with the French system [La Porta et al 2000].

64. *While all three countries have recently emerged from a socialist legal system, Slovak legal institutions draw more heavily from the Germanic legal traditions, Romanian from the French legal tradition, and the Kyrgyz Republic from tribal traditions.* These facts would suggest that Slovak law is more likely to contain restraints which prevent government exceeding its authority, although this was seriously put to the test during 1994 to 1998 when the Meciar government tried to remain in power by introducing new laws to restrict political competition. In Romania, the constitution allows lawmaking to be delegated to the executive, between sessions and for emergencies, a privilege which the government has abused in the past to advance its own interests. In the Kyrgyz Republic, during the 2000 election campaign, international and domestic observers complained that the judiciary used its powers to selectively harass strong opposition candidates. All three countries have a long way to go to institute an effective rule of law.

External Factors

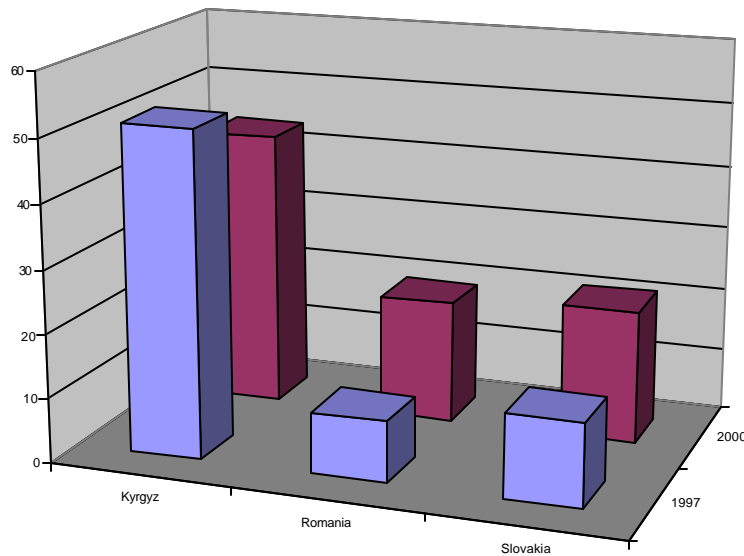
65. External factors play an important role in all three countries in stimulating a demand for public sector reform. Two of the most important factors are the drive for EU accession and foreign aid and other sources of financing.

66. *Slovakia has the best prospects for EU integration.* Public sector reform specialists in ECA countries routinely point to the positive influence of the drive for EU integration in stimulating a demand within the country for public sector reform. The Slovak Republic began its negotiations with the EU in 1999. It has managed to meet the basic requirements for closing 28 chapters of its accession agreement with the EU and has a realistic prospect of closing the three outstanding chapters shortly. In October 2002 the EU Commission recommended that negotiations with Slovakia be closed. Romania

began its negotiations in 2001, with the aim of achieving integration by 2007. Romania has closed 15 chapters of its accession agreement. The Kyrgyz Republic is obviously not a candidate for EU integration.

67. *The Kyrgyz Republic continues to have the greatest demand for foreign aid.* Figure 3 depicts current dollars of aid per capita to each of the three countries. Clearly, aid per capita is highest in the Kyrgyz Republic, although it is declining, primarily because levels are currently too high. The World Bank has more active operations in the Kyrgyz Republic and Romania than in the Slovak Republic.

Figure 3. Foreign Aid



Conclusion

68. This chapter provides the reader with an understanding of some of the factors that can be expected to influence public sector performance in our three case studies. As shown in Table 3, these factors generally favor Slovakia, then Romania, and finally the Kyrgyz Republic.

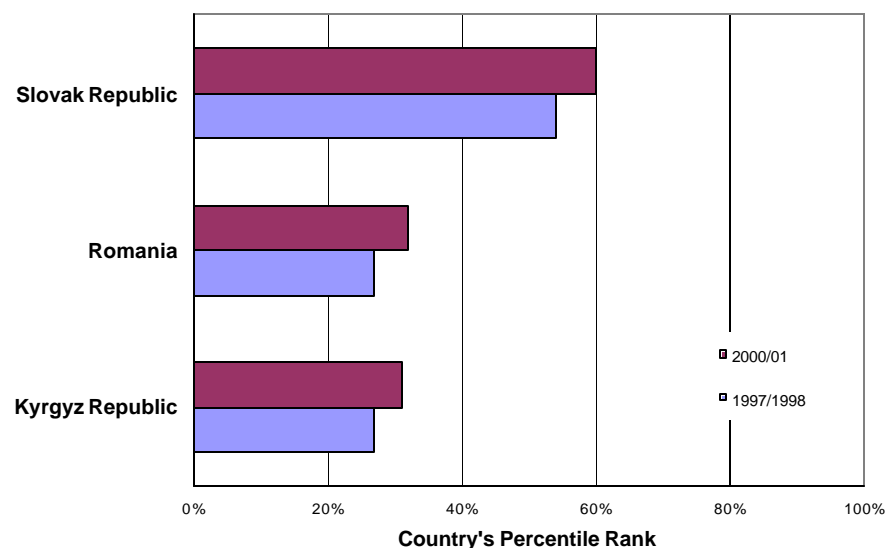
69. Given this constellation of factors, it would not be surprising to find that government effectiveness is measured as much higher in the Slovak Republic than in either Romania and the Kyrgyz Republic. Figure 4 depicts the rank of each country in a worldwide comparison of countries based on government effectiveness. According to these measures, Slovakia ranks higher than 60 percent of countries, with Romania and the Kyrgyz Republic ranking higher than about 30 percent of countries. Effectiveness in all three countries appears to be growing.

Factor	Kyrgyz Republic	Romania	Slovak Republic
History of state administration	3	2	1
Economic development	3	2	1
Social cohesion	3	1	2
Civil liberties			
Civil society development	3	2	1
Decentralization*	2	1	3
Legal traditions	3	2	1
External factors			
EU accession	3	2	1
Donor involvement	1	3	2
Mean	2.6	1.9	1.5

*We assume that decentralization harms public sector performance.

70. Many of the factors we have discussed in this chapter are exogenous characteristics of countries that are difficult to change. At an operational level, we are interested in those factors the government can influence in the medium term, namely, public sector institutions such as meritocratic recruitment and promotion, effective administrative procedures, and performance management systems. To what extent do these institutions have a positive impact on public sector performance and what are the relative importance of distinct elements of each of these institutions? Will the relationship between institutions and performance be stronger in countries in which the enabling conditions for public sector reform discussed in this chapter are better? We now turn to answering these questions.

Figure 4. Government Effectiveness



source: Kaufmann and Kraay, 2002, "Growth without Governance"

Chapter 3. The Performance of Public Sector Bodies

71. Implicit in the public sector reform strategies the Bank often proposes is the idea that public sector performance depends crucially not only on the resources devoted to the public sector, but on the institutional environment in which state employees do their work. The environment is shaped by many factors from the technocratic, such as the formal rules that are adopted, to the informal, such as the organizational culture that motivates employees to behave in positive or negative ways.

72. Public sector performance is an undeniably complex concept, influenced by many factors not all of which are under the control of policy makers. We make no pretense to fully understanding these myriad factors, nor do we claim to have found an unambiguous definition of just what constitutes performance in the public sector. Yet clearly any considered attempt to improve public sector performance must begin with a conceptualization of what performance means and how to achieve it, difficult as these questions may be. Many experts in the Bank and elsewhere devote enormous energy to just this task, drawing on historical experience and detailed qualitative examinations of institutions and incentives. Our analysis offers a complementary approach. Empirical studies such as that summarized in this chapter contribute to our understanding of a complex issue, but they do not trump other forms of analysis. Quite the contrary, improving public sector performance relies crucially on expert analyses by public administration specialists. Indeed, empirical analyses may provide corroborating evidence for the wealth of expert opinions and descriptive testimonials to the importance of the institutions of public administration. Conversely, they may also impose some empirical discipline on assertions about the ways in which public sector institutions affect performance of public sector bodies.

73. In this chapter we focus on the ways in which the internal institutions of public administration influence the performance of public sector bodies in the Kyrgyz Republic, Romania, and the Slovak Republic, focusing on quality and integrity as the two key dimensions of performance. A sensible answer to such a question will have to identify, for a specific boat, which design factor is currently the most serious constraint to performance improvements. It is in this sense that we investigate the determinants of the performance of public sector organizations. We would not be surprised to find that the most serious constraints to performance improvements vary across countries, due to differences in their enabling environments. Accordingly, we estimate separate models for each country and compare results across countries.

74. The chapter contains a technical discussion of the basic model we use to evaluate the role of public sector institutions in public sector performance, our data sources, and tables summarizing our econometric results. Some of the choices we have made, both in the design of the model and in its implementation were driven by the availability of data. Where applicable, we identify where we have made these compromises. In the Annex we summarize how we might have designed and implemented this model differently, had the data used for this report been collected explicitly for this purpose.

75. A preview of our key findings follows.

- *Building a meritocratic civil service is of universal importance to performance.* In all three countries, public sector bodies with more merit-oriented systems of personnel management had much higher levels of public sector performance. Of the four aspects of public administration, meritocracy was the only consistent influence on overall public sector performance. This result is consistent with cross-country empirical studies and has important implications for the Bank's work in public administration. The strength of the relationship confirms the importance of a merit-oriented civil service as a development issue.
- *A well-functioning system of administrative procedures lays the foundation for meritocracy.* Although administrative procedures exert a weak direct effect on public sector performance, the most important contribution to be made by administrative procedures is the indirect effect on performance, working through the enabling environment it creates for building meritocracy. In sequencing Bank interventions in public administration, therefore, strengthening systems of administrative procedures should be among the earliest components.
- *Performance management systems demonstrated remarkably little influence on anything.* With the exception of a mutually supportive role with respect to personnel management in the Slovak Republic, performance management had either no effect at all, or a negative effect. Indeed, in the Kyrgyz Republic, public sector bodies with better performance management had higher levels of bribery. Certain aspects of performance management, in particular the existence of complaint systems, have an influence on performance in reduced form estimations, but only in the two European countries with the stronger effect being in the Slovak Republic. These findings suggest that instituting performance management in environments where the foundations of public administration have not been established may be inconsequential at best, or risky at worst.
- *Financial management systems showed little sign of direct or indirect effect on public sector performance.* Financial management systems exerted no effect on any other system of public administration. In reduced form estimations, the only aspect of financial management that had an important effect on performance was the existence of extra-budgetary funds in Romania, which was associated with higher levels of bribery.¹⁶ While a strong financial management system will always be necessary for fiduciary purposes, expectations that such systems will lead to noticeable improvements in public sector performance should be modest if these findings are corroborated. Having said this, it is important to note that the measures of the quality of financial management systems included in these models were particularly weak. As such, these findings are probably more sensibly viewed as signaling the need for better measurement of financial management systems, rather than as evidence of the unimportance of financial management systems in promoting performance of public entities.¹⁷
- *The paradigm of public sector performance described in this chapter works more completely in the more formalized advanced countries.* The systems of public

administration generally contribute to performance, directly and indirectly, most thoroughly in the Slovak Republic, followed by Romania. In the Kyrgyz Republic, gaps in the paradigm are largely filled in by organizational culture. Thus, *although organizational culture has a role in all countries, the effect is strongest when formal institutions are weakest*. When the enabling environments are weak, the idiosyncrasies of managers and leaders tend to drive performance. The implications for Bank operations are that implementing system-wide reforms will be difficult in less hospitable enabling environments, such as the Kyrgyz Republic, and that finding entry points in bodies or sectors with positive organizational cultures can reduce the chance of failed projects in such environments.

The Dimensions of Public Administration and Performance

76. This is not the first time that the Bank has attempted to examine public sector performance empirically. In ECA, for example, World Bank [2001a, 2001b, 2003] examine the influence of various public institutions on public performance in Romania, Kazakhstan, and the Kyrgyz Republic. Manning, Mukherjee, and Gokeckus [2000] similarly propose an analytical framework for using public official's surveys to analyze public sector institutions, and this framework has been employed in a number of non-ECA countries.¹⁸ Using slightly different methodology, Kaufmann, Mehrez, and Gurgur [2000] examine the importance of broad principles of public administration, such as transparency, accountability, and voice as factors influencing corruption in Bolivia.¹⁹ They argue that voice-related variables have a larger effect on the quality of service and corruption than traditional public sector management variables. Other researchers have undertaken empirical analyses of these issues as well. Evans and Rauch [1997; 2000] have also undertaken careful econometric analyses of how competitive salaries, internal promotion and career stability and meritocratic recruitment affect bureaucratic performance in 35 less developed countries. They found that meritocratic recruitment is the most consistently significant determinant of performance.

77. We focus on four key dimensions of public administration: personnel management, administrative procedures, performance management, and financial management. Many World Bank public administration projects worldwide have components in these four areas. A fifth area that should, perhaps, be included in this framework is the policy formulation system. Our omission of policy formulation reflects the lack of available data on sector policy formulation. In the Annex we suggest a number of improvements that could be made in data collection, e.g., survey questions and sampling strategies, which could improve this framework for future applications.

Public sector performance and institutions

78. Public sector performance is a singularly difficult concept to define precisely, and even more challenging to measure. Defining public performance is challenging in one instance because performance is a multidimensional phenomenon, encompassing the quality of the work done, the accessibility of services to the general public, and the integrity with which the services are produced and delivered. Each of these three dimensions of performance are very closely linked, each depending on the other.²⁰ For

example, it could be argued that one measure of the quality of a service is access itself – the provision of social benefits and income support can only be deemed successful if it is made available to those who need it the most. Similarly, corruption in the provision of a service may limit access for those who cannot afford the unofficial payments. Quality and corruption are similarly linked: if a doctor only provides quality services to those who provide unofficial payments, the average level of quality will be lower in the most corrupt bodies.

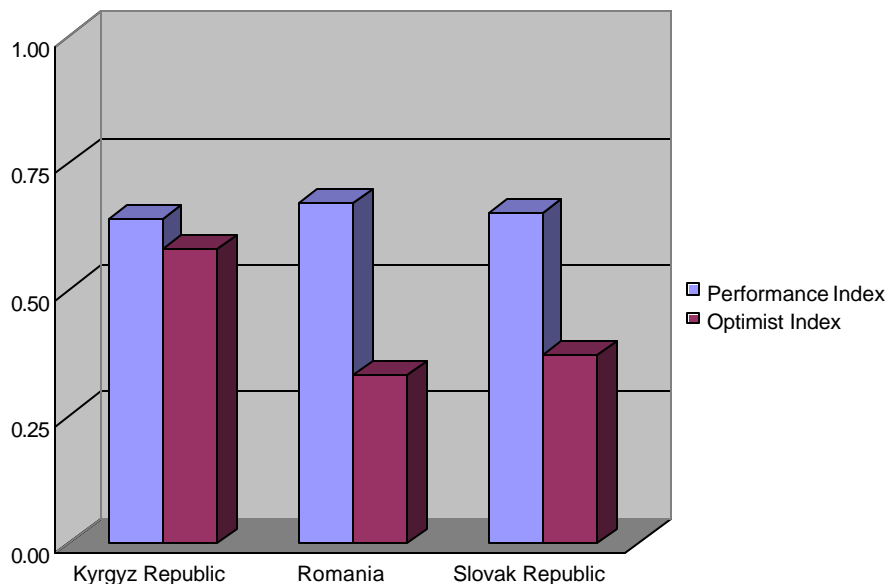
79. Even if clearly defined, “public performance” is a concept that presents empirical researchers with several challenges in measurement. Foremost among these is the fact that publicly provided services can serve fundamentally distinct functions with correspondingly distinct beneficiaries, including:

- **Direct benefits:** public goods and services that provide direct benefits to citizens, such as safety (law enforcement, fire-code enforcement, environmental protection), information services (statistical agencies), health, education, and garbage collection
- **Direct costs:** services that impose direct costs on individual citizens (e.g., revenue collection) in order to allow government to finance other services and goods that provide benefits to the citizenry
- **Internal services:** services that are entirely internal to government, such as internal auditing, accounting, human resource management, but which provide government with means of managing the resources at its disposal and holding itself accountable for how it manages those resources – in the private sector these would be considered to be overhead or back-office functions.

80. Because of this heterogeneity of services, an objective quantitative measure of performance that would apply equally to all organizations would be difficult to come by. For example, a non-survey indicator of one dimension of performance in revenue collection might be the amount of collections, while an indicator for passport issuance might be turnaround time. While each may be useful for analyzing the trends over time in the performance of a particular public sector organization, they are of little use for cross-organization analysis. Moreover, even for a particular service, making inferences from quantifiable data is not without ambiguity because of the multi-dimensionality of service characteristics. For example, if the tax collection body increases collections, this could be a sign of greater effectiveness, but it might also be accompanied by a degradation of tax payer’s rights. Our point here is not to say that objective quantitative indicators of performance are not important, merely that they pose challenges. Our measures, based on subjective perceptions, also pose obvious challenges, some of which will be discussed throughout this chapter and elaborated on in the Annex. As discussed below, we believe a potentially valuable direction for future research would be to combine the approach described in this paper with quantitative indicators of performance, in a sample designed for the purpose, to help understand how these two imperfect yet useful measures of performance can complement each other for research purposes.

81. In this study we use data from the public official's surveys to construct indices of performance. We focus on quality and integrity, two key dimensions of performance. Although other dimensions of performance would also be of interest, we limited ourselves to quality and integrity because they facilitated similar approaches for all three countries. Quality is based on a survey question about the quality of services provided by the respondent's organization. Bribery, an inverse measure of integrity, is based on the severity of the problem of bribery within the organization. We also construct a summary index, called Performance, which is the simple average of these two measures. Figure 5 shows the average level of self-assessed performance for each country. As will be discussed in detail later in this chapter, the use of self-assessments presents certain challenges. The second bar in Figure 5 is the variable Optimist, which is based on a survey question about confidence that the Government is serious about combating corruption. This variable is used here as a rudimentary benchmark and will be included in many subsequent charts to help keep responses in perspective. In the case of Figure 5, for example, the near uniformity in the level of Performance may reflect the generally more positive responses of public officials in the Kyrgyz Republic.

Figure 5. Performance Index



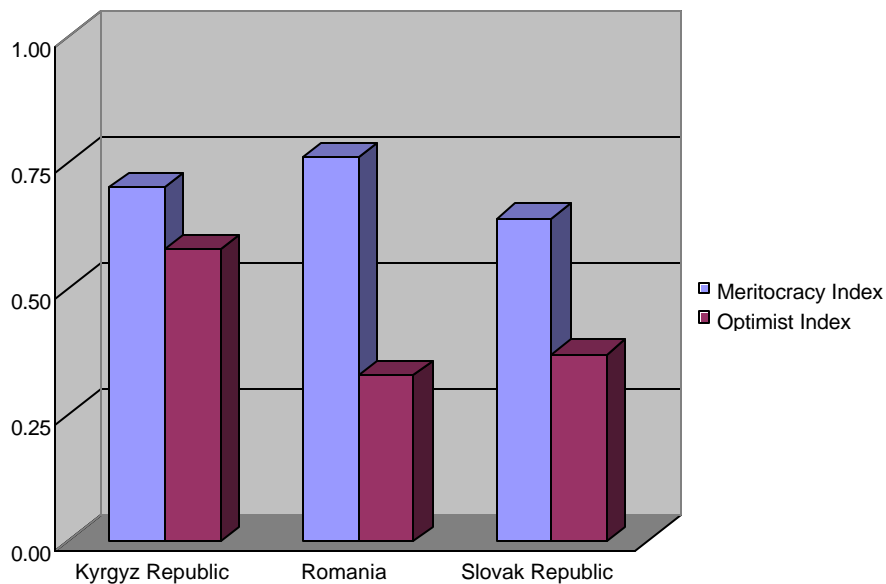
The model, to be described formally later in this chapter, considers the production of performance to be a function of the qualities of the systems of personnel management, performance management systems, administrative procedures, and financial management, each of which will be briefly introduced here.

Personnel management systems

82. Our measure of the quality of the personnel management system is the (respondent's perception of the) degree to which personnel decisions are based on merit rather than other factors such as connections. Thus, meritocracy is an intermediate input, determined

in turn by the levels of other intermediate inputs and by the underlying institutional arrangements related to personnel management. Optimally, we would like to consider a large number of aspects of the system including the specific qualities of systems of competitive recruitment, appeals procedures, attestation, compensation, career advancement potential, and personnel evaluations, all mechanisms that are often advocated as ways to make the civil service contestable and professional. Because of data limitations, our analysis relies on two underlying institutional variables that are available for all three countries: the formalization of the system and the degree to which decisions are audited. In addition, the data for the Kyrgyz Republic allows a tentative examination of the prevalence of competitive recruitment and attestation. One of our recommendations would be that future applications of this methodology expand our list of underlying institutional arrangements to include these other variables. This would require adding questions²¹ to the survey instruments, designed to capture those other elements of personnel management systems; such as the specific qualities of systems of competitive recruitment, appeals procedures, attestation, compensation, career advancement potential, and personnel evaluations. Figure 6 shows the average level of self-assessed meritocracy for each country, together with the variable Optimist, to help keep responses in perspective.²²

Figure 6. Personnel Management Systems

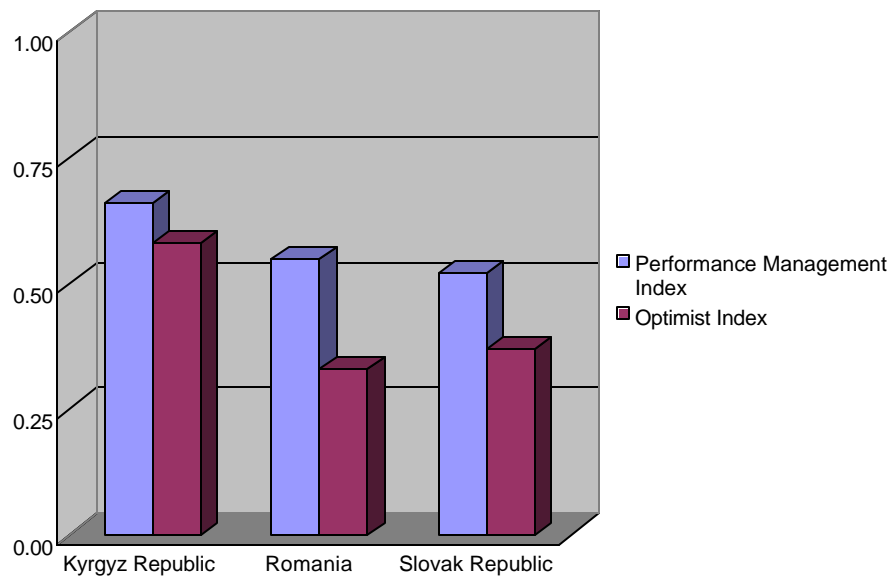


Performance management systems

83. In Bank client countries, and indeed in the Bank itself, managing for results is often argued to be key to improving performance. Focusing on results, the argument goes, will help sharpen attention on the things that matter and provide incentives to do things better. We use as our proxy for the quality of the performance management system an assessment of incentives to improve quality. Distinguishing performance management

from meritocracy is difficult both conceptually and semantically. Often the term “performance management” is used to refer to both individual incentives and to organizational incentives. [See, for example, OECD, 1993, *Private Pay for Public Work*, OECD PUMA Public Management Series, Paris.] We focus on the latter, covering the former under “meritocracy.” Having said that, we must acknowledge that even if the conceptual distinction is clear, we would have preferred a variable for organizational incentives that more precisely emphasized organizational incentives and the use of feedback mechanisms that we usually have in mind for performance management. The features that make up a performance management system are many, including systematic efforts to identify measurable indicators of success, targets and benchmarks. As underlying institutional variables, we focus on “voice” aspects of the public-private interface: the degree to which a body actively provides information to the public, and the existence and use of complaint systems. While the next chapter focuses on the firm’s demand for and use of such complaint systems, this chapter looks at the supply of such systems by the public sector. Our first-best attempt to implement this methodology would also have included indicators of how much indicators of performance are measured and reported and the role they play in the performance management system, as well as the “voice” measures included here; i.e., actual use of complaint systems and reporting. Figure 7 shows the average level of the index for performance management for each country, together with the variable Optimist, to help keep responses in perspective.

Figure 7. Performance Management Systems

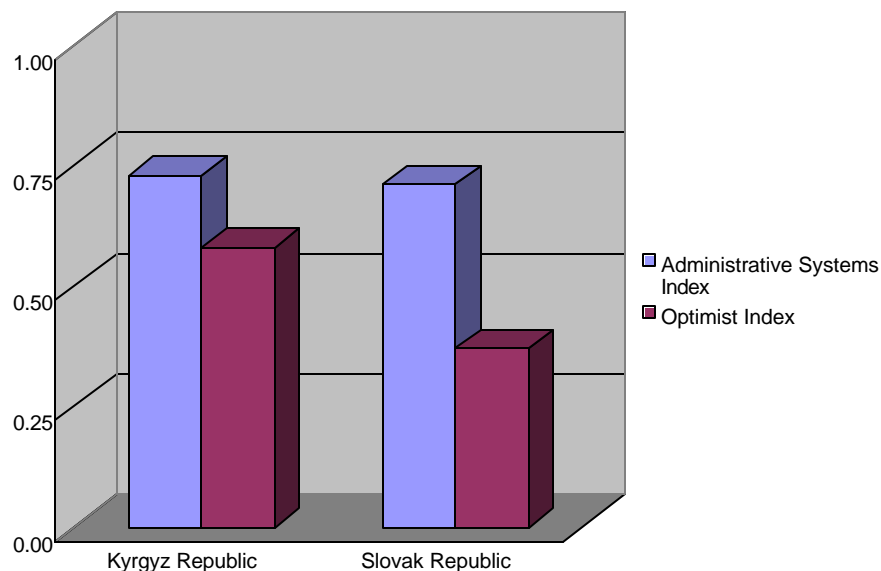


Administrative procedures

84. Internal bureaucracy is a fact of life for employees of any large organization. The myriad administrative procedures are adopted for various reasons, often for simple organizational expediency, but also for the control that they provide over wrongdoing.

There are procedures for procurement, for time management, and for the specific operational functions of particular jobs. Our analysis relies on a simple assessment of the overall quality of administrative procedures. The overall quality, in turn, is a function of many factors. We employ measures of cross-cutting themes such as formalization, the degree to which procedures are monitored and enforced, the lack of ambiguity in procedures, the appropriateness of the number of levels of management and the degree to which they consult with each other, and the stability of the system. Our examination of the determinants of good administrative procedures is more cleanly comparable for the Kyrgyz Republic and the Slovak Republic. The reasons, and a description of our approach for Romania, are described later in this chapter. Figure 8 shows the average level of the index for administrative procedures for each country, together with the variable Optimist, to help keep responses in perspective.

Figure 8. Administrative Systems

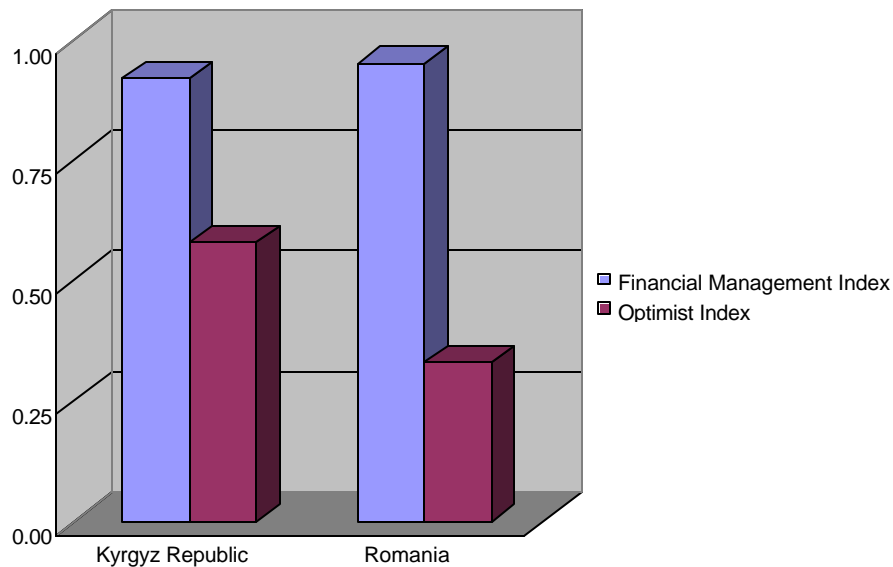


Financial management

85. A key goal of many Bank public administration projects is to improve the system of financial management in our client governments. Advice is motivated not only by views on the importance of financial management systems for improving public sector performance, but also for fiduciary reasons. Bank lending in countries with weak controls is risky since funds may disappear or be used for improper purposes. Financial management systems include both budget formulation systems (e.g., the development of multi-period budgeting, budget processes that impose realistic, hard budget constraints, budget preparation procedures that introduce various contestability mechanisms into the preparation of budget proposals, etc.) and budget execution systems (e.g., treasury systems, accounting systems, auditing requirements). We are able to provide only tentative results for two countries, the Kyrgyz Republic and Romania. Arriving at a good summary measure of the quality of the financial management system has proven

particularly challenging with the data at our disposal. We focus on the degree to which wage arrears are a problem in a given entity. This is admittedly the weakest of the intermediate input variables, driven by data availability. We would have preferred a much better characterization of the overall quality of financial management. While we view the results using the imperfect substitute as interesting, we also warn that the methodology as implemented is particularly weak for this variable. As underlying institutional characteristics we include the degree of consultation in budget formulation, the appropriateness of budget approvals, the lack of ambiguity in procedures, and appropriateness of the level of bureaucracy. We also consider the degree to which the organization relies on extra-budgetary funds. Figure 9 shows the average level of the index for financial management for each country, together with the variable Optimist, to help keep responses in perspective.

Figure 9. Financial Management System



Culture and leadership

86. The last element of performance we consider is organizational culture and leadership. This aspect of the environment in which public sector employees work is not as tangible as the others, but no less important for motivating performance. We focus on the degree to which state employees identify with the body's core mission and have a client orientation in their work, a variable we denote *Culture*. Culture and leadership represent intangible contributors to all of the intermediate inputs and the final output, public sector performance. Since public sector bodies with strong leadership and a culture of integrity and performance may have both lower levels of corruption and more meritocratic personnel management systems, there is the potential for endogeneity to cloud the results. We attenuate this problem by adding the variable *Culture* to each equation. This definition is consistent with that provided by James Q. Wilson [1989], emphasizing the distinctive way of viewing and reacting to the bureaucratic world that shapes whatever

discretionary authority an employee may have. “When that culture is a source of pride and commitment, the agency has acquired a sense of mission.” Culture and leadership represents intangible contributors to all of the intermediate inputs and the final output, public sector performance. This variable would be improved if it were, in fact, two variables, one for leadership and a second for organizational culture.

87. Another set of influences that was modeled as affecting both performance and the intermediate inputs is the availability of rents. Rents could plausibly affect both the level of corruption and the intermediate inputs. Our approximation for the level of rents available for capture is a series of variables indicating the degree of interaction the body has with households, with enterprises, and with other government bodies. The vector *rents* includes these three variables. The methodology would have been stronger if the variable *rents* captured rents more cleanly, since there may be large rents even in bodies that do not interact much with the public and vice versa.

Empirical Evaluation

88. *Basic Model.* Our model has several features that make it distinctive; both for the ways that it addresses econometric challenges, and for the types of recommendations that it can provide. The model employs a simple construct in which performance (to be defined shortly) is determined by the overall quality of several dimensions of public sector institutions, each of which is in turn determined by the institutional and policy choices that reformers, managers, and history have put in place. Thus, public sector performance is determined by intermediate states of the world such as the degree of meritocracy, the quality of administrative procedures, the financial management system and the level of organizational incentives in the system; each of which is determined, in turn, by specific institutional arrangements (e.g., formal rules, procedures, etc.). This framework is depicted in Figure 10. There is a fifth set of intermediate inputs which we would like to have incorporated into the model if data were available, and that is the quality of the system of policy formation. If the quality of the policy formulation process is orthogonal to the other intermediate inputs, then estimating the partial model does not introduce any bias. However, the premise of this framework is that each intermediate input may very well have an influence on the others. If this were true for the case of policy formulation and one or more of the other variables, then our estimates of the importance of the other variables would be biased.

89. Each of these dimensions, however, is not a policy variable in itself, but an intermediate outcome determined by other states. The implication is well known to many reformers: understanding that meritocracy is important is easy, but creating a meritocracy is hard. In our model, meritocracy is in turn a function of aspects of the personnel management system including the degree to which the rules are formalized, monitored, enforced, subject to appeal, etc. Similarly, the quality of administrative procedures is a function of the degree to which they are formalized, simple, audited, etc.

90. A second feature of our model is that it explicitly allows for mutual endogeneity in the production of our intermediate outputs. Thus, meritocracy is a function of administrative procedures and organizational incentives, while each of these two are

$$P = \beta I^* + \gamma X_p + e$$

$$I^*_i = \alpha I^*_i + \delta X_i + u$$

where β , γ , α , and δ are vectors of coefficients, and e and u are error terms. For any single P , therefore, the system consists of up to five equations depending how many intermediate variables I^* are examined. This model is quasi-recursive since the variable P only appears in one equation. Thus the first equation can be estimated by OLS, while the other equations are mutually endogenous and must be estimated using a technique appropriate for simultaneous equations. We will estimate the system using 3SLS. Certain potential econometric problems, such as multicollinearity and non-independence of errors, are discussed in the Annex.

93. *Data.* The public officials surveys were undertaken in 1999 in the Slovak Republic, in 2000 in Romania, and in 2001 in the Kyrgyz Republic. Each had sample size of 350 and a similar approach was used for sample selection in each country. The sample in the Kyrgyz Republic covered all 8 oblasts and was stratified to reflect the existing institutional and regional levels of state institutions – executive, legislative and judicial power at the central, oblast and regional level. In the Slovak Republic, the sample covered all 8 regions with roughly equal numbers of respondents from central state administration, regional bodies of state administration, and local governments. In Romania, the sample covered central, county, and local governments in 39 counties. The analyses described here exclude elected officials, focusing instead on career state employees.

94. *Subjective perceptions.* Our public sector performance variables and our institutional quality variables are based on subjective measures. Since each of the variables is subjective, the assessments are dependent upon each respondent's understanding of the term and by their understanding of the relevant scales. Systematic patterns in such subjective understandings could lead to an optimist-pessimist bias: while an optimist might consistently provide favorable assessments, a pessimist might do the opposite. Although this actually occurs far less frequently than one might imagine – the correlation coefficients between Quality and Bribery, for example, are 0.01 in the Kyrgyz Republic, 0.21 in Romania, and 0.36 in the Slovak Republic – there is a need to address this potential bias. We do so by adding to each estimated equation an assessment of how committed the respondent feels the government is to reducing corruption, a variable named *optimist*. This variable is useful because it focuses on overall government rather than the respondent's own organization. However, a better variable would not be associated with government at all, but on some feature of daily life that is the same for all respondents, yet might be assessed differently by optimists and pessimists.

95. As subjective measures, it is plausible that interpretation varies by country. For example, what is viewed as good quality in one country could be viewed as mediocre in another. Indeed, it is interesting that the basic performance measures, the top three rows in Table 4, vary very little between countries. One variable that does vary considerably between the Kyrgyz Republic and the two European countries is *optimist*, one

interpretation being that respondents in the Kyrgyz Republic gave generally more favorable assessments than they might have had there been an objective scale for all three countries. A second indication of optimistic responses in the Kyrgyz Republic is provided by an entirely different survey.²³ The 2002 Business Environment and Enterprise Performance Survey provide enterprise assessments of various problems in doing business, including an assessment of inflation. Since there exist real indicators of inflation, a measure of firm over-optimism can be constructed by comparing firm assessments with the real indicators. Assessment of inflation in each country was regressed on the log of the actual inflation figure, and the residual calculated for each country. Positive residuals indicate that firms complained relatively more about inflation given the actual level of inflation; negative residuals indicate the opposite. The residuals for the Kyrgyz Republic, Romania, and the Slovak Republic are -0.56, +0.37, and +0.45. Since comparing responses across countries is problematic, the approach in this chapter focuses on the variation within each of the three countries.²⁴

96. Summary statistics for key variables are included in Table 4.

Table 4. Summary Statistics on Key Variables in Public Sector Performance

	Kyrgyz Republic	Romania	Slovak Republic
Measures of Performance			
Performance Index: An average Quality and Bribery, where the latter was rescaled such that higher numbers were good.	0.64	0.67	0.65
Bribery Index: An index between 0 and 1 indicating the level of bribery in the institution.	0.38	0.36	0.41
Quality Index: An index between 0 and 1 indicating the quality of services provided by the institution.	0.66	0.69	0.72
Intermediate Inputs			
Personnel Systems: An index between 0 and 1 indicating the degree to which personnel decisions are based on merit, rather than connections or other factors.	0.70	0.76	0.64
Administrative Systems: An index between 0 and 1 indicating the overall quality of administrative procedures.	0.73	N/A	0.71
Performance Management: An index between 0 and 1 indicating the degree to which there exist incentives to produce quality.	0.66	0.55	0.52
Financial Management: An index between 0 and 1 indicating the degree to which wage arrears are not a problem.	0.92	0.95	N/A
Controls for Optimism and Organizational Culture			
Optimism: An index between 0 and 1 indicating the degree to which the respondent believes that the government is serious about fighting corruption.	0.58	0.33	0.37
Culture: An index between 0 and 1 indicating the degree to which everyone in the institution knows and identifies with the organizational mission and the degree to which everyone in the institution views the citizen or user as their client.	0.79	0.66	0.65

For detailed descriptions, see the Annex. The surveys took place in 2001 in the Kyrgyz Republic, 2000 in Romania, and 1999 in the Slovak Republic.

Empirical Results

97. The interplay of these systems of public administration, their underlying institutions, and performance in three countries at varying degrees of development and with varying institutional histories provides some interesting food for thought about the efficacy and sequencing of World Bank interventions in public administration. The results for the Kyrgyz Republic, Romania, and the Slovak Republic are presented in the tables that follow. Table 5 through Table 7 contain the results of OLS estimations of the determinants of Performance, Quality and Bribery. Table 8 through Table 10 contain the results of 3SLS estimation of the system of equations relating the intermediate outcomes I^* to each other and to their underlying institutional characteristics. Financial management is discussed only in the Annex since estimation involved smaller samples and could only be done for two of the three countries. The next section discusses the findings from the tables below.

Table 5. Explaining the Level of Performance

Dep.Variable	Kyrgyz Republic	Romania	Slovak Republic
Performance Index			
Intercept	0.14 (1.54)	-0.070 (0.34)	0.46 (5.19)***
Personnel Systems †	0.38 (4.75)***	0.450 (4.39)***	0.24 (3.61)***
Administrative Systems †	0.10 (1.15)	N/A	0.10 (1.58)
Performance Management Systems †	-0.06 (-0.97)	-0.028 (0.64)	0.04 (0.84)
Culture	0.16 (1.55)	0.339 (4.41)***	0.26 (3.53)***
Enterprise Interactions	-0.02 (-0.84)	-0.131 (1.81)*	-0.02 (-0.55)
Household Interactions	-0.01 (-0.29)	0.118 (0.79)	-0.06 (-1.30)
Government Interactions	0.05 (1.34)	0.123 (0.77)	-0.17 (-2.96)***
Optimist	0.09 (1.92)*	-0.019 (0.42)	0.01 (0.24)
N	230	156	198
R-squared	0.20	0.51	0.36
Estimation by OLS. Absolute value of t statistics in parentheses;			
† endogenous variable;			
* significant at 10%; ** significant at 5%; *** significant at 1%			

Table 6. Explaining the Level of Quality

Dep. Variable	Kyrgyz Republic	Romania	Slovak Republic
Performance Index			
Intercept	0.261 (3.00)***	0.412 (1.60)	0.578 (6.87)***
Personnel Systems [†]	0.049 (0.64)	0.224 (1.77)*	0.155 (2.51)**
Administrative Systems [†]	0.147 (1.78)*	NA	0.059 (1.00)
Performance Management Systems [†]	0.055 (0.86)	-0.027 (0.51)	0.038 (0.76)
Culture	0.137 (1.37)	0.386 (4.05)***	0.271 (3.84)***
Enterprise Interactions	-0.001 (0.05)	-0.151 (1.69)*	-0.004 (0.08)
Household Interactions	0.051 (1.25)	0.243 (1.31)	-0.078 (1.54)
Government Interactions	0.047 (1.23)	-0.253 (1.28)	-0.095 (1.72)*
Optimist	0.056 (1.17)	-0.110 (1.90)*	-0.098 (1.68)*
N	230	156	198
R-squared	0.10	0.33	0.28
Estimation by OLS. Absolute value of t statistics in parentheses;			
[†] endogenous variable;			
* significant at 10%; ** significant at 5%; *** significant at 1%			

Table 7. Explaining the Level of Bribery

Dep. Variable	Kyrgyz Republic	Romania	Slovak Republic
Performance Index			
Intercept	0.978 (5.73)***	1.552 (5.25)***	0.659 (4.21)***
Personnel Systems †	-0.713 (4.80)***	-0.676 (4.64)***	-0.315 (2.74)***
Administrative Systems †	-0.054 (0.34)	NA	-0.136 (1.25)
Performance Management Systems †	0.187 (1.49)	0.028 (0.46)	-0.050 (0.54)
Culture	-0.192 (0.98)	-0.292 (2.67)***	-0.255 (1.94)*
Enterprise Interactions	0.056 (0.89)	0.111 (1.08)	0.053 (0.59)
Household Interactions	0.076 (0.95)	0.007 (0.03)	0.060 (0.64)
Government Interactions	-0.061 (0.81)	-0.499 (2.20)**	0.249 (2.42)**
Optimist	-0.138 (1.48)	-0.071 (1.07)	-0.128 (1.18)
N	230	156	198
R-squared	0.15	0.45	0.22
Estimation by OLS. Absolute value of t statistics in parentheses;			
† endogenous variable;			
* significant at 10%; ** significant at 5%; *** significant at 1%			

Table 8. Explaining the Merit-Orientation of Personnel Management Systems*

Dep. Variable	Indep. Variable	Kyrgyz Republic	Romania	Slovak Republic
Personnel Systems				
	Intercept	0.07 (0.76)	0.457 (2.40)**	-0.02 (-0.17)
	Administrative Systems †	0.46 (3.15)***	N/A	0.30 (2.22)**
	Performance Management Systems †	-0.303 (1.19)	0.132 (0.38)	0.56 (2.61)**
	H_formal	0.286 (4.33)***	0.169 (0.91)	0.16 (2.64)***
	H_audited	-0.019 (0.32)	0.125 (1.01)	0.07 (1.10)
	Culture	0.287 (1.92)*	-0.118 (1.10)	-0.05 (-0.37)
	Enterprise Interactions	-0.020 (0.67)	0.118 (1.14)	0.10 (1.34)
	Household Interactions	0.042 (1.05)	-0.219 (0.93)	-0.05 (-0.83)
	Government Interactions	-0.016 (0.43)	-0.184 (1.19)	0.00 (0.06)
	Optimist	0.102 (1.79)*	0.064 (1.19)	0.17 (2.03)**
	R squared	0.44	0.41	0.52
	N	202	131	126
Estimation by 3SLS. Absolute value of z statistics in parentheses				
† endogenous variable;				
* significant at 10%; ** significant at 5%; *** significant at 1%				

Table 9. Explaining the Quality of the System of Administrative Procedures

Dep. Variable	Indep. Variable	Kyrgyz Republic	Romania	Slovak Republic
Administrative Systems				
	Intercept	0.079 (0.69)	N/A	0.00 (0.04)
	Personnel Systems †	0.010 (0.05)	N/A	0.64 (1.66)*
	Performance Management Systems †	0.428 (0.78)	N/A	-0.91 (-2.29)**
	Formalism of Administrative Procedures	0.067 (1.12)	N/A	0.30 (2.17)**
	Monitoring and Enforcement of Administrative Procedures	0.027 (0.72)	N/A	0.14 (1.47)
	Consultation in Administrative Procedures	-0.059 (1.42)	N/A	-0.11 (-0.72)
	Lack of Ambiguity in of Administrative Procedures	0.158 (2.25)**	N/A	-0.01 (-0.15)
	Appropriate Number of Levels of Management	0.090 (1.03)	N/A	0.05 (0.63)
	Appropriate Centralization of Decision Making	0.302 (4.56)***	N/A	0.06 (0.72)
	Uncumbersome Procedures	0.138 (0.93)	N/A	0.10 (1.14)
	Information Availability	0.103 (1.46)	N/A	-0.03 (-0.30)
	Stability of Administrative Procedures	-0.035 (0.45)	N/A	0.11 (1.38)
	Culture	-0.158 (0.58)	N/A	0.45 (2.34)**
	Enterprise Interactions	-0.018 (0.57)	N/A	-0.09 (-0.84)
	Household Interactions	-0.020 (0.58)	N/A	-0.00 (-0.06)
	Government Interactions	0.027 (0.88)	N/A	0.00 (0.06)
	optimist	-0.070 (1.15)	N/A	-0.10 (-0.83)
	R squared	0.44	N/A	0.52
	N	202	N/A	126
Estimation by 3SLS. Absolute value of z statistics in parentheses.				
† endogenous variable;				
* significant at 10%; ** significant at 5%; *** significant at 1%				

Table 10. Explaining the Quality of the System of Performance Management

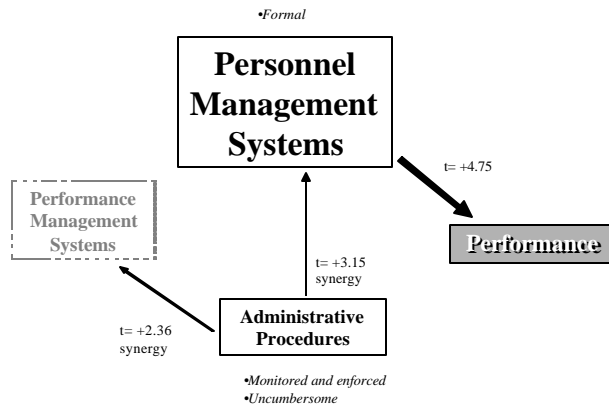
Dep. Variable	Indep. Variable	Kyrgyz Republic	Romania	Slovak Republic
Performance Management Systems				
	Intercept	-0.113 (1.10)	0.543 (1.24)	-0.19 (-0.93)
	Personnel Systems †	-0.004 (0.02)	-0.467 (0.72)	0.74 (4.63)***
	Administrative Systems †	0.378 (2.36)**	N/A	-0.20 (-0.98)
	Information Provision to the Public	-0.021 (0.46)	-0.097 (0.99)	0.11 (1.47)
	Existence and Use of Complaint Systems	0.059 (0.98)	0.066 (0.57)	-0.06 (-0.69)
	Culture	0.428 (3.77)***	0.285 (1.64)	0.24 (1.61)
	Enterprise Interactions	0.016 (0.47)	-0.228 (1.45)	-0.05 (-0.57)
	Household Interactions	0.050 (1.16)	0.386 (1.38)	0.05 (0.58)
	Government Interactions	-0.003 (0.08)	-0.288 (0.93)	0.09 (0.87)
	Optimist	0.131 (2.46)**	0.148 (1.25)	-0.03 (-0.32)
	R squared	0.44	0.41	0.52
	N	202	131	126

Estimation by 3SLS. Absolute value of z statistics in parentheses.
† endogenous variable;
* significant at 10%; ** significant at 5%; *** significant at 1%

98. The results from the tables above are depicted graphically in Figure 11. This figure focuses on three of the intermediate outcomes: personnel management, performance management, and administrative procedures. Financial management is discussed only in the Annex since estimation involved smaller samples and could only be done for two of the three countries. The results that include financial management are similar but not identical to those in Figure 11.

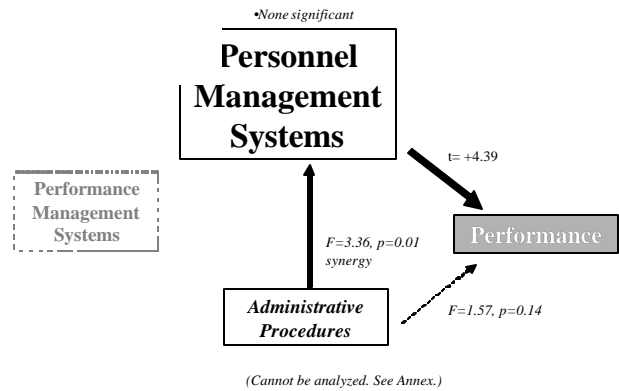
Figure 11. Performance in Three Disparate Countries

Kyrgyz Republic

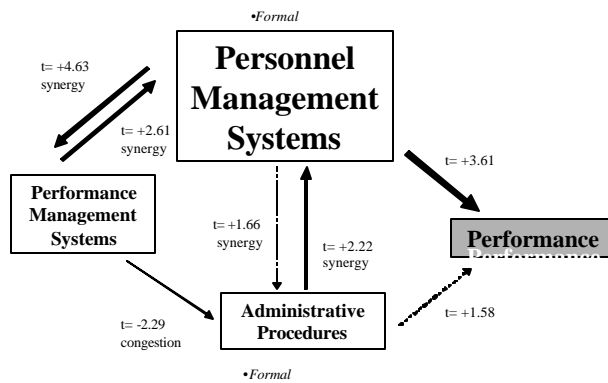


Solid lines indicate high degrees of statistical significance; the larger size and font for a particular box indicates that the intermediate input is a highly significant determinant of performance; an intermediate input that is not a significant determinant of anything is grayed out; synergy (congestion) means that the factor is a significant positive (negative) influence on the other input in 3SLS estimation. A modified approach was undertaken for Romania due to data limitations. See Annex.

Romania



Slovak Republic



The Universal Importance of Meritocracy

99. Proponents of civil service reform have pointed to the importance of establishing systems of personnel management in which decisions are based on merit rather than connections or other factors.²⁵ Although most arguments are qualitative in nature, some recent empirical research has begun to provide support. The cross country studies of Rauch and Evans [1997; 2000], for example, examine how competitive salaries, internal promotion and career stability and meritocratic recruitment affects bureaucratic performance in 35 less developed countries. They found that meritocratic recruitment is the most consistently significant determinant of performance.

100. Econometric work undertaken as part of the anticorruption and governance diagnostics have also supported the link between performance and meritocracy. Using a simple single equation model, the diagnostics in Romania and Kazakhstan, for example, have found that public sector bodies with more merit-oriented personnel policies have lower levels of corruption, higher quality and (in Kazakhstan) greater accessibility. Despite these promising results, questions remain about the relative importance of meritocratic personnel policies, primarily because these single equation tests do not thoroughly deal with the complexity of the relationships.²⁶

101. Our model, illustrated in Figure 10, does address these complexities and the results provide strong support for the link between meritocracy and performance. In all three countries, public sector bodies with more merit-oriented personnel systems had lower rates of bribery and higher performance overall. (Table 5 and Table 7.) This is true even after controlling for rents and for the organizational and leadership culture. In Romania and the Slovak Republic, meritocracy is further associated with quality, although this was not true in the Kyrgyz Republic. Nevertheless, the overall strong performance of this variable provides corroborating evidence to the single equation models estimated in other countries and to the cross-country evidence of Rauch and Evans.

102. The results also provide indications on how to create meritocracy.²⁷ In both the Kyrgyz Republic and the Slovak Republic, audits did not demonstrate any explanatory power, whereas the simple formalization of the rules did. (Table 8.) There is also some support for the importance of competitive recruitment procedures in the Kyrgyz Republic, the only country where the data and institutional history allowed for such analysis.²⁸ The 1999 Law on Public Service established competitive recruitment for positions and attestation. A variant of our model, estimated for the Kyrgyz Republic and only for those who got their jobs through competitive recruitment, finds that public sector bodies with greater levels of transparency and fairness of the process have higher merit-orientation in their personnel systems.

103. In the Kyrgyz Republic, public sector bodies with stronger leadership and organizational culture have higher levels of meritocracy. In this country with a newly enacted civil service regime, variations in implementation rely heavily on the

idiosyncrasies of managers. In the Slovak Republic, with its history of European public administration, meritocracy is driven more by the variations in the qualities of other systems of public administration such as administrative procedures and performance management, as well as variations in formalism. This does not imply that formal institutions do not matter in the Kyrgyz Republic; rather, it suggests that leadership and culture bear the lion's share of the burden for establishing meritocratic and performance-oriented organizational behavior when formal institutions are nascent. It is likely that sustained leadership aimed at creating more meritocratic and performance-oriented organizational behavior is required *both* to establish well functioning formal institutions as well as to create such organizational behavior.

Creating an Enabling Environment through Administrative Procedures

104. Public officials do not do their work in a vacuum. Even if personnel policies are designed to reward merit, officials must still face constraints including those imposed by the system of administrative procedures. At their best, such procedures can impose effective controls against improper behavior without imposing excessive bureaucracy. At their worst, administrative procedures can hinder public officials from carrying out their functions without effectively reducing corruption and waste.

105. In both Romania and the Slovak Republic, public sector bodies with better systems of administrative procedures have somewhat higher levels of quality and performance, and lower levels of bribery, even after controlling for meritocracy, organizational culture and other factors. (Table 5 through Table 7.) In the Kyrgyz Republic, strong administrative procedures also have a direct effect on quality, but not on bribery or on overall performance. However, the true importance of administrative procedures is understated if considering the direct effect alone. In all three countries, strong administrative procedures are also very highly correlated with meritocracy, which in turn improves performance in all three countries. (Table 8.) The underlying characteristics of administrative procedures that seem to generate quality, however, is different in the three countries; whereas the formalism of the system is the strongest correlate in the Slovak Republic, in the Kyrgyz Republic the key is that the rules be monitored, enforced and not cumbersome.²⁹ (Table 9.) These findings suggest the importance of country-specific analyses to determine which factors, in a given country's current enabling environment, provide the most promising candidates for improving organizational performance.

The Surprising Lack of Importance of Performance Management

106. The results for all three countries suggest a robust role of meritocracy in personnel decisions for improving performance, and a more indirect role for administrative procedures. As strong as the results are for meritocracy, however, our proxy for performance management systems, based on an assessment of the incentives in the organization to improve quality, has very little explanatory power. Indeed, of the three intermediate outcomes in our model, meritocracy, administrative procedures, and organizational incentives, it is the latter that has the least power for explaining quality and performance. (Table 5 through Table 7.) The only country in which performance

management exerts a significant effect on any measure of performance is in the Kyrgyz Republic with respect to bribery. However, the relationship exhibits the wrong sign, such that bodies with greater organizational incentives actually have higher levels of bribery. (Table 7.) These results could indicate that in the absence of well functioning administrative systems, performance management efforts pose a significant risk of actually being counterproductive. There are two possible reasons for this risk: (i) in the absence of effective administrative systems, publicly disseminated information on performance can't be interpreted in light of reliable information on how inputs were managed, so such information is likely to be used to buttress priors rather than to dispassionately assess reasons for good or poor performance – in short, such information easily generates confrontation and demagoguery rather than constructive dialogue; (ii) performance management efforts typically rely on the use of discretion by managers to reward good performers, while, if administrative systems are weak, the exercise of such discretion is more susceptible to abuse or, at best, poor judgment – this could easily fall prey to rewarding staff who take bribes, since their bribe-taking could make them look like good performers.

107. In the Kyrgyz Republic and Romania, performance management seems to have little effect on either meritocracy or administrative procedures. (Table 8 and Table 9.) In the relatively more developed Slovak Republic, performance management and meritocracy are both mutually supporting, although performance management has a weakly congestive effect on administrative procedures. One interpretation of these findings is that in the Slovak Republic, the controlling aspects of a good system of administrative procedures are biting enough that they are viewed negatively by public officials who believe they have a strong system of organizational incentives.

108. Even more perplexing are the results on the determinants of organizational incentives. External complaint systems do not seem to provide incentives in any country, and active information provision to the public is only weakly important in the Slovak Republic, and not significant at all in the Kyrgyz Republic or Romania. (Table 10.) In the Kyrgyz Republic we again find that organizational culture and leadership seem to be filling the gap left by the ineffectiveness of external pressure. By contrast, in the Slovak Republic, it is the more formalized meritocracy that exerts the most influence. (We elaborate on this issue below.)

109. These results are consistent with the observation from diagnostics that in the Kyrgyz Republic information provision does not yet seem to be generating too much effect, perhaps because the constituencies that might avail themselves of that information are less well developed. However, the type of information provision described in the surveys emphasizes reporting to the public at large the activities of the specific body. The supply driven nature of the calculus for deciding which information is necessary to provide might also explain why information provision is having so little effect in the Kyrgyz Republic. Adoption of a sweeping freedom of information regime could bring about enhanced demand for such information, and thereby lead to positive pressure on state bodies to perform. At the time of the surveys none of the three countries had such a freedom of information regime. However, soon after the surveys in the Slovak Republic, a progressive free access to information law was adopted. The strong provisions of this

law, and its role as a centerpiece of anticorruption efforts, are indicative of the strength of the NGO community, the constituency demanding the reforms. A second important constituency in the Slovak Republic was the free and open media. It is a reasonable conjecture that even in the absence of the free access to information law, these constituencies were able to exert some effective pressure on public sector bodies for information that ultimately helped provide the external pressure for improved performance.

110. Although Romania also has an active NGO community and free media, both tend to have a more antagonistic relationship with the Government. Indeed, a recent report³⁰ by a media NGO argued that communist era regulations of journalists, including strict libel laws, are often used to prosecute journalists for insulting authorities. Moreover, the report suggests that news outlets are often dependent on the state, curbing their independence. The relatively recent adoption of a freedom of information law in Romania was immediately followed by a strengthened state secrets act, albeit one that was ultimately vetoed. The freedom of information act is currently being tested by NGOs and think tanks in an effort to ensure that state offices comply with the provisions of the law.

111. The Kyrgyz Republic also has a large number of NGOs and is often argued to be the most open of the Central Asian republics. However, the NGO community includes partisan NGOs that argue for stricter libel laws, not greater media freedom, and slander and insult are criminal offenses. Contrasting the experiences of these three disparate countries, it should be no surprise that that public sector bodies in the Slovak Republic tended to exhibit a greater association between information provision and performance, and that the Slovak Republic was the only country for which externally generated organizational incentives seemed correlated with internal meritocracy.

Implications for Reform Sequencing

112. At the outset of this chapter we drew the analogy between reforming systems of public administration and designing a sailboat. Even though both the sail and the hull are important, the designer needs to know which of the two should be redesigned first to increase the boat's speed the most. Similarly, public administration reformers face important sequencing questions. One of the strengths of the approach illustrated in Figure 11 is that it suggests some principles of reform sequencing.³¹ They suggest, for example, that strengthening of both meritocratic civil service management systems and administrative systems should precede extensive efforts to build performance management systems. The limited range of measures of factors contributing to meritocratic civil service management practices included in these models prevents us from drawing definitive conclusions on sequencing of reforms within that subsystem. Nevertheless, the findings from the analysis suggests that transparent, competitive recruitment and selection procedures should probably be among the earliest civil service reform efforts. While those reforms will need to be complemented with efforts to establish personnel performance evaluation practices, our findings on performance management systems suggest that reformers will need to keep expectations regarding the likely impacts of this aspect of the civil service management system quite modest during

the early stages of such reform efforts. Similarly, freedom of information acts should be pushed early in a reform effort, but their impacts should not be expected to be important until both administrative procedures and the press and NGO sector are functioning reasonably well. Moreover, a sound system of administrative procedures is correlated with the level of meritocracy in all three countries, and the organizational incentives system supports meritocracy in the Slovak Republic. In that country the relationship seems to be mutually supporting: meritocracy also supports the system of organizational incentives. Moreover, these synergies appear to be stronger when the enabling conditions are more supportive, i.e., in the Slovak Republic.

113. Other relationships, however, are not necessarily mutually supporting. Meritocracy underpins the quality of administrative procedures only in the Slovak Republic, and very weakly there. The linkages between administrative procedures and organizational incentives are even more unstable. In the Kyrgyz Republic we find that incentives exhibit neither synergy nor congestion with respect to administrative procedures, yet the quality of administrative procedures does support organizational incentives. In the Slovak Republic, by contrast, organizational incentives appear to cause congestion with administrative procedures, while administrative procedures neither support nor hinder organizational incentives.

114. The finding that there can be tension between two worthy goals of public administration reform – improving organizational incentives and strengthening administrative procedures – is not entirely surprising, since administrative procedures exist in part to control the behavior of public sector employees, for example by limiting discretion and thereby forestalling opportunities for corruption. Yet incentives by their very nature require discretion in order to be effective. Indeed, as we argued earlier, one may conjecture that the findings for Slovakia indicate that some of the restraints of administrative discretion are indeed having the desired effect.

115. In the Kyrgyz Republic, by contrast, the unidirectional synergy in which administrative procedures support organizational incentives but not vice versa suggests a different conjecture. After only a decade of independence, following a much deeper entrenchment of Soviet public administration, the foundations of public administration are weaker and these need to be established before focusing strongly on incentives. Indeed, the fact that organizational incentives seem to be positively associated with bribery in the Kyrgyz Republic provides an even stronger argument that addressing the foundations of public administration, especially administrative procedures and meritocracy in civil service, should be a higher priority than building systems of performance management.³²

Quality and Integrity are Not Always Driven by the Same Factors

116. One key result in Table 6 is that the determinants of quality are different in the Kyrgyz Republic than in the other two countries, and within the Kyrgyz Republic, the determinants of quality are different from the determinants of bribery. In the Kyrgyz Republic, administrative procedures are weakly important for producing quality, while in Romania and the Slovak Republic it is meritocracy in the personnel management system

that is important. In the Kyrgyz Republic, the country with weaker public sector institutions, quality is primarily driven by variations in organizational culture and leadership, perhaps precisely because formal institutions are weaker. In such an environment, bringing formality to informal public administration systems may be the first priority for improving performance. These empirical results suggest that leadership is key to bringing formality to informal public administration systems – a sequencing point again.

Chapter 4. The Public-Private Nexus

117. Institutional development within the public sector does not take place in isolation of the rest of society. It is the result of a complex interplay, for better or worse, between public officials and their constituents in society at large. In the best case, the public – either as individuals or collectively as organizations – provide some form of oversight that creates pressure on the state to operate more efficiently and effectively. In the worst case, they work to subvert public sector rules and regulations in order to obtain preferential treatment for themselves. They may collude actively or comply passively with public officials to their mutual advantage in ways that unfortunately undermine the broader public interest.

118. Unfortunately, the analysis presented in Chapter 3 raises genuine doubts about the capacity of the public sectors in the Kyrgyz Republic, Romania, and to a lesser extent the Slovak Republic to foster constructive participation and oversight by the public. Creating institutions to provide public access to information about the state and to solicit feedback do not generally appear to generate important incentives for officials to improve their performance. They appear unable to discourage businesses and other social groups from engaging in bribery and capture.

119. In this chapter, we explore the interaction between the state and society more deeply. We focus on the state's interaction with businesses as a case study to better understand how different institutions in the public and private sector are being used to influence public sector performance. We fully recognize that this is not the only important interaction between the state and society that warrants study. Other case studies, for example focusing on the interaction between vulnerable groups and social security institutions or between healthcare institutions and their clients, would provide other valuable lessons. Our choice to focus on the business community and the state was driven by two considerations. First, the resources of firms are quite considerable and play a potentially important role in shaping the incentives of officials. Second, the anticorruption surveys provide some information on institutions within the private sector that might be used to influence the state, but do not provide comparable information for households. Hopefully future data collection efforts will fill this information gap, so that a more comprehensive analysis can be conducted.

120. The main conclusions of our analysis are the following.

- *Use of complaint systems and courts improve public sector performance.* A supply driven approach to building these systems, which does not give adequate attention to the underlying incentives for firms to use these systems, may be one reason we find in Chapter 3 that simply building mechanisms for user oversight does not have a significant effect on performance. The *use* of institutional mechanisms such as complaint systems and courts generally does appear to be effective instruments for discouraging poor public sector performance such as bribery.

- *Business associations and political parties may target specific public sector bodies whose behavior has the most adverse consequences for the broadest range of its members and contributors.* Collective action plays a very particular and not always beneficial role in each of the three countries. However, in all three countries, business associations and political parties appear to play at least one beneficial role. While they might not always reduce corruption in the aggregate, they appear to target specific public sector bodies whose behavior has the most adverse consequences for most of their members and supporters and get them to treat firms better. For example, business associations appear to reduce the number of contacts with tax inspectorates and both firms of collective action decrease the probability a bribe will be paid.
- *Perceptions of the business environment play a large role in determining how firms choose to influence the state.* Firms under pressure from unfair competition are more likely to engage in bribery. Political instability increases the likelihood that firms will try to influence the state in the Kyrgyz Republic and Romania, and decreases the likelihood that firms will try to influence the state in Slovakia.
- *Corruption is used more frequently by the very firms that should be the engine of future growth.* Newer firms and firms with younger managers in the Kyrgyz Republic and Slovakia are more likely to resort to bribery. Although it is not possible to establish with certainty if these effects are transitory, they do raise a concern that the process of entry and the demands of the first years of operation socialize firms into corruption.
- *Country context matters.* The level of development of different institutions within the private sector such as business associations and complaint systems vary markedly by country, with very different implications for their efficacy in dealing with the state.
- *Entry points exist.* This chapter identifies a possible entry point for public sector reform – regions with a high concentration of firms that do not pay bribes and actively report officials that solicit bribes.

121. Our main recommendations based on these findings are the following.

- Country strategies for public sector reform would benefit from more actively planning for the development of complaint systems and capacity within courts to hear administrative cases as well as cases of corruption. A basic assessment tool is needed to identify the extent to which complaint systems and judicial procedures to hear administrative and corruption cases are in place and are actually being used to introduce changes that will improve the performance of public sector organizations. Incentives for firms and other constituencies to use these mechanisms need to be identified and strategies for strengthening these incentives need to be developed and implemented.

- Country strategies for public sector reform also might benefit from more actively planning for the implementation of pro-competition policy and other reforms such as greater participation in legal drafting that will make the playing field more level for all firms. Achievements in this area need to be publicized using media that reach managers, so that their views about the fairness of the business environment perceptions can be altered.
- Anticorruption programs may need to target newer firms, to reduce their dependence on bribery as their main form of influencing the state. Otherwise there is a risk that corruption may become even more institutionalized.
- Country strategies for public sector reform programs would benefit from more actively considering how best to mobilize the public in support of the program. Firms that report corruption and resist paying bribes are too few to be the foundation of support. One possible strategy is to try to elicit firms that avoid paying bribes, yet do not report corrupt officials – which are a majority of firms – to become more willing to come forward through a public relations campaign targeted at the geographic centers where such firms are concentrated.

The Market for Influence

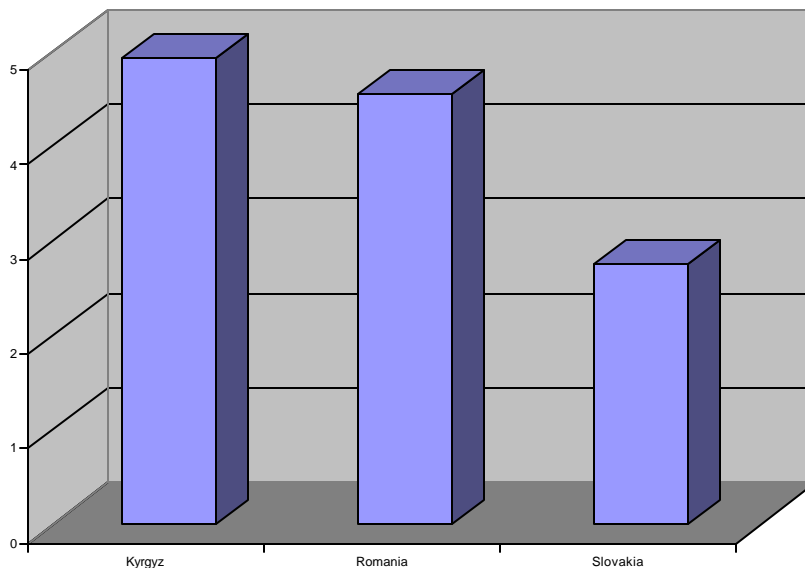
122. The state, with its power to regulate the economy and undertake capital and other projects using goods and services procured from firms, controls a set of decisions that may have a decisive impact on the profitability of firms. Naturally, firms in all countries seek to influence these decisions in their favor. In societies where a few firms or individuals have disproportionate influence over policymaking and implementation, other firms become disillusioned. These firms distrust the state, underreport their revenues to tax authorities, and avoid using state institutions such as courts [Hellman and Kaufmann 2003]. Hence the concentration of influence has dire consequences for the fiscal and sectoral performance of the state.

123. One measure of the concentration of influence, used by Hellman and Kaufmann [2003], is the relative influence of the following two groups over recently enacted laws and regulations: (i) individuals and firms with political connections and (ii) business associations which represent a broader constituency. The higher the ratio, the greater the concentration of influence in a narrow set of interests. As illustrated in Figure 12, this ratio in the Kyrgyz Republic, Romania, and the Slovak Republic ranges from nearly 5:1 to less than 3:1, suggesting that the market for influence is quite imperfect, almost twice as imperfect in the Kyrgyz Republic and Romania than in the Slovak Republic.³³ These imperfections in the market for influence may be partly responsible for the under-reporting of revenues to tax authorities, and the corresponding difficulties the governments have in financing their delivery of goods and services. Firms in the Slovak Republic and Romania report 87 percent of their income on average, while firms in the Kyrgyz Republic report only 74 percent of the income.³⁴

124. The ways in which officials and firms interact at a more bureaucratic level also have an important effect on public sector performance. When executing a state function

that affects firms, officials and firms can choose to respond to the incentives that arise from this situation in a number of ways. They can comply with the regulations and formal procedures that govern the decision. They can collude to subvert the decision to their mutual private advantage [Hellman et al 2000, World Bank 2000]. In some cases, the firm can extort a reluctant official to take a decision that favors the firm, for example using blackmail or threats of violence. Conversely, an official may extort a reluctant firm to pay a bribe. [Schleifer et al]. In this situation, the firm may (i) pay the bribe; (ii) use personal connections, a political party, or a business association to pressure the official to back down; or (iii) lodge a formal complaint with the state organization or with prosecutors to prevent the official from collecting bribes in the current situation as well as in the future. Some firms will try to avoid this situation altogether, by staying away from activities where officials have this type of power.

Figure 12. Concentration of Influence

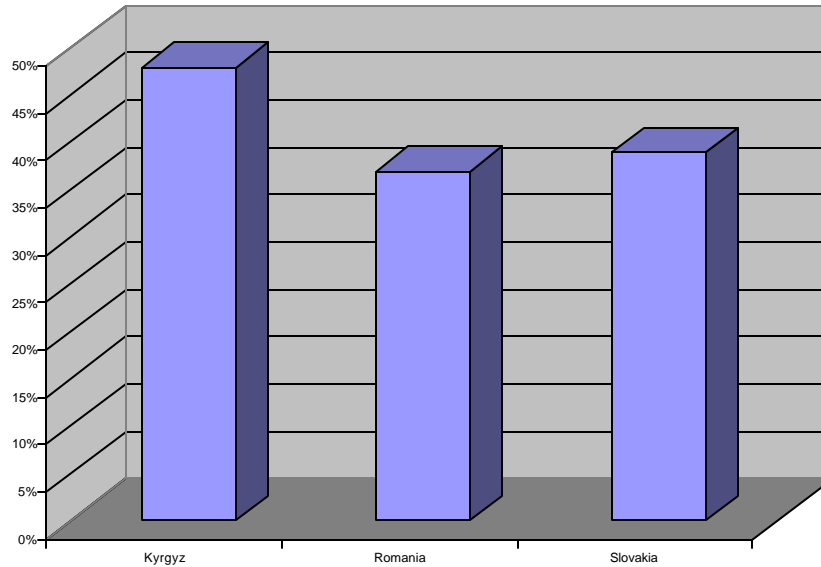


125. In the remainder of this chapter, we explore how the firm's use of these various mechanisms to influence the state actually affects the performance of the state. For the purposes of this chapter, we classify the instruments that firms use to influence the behavior of the state into three categories: personal relations, collective action, and institutional mechanisms. We describe the mechanisms and the extent of their use in each of the three countries below.

126. *Personal relations.* Personal relations include all the bilateral actions that a manager can take to influence a decision of the state in the firm's favor. These actions may include contacting a friend or relative in a position to influence the decision, bribing the official who makes the decision, purchasing a high-level official who acts as the firm's 'roof' or protector in dealings with the state, or using a 'roof' in the mafia to threaten the official. We have data on one of these actions, bribery. As shown in Figure 13, the percent of firms engaged in bribery is highest in the Kyrgyz Republic and about equal in Romania and the Slovak Republic.³⁵ Firms that resort to bribery tend to be

smaller firms, in the manufacturing sector, and privately owned. Their managers are more likely to be young and male.

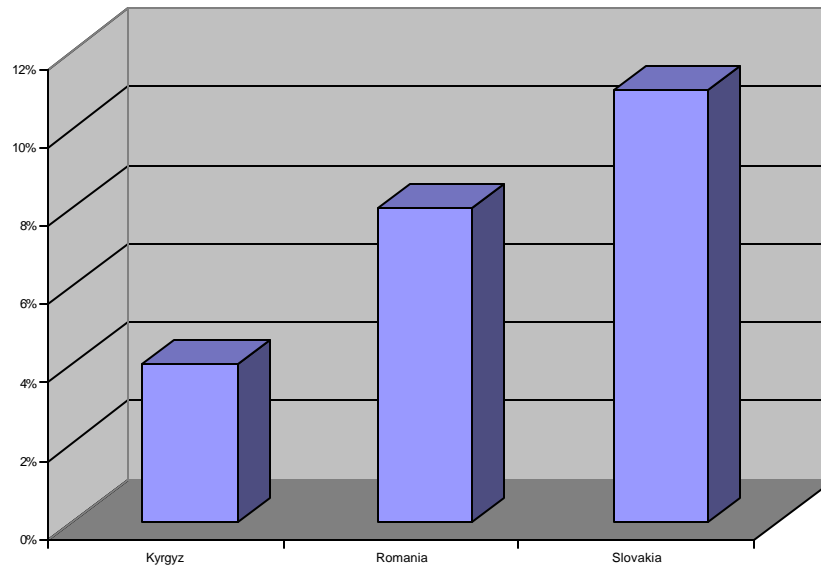
Figure 13. Incidence of Bribery



127. *Collective action.* Collective action includes all multiparty actions that firms take to influence the state. Two common mechanisms for collective action are business associations and political parties. Mechanisms for collective action tend to be most developed in the Slovak Republic and least developed in the Kyrgyz Republic. As shown in Figure 17, membership in business associations varies markedly across countries, from a high of 31 percent of firms in the Slovak Republic, to 23 percent in Romania, to only 12 percent of firms in the Kyrgyz Republic. Firms that join business associations tend to be older, larger firms. They are more likely to be state-owned and managed by a male than firms that are not members.

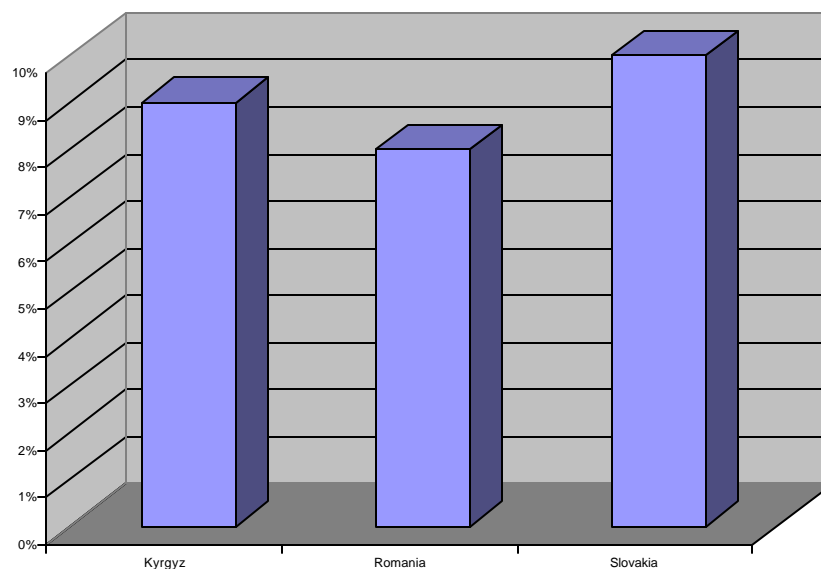
128. Firm financing of political parties also varies considerably across the three countries. As shown in Figure 14, 11 percent of firms in the Slovak Republic, eight percent of firms in Romania, and only four percent of firms in the Kyrgyz Republic make contributions to political parties. Firms that contribute to parties tend to be privately owned and in the manufacturing sector.

Figure 14. Firm Financing of Political Parties



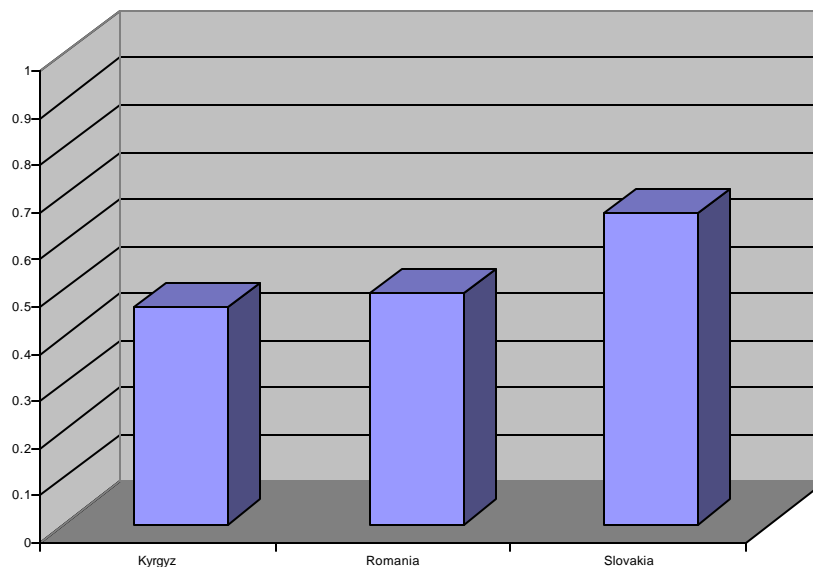
129. *Institutional mechanisms.* A third set of instruments for influencing decisions of the state are formal institutions. These include mechanisms within public sector bodies for consultation, such as advisory bodies or working groups that include representatives of key user groups, and systems for users to lodge complaints and appeal decisions. They also include mechanisms, such as ombudsman or courts, which are external to the public sector body. As shown in Figure 15, use of these types of mechanisms to complain about corruption is remarkably similar across countries, ranging from eight to 10 percent of firms. Firms that have lodged official complaints about corruption tend to be larger and are more likely to be state owned.

Figure 15. Use of Complaint Systems



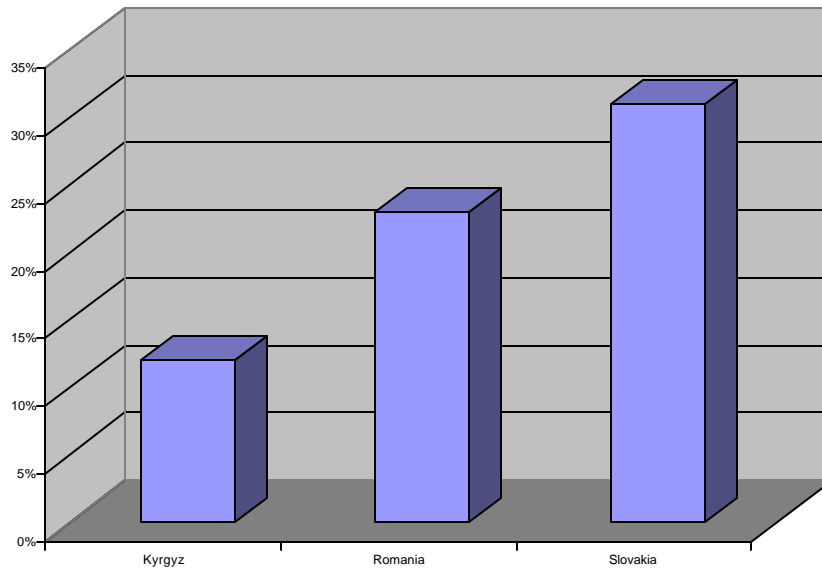
130. The willingness of firms to use the judicial system to redress complaints with public sector organizations is likely to be greater the greater the capacity of courts to adjudicate disputes. Figure 16 depicts the average quality of courts, based on a satisfaction rating by firms that have used courts in their country during the past two years. A value of 0 corresponds to very dissatisfied, a value of .25 corresponds to dissatisfied, a value of .5 corresponds to neither satisfied nor dissatisfied, a value of .75 corresponds to satisfied, and a value of 1 corresponds to very satisfied. Court users are generally lukewarm about the quality of courts in the Kyrgyz Republic and Romania, and almost satisfied in Slovakia.

Figure 16. Quality of the Judicial System



131. Figure 18 depicts all the instruments that firms are using in each country. By stacking the measures of use of the different instruments, we obtain a very crude proxy for the cumulative use of the different mechanisms of influence. We would like to make three observations. First, Slovak firms are more actively engaged in the market for influence, largely as a consequence of having a greater propensity for engaging in collective action. This greater engagement translates into a more competitive market for influence. Second, firms in the Kyrgyz Republic are much more dependent on corruption as the main mechanism of influence, with few other options. Finally, not all forms of influence have the same implications for public sector performance. Bribery generally reduces public satisfaction with government services, while complaint systems provide feedback that can be used, at least in theory, to introduce changes that will strengthen performance and even reduce bribery. But do they in fact? Do collective organizations such as political parties and business associations work to strengthen or subvert public sector performance? These are the questions to which we now turn.

Figure 17. Membership in Business Associations



Evaluating Impact on Performance

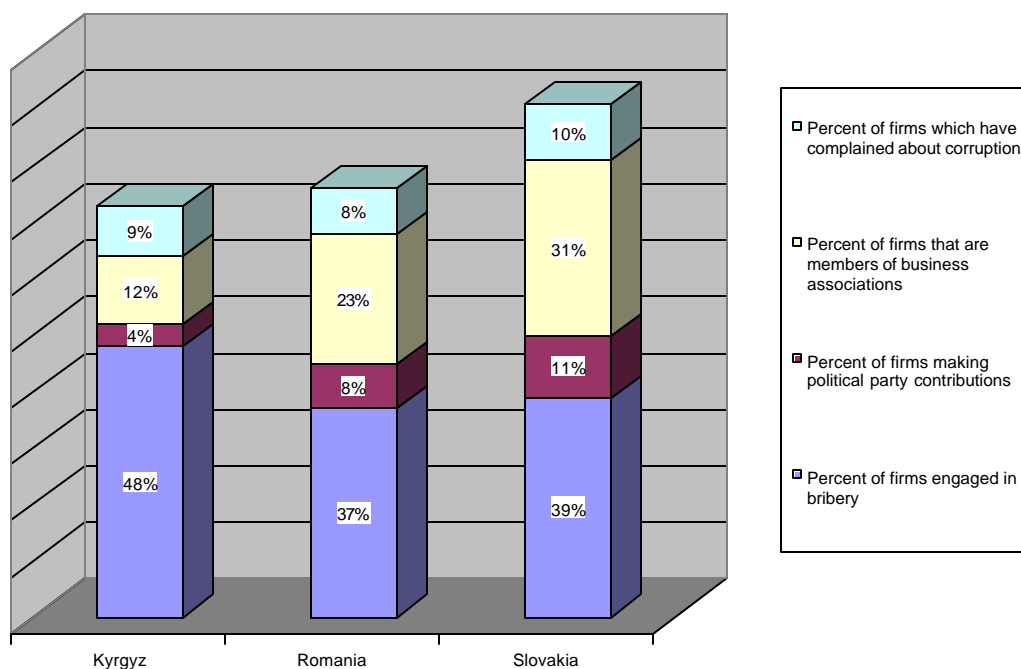
132. *Basic Model.* Up to this point, we have characterized bribery primarily as an instrument used by firms to influence the decisions of the state. In actuality, bribery is the outcome of a transaction with an official. Therefore, it can appropriately be viewed as an indicator of the performance of that official as well. This suggests that one way to measure the impact of institutions used by the private sector to influence the state – such as political party contributions, business associations, complaint systems, and courts – is to examine their effect on the incidence of bribery.

133. To structure this analysis, we assume that firms have many interactions with the state. Firms may be purchasing public services such as electricity and water, dealing with government regulations, or trying to reduce their tax obligations. The firm has at its disposal a variety of different instruments that it can use to make these interactions work in its own interest, including making contributions to political parties, joining business associations that will lobby the government, lodging official complaints, and of course bribery.

134. We assume that firms choose the combination of these instruments that will maximize their expected net benefits. Of course, this choice might not be in the best interest of society at large. Intuitively, we would expect that use of personal relations would have the narrowest benefit (the firm), use of collective action would have a somewhat wider benefit (the interests represented by the business association or political party), and use of formal mechanisms would have the widest benefit (the public interest, if the institutions are well functioning).³⁶

135. The literature on the use of different mechanisms to influence the state is fairly extensive and quite diverse. It includes, for example, studies on the capture of the state by dominant firms and business associations,³⁷ on the role of campaign finance in influencing voting behavior in legislatures,³⁸ and on potential adverse consequences of investigating bribery through complaint systems.³⁹ Most of the empirical literature on this topic for countries in transition focuses on the use of bribery. Firm and managerial characteristics feature strongly in these analyses, demonstrating for example that larger firms and state-owned firms have more influence but pay lower bribes as a share of their revenues than smaller firms [Hellman et al 2000]. Also, firms operated by women are less likely to pay bribes than those managed by men [Swamy et al 2001]. More recent analysis focuses on the role of managerial perceptions. Managers who believe that a few firms or individuals have disproportionate influence over policymaking and implementation are more likely to distrust the state, underreport their revenues to tax authorities, and avoid using state institutions such as courts [Hellman and Kaufmann 2003]. The methodology we use for this report builds on this type of research.

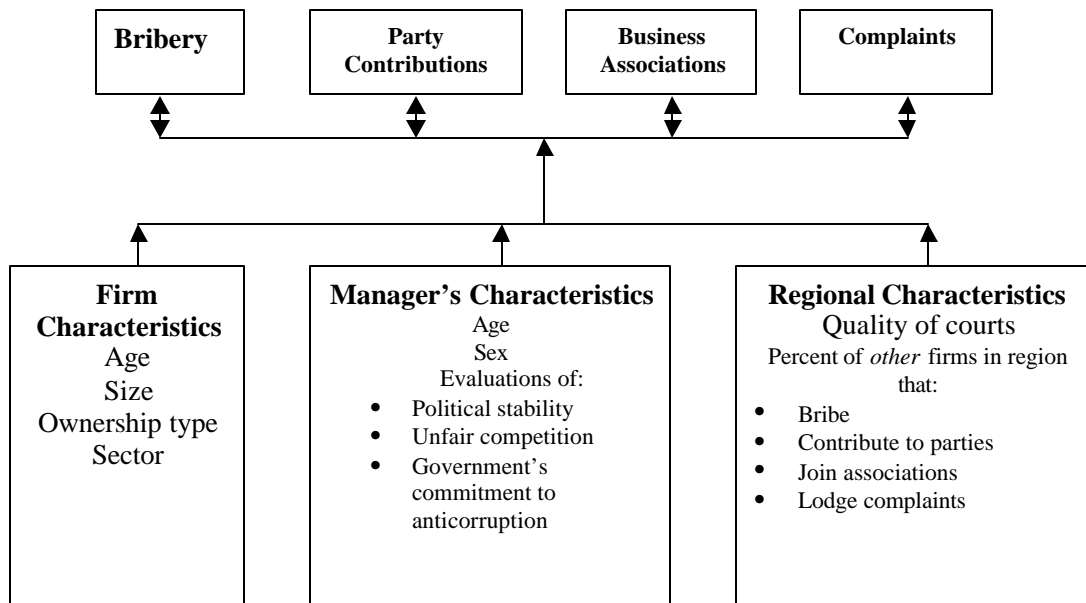
Figure 18. Mechanisms of Influence



136. In our formulation, we assume that the decision to use a particular instrument to influence the state can be explained by different sets of exogenous characteristics. This framework is depicted in Figure 19. The first set includes characteristics of the *firm*, such as its age, size, ownership, and sector. Different types of firms have different reasons and opportunities to interact with the state. For example, new firms may have a more intense need to interact with the state, to register their enterprise, obtain a taxpayer identification number, lease real estate, and obtain the permits and licenses they need to begin

operations. Smaller firms can more easily hide from tax officials and other regulators, while larger firms are under greater state scrutiny. State-owned firms often have public officials sitting on their supervisory boards as well as ancillary connections that can substitute for bribery and other mechanisms of influence.

Figure 19. The Decision of the Firm



137. The second set includes characteristics of the *respondent*, who is usually the manager of the firm. These characteristics include the respondent's sex and age, which may influence the person's perception of the business environment and the risks and rewards of using different instruments. Women have been shown empirically to be more resistant to bribery [Swamy et al 2001; Dollar et al 2001; Gocekus and Mukherjee 2002]. Women also might be less likely to use mechanisms that formally or informally have a gender dimension, for example joining a professional association where the members are predominantly male. Younger persons might be less risk averse than older persons, and hence more willing to pay bribes.

138. The respondent characteristics also include the respondent's evaluation of three aspects of the business environment: the extent to which political instability is an obstacle to doing business, the extent to which monopolies and/or other forms of unfair competition are obstacles to doing business, and the commitment of the government to anticorruption. Political instability may create an incentive for firms to contribute to political parties, to increase the likelihood that parties friendly to the firm will be in power. Unfair competition may create economic pressure on firms and give them an incentive to use a variety of different mechanisms to level the playing field. We also expect that the perceived risk of engaging in bribery may be influenced by the extent to which the manager views the government as committed to anticorruption.⁴⁰

139. A distinguishing feature of the model is the focus on *regional* characteristics to explain the firm's use of different instruments to deal with the state. Specifically, we allow for the possibility that managers consider the behavior of other firms in their region when choosing their strategy, for either sociological reasons (they are responding to some social or cultural norm) or economic reasons (aggregate behavior in the region affects the underlying costs and benefits of particular actions). In terms of economics, it is sometimes difficult to predict the direction of the effect exactly. For example, bribery is more costly and more difficult to punish when many firms and officials are engaged in bribery; at the same time the benefits of bribery might be less if many firms resort to bribery and its benefits must be shared among many firms. Similarly, contributions to political parties may be a necessary and expected business practice if many other firms in the region are also making contributions – otherwise the parties may take some form of retribution; however the benefits to the firm of making a contribution might be less if many firms are also making contributions. The benefits of joining a business association might be greater when associations have more members, and so as a group can speak with a more powerful and representative voice; however the logic of collective action suggests that these are the very circumstances that may discourage the firm from joining, choosing instead to free ride. By the same logic, firms may not bother lodging a formal complaint if many other firms have already complained; yet the willingness of many firms to complain speaks to the efficacy of complaining.

140. Other regional characteristics may also influence the payoffs of using different instruments. One example is the quality of local courts. The more capable the court, the more effectively it may be able to adjudicate administrative disputes as well as cases of corruption, and thus act as a check on the behavior of the government.

141. *Econometric Specification.* The formal model is as follows. Let n^* be a measure of the extent to which a firm in a particular region within a country uses instrument n to influence decisions of the state. Instrument n may be paying a bribe, making a contribution to a political party, joining a business association, or lodging a formal complaint about corruption. Also, let X be a vector of firm, managerial, and regional characteristics that influence this decision. Then:

$$n^* = \mathbf{b}X + \mathbf{e}$$

where \mathbf{b} is a vector of coefficients and \mathbf{e} is the error term. Unfortunately, we do not observe n^* . Rather, we observe: $\hat{n} = 1$ when $n^* > 0$ and $\hat{n} = 0$ otherwise. Because n^* is a latent variable, we estimate the probability that $\hat{n} = 1$, as shown below.

$$\Pr[\hat{n} = 1 | X] = \mathbf{b}X + \mathbf{e}$$

142. We estimate this model as a Probit, separately for each country. We find, for many variables, the direction of their effects differ across countries, suggesting the importance of country-specific regressions. For other variables, their effects are consistent in sign across countries but sometimes insignificant. In these cases, the effects

may be too small to observe in small samples, and can be better evaluated in a combined sample. Therefore, we also estimate the model across countries. For these regressions, we assume that error terms may be correlated within countries, due to differences in the way specific variables are measured across countries or to country effects that are not included in the regression. For computational simplicity, we assume that the error terms are uncorrelated across the four equations describing the use of each of the mechanisms of influence.⁴¹

143. *Data.* We estimate this model using data from the surveys of firms that were conducted as part of anticorruption diagnostics in Slovakia in 1999, Romania in 2000, and the Kyrgyz Republic in 2001. The surveys for all three countries have a sample size of roughly 400 firms, stratified by size (large firms are over-represented), geography (region and degree of urbanization), and ownership form. The samples in the Kyrgyz Republic and Slovak Republics covered all 8 regions. In Romania, the sample was based on four regions – West, East, South, and Bucharest. Definitions of variables used in this and subsequent analyses are provided in Table 11 and Table 12. An analysis of some of the empirical challenges in estimating this model – including issues related to the self-reporting of sensitive data such as bribery, bias in some of the geographic measures, and the comparability of the data across surveys – is provided in Annex 2.

Table 11. Definitions of Dependent Variables

Dependent Variable	Definition	Mean		
		Kyrgyz Republic	Romania	Slovak Republic
Bribe	Dummy variable = 1 if the firm paid bribe during the past three years (for Romania and Slovakia) or past year (for the Kyrgyz Republic)	.48	.37	.39
Party	Dummy variable = 1 if the firm made a contribution to a political party	.04	.08	.11
Association	Dummy variable = 1 if the firm is a member of a business association	.12	.23	.31
Complaint	Dummy variable = 1 if a firm has made an official complaint about corruption (for the Kyrgyz Republic and Romania) or would have made a complaint (for Slovakia)	.09	.08	.10

Table 12. Definitions of Independent Variables

Type of Variable	Variable	Definition	Mean		
			Kyrgyz Republic	Romania	Slovak Republic
Firm characteristics	Age	Firm's age in years	4.53	7.38	5.00
	Size	Ln(Number of employees)	2.26	3.56	2.19
	State	Dummy variable = 1 if the firm is state-owned	.02	.30	.03
	Agriculture	Dummy variable = 1 if the firm is in the food processing sector	.06	.05	.08
	Industrial	Dummy variable = 1 if the firm is in the industrial sector	.26	.21	.14
	Construction	Dummy variable = 1 if the firm is in the construction sector	.06	.06	.16
Respondent characteristics	Gender	Dummy variable = 1 if the respondent is a female	.42	.33	.23
	M_Age	Variable = 1 if respondent's age is between 18 and 29; variable = 2 if respondent's age is between 30 and 39; variable = 3 if respondent's age is between 40 and 49; variable = 4 if respondent's age is between 50 and 59; variable = 5 if respondent's age is above 60 years	2.57	2.65	2.57
	Political instability	Evaluation on a 5-point scale of the extent to which political instability is an obstacle to the firm; minimum possible value is 0 and maximum possible value is 1	.61	.78	.64
	Unfair competition	Evaluation on a 5-point scale of the extent to which unfair competition and monopolies are an obstacle to the firm; minimum possible value is 0 and maximum possible value is 1	.61	.70	.65
	Commit	Evaluation on a 5-point scale of the commitment of the government to anticorruption; minimum possible value is 0 and maximum possible value is 1	.43	.21	.54
	Regional characteristics	R_Bribe	Share of <i>other</i> firms in region which have paid bribes	.48	.38
R_Party		Share of <i>other</i> firms in region which have made political party contributions	.04	.08	.11
R_Assocation		Share of <i>other</i> firms in region which are members of business associations	.12	.23	.31
R_Complaint		Share of <i>other</i> firms in region which have lodged official complaints about corruption	.09	.08	.10
R_Court		Mean value of evaluations on a 5-point scale of the quality of courts by firms in the region which have used courts; minimum possible value is 0 and maximum possible value is 1	.46	.49	.66

144. *Empirical Results.* Our primary interest is in the factors that influence the decision to bribe, especially those that can be targeted as part of a strategy for public sector reform. Our goal is to identify the firms to target, the attitudes to change, and the institutions to develop in order to mobilize the private sector as a force for positive change. For this reason, we primarily include in this Chapter the tables that explain the decision to bribe, both for each country (Table 13, Table 14, and Table 15) and across countries (Table 16). The individual country tables that explain the use of other instruments of influence are provided in Annex 2. The cross-country results for these other instruments are provided in Table 17 in this Chapter. A discussion of all of these results follows.

Table 13. Explaining the Decision to Bribe in the Kyrgyz Republic

	(1)	(2)	(3)	(4)	(5)
Age	-0.015 (0.90)	-0.016 (1.02)	-0.015 (0.90)	-0.015 (0.90)	-0.016 (1.05)
Size	0.069 (3.22)***	0.080 (2.85)***	0.069 (3.15)***	0.069 (3.16)***	0.081 (2.93)***
State	N/A	N/A	N/A	N/A	N/A
Food processing	-0.216 (0.54)	-0.375 (1.11)	-0.227 (0.60)	-0.239 (0.65)	-0.260 (0.69)
Manufacturing	0.228 (1.32)	0.195 (0.99)	0.230 (1.33)	0.227 (1.30)	0.203 (1.15)
Construction	-0.163 (0.82)	-0.233 (1.04)	-0.162 (0.84)	-0.164 (0.87)	-0.197 (1.00)
Female	-0.067 (0.41)	-0.052 (0.31)	-0.065 (0.39)	-0.070 (0.43)	-0.075 (0.46)
M_Age	-0.144 (2.46)**	-0.148 (2.35)**	-0.144 (2.38)**	-0.144 (2.35)**	-0.139 (2.36)**
Political instability	0.306 (3.19)***	0.223 (1.78)*	0.312 (3.46)***	0.314 (3.52)***	0.271 (2.95)***
Unfair competition	0.464 (5.35)***	0.465 (4.52)***	0.461 (5.63)***	0.471 (5.16)***	0.499 (5.07)***
Commit	-0.775 (4.37)***	-0.864 (5.30)***	-0.786 (4.66)***	-0.766 (4.73)***	-0.742 (3.96)***
R_Bribe	-0.048 (0.05)				
R_Party		-8.056 (3.41)***			
R_Association			-0.250 (0.24)		
R_Complaint				-0.505 (0.48)	
R_Court					-1.956 (2.74)***
Constant	0.166 (0.29)	0.541 (5.01)***	0.174 (1.22)	0.178 (1.23)	1.019 (3.35)***
Observations	361	361	361	361	361

Estimated using probit; errors are allowed to be correlated within regions; robust z statistics in parentheses; *significant at 10%; ** significant at 5%; *** significant at 1%; N/A indicates the independent variable predicts the dependent variable perfectly

Table 14. Explaining the Decision to Bribe in Romania

	(1)	(2)	(3)	(4)	(5)
Age	-0.003 (0.38)	-0.001 (0.15)	-0.004 (0.54)	-0.003 (0.37)	-0.001 (0.16)
Size	-0.003 (0.04)	-0.003 (0.05)	0.001 (0.02)	0.001 (0.02)	-0.003 (0.05)
State	-0.697 (1.42)	-0.790 (1.55)	-0.690 (1.41)	-0.767 (1.56)	-0.750 (1.52)
Food processing	0.047 (0.24)	-0.007 (0.04)	0.135 (0.65)	0.076 (0.53)	0.044 (0.24)
Manufacturing	0.329 (1.53)	0.354 (1.62)	0.330 (1.53)	0.342 (1.56)	0.352 (1.68)*
Construction	0.091 (0.37)	0.086 (0.32)	0.135 (0.57)	0.114 (0.40)	0.110 (0.41)
Female	-0.273 (2.69)***	-0.257 (3.08)***	-0.293 (2.66)***	-0.264 (2.90)***	-0.279 (3.01)***
M_Age	-0.241 (6.20)***	-0.250 (5.07)***	-0.247 (6.66)***	-0.235 (5.27)***	-0.265 (6.17)***
Political instability	0.595 (1.55)	0.596 (1.49)	0.617 (1.71)*	0.592 (1.60)	0.618 (1.62)
Unfair competition	0.663 (1.02)	0.571 (0.84)	0.721 (1.13)	0.644 (0.97)	0.603 (0.93)
Commit	-0.923 (2.61)***	-0.966 (2.61)***	-0.918 (2.60)***	-0.937 (2.76)***	-0.973 (2.56)**
R_Bribe	1.373 (2.86)***				
R_Party		3.352 (2.03)**			
R_Association			-2.243 (1.91)*		
R_Complaint				-1.785 (0.35)	
R_Court					-2.535 (3.95)***
Constant	-0.687 (1.93)*	-0.361 (1.09)	0.298 (0.70)	-0.033 (0.05)	1.159 (1.79)*
Observations	231	231	231	231	231

Estimated using probit; errors are allowed to be correlated within regions; robust z statistics in parentheses;
*significant at 10%; ** significant at 5%; *** significant at 1%

Table 15. Explaining the Decision to Bribe in the Slovak Republic

	(1)	(2)	(3)	(4)	(5)
Age	-0.025 (0.58)	-0.020 (0.45)	-0.031 (0.71)	-0.024 (0.56)	-0.017 (0.38)
Size	0.086 (2.12)**	0.086 (1.88)*	0.105 (2.85)***	0.095 (2.34)**	0.085 (1.86)*
State	-0.968 (2.09)**	-0.916 (2.13)**	-1.096 (2.52)**	-0.958 (2.16)**	-0.905 (2.05)**
Food processing	0.158 (0.37)	0.059 (0.15)	0.234 (0.54)	0.051 (0.12)	0.047 (0.13)
Manufacturing	0.296 (2.63)***	0.190 (1.37)	0.197 (2.98)***	0.150 (1.26)	0.222 (1.55)
Construction	0.055 (0.42)	0.032 (0.31)	0.026 (0.20)	0.043 (0.39)	0.039 (0.31)
Female	-0.285 (1.72)*	-0.271 (1.49)	-0.285 (1.54)	-0.291 (1.44)	-0.267 (1.51)
M_Age	-0.085 (1.21)	-0.110 (1.49)	-0.074 (1.17)	-0.122 (1.60)	-0.099 (1.35)
Political instability	-0.378 (1.25)	-0.488 (1.97)**	-0.440 (1.42)	-0.475 (1.85)*	-0.438 (1.64)*
Unfair competition	0.396 (2.44)**	0.322 (1.83)*	0.411 (2.54)**	0.319 (1.73)*	0.313 (1.73)*
Commit	-0.006 (0.03)	-0.098 (0.48)	-0.047 (0.19)	-0.097 (0.45)	-0.084 (0.41)
R_Bribe	1.957 (3.75)***				
R_Party		1.110 (1.06)			
R_Association			5.186 (4.02)***		
R_Complaint				-2.991 (0.81)	
R_Court					2.222 (0.77)
Constant	-0.857 (2.71)***	0.020 (0.05)	-1.682 (3.35)***	0.469 (0.71)	-1.412 (0.77)
Observations	280	280	280	280	280

Estimated using probit; errors are allowed to be correlated within regions; robust z statistics in parentheses;
 *significant at 10%; ** significant at 5%; *** significant at 1%

Table 16. Tests of Factors that Explain Bribery

Independent Variables	Dependent Variable: Bribe					
	(1)	(2)	(3)	(4)	(5)	(6)
Age	-0.008 (1.58)	-0.008 (1.80)*	-0.008 (1.76)*	-0.008 (1.78)*	-0.008 (1.77)*	-0.008 (1.48)
Size	0.054 (1.69)*	0.057 (1.65)*	0.055 (1.68)*	0.055 (1.60)	0.057 (1.61)	0.058 (1.54)
State	-0.949 (6.38)***	-1.024 (8.37)***	-1.030 (6.67)***	-1.046 (6.68)***	-1.062 (7.05)***	-0.995 (5.87)***
Food processing	0.020 (0.19)	-0.025 (0.19)	-0.022 (0.20)	-0.025 (0.22)	-0.018 (0.16)	0.009 (0.06)
Manufacturing	0.259 (6.55)***	0.262 (3.77)***	0.267 (5.27)***	0.270 (3.76)***	0.249 (3.32)***	0.245 (4.94)***
Construction	0.011 (0.14)	0.023 (0.28)	0.016 (0.16)	0.011 (0.11)	0.032 (0.33)	0.023 (0.28)
Female	-0.147 (1.85)*	-0.135 (2.35)*	-0.127 (1.74)*	-0.122 (1.62)	-0.150 (2.26)**	-0.164 (2.40)**
M_Age	-0.157 (5.09)***	-0.158 (6.38)***	-0.157 (5.31)***	-0.156 (5.58)***	-0.162 (5.27)***	-0.160 (5.66)***
Political instability	0.092 (0.45)	0.064 (0.26)	0.068 (0.26)	0.067 (0.27)	0.049 (0.20)	0.073 (0.34)
Unfair competition	0.409 (6.73)***	0.398 (4.59)***	0.393 (4.87)***	0.397 (4.99)***	0.402 (4.81)***	0.429 (8.02)***
Commit	-0.571 (3.94)***	-0.604 (4.26)***	-0.605 (4.46)***	-0.597 (4.33)***	-0.548 (3.82)***	-0.518 (3.09)***
R_Bribe	1.468 (3.35)***					1.355 (2.53)**
R_Party		-0.838 (0.61)				-1.231 (0.91)
R_Association			-0.184 (0.27)			0.684 (0.74)
R_Complaint				-0.512 (0.90)		-0.959 (1.73)*
R_Court					-0.890 (2.29)**	-0.583 (4.49)***
Constant	-0.485 (3.21)***	0.242 (7.63)***	0.218 (1.79)*	0.218 (1.95)*	0.660 (6.87)***	-0.099 (0.47)
Observations	881	881	881	881	881	881

Estimated using probit; errors are allowed to be correlated within countries; robust z statistics in parentheses; *significant at 10%; ** significant at 5%; *** significant at 1%

Table 17. Test of Factors that Explain Use of Instruments to Influence the State

Independent Variables	Dependent Variables		
	Party	Association	Complaint
Age	-0.003 (1.16)	0.023 (2.67)***	-0.019 (1.45)
Size	0.088 (2.85)***	0.218 (3.18)***	0.073 (2.89)***
State	-0.760 (5.71)***	-0.590 (2.90)***	-0.009 (0.15)
Food processing	-0.197 (0.82)	0.173 (1.24)	-0.081 (0.34)
Manufacturing	0.202 (3.25)***	-0.035 (0.61)	-0.059 (0.55)
Construction	0.196 (1.28)	-0.116 (0.72)	0.231 (1.10)
Female	-0.177 (1.26)	-0.256 (1.97)**	0.093 (0.36)
M_Age	0.065 (1.17)	0.162 (1.51)	0.050 (0.54)
Political instability	0.106 (2.77)***	0.062 (0.33)	0.174 (2.73)***
Unfair competition	0.047 (0.62)	0.106 (0.77)	0.147 (0.59)
Commit	-0.076 (0.33)	-0.030 (2.44)**	-0.000 (0.00)
R_Bribe	-0.329 (0.81)	0.270 (1.20)	-0.131 (0.37)
R_Party	0.617 (0.51)	0.355 (0.78)	-2.530 (3.33)***
R_Association	2.898 (6.69)***	2.600 (3.29)***	0.441 (0.96)
R_Complaint	-1.712 (1.06)	0.670 (14.26)***	-0.126 (0.08)
R_Court	0.295 (0.22)	1.419 (1.78)*	0.499 (0.98)
Constant	-2.385 (3.30)***	-3.461 (7.41)***	-1.942 (8.00)***
Observations	931	951	953

Estimated using probit; errors are allowed to be correlated within countries; robust z statistics in parentheses; *significant at 10%; ** significant at 5%; *** significant at 1%

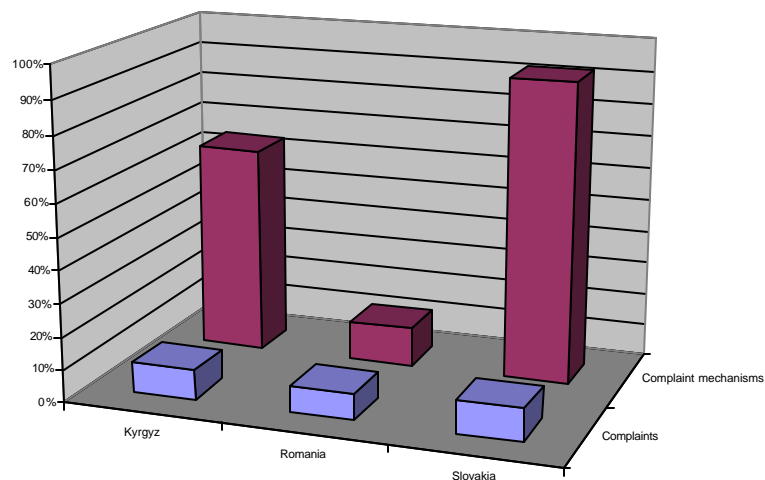
A Demand-driven, Not Supply-driven, Approach to Complaint Systems

145. A startling finding, in light of the results discussed in Chapter 3, is that complaints about corruption by firms actually discourage poor public sector performance such as bribery. This effect is quite strong. The probability that a firm pays a bribe decreases by 31 percent when an additional one percent of other firms in the region lodge complaints about corruption.

146. Why, then, did we find in Chapter 3 that complaint systems and other forms of user contact produced only weak improvements in public sector performance at best?

Figure 20 suggests a possible answer. The bars to the back of the graph – labeled ‘complaint mechanisms’ – measure the percentage of service delivery bodies in each country with complaint systems. The bars to the front – labeled ‘complaints’ – measure the percentage of firms that have actually lodged complaints about corruption. As is evident, the correlation between the existence of complaint systems and actual use of these systems to complain about corruption is practically zero. The absence of any correlation between the availability of complaint mechanisms and actual complaints suggests that simply building a complaint system is not sufficient to encourage use of the system. Institutional reformers must identify the factors that encourage firms to lodge complaints, and build a strategy that addresses these incentives.

Figure 20. Complaint Systems and Complaints



147. Surprisingly, the manager’s perception of the commitment of the government to anticorruption does not appear to encourage managers to lodge complaints about corruption.⁴² What does seem to matter is the manager’s perception of political instability, especially in Romania and possibly the Kyrgyz Republic. Political instability, possibly created by turnover of governments, may create an environment that managers believe is conducive to change, and so provides them with an incentive to complain about corruption. This fact suggests the tactical importance of explicitly building in the use of hotlines and other types of complaint systems into a new government’s public relations strategy when it first comes into office.

148. Across countries, larger firms are more likely to use complaint systems, possibly because they have more contact with the state or because they have sufficient economic and political power to ‘risk’ not paying bribes. In Romania and Slovakia, women and managers in newer firms tend to be more likely to lodge complaints. This greater propensity may be a consequence of the fact that such managers are less likely to be embedded in existing social networks, and therefore look to formal institutions as an important means for resolving their problems with state organs. The fact that outsiders are willing to use state institutions is possibly a sign of their underlying credibility, which could be a basis for building a more robust system. ‘Outsiders’ might possibly be

targeted as potential users of complaint systems, for example, using campaigns aimed at new entrants. In the Kyrgyz Republic, building credibility would need to be based on a different approach, for example taking into account the fact that complaint systems function quite differently in different regions based on differences in the level of corruption.

Courts' Role in Checking Poor Government Performance

149. Complaint systems are not the only institutional mechanisms that appear to discourage bribery: courts, at least in the Kyrgyz Republic and Romania, play an important role as well. A one percent increase in the quality of courts results in a 22 percent decrease in the probability the firm will pay a bribe. Unfortunately, the data do not allow us to identify the particular aspects of courts that are acting as a check on corruption in government. One possibility is that higher quality court systems are better able to prosecute cases of government corruption. Thus, the higher the quality of the court system, the greater the risk to officials and, if offering a bribe is a crime, to firms as well. An alternative possibility is that higher quality court systems more effectively adjudicate administrative complaints. These may be complaints lodged by firms, for example because they were illegally denied an important property right as a consequence of an action by the state, a problem which might otherwise have been solved using bribery. Or, they may be complaints lodged by officials, for example who are illegally dismissed or otherwise punished because they have revealed cases of government abuse. Moreover, the ways in which the outcomes of these cases feed back into organizational reforms within the state have not been studied at all. In fact, the analysis in Chapter 3 suggests that links between feedback and systemic reform are virtually non-existent. Much more investigation is needed to establish the precise role of courts in checking poor public sector performance.

A Specialized Role for Business Associations and Political Parties

150. Business associations and political parties do not uniformly reduce the incentive of firms to bribe. While business associations decrease bribery in Romania, they increase it in Slovakia. And, while political parties help to reduce bribery in the Kyrgyz Republic, they increase it in Romania. Given the fact that both of these organizations at least publicly state their intentions to support anticorruption, we found this to be quite disappointing. On further thought, we wondered whether, given the limited capacity of both types of organizations, they might be targeting some specific forms of corruption. Given the degree to which firms routinely complain about their tax burden, we suspected that addressing corruption in tax inspections might be a way these organizations could resolve an important problem facing the greatest share of their members.

151. A common complaint of firms is that tax authorities are often predatory, visiting the firm or calling its managers into their offices many times a month. For this reason, one reform that business associations and political parties might fight to introduce involves restricting the number of contacts of firms with tax authorities. Upon contact, they may also encourage the adoption of reforms, both in government and in the firm, that reduce incentives for bribery. To explore these two hypotheses, we estimate two

additional models. The first model identifies the factors that influence the number of contacts with tax authorities; and the second model identifies the factors that influence the firm's decision to pay a bribe, conditional on contact. Table 18 provides definitions of the measures of contact and bribery we use to test these hypotheses.

Table 18. Definitions of Dependent Variables for Analysis of Corruption in Tax Administration

Dependent Variable	Definition	Mean		
		Kyrgyz Republic	Romania	Slovak Republic
Number of tax contacts	Number of contacts with tax inspection office during past year	11.32	3.40	5.84
Tax bribe	Dummy variable = 1 if the firm felt obligated to pay a bribe to a tax inspector (for firms with contact with the tax inspection only); variable is conditional on contact	0.45	0.23	0.09

152. We estimate the models using Probit, using a combined cross-country sample. As below, we allow the error terms to be correlated within countries, but not across countries. The results are presented in Table 19 below.⁴³

153. The test results substantiate our suspicions; membership in business associations appears to reduce the number of contacts with tax inspectorates. Both forms of collective action reduce the likelihood of paying a bribe. By reducing contacts as well as bribery, collective action helps to strengthen the performance of tax authorities, at least from the perspective of firms.

The Importance of Economic Incentives

154. Earlier we describe how pressure from unfair competition creates an incentive for firms to pay bribes. This effect is not small. A one percent increase in the manager's perception that unfair competition is an obstacle to the firm results in a 17 percent increase in the probability that the manager will pay a bribe. This points to the importance of government policies that make the playing field level for all firms. Incentives arising out of political instability also appear to play an important role in determining how firms will influence the state. In the Kyrgyz Republic, political instability increases the likelihood of bribery, joining a business association, and possibly lodging complaints; in Romania it increases the probability of making a complaint and possibly paying a bribe. In contrast, political instability in Slovakia appears to discourage interest in influencing the state, especially through bribery and membership in business associations. The differences in this effect between countries might be due to differences in the underlying reasons for instability in each setting.

Table 19. Performance of Tax Authorities

Independent Variables	Number of Tax Contacts	Tax Bribe
Age	-0.017 (2.24)**	-0.000 (0.04)
Size	0.067 (2.40)**	0.055 (1.36)
State	-0.164 (1.05)	-0.760 (3.78)***
Food processing	-0.134 (0.60)	-0.760 (3.00)***
Manufacturing	0.149 (1.45)	0.044 (0.41)
Construction	0.131 (4.42)***	-0.289 (1.08)
Female	0.105 (1.33)	-0.045 (0.35)
M_Age	-0.050 (1.55)	-0.155 (5.63)***
Political instability	-0.121 (1.91)	0.340 (3.49)***
Unfair competition	0.164 (1.54)	0.133 (1.65)
Commit	0.064 (0.29)	-0.711 (5.72)***
R_Bribe	1.551 (4.27)***	3.039 (2.70)***
R_Party	-0.269 (0.18)	-3.813 (2.39)**
R_Association	-1.103 (2.27)**	-2.570 (2.27)**
R_Complaint	0.453 (0.77)	-0.031 (0.03)
R_Court	0.116 (0.75)	-0.482 (0.63)
Observations	939	796

Estimated using probit; errors are allowed to be correlated within countries; robust z statistics in parentheses; *significant at 10%; ** significant at 5%; *** significant at 1%

Communicating Commitment to Anticorruption⁴⁴

155. Earlier we note that Government commitment to anticorruption does not appear to influence the manager's willingness to report corruption to authorities; rather political changes play a more significant role. However Government commitment does play a fairly direct large role in discouraging bribery. A one percent increase in the manager's evaluation of the Government's commitment to anticorruption reduces his or her willingness to pay a bribe by 22 percent. This effect is stronger in the Kyrgyz Republic and Romania than in Slovakia. Given the importance of communicating commitment, Governments might considering taking concrete actions to convince the business community that they are committed to and intend to follow through with anticorruption.

Focusing on Country Context

156. In Chapter 3, we present evidence that suggests that, while meritocracy is important to public sector performance in all countries, the effectiveness of other institutions is very dependent on country context. Similarly, there are many country-specific aspects to understanding the public-private interface. Certainly, the level of development of different institutions within the private sector such as business associations and complaint systems vary markedly by country, with the lowest levels in the Kyrgyz Republic and highest levels within the Slovak Republic. This alone suggests differences in the cumulative impact of these institutions. Perceptions of the business environment have very different effects in each of the countries, possibly because the phenomena they measure differ from country to country. The causes of political instability or the drivers of unfair competition may be different in important ways. The institutions that seem most prone to country context are those designed to foster collective action – political parties and business associations – possibly because they are truly endogenous institutions shaped by the local environment. The more formal institutions – such as complaint systems and courts – seem to have a more uniform impact, possibly because they are more standardized in design.

Finding a Constituency For Reform

157. In designing public sector reforms, experts need to find good entry points, where technical appropriateness is complemented by political feasibility. The analysis presented in this Chapter suggests one possible entry point is piloting reforms in *regions*. Regions differ markedly in terms of their institutional development, and in the constellation of factors that indicate their readiness to reform. Thus, even when national conditions might not be conducive to public sector reform, at least some regions might be ready to engage in the reform process. Based on experience in these regions, lessons might be learned that would enable these reforms to be adapted to less hospitable regions.

158. Regardless of whether the reform strategy has a national or regional focus, an important part of any public sector reform strategy is a plan to mobilize firms in support of the objectives of the reform. A good place to start is to identify which firms are likely to support the reforms based on their current strategies for dealing with the state. Here we provide an example of how it might be done. We begin with the simple observation from our cross-country analysis that a firm is much less likely to pay a bribe in regions where complaints are more common. Firms which are willing to lodge formal complaints may be more likely to actively support the reforms, especially if these firms are also able to refrain from bribery.

159. Based on this observation, we distinguish between four types of firms. The first type is a *collaborator*, which is a firm that pays bribes and does not complain. These firms may be using corruption as an active strategy to gain advantage, and are likely to be the most difficult to convince to support the reform. The second type is a *victim*, which is a firm that pays a bribe yet complains to authorities about the need to pay bribes. Officials may be extorting these firms for bribes. An *avoider* is the third type of firm. This is a firm that resists paying bribes, but at the same time is not willing to complain

about corrupt officials it encounters. The final type of firm is what we call an *enforcer*, which is a firm that resists paying bribes and is willing to report an official that attempts to extort them. Figure 21 presents the share of each type of firm in the Kyrgyz Republic, Romania, and the Slovak Republic. A statistical analysis of the characteristics of each type of firm is presented in Annex 2.

Figure 21. Collaborators, Victims, Avoiders, Enforcers

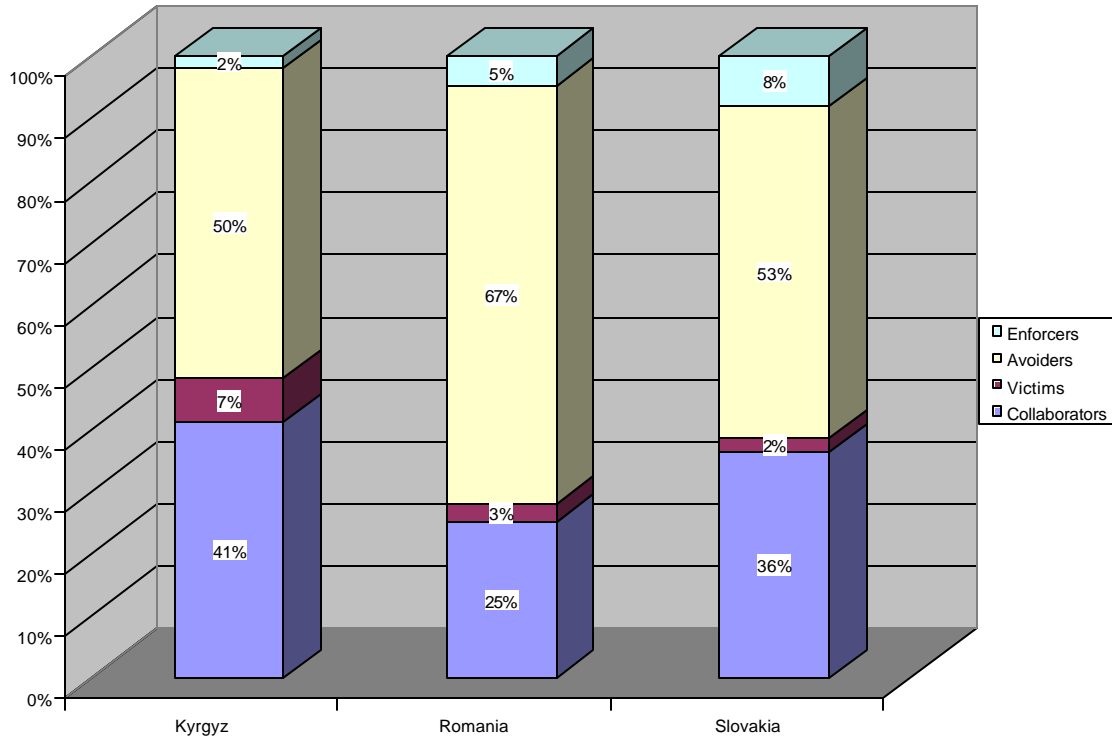


Table 20. Definitions of Dependent Variables

Dependent Variable	Definition	Mean		
		Kyrgyz Republic	Romania	Slovak Republic
Collaborator	Dummy variable = 1 if the firm has paid a bribe & the firm has not lodged an official complaint about corruption	.41	.34	.37
Victim	Dummy variable = 1 if the firm has both paid a bribe and lodged an official complaint about corruption	.07	.03	.02
Avoider	Dummy variable = 1 if the firm has neither paid a bribe nor lodged an official complaint about corruption	.50	.59	.53
Enforcer	Dummy variable = 1 if the firm has not paid a bribe & the firm has lodged an official complaint about corruption	.02	.04	.08

Table 21. Strategies for Dealing With the State

Independent Variables	Dependent Variables			
	Collaborator	Victim	Avoider	Enforcer
Age	-0.005 (0.89)	-0.016 (1.90)*	0.014 (2.98)***	-0.032 (1.05)
Size	0.052 (1.65)*	0.031 (0.83)	-0.089 (2.28)**	0.142 (3.88)***
State	-0.974 (6.26)***	-0.240 (1.12)	0.832 (5.29)***	0.212 (1.18)
Food processing	0.079 (0.70)	N/A	-0.051 (0.25)	-0.004 (0.04)
Manufacturing	0.118 (2.35)**	0.411 (6.75)***	-0.113 (1.90)*	-0.811 (2.80)***
Construction	-0.068 (0.61)	0.356 (7.87)***	-0.039 (1.16)	0.051 (0.16)
Female	-0.143 (2.38)**	-0.075 (1.08)	0.091 (0.88)	0.218 (0.57)
M_Age	-0.157 (3.24)***	-0.036 (0.39)	0.138 (4.26)***	0.101 (0.95)
Political instability	0.076 (0.43)	-0.008 (0.05)	-0.125 (0.68)	0.325 (3.05)***
Unfair competition	0.333 (5.04)***	0.367 (3.46)***	-0.427 (9.42)***	-0.057 (0.49)
Commit	-0.557 (2.75)***	0.072 (0.55)	0.510 (2.22)**	-0.113 (0.45)
R_Bribe	1.147 (2.12)**	0.874 (6.92)***	-1.071 (2.36)**	-1.139 (3.57)***
R_Party	-0.519 (0.37)	-2.751 (2.61)***	1.641 (1.12)	-1.084 (1.02)
R_Assocation	0.555 (0.61)	0.430 (2.51)**	-0.739 (0.95)	0.161 (0.25)
R_Complaint	-1.324 (2.08)**	0.441 (0.54)	1.489 (1.35)	-3.332 (1.24)
R_Court	-0.234 (4.59)***	-1.341 (1.89)*	0.037 (0.14)	2.559 (1.98)**
Constant	-0.229 (0.67)	-1.594 (3.32)***	0.236 (0.61)	-2.962 (4.54)***
Observations	879	816	879	879

Estimated using probit; errors are allowed to be correlated within countries; robust z statistics in parentheses; * significant at 10%; **significant at 5%; *** significant at 1%

160. *Enforcers Are Too Few To Be the Foundation of Reform.* The firms which are most likely to support public sector reform are obviously enforcers, who are already actively resisting and complaining about the poor performance of state institutions. These firms tend to be larger firms, and outside of the manufacturing sector. They tend to be located in communities with some political instability, possibly as a consequence of recent political changes. These communities have less corruption and better courts.

161. Unfortunately, enforcers account for a relatively small share of all firms: eight percent of firms in the Slovak Republic, five percent in Romania, and only two percent in

the Kyrgyz Republic. While they can form the core of support for a public sector reform – especially if they comprise some of the largest firms – they are likely to be too few in number to be able to convince the business community. The question is, how can their numbers be increased?

162. *Avoidance is the Most Common Strategy for Dealing With the State.* Most firms claim to be avoiders.⁴⁵ They resist paying bribes, but unfortunately are unwilling to report requests from officials for bribes. These firms tend to be older although smaller firms, with older managers. They are more likely to be state owned. As in the case of enforcers, they tend to be located in regions with less corruption.

163. In our view, these firms are those that can most easily be convinced to support the reform. They already tend to be more convinced of the government's commitment to anticorruption than other firms. The question is, how can they be convinced to report corruption and other types of poor public sector performance, so that feedback mechanisms work more effectively to create pressure for institutional change within government?

164. *Avoiders and Enforcers Reside In the Same Cities and Towns.* One possible approach – especially given the budgetary stringency and limited capacity of most governments – is to try to pilot public sector reforms in those cities and towns where the enforcers and avoiders are most highly concentrated. Fortunately, enforcers and avoiders are likely to reside in the same communities, where corruption already tends to be somewhat less common. By targeting these communities, the government can increase the probability that their first interventions will produce some tangible success. These pilots will produce valuable lessons regarding the design and implementation of public sector reform, as well as produce experienced specialists that can help replicate the pilots in other cities and towns.

165. Given that much of the corruption takes place at the regional and municipal levels where service delivery takes place, a community based approach might be logical. In addition to helping regional and local governments with public sector reforms, the national government can also help them design a public relations campaign, which would aim to convert avoiders in these communities into enforcers. This public relations campaign would target firms that are more likely to be avoiders – older, smaller firms; older managers; state-owned firms – using language which resonates with these groups.

166. *The Government Needs to Take Advantage of Its Window of Opportunity.* The analysis confirms that firms are most likely to behave as enforcers at times of political change. Governments need to act quickly once in office to convince firms and others to work with the state and support the process of change. One method used in some countries is to create a streamlined system for reporting complaints of public sector performance to the government. Then over time the government reports on the pattern of complaints and the ways these problems are resolved. In this way, the government builds a track record of responsiveness to public dissatisfaction with the way state decisions are made.

167. *Bolstering Support for Anticorruption Will Require a Multipronged Strategy.* The analysis in Chapter 3 identifies some of the reforms that might be appropriate in the Government's anticorruption strategy, which could possibly be included in regional pilots. The analysis here suggests some additional elements that could be incorporated in the pilots, including measures to enhance the fairness of competition and improve the functioning of courts. The strategy should aim to address the specific problems in the individual communities, as well as to demonstrate the Government's firm commitment to anticorruption.

Conclusions and Recommendations

168. The Bank's strategy for public sector reform has long recognized the importance of mechanisms for providing users with the opportunity to provide feedback to the state [WDR 1997, WDR 2001, Anticorruption in Transition 2000, Public Sector Strategy 1999 with Update 2003]. This analysis confirms that such mechanisms are important. However it also provides evidence that the way in which most of the feedback systems are designed and implemented does not adequately contemplate the incentives for users to lodge complaints.

169. *Public Sector Strategies Need to Pay Greater Attention to Making Feedback Mechanisms Credible.* Country strategies for public sector reform might benefit from more active planning for the development of complaint systems and capacity within courts to hear administrative cases as well as cases of corruption. A basic assessment tool could be developed to identify the extent to which complaint systems and judicial procedures to hear administrative and corruption cases are in place and are actually being used to introduce changes that will improve the performance of public sector organizations. A key part of this assessment tool would be methods to identify incentives for firms and other constituencies to use these mechanisms, and to integrate them in the overall strategy for public sector reform.

170. *Public Sector Strategies Need to Explicitly Consider Economic and Political Competition.* As in the case of feedback systems, Bank strategies for public sector reform have long recognized the importance of economic and more recently political competition to reducing corruption and strengthening public sector performance [World Bank 2000]. The challenge is that these are precisely the reforms that are the most difficult to implement when corruption has a stranglehold over the state.

171. Unfortunately, our analysis suggests that public sector reform and, in particular, anticorruption will be difficult to implement without tackling this fundamental problem. However, there is usually some entry point – a place or type of public sector organization – that may provide a first entry point. Even in the Kyrgyz Republic, where the market for influence is highly concentrated, the government is beginning to introduce regulatory impact assessments as a first step toward a more participatory approach to legal drafting. In Romania, also a highly centralized state, the government is backing down from its routine use of executive decrees to regulate the economy, opting for a more open and transparent mechanism for rulemaking. Achievements such as these need to be

monitored and their results publicized using media that reach managers, so that their views about the fairness of the business environment can be altered.

172. *New Entrants Could be Targeted.* One of the most discouraging findings of this and many other studies of relations between the firm and the state is the fact that younger firms tend to pay more bribes. Public sector reform strategies might explicitly consider anticorruption in connection to these firms, to reduce their dependence on bribery as their main instrument to influence the state. While it is possible that this is just a developmental phase, there is some risk that corruption may become even more institutionalized as these firms age. One way of doing this is targeting those organizations that are most responsible for the high incidence of bribery among these firms.

173. *Constituencies for Reform Need To Be Identified and Supported.* Public sector reform is notoriously difficult. It requires considerable time for its planning and execution, and a high degree of political support. For these reasons, the tactics of reform – finding the right entry point, empowering the reform’s beneficiaries, establishing early successes, and learning from mistakes – are considered to be as important as the technical design of reform. In this Chapter, we present several ideas regarding tactics, including piloting reforms in hospitable regions and enlisting support of firms that may be more open to anticorruption. While these are simply examples, the more general message is that Governments might benefit from being more proactive in engaging the public in support of the reform process.

174. *Methodologies for Studying Public-Private Interactions Can Be Strengthened.* The main methodological lesson from the analysis presented in this chapter concerns the importance of focusing on the *use* of public sector institutions, and not only the supply. Specifically, while the use of complaint systems is shown to be a deterrent to bribery, the supply of complaint systems is not. We are able to obtain this insight only by comparing information about supply from surveys of public officials with information about use from surveys of constituents outside the public sector.

175. The analysis presented in Chapters 3 and 4 suggest a rethinking of the methodology used to evaluate the efficacy of public sector institutions. A better approach might be to explicitly integrate information about supply and use in a single analysis, in much the same way that Murrell [2002] does in his analysis of Romanian courts.⁴⁶ In this type of analysis, the unit of analysis is the public sector organization. The performance of the organization derives both from the supply of public sector institutions and from the use of the institutions by the organization’s constituents in society. To make such an approach tractable, it might best be applied to reasonably homogeneous groups of public sector organizations, such as regional tax offices or polyclinics. The sample would need to be designed so that the responses of users of the public sector organization could be matched to that organization. The key to the successful application of this approach is to design the evaluation methodology *prior* to the collection of data.⁴⁷

Chapter 5. Lessons for Bank Operations

176. The purpose of this report is to develop a replicable methodology for evaluating the effectiveness of different types of public and private sector institutions in promoting good public sector performance, and to apply it to countries with very different types of enabling environments for public sector reform. Our expectation, prior to conducting any data analysis, was that we would find that formal institutions worked more effectively in countries with better enabling environments, and that better performance in countries with weaker environments would be largely a consequence of informal arrangements not captured by our model.

177. In fact, this is not what we found. Reality – to the extent it is captured by our data – is infinitely more complex. While understanding the enabling environment is important to some aspects of the design of public sector reforms, some of our key findings seem to apply to all countries, regardless of their enabling environment. We have distilled our findings into the most important lessons for operations. In the remainder of this chapter, we list these lessons and discuss their importance for the design of public sector reforms.

The 10 Most Important Lessons

Lesson 1. Formal institutions can and do play important roles in countries with strong as well as weak enabling environments.

Lesson 2. Leadership plays an important role in all countries, regardless of the enabling environment. In countries with weaker enabling environments, leadership works through specific systems, for example, helping to make meritocratic and performance management systems more effective. In countries with better enabling environments, leadership strengthens performance exogenously.

Lesson 3. A meritocratic system for personnel administration is the single-most important determinant of public-sector performance, in all types of enabling environments.

Lesson 4. The primary effect of well-functioning administrative procedures is to reinforce meritocratic practices. In weaker enabling environments, it may also strengthen performance directly. Simplicity and monitoring of administrative procedures are important to their effectiveness when the enabling environment is weak.

Lesson 5. Systems for strengthening performance through public outreach and oversight are only effective when they are actually *used*. We know little about how to make these institutions credible, in any enabling environment.

Lesson 6. Systems for strengthening performance through public outreach and oversight will make work procedures more complex in countries with more active civil societies.

Lesson 7. In each of the countries, collective action organizations, such as business associations and political parties, play particular roles that are not easily explained by enabling conditions. However, across countries, they do appear to try to alleviate the detrimental impact of some public sector entities – such as tax inspectorates – on their constituents.

Lesson 8. Courts contribute to better public sector performance, especially in countries with weaker enabling environments.

Lesson 9. Perceptions about the quality of the business environment – including unfair competition, political instability, and the Government’s commitment to anticorruption – matter to the firm’s decision to influence the state in all the countries, although in very different ways, possibly because of differences in the underlying reasons for these problems.

Lesson 10. Within all the countries, there is strong variation in the development of different institutions, both across organizations and geographic centers. There are also strong local spillovers in behavior, creating powerful geographic norms.

Implications for the Design of Public Sector Reforms

178. Our findings suggest at least three key implications regarding the *sequencing and targeting* of reforms.

179. The early stages of any institutional reform effort should probably focus heavily on establishing formal procedures required for meritocratic personnel management. Establishing such formal procedures should help to reduce the dependency of such reform efforts on unavoidable leadership uncertainties, such as loss of an effective leader.

180. Until effective administrative procedures operate, and until the formal rules and procedures governing human resource management are operative, institutional reform success hangs on the thin thread of leadership. Because of this, reform efforts in environments lacking these key ingredients need to make leadership the *sine qua non* for any intervention, and accept the fact that these initial reform efforts are unavoidably risky because they depend so heavily on the quality of the individual leading the reform, rather than on some system. One implication of this conclusion: public sector reform programs might benefit from allocating more attention to the professional development of managers, through training programs and recognition of achievement, to reduce this risk and increase the quality of public sector management.

181. While it is undeniably important to emphasize managing for results, our findings suggest that performance management reforms would be more wisely viewed as second generation reforms, because there is little evidence that a performance management emphasis consistently contributes to better performance in public entities lacking meritocratic personnel management practices and effective administrative systems. While one of the elements of a meritocratic personnel management system is management of the performance of personnel (e.g., personnel performance evaluation

systems, promotions procedures based, in part, on performance), our findings suggest that expectations regarding the impacts of such reforms should be kept modest during the early stages of reform; while heavier emphasis should probably be given to competitive recruitment and selection procedures as well as to the due process procedures that underpin any efforts to depoliticize the management of human resources.

182. While efforts to strengthen “voice” mechanisms (e.g., strengthening civil society, establishing complaint mechanisms, publication of information on the activities and performance of public entities, creation of an ombudsman, strengthening the investigative reporting capacities of the press, etc.) are important, the impacts of such reforms appear to be almost non-existent until there exists a public sector capable and motivated to respond to the external voices. In short, “voice” strengthening should be viewed as a second-generation reform requirement, while creation of a meritocratic civil service, as well as creation of effective administrative procedures, should be viewed as first-generation institutional reform requirements. This does not mean that efforts to improve “voice” should be abandoned in countries such as these. Rather, it suggests that such reforms should be viewed as part of a longer term strategy, rather than as likely to yield any immediate performance impacts. In-country research needs to be conducted to determine how to make these types of systems credible.

183. Public sector reforms may benefit from better targeting in the early phases of reform. Successful pilots help to breed interest as well as create pressure on other public entities or geographic centers to participate in subsequent rounds of reform. The analysis presented in this report suggests many different ways that reforms could be targeted in order to increase their probability of success. For example, reforms could be piloted in organizations with more effective leaders or in regions with a lower concentration of corruption or better court systems. When planning a public sector reform, we would recommend that a systematic analysis be conducted to identify where pilots might be most successful.

Conclusion

184. This report provides systematic analyses of empirical data on the performance of public entities in three countries in the ECA Region – the Kyrgyz Republic, Romania, and the Slovak Republic – which span much of the range of institutional environments to be found throughout the ECA Region. The evidence gleaned from these analyses suggests a number of concrete recommendations, summarized immediately above, for the design of Bank operations aimed at improving the performance of the public sector in ECA countries. Moreover, the methodology developed and applied in this report provides a tool that could be refined and applied in any client country of the Bank, in order to better tailor operations for improving the performance of public entities to a given country’s institutional environment. The key to the successful application of this approach is to design the evaluation methodology *prior* to the collection of data.⁴⁸

Annex 1. Special Issues in the Analysis of the Performance of Public Sector Bodies

185. This Annex includes technical details not contained in the body of the text. It will first examine econometric issues, followed by a somewhat lengthier discussion of self-assessments than was cover in the text. Next, a summary of recommendations for improving the methodology is presented. Estimation results for the full model, including financial management variables, follow and a list of actual survey questions on which the variables were constructed concludes this Annex.

Econometric Issues

Multicollinearity

186. One concern for estimating the model is that the components of the vector I might be highly collinear. For example, organizations with high indices of meritocracy might also have high indices for budget management. Although multicollinearity does not introduce bias, the stability of estimates of coefficients could be suspect if the degree of multicollinearity is very high. To examine whether this is potential cause for concern, we performed a VIF test on the basic regressions in all three countries. In none of the basic regressions in does multicollinearity pose a significant problem.

Limited dependent variable

187. Two of our dependent variables, Bribery and Performance have enough discrete values to be considered continuous variables. Quality, by contrast, takes on only 5 distinct values. Although the results presented here treat quality as a continuous variable, we also estimated all of the equations with Quality as a dependent variable using an ordered probit and there were no substantive changes in the results.

Non-independence of errors

188. One potential source of concern is that the error term might be correlated across respondents who work in the same organization. To test the robustness of our results to the possibility of non-independence of errors, we supplemented our regressions with both between group regressions (BE -- means by organizations regressed on means by organization) and, more appropriately, error components two stage least squares (EC2SLS). The latter approach allows both individual heterogeneity of errors and group-based correlations in errors. Both approaches require identifying particular organizations. We employed both broad and narrow definitions of organizations. In the broad definitions, a single body, such as a ministry, would be considered a single organization. Using the broad definition, the number of groups, and therefore the number of observations for the BE regressions, falls tremendously to only 21 and 22 in Romania and the Kyrgyz Republic, and the model can no longer be estimated in the Slovak Republic. In the narrow definition of an organization, we included geographical criteria. Thus, the police department in one oblast would be considered a separate organization from the

police department in other oblasts. Using the narrow definition, the number of groups are 81 in the Kyrgyz Republic, 39 in the Slovak Republic, and 66 in Romania.

189. We employed BE and EC2SLS using both broad and narrow definitions of organizations, looking in particular at how three key results described in the text would be affected: (i) the importance of *Personnel Systems* for *Performance*, (ii) the importance of *Administrative Systems* for *Personnel Systems*, and (iii) the importance of *Formality of Personnel Systems* for the *Merit-Oriented of the Personnel Management Systems*.

190. In the Kyrgyz Republic, each of these three results is confirmed when using EC2SLS, regardless of whether the broad or narrow definition of organization is used. In the BE regressions, *Formality of Personnel Systems* is confirmed for both definitions and *Administrative Systems* is confirmed for the narrow definition. *Personnel Systems* retains its sign, but falls in significance for both broad and narrow definitions. The only key result that is not confirmed is the role of *Administrative Systems* but only when the broad definition of organizations is used.

191. In the Slovak Republic, each of these three results is confirmed when using EC2SLS, and the importance of *Personnel Systems* and *Formality of Personnel Systems* are confirmed for the BE regressions. *Administrative Systems* retains its sign but falls in significance.

192. In Romania, each of these three results is confirmed when using EC2SLS with the broad definition of organization. When the narrow definition is used, however, the importance of *Personnel Systems* is not confirmed. Although it retains its sign, it becomes insignificant. In the BE regressions, *Formality of Personnel Systems* and *Personnel Systems* are both confirmed for the broad definitions, and *Administrative Systems* weakens for the broad definitions. The only key result that is not confirmed in the BE regressions is the role of *Personnel Systems* but only when the narrow definition of organizations is used.

A note on comparability

193. Although great effort was spent in trying to make the models directly comparable in all three countries, heterogeneity in the surveys required slight variations in two key dimensions. First, the variables related to financial management systems, even the imperfect ones used for the other two countries, were not available for the Slovak Republic. For this reason, we will first focus on the results obtained when financial management is omitted from the model. The full model, including financial management variables, was run for Romania and the Kyrgyz Republic and the results will be discussed later in the report. We would like to note at this point, however, that for the two countries where it was possible, we compared results for the models with and without *Financial Management Systems* using identical observations and there was no appreciable difference in results. This suggests that the partial model presented here is useful despite biases inherent in omitted variables. Moreover, it is well known that omitted variables do not cause bias if the effects are orthogonal. This seems to be the

case here, although the weaknesses in our proxy *Financial Management Systems* do not permit definitive conclusions.

194. Second, in Romania, we do not have the variable for *Administrative Systems*. Since this was the only variable missing, we estimated the following approximation. We replaced *Administrative Systems* by the vector of subsidiary variables (e.g., *Monitoring and Enforcement of Administrative Procedures*) in all equations, and estimated significance by conducting an F-test of the restriction that all of the elements of this vector are equal to zero. This allows a rough gauge of how administrative procedures impact both performance and the intermediate institutional qualities. For symmetry, we also used this same approach to estimate the models in the Kyrgyz Republic and the Slovak Republic. In the Kyrgyz Republic, the results were not substantively changed as a result of the alternative approach. In the Slovak Republic, some of the results are confirmed, but others are not. In particular, Personnel Systems loses significance in the performance equation. However, it should be noted that this approach is not the preferred one and was being implemented in the other two countries only to get a sense of how the results in Romania might have been affected. If this experiment in the Kyrgyz Republic and the Slovak Republic is any guide, the approach used in Romania had the following effect on one of the key conclusions, the importance of Personnel Systems in explaining public sector performance: at one extreme the result is unaffected and at the other extreme the importance of Personnel Systems is biased *downward*.

Subjective perceptions and self-assessments

195. The use of the officials' perceptions of their own entity's performance will no doubt be controversial. Many will argue that external assessments by the users of services would be preferable. We are certainly sympathetic to this argument. External assessments provided by the general public provide the user's perspective. However, external assessments present their own challenges, introduced briefly in the text, and we feel it is important to keep in mind that users may only be concerned with certain aspects of performance, while the officials and the public interest may be concerned with others. For example, firms visited by tax inspectors may only be concerned about their rights, fair treatment and minimizing the tax paid, whereas the inspector would (should) also have the public's interest in mind and therefore have the goal of collecting the appropriate amount of taxes. A passport applicant may only be concerned with the speed with which the passport is prepared, while the officials might also be concerned with the public interest in not providing passports based on false identities.

196. A second drawback to the use of external assessments is that public sector organizations are complex, and one part of the body may indeed be providing very high quality, while others are not – the users' evaluations will only provide an assessment of the net product and the valuable information content of variations in performance within a large body – which may well be attributable to variations in institutions – gets lost. Moreover, from a practical perspective, users' evaluations of services are often difficult to map to the public sector bodies that provide those services. For example, while we may know how a household evaluates the quality of the polyclinic they visit, we do not necessarily have assessments of institutional arrangements in that particular clinic. An

additional consideration is that external assessments by users would restrict the sample to organizations that frequently interact with the general public—cross-cutting government support bodies such as internal auditors would be excluded from the sample, even though we presumably are also concerned with their performance. (Our purpose here is not to say that external assessment are of no use. Rather, as we suggested in the text, we feel that a combination of both types of indicators would be especially powerful.)

197. Self-assessments by the public officials themselves solve some of the problems described above. Performance is a broad enough concept that multiple goals, for example revenue collection and fair treatment of users, may be embodied in a single measure. A second benefit of using self-evaluations as a measure of performance is that because each official is describing both the performance and institutional characteristics of the body where they work, we can be certain that they are referring to the same body – the “mapping” challenge does not exist.

198. Other literatures also provide reassurance that subjective measures can indeed be very useful. Djankov and Murrell 2002 studied a voluminous body of empirical studies of the effects of enterprise restructuring using both qualitative and quantitative measures of restructuring. They emphasize the quantitative measures, but also find that the qualitative measures often produced similar results.

199. A second literature is directly relevant to the use of self-assessments. The literature on health provides close parallels. Just like the current discussion of self assessments of performance, assessments of personal health face a challenge posed by the fact that health is a complex, multidimensional phenomenon. As self-assessments of performance may be suspected of bias or guessing, so too self-assessments of overall health might meet the same suspicion. One key difference, however, is that there do exist quantifiable objective indicators of the accuracy of both self-assessments and external (doctor’s) assessments of health. Research has found that simple self-assessments – self-ratings of overall health on a five-point scale from excellent to poor – correlate well with objective, examination-based health evaluations made by physicians, and are even *better* predictors of longevity than physicians’ examination-based evaluations.⁴⁹

200. We emphasize that our point here is not to say that self-assessments are necessarily better than external assessments or quantitative indicators, but that they do solve some of the problems associated with external assessments and quantitative indicators. Clearly, there are some ways in which the self-assessments are inferior to those other measurements, as well, most obviously the fact that they rely on subjective self-assessments. We believe that the most robust approach would be to use a combination of external assessments, self-assessments, and objective quantitative indicators from a sample specifically designed for the purpose.

201. Finally, to the degree that subjective perceptions are a factor in the computation of the variables, the problem this poses for estimation of the parameters is mitigated a great deal by the fact that multiple such perceptions are on the right hand side of every equation. Second, as will be discussed in the second on robustness of results, a set of supplementary organization-level regressions was also run. To the extent that positive

and negative perceptions tend to cancel each other out, biases arising from subjective perceptions should not be excessive.

Summary of Recommendations for Improving this Methodology

202. The framework described in Figure 10 relates intermediate institutional outcomes to public sector performance. While discussion of just what should go into that diagram could go on endlessly, there is one intermediate institutional outcome that we omitted purely due to limitations in the data, and that is the quality of the policy formulation apparatus. Including such a variable would not only lead to a richer set of results, but one less susceptible to an omitted variables bias, as well.

203. Our proxy for financial management systems is the weakest of the intermediate inputs. A more comprehensive measure capturing the overall quality of the system would have been preferred. One challenge we would face in implementing such a measure is that only certain people within an organization would be privy to knowledge about the details of the financial management system. Thus sample design would need to be altered to reflect this fact. Similarly, our proxy for performance management systems does not delineate performance management from meritocracy as cleanly as we would have liked.

204. We would have liked to have had a more comprehensive set of subsidiary variables for each of the intermediate outcomes. For meritocracy, for example, competition in recruitment, attestations, performance evaluations, and other mechanisms that are often advocated as ways to make the civil service contestable and professional are all tools that directly correspond to those our clients and that we ourselves consider when designing reforms. Incorporating them into this model would have strengthened it. Similarly, our first-best attempt to implement this methodology would also have included indicators of how much indicators of performance are measured, reported, and the role they play in the performance management system, as well as the actual use of complaint systems, reporting, and so forth.

205. Our variable for respondent optimism would have been improved if it had referred to a subjective assessment of some feature of life that is the same for everyone yet might be assessed differently by optimists and pessimists, such as assessments of the weather, or mankind's ability to reach Mars in the next century. Our variable for leadership and organizational culture would have been better if it were actually two variables, one capturing leadership and the other organizational culture. Our variable proxying rents would be improved if it measured rents more directly, rather than relying only on indications of contact with the public.

206. As with any empirical study, we would have loved to have had larger sample sizes. A future exercise would employ not only larger samples, but samples chosen specifically to allow for cross-checking of results with quantitative data performance data and external assessments of performance. To some extent, quantitative service delivery surveys do just this. The value-added of the current approach is to model the production

function of public sector performance, incorporating mutual endogeneity and other innovations of the current model.

207. These observations of ways in which these model estimates could be improved provide guidance to future analysts, who could employ an improved version of the replicable methodology developed in this paper to analyse the factors contributing to the performance of public entities in a given country, in order to better design strategies for improving the public administration in that country.

Estimation of the full model, including financial management

208. As discussed in the text, analyses that include financial management systems are much weaker than the others for a number of reasons. First, only a very rough approximation for the quality of financial management systems exists. Second, sample sizes become much smaller when the financial management variables are included. Third, such variables are not available for the Slovak Republic. Nevertheless, the analyses including financial management variables provides corroboration some of the findings in the text, especially the importance of personnel management systems.

Table 22. Model of Performance Including Financial Management

Dep.Variable	Kyrgyz Republic	Romania
Performance Index		
Intercept	0.11 (0.12)	-0.07 (0.32)
Personnel Systems [†]	0.39 (4.72)***	0.43 (4.10)***
Administrative Systems [†]	0.12 (1.32)	N/A
Performance Management Systems [†]	-0.06 (-0.80)	0.01 (0.71)
Financial Management Systems [†]	0.04 (0.50)	0.01 (0.11)
Culture	0.14 (1.30)	0.33 (4.23)***
Enterprise Interactions	-0.03 (-0.86)	-0.15 (1.97)*
Household Interactions	-0.02 (-0.46)	0.13 (0.85)
Government Interactions	0.05 (1.26)	0.13 (0.80)
Optimist	0.08 (1.60)*	-0.02 (0.48)
N	221	154
R-squared	0.20	0.50
Estimation by OLS. Absolute value of t statistics in parentheses; [†] endogenous variable; * significant at 10%; ** significant at 5%; *** significant at 1%		

Table 23. Model of Quality Including Financial Management

Dep. Variable	Kyrgyz Republic	Romania
Performance Index		
Intercept	0.23 (1.97)**	0.35 (1.25)
Personnel Systems †	0.06 (0.80)	0.23 (1.78)*
Administrative Systems †	0.20 (2.32)*	NA
Performance Management Systems †	0.06 (0.92)	-0.04 (0.73)
Financial Management Systems †	-0.01 (0.19)	0.08 (0.67)
Culture	0.14 (1.35)	0.39 (4.00)***
Enterprise Interactions	-0.00 (0.15)	-0.16 (1.80)*
Household Interactions	0.04 (0.97)	0.26 (1.41)
Government Interactions	0.06 (1.56)	-0.26 (1.32)
Optimist	0.03 (0.71)	-0.12 (2.03)**
N	221	154
R-squared	0.12	0.34

Estimation by OLS. Absolute value of t statistics in parentheses;
† endogenous variable;
* significant at 10%; ** significant at 5%; *** significant at 1%

Table 24. Model of Bribery Including Financial Management

Dep. Variable	Kyrgyz Republic	Romania
Performance Index		
Intercept	1.02 (4.45)***	1.49 (4.68)***
Personnel Systems †	-0.72 (4.71)***	-0.64 (4.21)***
Administrative Systems †	-0.05 (0.26)	NA
Performance Management Systems †	0.17 (1.33)	0.02 (0.35)
Financial Management Systems †	-0.10 (0.63)	0.06 (0.42)
Culture	-0.15 (0.72)	-0.28 (2.48)**
Enterprise Interactions	0.06 (1.01)	0.13 (1.21)
Household Interactions	0.08 (0.99)	0.00 (0.01)
Government Interactions	-0.04 (0.57)	-0.52 (2.27)**
Optimist	-0.13 (1.48)	-0.07 (1.07)
N	221	154
R-squared	0.15	0.44

Estimation by OLS. Absolute value of t statistics in parentheses;
† endogenous variable;
* significant at 10%; ** significant at 5%; *** significant at 1%

Table 25. Model of Personnel Management Systems Including Financial Management

Dep. Variable	Indep. Variable	Kyrgyz Republic	Romania
Personnel Systems			
	Intercept	0.00 (0.03)	0.50 (1.89)*
	Administrative Systems †	0.10 (0.54)	N/A
	Performance Management Systems †	-0.02 (0.10)	0.07 (0.44)
	Financial Management Systems †	0.28 (1.07)	-0.11 (0.51)
	Formalism of Personnel Systems	0.27 (2.56)**	0.08 (0.67)
	Auditing of Personnel Systems	0.04 (0.42)	0.13 (1.45)
	Culture	0.11 (0.52)	-0.08 (0.71)
	Enterprise Interactions	-0.02 (0.56)	0.05 (0.82)
	Household Interactions	0.07 (1.22)	-0.15 (0.91)
	Government Interactions	0.03 (0.63)	-0.04 (0.25)
	Optimist	0.04 (0.53)	0.08 (1.63)
	R squared	0.38	0.34
	N	90	111
Estimation by 3SLS. Absolute value of z statistics in parentheses			
† endogenous variable;			
* significant at 10%; ** significant at 5%; *** significant at 1%			

Table 26. Model of Administrative Procedures Including Financial Management

Dep. Variable	Indep. Variable	Kyrgyz Republic	Romania
Administrative Systems			
	Intercept	-0.03 (0.93)	N/A
	Personnel Systems [†]	0.06 (0.30)	N/A
	Performance Management Systems [†]	0.13 (0.38)	N/A
	Financial Management Systems [†]	0.21 (0.58)	NA
	Formalism of Administrative Procedures	0.15 (1.31)	N/A
	Monitoring and Enforcement of Administrative Procedures	0.36 (3.25)***	N/A
	Consultation in Administrative Procedures	0.35 (2.01)**	N/A
	Lack of Ambiguity in of Administrative Procedures	0.14 (1.24)	N/A
	Appropriate Number of Levels of Management	0.05 (0.61)	N/A
	Appropriate Centralization of Decision Making	0.01 (0.07)	N/A
	Uncumbersome Procedures	0.13 (1.10)	N/A
	Information Availability	-0.05 (0.33)	N/A
	Stability of Administrative Procedures	-0.01 (0.10)	N/A
	Culture	0.02 (0.08)	N/A
	Enterprise Interactions	0.02 (0.38)	N/A
	Household Interactions	-0.05 (0.83)	N/A
	Government Interactions	0.02 (0.39)	N/A
	optimist	-0.08 (1.35)	N/A
	R squared	0.38	N/A
	N	90	N/A
Estimation by 3SLS. Absolute value of z statistics in parentheses.			
[†] endogenous variable;			
* significant at 10%; ** significant at 5%; *** significant at 1%			

Table 27. Model of Performance Management Including Financial Management

Dep. Variable	Indep. Variable	Kyrgyz Republic	Romania
Performance Management Systems			
	Intercept	0.48 (1.83)	-0.03 (0.04)
	Personnel Systems †	0.03 (0.13)	0.04 (0.05)
	Administrative Systems †	0.39 (2.12)**	NA
	Financial Management Systems †	-0.69 (2.75)***	0.32 (0.52)
	Information Provision to the Public	0.09 (1.23)	-0.11 (1.12)
	Existence and Use of Complaint Systems	0.02 (0.25)	-0.10 (0.83)
	Culture	0.53 (3.13)***	0.39 (1.67)*
	Enterprise Interactions	0.05 (1.01)	-0.24 (1.35)
	Household Interactions	-0.05 (0.73)	0.41 (1.30)
	Government Interactions	0.03 (0.45)	-0.14 (0.35)
	Optimist	0.10 (1.21)	0.15 (1.10)
	R squared	0.38	0.34
	N	90	111
Estimation by 3SLS. Absolute value of z statistics in parentheses.			
† endogenous variable;			
* significant at 10%; ** significant at 5%; *** significant at 1%			

Table 28. Explaining the Quality of Financial Management Systems*

Dep. Variable	Indep. Variable	Kyrgyz Republic	Romania
Financial Management Systems			
	Intercept	0.79 (5.30)***	0.58 (1.34)
	Personnel Systems [†]	0.08 (0.41)	0.46 (0.53)
	Administrative Systems [†]	0.22 (1.25)	N/A
	Performance Management Systems [†]	-0.44 (2.10)**	0.29 (2.45)**
	Approvals of Budget Process	-0.13 (1.19)	-0.05 (0.56)
	Consultation in Budget Process	0.03 (0.34)	0.11 (0.75)
	Unambiguity of Rules	-0.00 (0.03)	0.13 (1.42)
	Lack of Bureaucracy in Rules	0.05 (0.77)	0.08 (0.91)
	No Extrabudgetary Funds	0.02 (0.43)	0.12 (1.29)
	Culture	0.28 (1.60)	-0.44 (2.18)**
	Enterprise Interactions	0.01 (0.35)	0.18 (1.13)
	Household Interactions	-0.02 (0.40)	-0.41 (1.65)
	Government Interactions	0.04 (0.74)	-0.18 (0.64)
	Optimist	0.03 (0.43)	-0.13 (1.01)
	R squared	0.38	0.34
	N	90	111
Estimation by 3SLS. Absolute value of z statistics in parentheses			
[†] endogenous variable;			
* significant at 10%; ** significant at 5%; *** significant at 1%			

Survey Questions on Public Sector Performance and its Factors

Measures of Performance

Quality

“To what extent do you agree with the following statement related to the services provided by your institution?”

A. They are of a high quality

1= totally disagree

2= disagree

3= neither agree nor disagree

4= agree

5= totally agree”

Bribery.

We focus on bribery as an indication of corruption because it is somewhat less susceptible to idiosyncrasies of the organizations. For the same reason, we construct an index based on the existence of problems in any one area, not on the average of problems in all areas.

“Tell us please to what extent do the following problems appear in your institution.

1= does not appear (exist) at all 5 = it appears (exists) very often

- Accepts bribes in return for influencing specific governmental regulatory decisions
- Accepts bribes in return for speeding up the process of getting licenses and permits
- Accepts bribes in return for granting monopolistic privileges for particular enterprises
- Accepts bribes in return for reducing fees or taxes paid by particular enterprises
- Accepts bribes in return for providing privileges in state contracting, granting concessions, etc., to private firms

In many countries it is a common practice that companies make unofficial payments to gain contracts in a public tender. Do you believe that such practices take place in your institution today?

1=no, these practices never take place at my institution

2=these practices only occasionally take place at my institution

3=these practices take place at my institution frequently”

Performance

Performance is the simple average of Quality and the inverse of Bribery. It remains scaled from 0 to 1.

Measures of Intermediate Outcomes

Personnel Management = $(j26_4 + (j26_7 + j26_9 + j26_10)/3 + (1 - j732))/3$;

26. To what a degree do you agree with the following statements dealing with decisions in the field of personnel policy (recruitment/appointments/ promotions/ transfers) in your institution. “In general, decisions relating to personnel policy were:”

D. Based on professional experience/merit/performance

- G. Based on family connections/wealth/status
- I. Based on political connections/party affiliation/political pressures
- J. Based on connections/patronage within the institution

1= totally disagree

2= disagree

3= neither agree nor disagree

4= agree

5= totally agree

9= don't know

73. Tell us please to what extent do the following problems appear in your institution.

1= does not appear (exist) at all 5 = it appears (exists) very often 9= don't know

B. Job placement determined by personal or political relations, not by performance/ability

Administrative Procedures = j18_10 ;

18. To what extent do you agree or disagree with the following statements relating to procedures / guidelines / regulations in the field of internal management in you institution are:

J. Good, and serve the institution well

1= totally disagree

2= disagree

3= neither agree nor disagree

4= agree

5= totally agree

Performance Management = j17_4 ;

17. Please, indicate to what extent you agree or disagree with the following statements? In the Institution for which you work:

D. Incentives do exist to generate a better quality of service delivery

1= totally disagree

2= disagree

3= neither agree nor disagree

4= agree

5= totally agree

Measures of Institutional Variables

Formalism in Personnel Policies = j26_3 ;

26. To what a degree do you agree with the following statements dealing with decisions in the field of personnel policy (recruitment/appointments/ promotions/ transfers) in your institution. "In general, decisions relating to personnel policy were:"

C. Based on the criteria specified in the written policy/guides/regulations (rather than tacit, unwritten, or informal ru les)

1= totally disagree

2= disagree

3= neither agree nor disagree

4= agree

5= totally agree

9= don't know

Auditing of Personnel Decisions = j26_2 ;

26. To what a degree do you agree with the following statements dealing with decisions in the field of personnel policy (recruitment/appointments/ promotions/ transfers) in your institution. "In general, decisions relating to personnel policy were:"

B. Audited on a regular basis by internal control agencies

1= totally disagree

2= disagree

3= neither agree nor disagree

4= agree

5= totally agree

9= don't know

Transparency of Personnel Policies = j26_14 ;

26. To what a degree do you agree with the following statements dealing with decisions in the field of personnel policy (recruitment/appointments/ promotions/ transfers) in your institution. "In general, decisions relating to personnel policy were:"

N. Information on decisions taken are accessible for the other workers of the institution

1= totally disagree

2= disagree

3= neither agree nor disagree

4= agree

5= totally agree

9= don't know

Appeals of Personnel Policies = j26_15 ;

26. To what a degree do you agree with the following statements dealing with decisions in the field of personnel policy (recruitment/appointments/ promotions/ transfers) in your institution. "In general, decisions relating to personnel policy were:"

O. Not subject to a workable appealing procedure

1= totally disagree

2= disagree

3= neither agree nor disagree

4= agree

5= totally agree

9= don't know

Appropriate Levels of Management = j17_5 ;

17. Please, indicate to what extent you agree or disagree with the following statements? In the Institution for which you work:

E. In the institution that we work in there are too many levels of management

1= totally disagree

2= disagree

3= neither agree nor disagree

4= agree

5= totally agree

Appropriate Centralization of Management = j17_6 ;

17. Please, indicate to what extent you agree or disagree with the following statements? In the Institution for which you work:

F. The decisions are too centralized which hampers the institution's efficiency

1= totally disagree

2= disagree

3= neither agree nor disagree

4= agree

5= totally agree

9= don't know

Uncumbersome Administrative Procedures = $(j18_4 + j18_5)/2$;

18. To what extent do you agree or disagree with the following statements relating to procedures / guidelines / regulations in the field of internal management in you institution are:

D. Imposing an excessive number of administrative steps

E. Adding too much time to the process of decision making/service delivery

1= totally disagree

2= disagree

3= neither agree nor disagree

4= agree

5= totally agree

Availability of Information to Staff = $(j20_4 + j20_5)/2$;

20. Please tell us, to what extent do you agree with the following statements related to your organization?

D. I always have access to the information, which enables me to do my work effectively

E. I am clear about the steps to solve the problems I deal with

1= totally disagree

2= disagree

3= neither agree nor disagree

4= agree

5= totally agree

Monitoring and Enforcement of Administrative Procedures = $(j18_7 + j18_8)/2$

18. To what extent do you agree or disagree with the following statements relating to procedures / guidelines / regulations in the field of internal management in you institution are:

G. Well monitored (violations are always exposed)

H. Strictly enforced (violations are always punished)

1= totally disagree

2= disagree

3= neither agree nor disagree

4= agree

5= totally agree

Formalization of Administrative Procedures = $(j18_1 + j18_2)/2$;

18. To what extent do you agree or disagree with the following statements relating to procedures / guidelines / regulations in the field of internal management in you institution are:

A. Formalized, officially approved (written)

B. Simple, clear, and easy to understand

1= totally disagree

- 2= disagree
- 3= neither agree nor disagree
- 4= agree
- 5= totally agree

Lack of Ambiguity in Administrative Procedures = $(j18_3 + j19)/2$;

18. To what extent do you agree or disagree with the following statements relating to procedures / guidelines / regulations in the field of internal management in you institution are:

C. Well specified, leaving no room for different interpretations and discretion

- 1= totally disagree
- 2= disagree
- 3= neither agree nor d isagree
- 4= agree
- 5= totally agree
- 9= don't know

19. Would you say that your institution's procedures for interacting with the public are clear and leave little room for subjective decision making?

- 1= the procedures are completely unambiguous, leaving no room for discretion
- 2= the procedures are somewhat unambiguous, leaving little room for discretion
- 3= the procedures are somewhat ambiguous, leaving some room for discretion
- 4= the procedures are completely ambiguous, leaving much room for discretion
- 9= don't know

Degree of Consultation in Administrative Procedures = $(j20_2 + j20_3) / 2$;

20. Please tell us, to what extent do you agree with the following statements related to your organization?

B. Those affected by decisions are informed beforehand

C. When the decisions are made, the managers always take into account their subordinate's opinion

- 1= totally disagree
- 2= disagree
- 3= neither agree nor disagree
- 4= agree
- 5= totally agree
- 9= don't know

Stability of Administrative Procedures = $j18_6$;

18. To what extent do you agree or disagree with the following statements relating to procedures / guidelines / regulations in the field of internal management in you institution are:

F. Stable (not changing or being rewritten all the time)

- 1= totally disagree
- 2= disagree
- 3= neither agree nor disagree
- 4= agree
- 5= totally agree
- 9= don't know

Information Provision to the Public = $(j10_2 + j10_4 + j10_5)/3$;

10. How does your institution make information regarding its activity and regulations known to the public?

B. by issuing activity reports 1=yes 2=no

D. by administrative boards/schedules, public announcements, press release 1=yes 2=no

E. via internet 1=yes 2=no

Complaint Systems = $(j11 + j12_1 + j12_2)/3$;

11. Does your institution have a special department or designated person to whom citizens and businessmen can complain when they encounter difficulties with your organization?

1 = Yes

2 = No

12. If yes, how would an ordinary citizen or businessman know who to approach with their complaint?

A. Instructions for providing comments and complaints are publicly posted in the place where they are likely to see it

B. Instructions for providing comments and complaints is printed on materials that are provided to the citizens and entrepreneurs

1 = yes

2 = no

Consultation with the Public = $(j13_6 + j13_7)/2$;

13. To what extent do you agree with the following statement related to the services provided by your institution?

F. There exist clearly defined mechanisms for consultations with users about their needs

G. There exist clearly defined complaint and redress mechanisms for users to express themselves

1= totally disagree

2= disagree

3= neither agree nor disagree

4= agree

5= totally agree

Culture = $(j17_1 + j17_2 + j17_3)/3$;

17. Please, indicate to what extent you agree or disagree with the following statements? In the Institution for which you work:

A. Everyone has a clear idea of the institution's objectives and strategy

B. Everyone believes the citizen/user are our clients

C. Everyone feels identified and involved with the objectives and strategies of the institution

1= totally disagree

2= disagree

3= neither agree nor disagree

4= agree

5= totally agree

9= don't know

Rents

Based on interactions with other private and public sector bodies

if q1_1 = 1 then eintrect = 0 ;
if q1_1 = 2 then eintrect = 0.5 ;
if q1_1 = 3 then eintrect = 1 ;

if q1_2 = 1 then hintrect = 0 ;
if q1_2 = 2 then hintrect = 0.5 ;
if q1_2 = 3 then hintrect = 1 ;

if q1_3 = 1 then gintrect = 0 ;
if q1_3 = 2 then gintrect = 0.5 ;
if q1_3 = 3 then gintrect = 1 ;

1. Does your institution in its activity comes in contact with:

- A. enterprises and entrepreneurs
- B. private persons, citizens
- C. other state institutions

1=not at all
2=sometimes
3=often

Optimist = j78_4 ;

78. Please indicate whether you agree or disagree with each of the following statements.

1=totally disagree; 2=disagree; 3=neither agree nor disagree; 4=agree; 5=totally agree

D. The government is very serious about fighting corruption in the public sector and state institutions.

1 2 3 4 5

Annex 2. Special Issues in the Analysis of the Public-Private Nexus

209. This Annex presents some of the empirical challenges of the econometric analysis presented in Chapter 4, and present further country-specific regressions explaining the decision to make political party contributions, join business associations, and lodge complaints. The empirical challenges fall into three groups: issues related to the self-reporting of sensitive data such as bribery, bias in some of the geographic measures, and issues of comparability of the data across surveys. Here we describe how we try to address these challenges.

Self Reporting

210. The data used to estimate the model is based on information which was reported by the firm. One obvious limitation of the use of self assessments is that the coefficients obtained in estimating the model might be subject to respondent bias, a problem which is discussed in detail in Chapter 3. In the present case, this problem is most likely to become manifest in the willingness of the firm to honestly report bribery. Less open or less honest managers may be less likely to reveal their own corruption, so that a key dependent variable BRIBE (a dummy variable equal to one if a firm has paid a bribe) may be biased downward. Econometrically, this would amount to an omitted variable problem, in which a person's openness or honesty is unobserved and consequently omitted from the specification. In a limited dependent variable model, such as the one considered here, an omitted variable will result in biased estimates of regression parameters, even if the omitted variable is uncorrelated with any of the right-hand variables. To try to address this problem, we include the variable on the right-hand side of the equation, as a proxy for a manager's willingness to discuss sensitive matters openly and honestly. This variable – COMMIT – is an evaluation of a five-point scale of government's commitment to anticorruption. We anticipate that a manager who is reluctant to openly discuss corruption might also be reluctant to openly criticize the government's commitment to anticorruption. To the extent this is true, the two variables will be correlated and COMMIT can reasonably be expected to control for this type of respondent bias. Note that, in other regressions where the dependent variable is not as sensitive a variable as the decision to pay a bribe, COMMIT does not need to be interpreted as a proxy for the honesty of the respondent.

Bias

211. Four of the geographic variables are subject to a second type of bias that warrants discussion. These are the variables that measure the share of *other* firms in a region that resort to bribery (R_BRIBE), make party contributions (R_PARTY), join business associations (R_ASSOCIATION), and lodge formal complaints (R_COMPLAINT). By excluding the firm's own behavior in the calculation of the regional variables, we can rule out any objections of endogeneity and focus squarely on the effect of spillovers of the behavior of other firms on the decisions of the firm.

212. Notice however that this approach produces a slight negative bias in the relationship between the behavior of the firm and the behavior of other firms in the region. To better understand this, consider the example presented in Table 29 of three hypothetical regions. The example examines the relationship between BRIBE and R_BRIBE, although the same example could be constructed for any of these variables. There are 100 firms in each region. In region A, 99 engage in bribery; in region B, 50 engage in bribery; and in region C, only one engages in bribery.

Table 29. Hypothetical Example of Bribery in Three Regions

Region	Value of BRIBE	Number of Firms with Given Value of BRIBE	Value of R_BRIBE for Firms with Given Value of BRIBE
Region A: high level of bribery	1	99	.99
	0	1	1
Region B: equal bribery and integrity	1	50	.49
	0	50	.51
Region C: high level of integrity	1	1	0
	0	99	.01

213. First, consider any single region. The measurement technique causes the correlation between BRIBE and R_BRIBE *within* the region to be negative. Now consider all three regions together. The high concentration of corrupt firms in region A and honest firms in region C causes the correlation between BRIBE and R_BRIBE to be positive. Hence, while there is a slight negative bias in the measurement of this type of variable within regions, strong differences between regions in the share of firms using a particular instrument will allow us to capture the effect of spillovers in behavior.

Data Comparability

214. Data comparability is almost always an issue in cross-country studies, whether it is explicitly stated or not. This analysis is no exception. In most cases, the language used in the surveys to collect the data in the three countries is identical or nearly identical. To the extent possible, we have tried to restrict our use to data that are directly comparable. However, several of our critical variables were specified slightly differently across the three countries, as described below.

215. *Bribe.* The variable BRIBE is a dummy variable equal to one if a firm admitted to paying a bribe. The issue with this variable is the time period the firm was asked to consider. In Romania and Slovakia, firms were asked if they had paid a bribe during the past three years, while in the Kyrgyz Republic firms were asked if they had paid a bribe during the past one year. Despite the shorter time period, about 25 percent more firms in the Kyrgyz Republic reported that they paid bribes than in either of the two other countries. If corruption has decreased dramatically in the Kyrgyz Republic during the past three years – so that a firm that paid a bribe two or three years ago is less likely to pay a bribe this year – then it may be the case that we underestimate the probability that a firm has paid a bribe during the past three years. On the other hand, if corruption has

stayed the same or worsened – as indicated by the Governance Indicators published by WBI for 1997 and 2000/1 – then the measurement error is likely to be quite small.

216. *Complaint.* The variable COMPLAINT is a dummy variable equal to one if a firm has lodged a complaint about corruption. The issue with this variable concerns the grammar used in the survey question. In the Kyrgyz Republic and Romania, firms were asked if they have reported corruption in the past; in Slovakia they were asked whether they would have reported corruption, if they had encountered it. Naturally we expect that some firms in Slovakia might overstate their willingness to report corruption, although we hope that firms actually based their response on their past behavior. Interestingly, the share of firms that reported corruption is remarkably similar across countries (between eight and 10 percent) and, as we discuss in Chapter 4, quite uncorrelated with the availability of complaint systems. Given the very low level of firms in Slovakia that said that they would have reported corruption, we trust that the amount of overstatement was small.

217. *Commit.* The variable COMMIT is an evaluation by the manager of the commitment of the government to anticorruption. The issue with this variable concerns its scale. In the Kyrgyz Republic, firms were asked to evaluate the government's commitment to anticorruption on a five-point scale. In Slovakia, they were asked to evaluate it on a four-point scale. And, in Romania, they were asked to evaluate firms on a three-point scale. We explored several different methods of rescaling the variables, all of which produced virtually identical empirical results. In the end, we used what in our view was the simplest approach, which was to rescale the variable in each country to be between 0 and 1.

218. Our approach to addressing these types of data differences across countries is to treat it as measurement error. We acknowledge that such differences might cause the error terms within each country to be correlated. For this reason, as well as the possibility that there may be some country-specific omitted variables, we assume, for the cross-country regressions, that the error terms might be correlated within countries. In addition, we estimate the model separately for each country. While this does not resolve the problem of the comparability of results across countries, it does eliminate this type of measurement error from the actual estimation.

Country-Specific Regressions Explaining the Decision to Make Political Party Contributions, Join Business Associations, and Lodge Complaints

Table 30. Explaining the Decision to Make a Political Party Contribution in the Kyrgyz Republic					
	(1)	(2)	(3)	(4)	(5)
Age	-0.004 (0.21)	-0.007 (0.34)	-0.005 (0.22)	-0.005 (0.24)	-0.000 (0.00)
Size	0.240 (4.79)***	0.246 (4.43)***	0.233 (4.76)***	0.236 (4.81)***	0.218 (5.69)***
State	N/A	N/A	N/A	N/A	N/A
Food processing	0.573 (1.63)	0.533 (1.47)	0.612 (1.81)*	0.590 (1.87)*	0.765 (2.37)**
Manufacturing	0.267 (1.83)*	0.253 (1.75)*	0.274 (1.89)*	0.255 (1.91)*	0.302 (2.33)**
Construction	-0.196 (0.37)	-0.224 (0.39)	-0.090 (0.16)	-0.125 (0.23)	0.006 (0.01)
Female	-0.469 (1.44)	-0.439 (1.44)	-0.481 (1.49)	-0.495 (1.54)	-0.500 (1.44)
M_Age	-0.012 (0.13)	-0.047 (0.41)	-0.040 (0.37)	-0.044 (0.40)	-0.030 (0.30)
Political instability	-0.040 (0.10)	-0.081 (0.20)	0.002 (0.00)	-0.011 (0.03)	-0.038 (0.09)
Unfair competition	-0.081 (0.52)	-0.090 (0.47)	-0.121 (0.61)	-0.113 (0.58)	-0.119 (0.65)
Commit	-0.895 (3.07)***	-0.791 (2.99)***	-0.823 (2.83)***	-0.779 (3.06)***	-0.883 (3.09)***
R_Bribe	-1.982 (3.67)***				
R_Party		-7.990 (0.86)			
R_Association			-0.850 (0.67)		
R_Complaint				-1.523 (0.56)	
R_Court					1.846 (3.76)***
Constant	-1.110 (2.17)**	-1.672 (3.15)***	-1.883 (4.07)***	-1.842 (3.87)***	-2.850 (6.19)***
Observations	361	361	361	361	361

Estimated using probit; errors are allowed to be correlated within regions; robust z statistics in parentheses; *significant at 10%; ** significant at 5%; *** significant at 1%; N/A indicates the independent variable predicts the dependent variable perfectly

Table 31. Explaining the Decision to Make a Political Party Contribution in Romania

	(1)	(2)	(3)	(4)	(5)
Age	-0.006 (0.64)	-0.005 (0.41)	-0.006 (0.60)	-0.005 (0.48)	-0.005 (0.47)
Size	0.045 (1.55)	0.040 (1.43)	0.050 (1.65)*	0.043 (1.70)*	0.039 (1.28)
State	-0.568 (1.50)	-0.535 (1.23)	-0.618 (1.62)	-0.486 (1.15)	-0.531 (1.26)
Food processing	N/A	N/A	N/A	N/A	N/A
Manufacturing	0.076 (0.20)	0.111 (0.28)	0.059 (0.16)	0.054 (0.14)	0.134 (0.37)
Construction	0.479 (1.06)	0.472 (1.10)	0.520 (1.14)	0.445 (1.03)	0.463 (1.15)
Female	-0.110 (0.85)	-0.088 (0.52)	-0.079 (0.49)	-0.087 (0.51)	-0.112 (0.79)
M_Age	0.068 (0.38)	0.055 (0.29)	0.073 (0.39)	0.069 (0.38)	0.055 (0.30)
Political instability	0.226 (0.50)	0.146 (0.36)	0.245 (0.51)	0.164 (0.37)	0.152 (0.34)
Unfair competition	0.303 (0.62)	0.226 (0.38)	0.250 (0.45)	0.311 (0.57)	0.253 (0.55)
Commit	-0.043 (0.21)	-0.038 (0.19)	-0.066 (0.29)	-0.026 (0.14)	-0.028 (0.15)
R_Bribe	-0.768 (0.51)				
R_Party		2.960 (1.12)			
R_Association			2.884 (2.05)**		
R_Complaint				-4.594 (0.80)	
R_Court					-1.529 (1.03)
Constant	-1.560 (3.98)***	-1.971 (3.56)***	-2.532 (3.91)***	-1.480 (1.51)	-0.989 (0.72)
Observations	265	265	265	265	265

Estimated using probit; errors are allowed to be correlated within regions; robust z statistics in parentheses; *significant at 10%; ** significant at 5%; *** significant at 1%; N/A indicates the independent variable predicts the dependent variable perfectly

Table 32. Explaining the Decision to Make a Political Party Contribution in the Slovak Republic

	(1)	(2)	(3)	(4)	(5)
Age	-0.019 (0.49)	-0.018 (0.53)	-0.024 (0.70)	-0.018 (0.53)	-0.010 (0.26)
Size	0.056 (0.97)	0.052 (0.91)	0.067 (1.16)	0.057 (0.95)	0.048 (0.85)
State	-0.492 (0.86)	-0.439 (0.76)	-0.573 (0.94)	-0.424 (0.75)	-0.426 (0.76)
Food processing	-0.243 (0.76)	-0.252 (0.83)	-0.186 (0.62)	-0.294 (0.90)	-0.313 (0.94)
Manufacturing	0.416 (2.30)**	0.355 (1.89)*	0.364 (1.91)*	0.353 (1.85)*	0.419 (2.22)**
Construction	0.119 (0.45)	0.086 (0.34)	0.097 (0.37)	0.104 (0.40)	0.099 (0.38)
Female	-0.015 (0.04)	-0.012 (0.03)	-0.009 (0.03)	-0.022 (0.06)	0.018 (0.05)
M_Age	0.158 (1.11)	0.150 (1.05)	0.167 (1.12)	0.136 (0.93)	0.174 (1.22)
Political instability	0.148 (0.60)	0.048 (0.21)	0.118 (0.45)	0.079 (0.41)	0.147 (0.65)
Unfair competition	0.092 (0.28)	0.052 (0.16)	0.110 (0.33)	0.051 (0.16)	0.027 (0.09)
Commit	0.439 (1.62)	0.365 (1.23)	0.441 (1.62)	0.376 (1.26)	0.388 (1.36)
R_Bribe	1.265 (1.87)*				
R_Party		1.862 (0.74)			
R_Association			3.797 (2.09)**		
R_Complaint				-0.637 (0.30)	
R_Court					4.223 (1.43)
Constant	-2.476 (5.30)***	-2.007 (4.29)***	-3.181 (3.91)***	-1.730 (4.20)***	-4.782 (2.23)**
Observations	280	280	280	280	280

Estimated using probit; errors are allowed to be correlated within regions; robust z statistics in parentheses;
 *significant at 10%; ** significant at 5%; *** significant at 1%

Table 33. Explaining the Decision to Join a Business Association in the Kyrgyz Republic

	(1)	(2)	(3)	(4)	(5)
Age	0.015 (1.10)	0.014 (0.99)	0.014 (0.98)	0.014 (0.99)	0.013 (0.92)
Size	0.179 (3.36)***	0.180 (3.31)***	0.185 (3.26)***	0.181 (3.34)***	0.184 (3.54)***
State	N/A	N/A	N/A	N/A	N/A
Food processing	N/A	N/A	N/A	N/A	N/A
Manufacturing	-0.008 (0.03)	-0.016 (0.07)	-0.032 (0.13)	-0.015 (0.07)	-0.016 (0.07)
Construction	-0.662 (2.60)***	-0.665 (2.69)***	-0.701 (2.63)***	-0.667 (2.79)***	-0.690 (2.97)***
Female	-0.512 (2.98)***	-0.515 (2.91)***	-0.527 (3.29)***	-0.505 (2.85)***	-0.511 (2.86)***
M_Age	0.009 (0.15)	0.020 (0.36)	0.015 (0.24)	0.020 (0.35)	0.022 (0.38)
Political instability	0.424 (3.81)***	0.456 (3.39)***	0.395 (3.82)***	0.429 (3.62)***	0.434 (3.23)***
Unfair competition	0.203 (0.95)	0.216 (0.99)	0.255 (1.15)	0.200 (0.92)	0.217 (0.97)
Commit	-0.178 (0.81)	-0.229 (1.26)	-0.122 (0.66)	-0.259 (1.40)	-0.227 (1.22)
R_Bribe	1.396 (0.77)				
R_Party		1.163 (0.39)			
R_Association			2.618 (1.64)*		
R_Complaint				1.058 (0.49)	
R_Court					-0.550 (0.40)
Constant	-2.507 (2.47)**	-1.898 (4.77)***	-2.205 (5.07)***	-1.923 (4.18)***	-1.594 (2.12)**
Observations	348	348	348	348	348

Estimated using probit; errors are allowed to be correlated within regions; robust z statistics in parentheses; *significant at 10%; ** significant at 5%; *** significant at 1%; N/A indicates the independent variable predicts the dependent variable perfectly

Table 34. Explaining the Decision to Join a Business Association in Romania

	(1)	(2)	(3)	(4)	(5)
Age	0.031 (3.01)***	0.032 (2.64)***	0.033 (2.92)***	0.033 (2.69)***	0.031 (2.92)***
Size	0.148 (2.64)***	0.134 (2.31)**	0.148 (2.77)***	0.133 (2.43)**	0.145 (2.55)**
State	-0.411 (1.80)*	-0.292 (1.23)	-0.395 (1.74)*	-0.265 (1.15)	-0.312 (1.32)
Food processing	0.455 (1.23)	0.367 (0.89)	0.318 (0.85)	0.304 (0.79)	0.414 (1.18)
Manufacturing	0.082 (0.55)	0.092 (0.60)	0.034 (0.26)	0.058 (0.49)	0.011 (0.07)
Construction	0.234 (1.48)	0.159 (0.82)	0.189 (1.12)	0.129 (0.65)	0.163 (0.80)
Female	-0.141 (0.71)	-0.142 (0.76)	-0.127 (0.64)	-0.136 (0.66)	-0.168 (0.82)
M_Age	0.312 (5.61)***	0.282 (4.15)***	0.327 (6.86)***	0.292 (6.51)***	0.327 (5.54)***
Political instability	-0.123 (0.39)	-0.100 (0.35)	-0.095 (0.29)	-0.075 (0.24)	-0.023 (0.07)
Unfair competition	-0.329 (1.37)	-0.374 (1.23)	-0.383 (1.28)	-0.387 (1.43)	-0.284 (1.03)
Commit	-0.011 (0.05)	-0.037 (0.20)	-0.023 (0.11)	-0.036 (0.20)	-0.003 (0.01)
R_Bribe	-2.307 (2.52)**				
R_Party		0.247 (0.07)			
R_Association			3.530 (3.73)***		
R_Complaint				-3.822 (0.59)	
R_Court					2.853 (3.08)***
Constant	-1.089 (1.82)*	-1.825 (4.40)***	-2.788 (13.37)***	-1.545 (2.65)***	-3.463 (10.46)***
Observations	301	301	301	301	301

Estimated using probit; errors are allowed to be correlated within regions; robust z statistics in parentheses;
 *significant at 10%; ** significant at 5%; *** significant at 1%

Table 35. Explaining the Decision to Join a Business Association in the Slovak Republic

	(1)	(2)	(3)	(4)	(5)
Age	0.004 (0.15)	0.003 (0.11)	0.003 (0.13)	0.001 (0.04)	0.009 (0.33)
Size	0.384 (7.04)***	0.379 (6.68)***	0.383 (6.78)***	0.385 (6.98)***	0.379 (6.54)***
State	-1.120 (1.86)*	-1.102 (1.81)*	-1.095 (1.91)*	-1.106 (1.91)*	-1.062 (1.78)*
Food processing	0.042 (0.26)	-0.011 (0.07)	-0.023 (0.14)	-0.035 (0.21)	-0.050 (0.33)
Manufacturing	-0.069 (0.28)	-0.145 (0.62)	-0.135 (0.57)	-0.169 (0.72)	-0.110 (0.46)
Construction	0.010 (0.04)	-0.033 (0.14)	-0.012 (0.05)	-0.013 (0.06)	-0.011 (0.05)
Female	-0.149 (0.52)	-0.126 (0.44)	-0.137 (0.47)	-0.145 (0.49)	-0.125 (0.43)
M_Age	0.294 (3.66)***	0.273 (3.55)***	0.270 (3.14)***	0.260 (3.01)***	0.278 (3.00)***
Political instability	-0.189 (1.69)*	-0.299 (2.35)**	-0.262 (2.02)**	-0.272 (1.74)*	-0.241 (1.69)*
Unfair competition	0.348 (1.78)*	0.310 (1.62)	0.312 (1.71)*	0.302 (1.65)*	0.302 (1.60)
Commit	-0.092 (0.24)	-0.150 (0.41)	-0.136 (0.36)	-0.142 (0.37)	-0.133 (0.37)
R_Bribe	1.676 (4.09)***				
R_Party		1.779 (2.07)**			
R_Association			0.929 (0.82)		
R_Complaint				-2.433 (1.09)	
R_Court					1.768 (0.83)
Constant	-2.729 (5.30)***	-2.052 (4.08)***	-2.177 (4.20)***	-1.589 (2.49)**	-3.114 (1.84)*
Observations	280	280	280	280	280

Estimated using probit; errors are allowed to be correlated within regions; robust z statistics in parentheses; *significant at 10%; ** significant at 5%; *** significant at 1%

Table 36. Explaining the Decision to Complain in the Kyrgyz Republic

	(1)	(2)	(3)	(4)	(5)
Age	-0.002 (0.10)	-0.002 (0.10)	-0.003 (0.12)	-0.002 (0.10)	-0.002 (0.08)
Size	0.052 (0.49)	0.052 (0.49)	0.054 (0.51)	0.053 (0.49)	0.050 (0.48)
State	N/A	N/A	N/A	N/A	N/A
Food processing	N/A	N/A	N/A	N/A	N/A
Manufacturing	0.105 (0.41)	0.106 (0.42)	0.097 (0.37)	0.105 (0.41)	0.113 (0.44)
Construction	0.655 (1.97)**	0.643 (1.90)*	0.641 (1.95)*	0.651 (1.96)**	0.654 (1.96)**
Female	-0.026 (0.22)	-0.024 (0.21)	-0.035 (0.31)	-0.021 (0.17)	-0.025 (0.21)
M_Age	-0.043 (0.92)	-0.040 (0.93)	-0.044 (0.96)	-0.042 (0.88)	-0.043 (0.97)
Political instability	0.258 (1.28)	0.258 (1.35)	0.232 (1.09)	0.255 (1.26)	0.271 (1.41)
Unfair competition	0.297 (1.30)	0.293 (1.31)	0.308 (1.35)	0.289 (1.30)	0.295 (1.27)
Commit	-0.027 (0.11)	-0.052 (0.21)	0.016 (0.06)	-0.052 (0.22)	-0.046 (0.20)
R_Bribe	0.322 (0.39)				
R_Party		-1.083 (0.25)			
R_Association			1.106 (0.67)		
R_Complaint				0.597 (0.42)	
R_Court					0.340 (0.77)
Constant	-1.881 (4.64)***	-1.679 (5.49)***	-1.865 (6.20)***	-1.772 (9.44)***	-1.882 (6.69)***
Observations	348	348	348	348	348

Estimated using probit; errors are allowed to be correlated within regions; robust z statistics in parentheses; *significant at 10%; ** significant at 5%; *** significant at 1%

Table 37. Explaining the Decision to Complain in Romania

	(1)	(2)	(3)	(4)	(5)
Age	-0.013 (2.23)**	-0.012 (2.13)**	-0.012 (2.65)***	-0.011 (2.15)**	-0.011 (2.35)**
Size	0.049 (0.39)	0.044 (0.37)	0.042 (0.35)	0.045 (0.37)	0.042 (0.35)
State	0.008 (0.04)	0.140 (0.60)	0.106 (0.51)	0.105 (0.50)	0.126 (0.53)
Food processing	-0.288 (0.44)	-0.320 (0.42)	-0.404 (0.61)	-0.344 (0.50)	-0.402 (0.61)
Manufacturing	-0.088 (0.26)	-0.115 (0.31)	-0.134 (0.38)	-0.106 (0.31)	-0.129 (0.37)
Construction	0.251 (0.97)	0.165 (0.49)	0.164 (0.52)	0.173 (0.52)	0.149 (0.42)
Female	-0.507 (4.32)***	-0.554 (5.56)***	-0.518 (4.37)***	-0.544 (4.54)***	-0.534 (4.37)***
M_Age	0.373 (2.54)**	0.352 (2.75)***	0.351 (2.36)**	0.343 (2.46)**	0.340 (2.61)***
Political instability	0.663 (3.18)***	0.709 (2.88)***	0.665 (3.43)***	0.677 (3.06)***	0.669 (2.98)***
Unfair competition	-1.205 (1.99)**	-1.119 (2.00)**	-1.192 (2.00)**	-1.174 (2.04)**	-1.193 (2.15)**
Commit	-0.665 (1.77)*	-0.621 (1.55)	-0.647 (1.73)*	-0.644 (1.64)*	-0.646 (1.59)
R_Bribe	-2.018 (5.90)***				
R_Party		-3.015 (1.19)			
R_Association			0.711 (0.38)		
R_Complaint				2.317 (0.84)	
R_Court					-0.380 (0.28)
Constant	-1.329 (1.75)*	-1.842 (2.38)**	-2.156 (2.33)**	-2.188 (2.72)***	-1.786 (2.57)**
Observations	303	303	303	303	303

Estimated using probit; errors are allowed to be correlated within regions; robust z statistics in parentheses;
 *significant at 10%; ** significant at 5%; *** significant at 1%

Table 38. Explaining the Decision to Complain in the Slovak Republic

	(1)	(2)	(3)	(4)	(5)
Age	-0.095 (1.62)	-0.096 (1.67)*	-0.091 (1.53)	-0.111 (1.75)*	-0.097 (1.67)*
Size	0.095 (1.65)*	0.093 (1.60)	0.089 (1.50)	0.110 (1.89)*	0.091 (1.54)
State	0.303 (0.53)	0.314 (0.55)	0.378 (0.66)	0.133 (0.25)	0.293 (0.51)
Food processing	0.186 (0.45)	0.198 (0.50)	0.150 (0.36)	0.211 (0.61)	0.218 (0.58)
Manufacturing	-0.258 (1.00)	-0.232 (0.90)	-0.231 (0.87)	-0.439 (1.47)	-0.237 (0.92)
Construction	0.013 (0.03)	0.026 (0.06)	0.037 (0.10)	-0.025 (0.06)	0.010 (0.03)
Female	0.662 (4.28)***	0.657 (4.23)***	0.674 (4.51)***	0.630 (3.81)***	0.661 (4.15)***
M_Age	0.080 (0.63)	0.082 (0.64)	0.075 (0.59)	0.069 (0.57)	0.085 (0.67)
Political instability	-0.121 (0.36)	-0.093 (0.31)	-0.121 (0.36)	-0.138 (0.51)	-0.097 (0.29)
Unfair competition	0.138 (0.57)	0.146 (0.61)	0.133 (0.53)	0.130 (0.62)	0.142 (0.58)
Commit	0.086 (0.25)	0.109 (0.31)	0.084 (0.24)	0.056 (0.16)	0.109 (0.32)
R_Bribe	-0.321 (0.60)				
R_Party		-0.800 (0.78)			
R_Association			-1.708 (1.65)*		
R_Complaint				-8.850 (1.24)	
R_Court					0.182 (0.09)
Constant	-1.431 (2.48)**	-1.506 (2.94)***	-1.030 (1.76)*	-0.576 (0.74)	-1.707 (1.13)
Observations	280	280	280	280	280

Estimated using probit; errors are allowed to be correlated within regions; robust z statistics in parentheses;
 *significant at 10%; ** significant at 5%; *** significant at 1%

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Endnotes

¹ The data are drawn from corruption and governance diagnostics. Reports describing the data in greater detail are World Bank [2001a, 2003] and World Bank and USAID [2000].

² E.g., Evans and Rauch [1999; 2000]; Manning, Mukherjee and Gokcekus [2000]; Nunberg [1995; 1997; 1999]; Rauch [2001]; Schick [1998];

³ We present this result with the caveat that some respondents who pay bribes but are not willing to admit to paying bribes might also not be willing to criticize the government. In this case, the importance of the credibility of the government's program to reducing the incentive for firms to pay bribes might be overstated.

⁴ The "Implementation Update" of *Reforming Public Institutions and Strengthening Governance: A World Bank Strategy*, cites a study of Bank-wide CASs that found that compared to the previous 1999 retrospective: (i) CASs that address governance and corruption issues rose from 78 to 100 percent; (ii) CASs that use governance-related triggers rose from 27 to 82 percent; and (iii) CASs that discuss audit institutions and other accountability mechanisms rose from 52 to 79 percent. In ECA, there are currently about 37 projects under preparation and 45 projects under supervision which either focus purely, or have components, on institutional/governance issues. Public sector institutional development and good governance also play increasingly important roles in CDF and PRSP initiatives in the ECA region.

⁵ Public sector performance also serves as an input for the population's utility function, although in this report we focus on the firm.

⁶ The data are drawn from corruption and governance diagnostics. Reports describing the data in greater detail are World Bank [2001a, 2003] and World Bank and USAID [2000].

⁷ <http://eng.gateway.kg/history>

⁸ <http://www.rotravel.com/romania/history/>

⁹ <http://www.slovakia.org/history4.htm>

¹⁰ Statistics on structural reform are from Freedom House, Country Report for Slovakia, 2002.

¹¹ Freedom House, country report for Kyrgyz, 2002.

¹² Freedom House, country report for Romania, 2002.

¹³ Freedom House, country report for Slovakia, 2002.

¹⁴ Freedom House, country reports for Kyrgyz, Romania, and Slovakia, 2002.

¹⁵ Freedom House, Slovakia, 2002.

¹⁶ Specifications including financial management variables could only be tested for the Kyrgyz Republic and Romania due to data limitations. This issue is explored further in the Annex.

¹⁷ Of course, this is an issue for virtually any empirical study, since the use of proxy measures are the rule rather than the exception.

¹⁸ For example, Mukherjee, Gokcekus, Manning, and Landell-Mills [2001] in Bangladesh, and Gokcekus, Manning, Mukherjee, and Nallari [2001] in Guyana.

¹⁹ Daniel Kaufmann, Gil Mehrez, and Tugrul Gurgur, 2000, "Voice of Institutions? An Empirical Investigation of Determinants of Public Sector Efficiency Utilizing Survey Responses from Public Officials" draft.

²⁰ This approach and the description of it draw from World Bank [2001b].

²¹ As the questionnaires were originally designed for multiple purposes, in the context of the governance and anticorruption dialogue, there are a number of questions that could be excluded to make room for the additional questions noted here.

²² With regard to the high perceived level of meritocracy in Romania, it should be pointed out that the survey was conducted in 2000, between the time of the adoption of the Civil Service Law in 1999 and the elections in late 2000.

²³ The approach described here was developed by Hellman, Jones, Kaufmann, and Schankerman, “Measuring Governance, Corruption, and State Capture – How Firms and Bureaucrats Shape the Business Environment in Transition Economies.” *World Bank Policy Research Working Paper* 2312, April 2000.

²⁴ By contrast, the data and approach in the next chapter are more amenable to pooling of data across countries.

²⁵ See, for example, Barbara Nunberg, “Managing the Civil Service: Reform Lessons from Industrialized Countries,” World Bank Discussion Paper No. 204. Washington, DC; and J. Edgardo Campos and Sanjay Pradhan, “Building Blocks toward a More Effective Public Sector”, Economic Development Institute, The World Bank, Washington, DC, 1998.

²⁶ Specifically, Kaufmann, Mehrez and Gurgur [2000] argue that partial correlations do not control for endogeneity and are therefore suspect.

²⁷ The limited range of elements of the human resource management systems that could be included in these models limits the conclusions we can draw on which elements contribute most significantly to meritocratic human resource management practices. Future applications of this methodology could improve on our estimates by including measures in the survey instruments of the various elements of human resource management systems. Our analysis of the Kyrgyz data illustrates the promise of such extensions of this model.

²⁸ The Romanian Civil Service Law of 1999 was not under implementation at the time of the surveys, nor was there a specific law on civil service in the Slovak Republic at the time of the surveys.

²⁹ As explained in the Annex, it was not possible to examine the determinants of quality administrative procedures in Romania due to data limitations.

³⁰ Associated Press, “Press freedom under threat in Romania,” 11/05/2002

³¹ Implications for sequencing from this model are drawn in the usual way that dynamic implications are drawn from static models, and with the very same limitations.

³² On a related issue, see Allen Schick, 1998, “Why Most Developing Countries Should Not Try New Zealand’s Reforms,” *The World Bank Research Observer* 13-1, February, pp. 123-31. Schick argues that basic reforms to strengthen rule-based government should be undertaken before New Zealand-type (performance-incentive based) reforms.

³³ BEEPS 2002, own calculations.

³⁴ BEEPS 2002, own calculations.

³⁵ The data for Romania and the Slovak Republic measure the percentage of firms that have paid bribes during the past *three* years. The data for the Kyrgyz Republic measure the percentage of firms that have paid bribes during the past *one* year. Hence, the estimate for the Kyrgyz Republic is biased downward.

³⁶ Even if the complaint system is well functioning, it may lead to socially undesirable outcomes. For example, Prendergast [2000] shows theoretically that when customer complaints are used to launch investigations of corruption the customer can use this to extort the official.

³⁷ For example, research on the influence of oligarchs over the state in Russia is quite extensive. For example, see Hellman 1996 and VCIOM 2002.

³⁸ The theoretical and empirical literature on the effect of campaign contributions on voting in Congress is quite extensive. For a recent example with references to earlier literature, see Ameden and Cash 2001.

³⁹ Prendergast 2000.

⁴⁰ Other aspects of the business environment may be relevant as well. We chose these three because we expected *ex ante* that they would be relevant to the choice of particular instruments of influence (political instability – political parties; unfair competition – business associations; Government commitment to anticorruption – bribery vs. complaint systems/courts). While all were relevant to the decision to influence the state, the precise modality of the effect was not always as predicted.

⁴¹ It is possible that the error terms may be correlated across the four equations, for example if there is a firm-specific omitted variable that applies to all four equations. In this case, it would be more efficient, although computationally more complex, to estimate all these equations jointly.

⁴² In fact, in Romania government commitment may actually discourage complaints, possibly because managers believe that action is already being taken.

⁴³ The estimates of the factors that influence the decision to pay a bribe to tax authorities in Table 19 could be biased, if the variables that influence the likelihood of contact with those authorities also influence whether a firm pays a bribe. For example, if larger firms are more likely to come into contact with tax authorities, then the resulting estimate of the coefficient for SIZE might be biased upward. Using a Heckman procedure for limited dependent variables, we found no basis for this type of bias. These results are not presented.

⁴⁴ We present this result with the caveat that some respondents who pay bribes but are not willing to admit to paying bribes might also not be willing to criticize the government. In this case, the importance of the credibility of the government's program to reducing the incentive for firms to pay bribes might be overstated.

⁴⁵ The share of firms that are avoiders may actually be smaller than reported. Some of these firms may simply be unwilling to admit that they have paid bribes, and so are in actuality collaborators. However, we asked firms in the Kyrgyz Republic and Romania (unfortunately, not in the Slovak Republic) whether it is possible to avoid corruption altogether. About a third of managers in the Kyrgyz Republic and Romania said that it is possible. Therefore, the community of avoiders in each country is likely to be large.

⁴⁶ The usefulness of Murrell's methodology to the design of judicial reform might be strengthened by the collection and use of additional data on judicial institutions, for example, court and case management practices, the cost and quality of legal advice, and the effectiveness of enforcement of judicial decisions.

⁴⁷ An example of this approach might be the following. Suppose we wish to apply the methodology to evaluate the performance of tax bodies in a country. One very simple model that could be used to evaluate the efficacy of different public sector institutions is the following:

$$R = \mathbf{a}_0 + \mathbf{a}_1M + \mathbf{a}_2B + \mathbf{a}_3C + \mathbf{e}$$

$$C = \mathbf{b}_0 + \mathbf{b}_1R + \mathbf{a}_2S + \mathbf{a}_3X + \mathbf{m}$$

where: R is a measure of the revenues collected by the tax body in a particular region,

M is a measure of the meritocracy in public administration,

B is a measure of the effectiveness of financial controls

C is a measure of the *use* of complaint and appeal systems

S is a measure of the *availability* of complaint and appeal systems,

X is a vector of socio-economic characteristics,

\mathbf{a}_i and \mathbf{b}_i are coefficients, and

\mathbf{e} and \mathbf{m} are error terms.

Notice that the performance of the tax body is a function of the use of complaint and appeals system. Also, the use of the complaint and appeals system is a function of the performance of the tax body as well as the availability of formal complaint and appeals mechanism. A fully specified model might include additional equations that describe the linkages between the systems for personnel administration, financial management, and complaints and appeals, along the lines of the model described in Chapter 3.

⁴⁸ For example, data limitations prevent estimation of the role of specific elements of personnel management systems (e.g., competitive recruitment procedures, appeals mechanisms, competitiveness of remuneration, career advancement prospects, personnel performance evaluations that actually sort staff on the basis of performance, etc.) in creating meritocratic personnel management practices. But the instrument developed could readily be expanded and refined to permit such modeling.

Similarly, to get a better understanding of the role of the public-private interface, we would recommend explicitly using a modeling approach that explicitly links the methodologies presented in Chapters 3 and 5. This would require a sampling design that facilitated this type of analysis. In short, future research could deepen the findings reported in this paper by expanding the data elements collected in the surveys and estimating more complete models.

⁴⁹ Ross M. Stolzenberg, [2001, p. 71], cites a number of studies, referenced below: "In all analyses reported here, health is reported by respondent as excellent, very good, good, fair, or poor. These are measures of overall health and indicate general physical functioning and comfort, rather than the condition of specific organ systems. Overall health does not distinguish between a kidney disease and a liver disease or a painful arthritic condition. A person in poor health might suffer from one severe health condition, or from two or more moderate conditions that jointly have the same consequences as one severe condition. Several large studies, done over an extended period by researchers from varied medical and social science disciplines, using data from a wide range of population groups, have found that U.S. survey respondents are able to make subjective assessments of their overall health, and that these self-assessments correlate well with objective, examination-based health evaluations made by physicians. Individuals' reports of their own health are more accurate predictors of their longevity than physicians' examination-based evaluations [Idler and Kasl 1991; Kaplan 1987; Mossey and Shapiro 1982]. If survival is the ultimate measure of health, then this finding suggests that self-reports of health have higher criterion validity than physician assessments [see Cronbach 1973]. These subjective assessments are sufficiently valid and reliable to support statistical analysis of the causes of health [Davies and Ware 1981; Mossey and Shapiro 1982; Taubman and Rosen 1982, p. 140; Ross and Wu 1995]. Finally, it is noteworthy that, in medical treatment, physicians consider self-reported health data sufficiently reliable and valid that medical diagnosis begins with the patient's self-reported health complaints and self-reported health history, and further physical examination is guided by the patient's responses, or the responses of a close relative, to questions about the patient's health."