

Patterns of corruption in the postcommunist world:

Evidence from the 2002 BEEPS survey

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# 1 Introduction

Corruption—the misuse of public office for private gain—is a problem in most countries of the world, and the postcommunist countries are no exception. A number of political scientists and economists have examined the extent and causes of bribery in the former communist countries, advancing theories and trying to test them with various kinds of data.<sup>1</sup> Most agree that venal bureaucrats—and the obstacles to doing business they create—have slowed economic growth in these countries in the years since the start of transition. Political leaders in just about all countries have denounced corruption and called on their law enforcement agencies to fight it.<sup>2</sup>

In a previous paper (Treisman 2003), I analyzed how different measures of corruption varied across the postcommunist countries as of the late 1990s. I found that most of the variation could be explained by several factors that were fixed at the time the Berlin Wall fell in 1989. Variables measuring the different political or economic course of transition in different countries did not seem to have much independent influence (although the course of transition might, itself, have been determined in part by initial conditions.) I concluded that the different levels of economic development and historical

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<sup>1</sup> For a few examples, see Hellman, Jones and Kaufmann (2000), Shleifer (1997), Broadman and Recanatini (2000), EBRD (1999), Levin and Satarov (2000), Treisman (2003), Guriev (2004).

<sup>2</sup> As recently as February 2005, Russia's prime minister, Mikhail Fradkov, criticized the police for inadequate measures against bribe-takers: "One cannot speak of any effective struggle with corruption." See Petrakova (2005).

legacies of different postcommunist countries had a strong influence on their levels of corruption in the first decade of transition.

This paper, which focuses on the kinds of administrative corruption that affect business operations and growth, provides an update, examining the results of a major, cross-national survey of firms conducted by the World Bank and European Bank for Reconstruction and Development (EBRD) in 2002. This survey, which repeated one conducted originally in 1999, generated a rich source of data on the types and scale of unofficial payments that firms typically pay to bureaucrats. In the paper, I describe the patterns of corruption revealed by this survey, and offer a few, preliminary thoughts about their interpretation.

## 2 The Survey

In 2002, the European Bank for Reconstruction and Development and the World Bank interviewed managers in 6,153 firms in 26 postcommunist countries for the second round of its “Business Environment and Enterprise Performance Survey” (BEEPS).<sup>3</sup> The survey repeated a similar one of 4,104 firms in 25 countries conducted in 1999. Questions covered a variety of topics, including the operations of the firms, perceptions of the business environment, and—most relevant here—the extent to which different types of “unofficial payments” were required to deal with various tasks that businesses faced.

The organizers designed the sample to be broadly representative of firms in the given country in their size, sector, and geographical location. They included enterprises engaged in industry (39 percent), including mining, construction, and manufacturing, as

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<sup>3</sup> For details, see Fries, Lysenko and Polanec (2003).

well as services (61 percent), including transportation, storage, communications, trade, real estate, hotels and restaurants. In size, about 68 percent of the firms were small (2-49 employees), 19 percent were medium-sized (50-249 employees) and the remaining 14 percent were large (250 to 9,999 employees) (Fries et al. 2003, p.6). (Firms with only one employee or more than 10,000 were excluded from the sample.) Firms varied in their ownership: 68 percent were *de novo* private firms, 18 percent were privatized enterprises, 14 percent were state owned, and 14 percent were foreign owned. Finally, the sample was geographically diverse, with one quarter of the firms located in rural areas, and the other three quarters in different sizes of cities. Surveys were completed with 37 percent of the firms originally contacted. Some 38 percent refused or were unavailable to participate. The others were excluded because of the need to fill the sample's quotas for different types of firm.

The survey included both questions about concrete facts—e.g., what percentage of the firm's revenues typically were paid for particular purposes—and questions about more subjective evaluations—e.g., to what extent did respondents believe the legal system would uphold their property rights in business disputes. There is some potential for perceptual biases in answering many of the questions, biases which might differ across countries in significant ways. Respondents in some countries might be more willing to talk openly about unofficial payments or to reveal facts about their firm's operations. In some countries, criticism of state authorities might be considered more acceptable than in others. The survey had to be aborted in Turkmenistan after one of the interviewers was invited for a private talk with the security service. The survey's designers were quite aware of such potential problems, and argue that objective measures

correlate with the subjective responses in ways that seem generally appropriate (Fries et al. 2003). Still, such concerns should be considered when interpreting the results.

### 3 Unofficial payments by businesses: a snapshot circa 2002

Bearing in mind the caveat noted above, the survey results offer a fascinating picture of the ways that administrative and political corruption were affecting business operations in the post-communist countries as of 2002.<sup>4</sup> Two questions in the survey were particularly relevant. One focused on the frequency with which firms were obliged to make unofficial payments. Respondents were asked whether they would agree that: “It is common for firms in my line of business to have to pay some irregular ‘additional payments’ to get things done.”<sup>5</sup> They could reply that they thought this was true: “always”, “usually” or “mostly”, “frequently”, “sometimes”, “seldom”, or “never”.<sup>6</sup> I added together the percentages of respondents that thought this was “always”, “usually” or “mostly”, or “frequently” true to get a measure of the “frequency of corruption” (see Table 1).

The “frequency of corruption” varied across countries in interesting ways. As of 2002, the proportion saying unofficial payments were “always”, “usually” or “frequently” necessary ranged from 44 percent in Kyrgyzstan and 39 percent in Russia to 7 percent in Slovenia and 12 percent in Estonia. The mean was about 25 percent and the median about 23 percent (in Hungary and Macedonia).

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<sup>4</sup> For earlier discussions, see Hellman and Kaufmann (2002), Hellman, Jones and Kaufmann (2000).

<sup>5</sup> In 2002, the question spoke of ‘additional payments/gifts’ and gave some examples of things that such payments might be necessary for.

<sup>6</sup> The option “usually” was used in 2002, “mostly” in 1999.

The second question focused on the cost of such payments to the firm. In the 1999 survey, respondents were asked: “On average, what percent of revenues do firms like yours typically pay per annum in unofficial payments to public officials?” In 2002, respondents were asked a similar question: “On average, what percent of total annual sales do firms like yours typically pay in unofficial payments/gifts to public officials?” I used the responses to calculate the average reported “burden of bribery” in the different countries. In the 1999 survey, responses were classified into a number of ranges: 0 percent, less than one percent, 1-1.99 percent, 2-9.99 percent, 10-12 percent, 13-25 percent, and over 25 percent. To estimate the average, I coded each of the inner ranges at their mid-points, while coding zero as zero and 25 as 25, before averaging the responses for each country. This is, thus, a conservative estimate of the cost of such payments, since it assumes there were no responses greater than 25. For the 2002 survey, I did not have access to detailed breakdowns, but instead used the estimates of the average bribe tax reported in Fries et al. (2003, p.25). This is presented as the average response within each country; (it is not clear whether it was estimated from data reported originally in ranges as in 1999.) The “bribe burden” thus constructed estimates the percentage of revenues that “the typical firm” used for unofficial payments (see Table 1).

As of 2002, the reported “bribe burden” ranged from about 3.7 percent of revenues in Kyrgyzstan and 3.3 percent in Albania to 0.6 percent in Croatia and 0.3 percent in Estonia. Such payments came to 1.6 percent of revenues in the average country, and 1.4 percent in the median country (Slovakia or Russia).<sup>7</sup>

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<sup>7</sup> The World Bank conducted similar surveys in some other, more economically developed countries. The corresponding percentage saying in 1999 that unofficial payments were “always”, “usually”, or “frequently” necessary was 37 percent in Turkey, 28 percent in France, 21 percent in the US, 20 percent in Germany, 5 percent in the UK, and 1 percent in Sweden (downloaded from the World Bank’s website at

In both 1999 and 2002, the reported frequency of unofficial payments and the aggregate cost they imposed on businesses were strongly correlated (at  $r = .60$  in 1999 and  $r = .81$  in 2002, both highly significant; the 2002 relationship is graphed in Figure 1). Looking at Figure 1, the most corruption-prone countries are clustered in the top-right corner (Kyrgyzstan, Albania, Georgia, Tajikistan, and Romania), while the least corrupt are in the bottom-left (Slovenia, Estonia, Croatia, Czech Republic, and Armenia).

Table 1: Frequency and cost of unofficial payments, 1999 and 2002

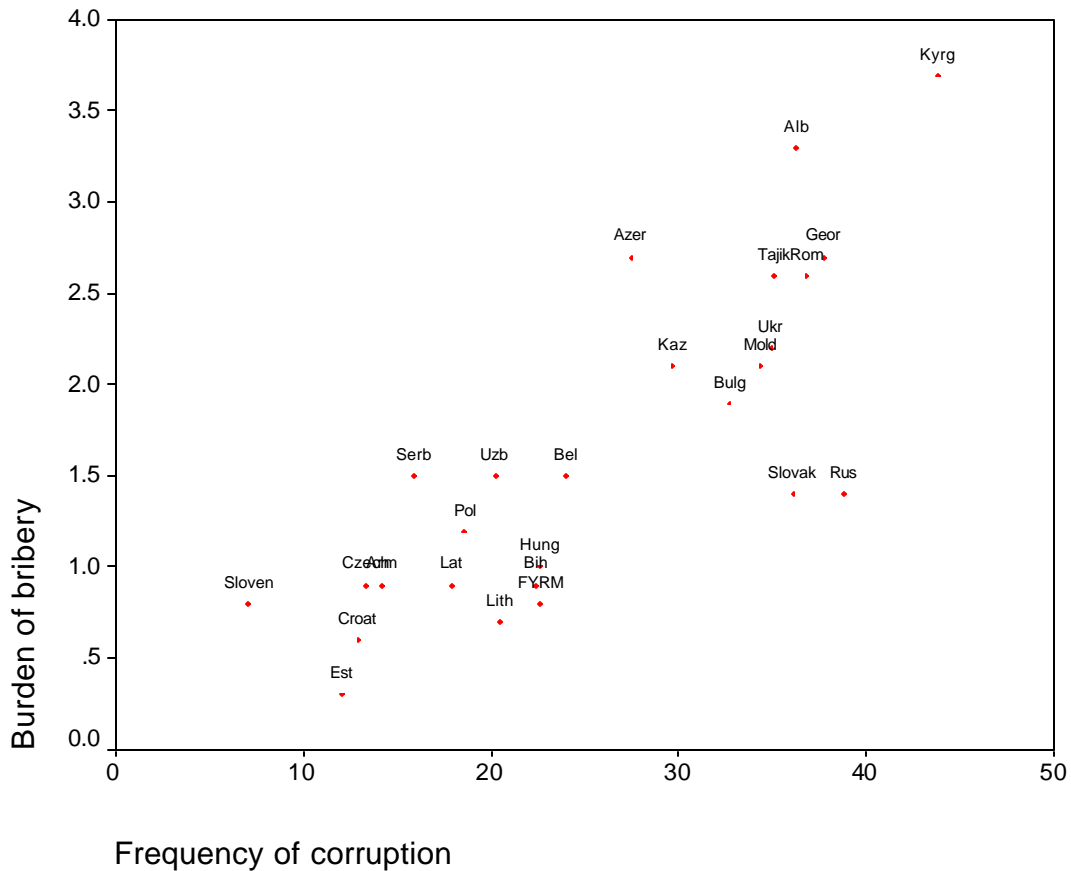
	Corruption frequency 1999 (%)	Corruption frequency 2002 (%)	Change in corruption frequency (%)	Bribe burden 1999 (% of revenues)	Bribe burden 2002 (% of revenues)	Change in bribe burden (% of revenues)
Azerbaijan	59.5	27.5	-32	6.5	2.7	-3.8
Romania	50.9	36.8	-14.1	3.7	2.6	-1.1
Albania	46.8	36.3	-10.5	4.3	3.3	-1.0
Uzbekistan	46.2	20.2	-26	5.5	1.5	-4.0
Armenia	40.3	14.2	-26.1	6.6	0.9	-5.7
Ukraine	39	34.9	-4.1	6.3	2.2	-4.1
Georgia	36.8	37.8	1.0	7.9	2.7	-5.2
Moldova	34.4	34.4	0	5.7	2.1	-3.6
Slovakia	33.6	36.1	2.5	3.4	1.4	-2.0
Poland	33.1	18.6	-14.5	2.2	1.2	-1.0
Macedonia	32.9	22.6	-10.3	3.2	0.8	-2.4
Hungary	32.3	22.6	-9.7	2.7	1.0	-1.7
Russia	30.6	38.8	8.2	3.8	1.4	-2.4
Kyrgyzstan	28.1	43.8	15.7	5.3	3.7	-1.6
Kazakhstan	26.2	29.7	3.5	4.2	2.1	-2.1
Czech Rep	25.9	13.3	-12.6	4.1	0.9	-3.2
Lithuania	23.1	20.5	-2.6	3.8	0.7	-3.1
Bulgaria	23	32.7	9.7	3.2	1.9	-1.3
Latvia	22	17.9	-4.1	2.1	0.9	-1.2
Bosnia Herz	20.5	22.4	1.9	3.8	0.9	-2.9
Croatia	17.7	12.9	-4.8	1.7	0.6	-1.1
Belarus	14.8	24	9.2	2.8	1.5	-1.3
Estonia	12.9	12.1	-0.8	2.4	0.3	-2.1
Serbia Mont	9.5	15.9	6.4	2.2	1.5	-0.7
Slovenia	7.7	7.1	-0.6	3.1	0.8	-2.3
<i>Mean</i>	29.9	25.3	-4.6	4.0	1.6	-2.4
<i>Median</i>	30.6	22.6	-2.6	3.8	1.4	-2.1

Sources: Fries et al (2003, p.25); Hellman, Jones, and Kaufmann (2000); data downloaded from the World Bank BEEPS interactive gateway <http://info.worldbank.org/governance/beeps2002/> on January 25, 2005. See text for definitions of "corruption frequency" and "bribe burden".

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<http://info.worldbank.org/governance/wbes>, February 14, 2005). In all except Turkey, Germany, and the US, the average proportion of revenues paid was very small.

Figure 1: The pattern of corruption, 2002



Sources: Fries et al (2003, p.25); data downloaded from the World Bank BEEPS interactive gateway <http://info.worldbank.org/governance/beeps2002/> on January 25, 2005. “Frequency of corruption”: proportion of respondents that said it was “always”, “usually”, or “frequently” necessary to make unofficial payments to “get things done”. “Burden of bribery”: average percentage of revenues reportedly paid by the typical firm as unofficial payments to “get things done”.

What might explain the crossnational variation? In Treisman (2003), I examined various indicators of perceived corruption for post-communist countries and found that three possible determinants were often or always significant—economic development, as measured by GDP per capita; the proportion of the population that were Protestant; and the number of years the country had been under Communist rule. To investigate the determinants of corruption as of 2002, I ran several regressions for the 2002 burden of



bribery and frequency of corruption variables (see Table 2). As before, I found that economic development and Protestant religious traditions were significantly associated with lower corruption. For each thousand dollars in a country's per capita GDP as of 2001, the bribe burden was about .12 percentage points lower, and the frequency of corruption was about 1.3 percentage points lower. For every 10 percent of the population that were Protestant adherents, the bribe burden was some .14-.16 percentage points lower, and the frequency of corruption was a bit more than one percentage point lower. (The proportion Protestant ranged from about zero in many of the former Soviet countries to 22 percent in Hungary and 66 percent in Estonia. Based on the regressions, one would expect Estonian firms to pay about one percentage point of revenues less in bribes than firms in countries with no Protestants.)

Of course, lower corruption may lead to faster economic development rather than—or as well as—the reverse. Interestingly, I found that the level of economic development *as of 1989* predicted 2002 levels of corruption about as well as the current level of economic development. (This was also true for a variety of indicators of corruption as of 1999—see Treisman (2003).) This might suggest that recent experience with economic development is less important than longer run trends. But it might have a simpler explanation: in this group of countries, GDP per capita as of 1989 and as of 2001 are, in fact, highly correlated ( $r = .91$ ). I tried breaking down current GDP per capita into two parts—GDP per capita as of 1989, and the change between 1989 and 2001. In regressions including both of these, the 1989 level was more significant, and the coefficients on it were just about 25 percent lower than in the regressions in Table 2.

Unlike in the analysis of 1999 corruption data, I did not find that the number of years under Communism had any discernible effect on current levels of corruption, once one controlled for economic development and religion. I also did not find that the current level of political freedoms (as measured by Freedom House's political rights index) bore any relationship to the frequency of corruption or the bribe burden.

Table 2: Determinants of corruption, 2002

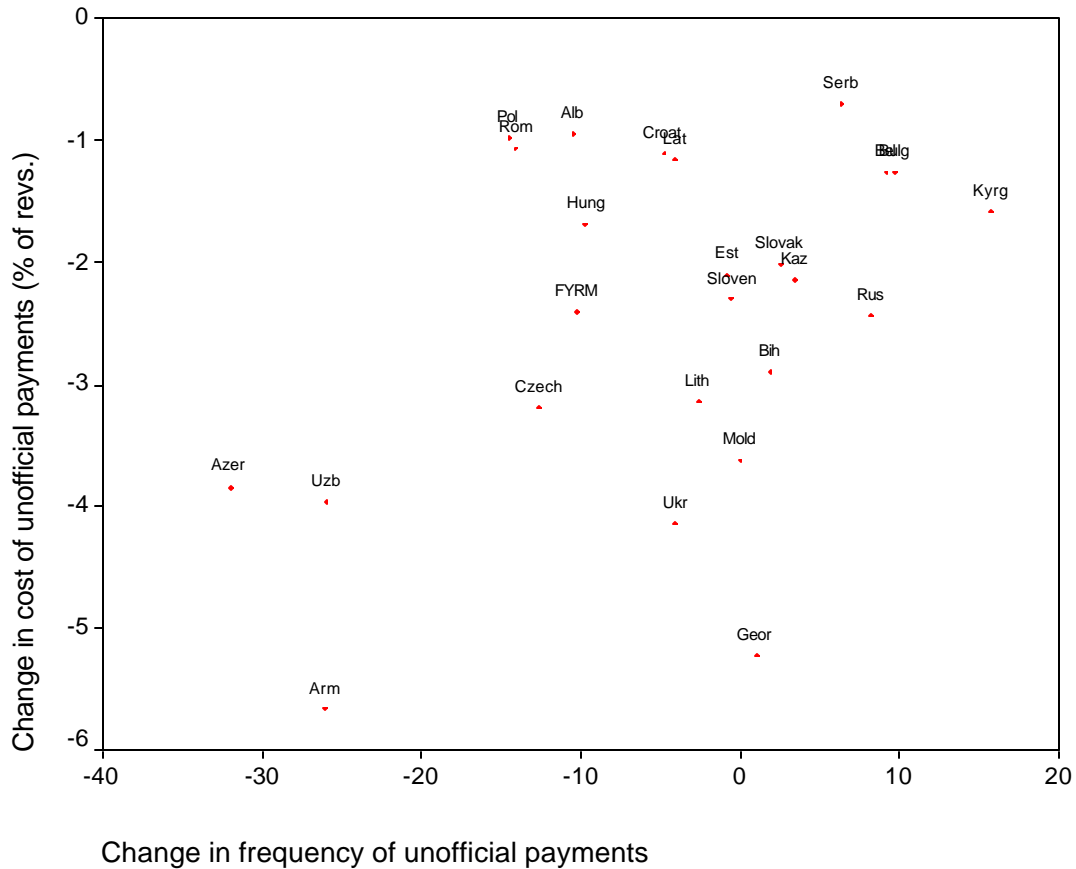
	Bribe burden		Corruption frequency	
Gdp per capita PPP 2001 (thousand dollars)	-.12** (.04)		-1.33** (.45)	
Gdp per capita PPP 1989 (thousand dollars)		-.20** (.07)		-2.01** (.65)
Percent of population Protestant	-.014** (.004)	-.016** (.004)	-.11 (.06)	-.14* (.05)
Years under communist rule	.003 (.014)	.007 (.011)	-.016 (.136)	.055 (.133)
Constant	2.31* (1.03)	2.24* (.91)	36.75** (9.01)	33.26** (8.43)
R-squared	.437	.468	.349	.344
N	25	24	25	24

OLS regressions. White heteroskedasticity-corrected standard errors in parentheses. \*\* p < .01; \* p < .05.

#### 4 Change in aggregate corruption levels, 1999-2002

The two rounds of the BEEPS survey make it possible to examine the change in the frequency and size of unofficial payments between 1999 and 2002 (see Table 1 and Figure 2).

Figure 2: Change in reported corruption, postcommunist countries 1999-2002



Sources: Fries et al (2003, p.25); Hellman, Jones, and Kaufmann (2000); data downloaded from the World Bank BEEPS interactive gateway <http://info.worldbank.org/governance/beeps2002/> on January 25, 2005.

Change in frequency of unofficial payments is change between 1999 and 2002 in the percentage of respondents who said that it was “always”, “frequently” or “usually/mostly” necessary to make unofficial payments to “get things done”. Change in cost of unofficial payments is change between 1999 and 2002 in the average percentage of revenues respondents said firms like theirs typically spent in unofficial payments. Respondents indicated a range; I have imputed as described in the text.

The first point to notice is that the frequency—and, even more significantly, the burden—of bribery appear to have fallen on average in the postcommunist countries during these three years. (This echoes a general finding of the survey—that the business environment in these countries improved on average between 1999 and 2002 (Fries et al.

2003, p.12).) The average bribe burden fell in all 25 countries that were included in both surveys.<sup>8</sup> Between 1999 and 2002, the percentage of revenues reportedly spent on unofficial payments fell by 2.4 percentage points in the average country, and by 2.1 percentage points in the median country (Estonia or Kazakhstan). The improvement ranged from a reduction of 5.7 percentage points (in Armenia) to 0.7 percentage points in Serbia and Montenegro.

The change in the reported frequency of corruption varied dramatically across countries. In Azerbaijan, the frequency dropped by 32 percentage points, and Uzbekistan and Armenia saw reductions of about 26 points. At the other end of the scale, the frequency of corruption rose by almost 16 percentage points in Kyrgyzstan. Nevertheless, on average this measure also improved somewhat between 1999 and 2002, falling in 15 of the 25 countries. In the average country, the frequency of corruption fell by 4.6 percentage points, and in the median country (Lithuania) it fell by 2.6 percentage points.

What explains the variation? While Uzbekistan, Armenia, and Azerbaijan appear to have made dramatic improvements in reducing both the frequency and the cost of corruption, Serbia, Belarus, Bulgaria, and Kyrgyzstan saw the frequency of corruption increase. In part, this variation represents simply regression to the mean: countries with relatively high corruption in 1999 tended to improve in subsequent years, while those that started with relatively low corruption tended to deteriorate. (The change in both the frequency and the burden of bribery was strongly negatively correlated with the 1999 levels, at  $r = .67$  and  $r = .84$ , respectively.) If one controls for the starting point, the countries that stand out for their dramatic improvements during these years are Armenia, followed by Uzbekistan, the Czech Republic, Estonia, and Slovenia, while those that

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<sup>8</sup> Tajikistan was not included in 1999, but was in 2002.

stand out for deteriorations are Kyrgyzstan, followed by Albania, Romania, Bulgaria, and Russia.

I do not have a good explanation for the remaining variation. Steves and Rousso (2003) used the BEEPS survey to study the effectiveness of government anti-corruption programs in these countries during 1999-2002, and found little evidence that such measures could explain the variation. They found, first, that anti-corruption programs were more likely to be adopted where they were “needed least”—in countries with the lowest levels of administrative corruption. Second, they found that “omnibus anticorruption activity and membership in international anti-corruption conventions” did not reduce corruption. In fact, they found that countries that worked hardest at such measures tended to have a larger increase in reported corruption levels. The one encouraging finding was that “new anti-corruption legislation aimed at reducing the opportunities for rent-seeking in areas such as financial transactions and political party finance are correlated with lower levels of some forms of administrative corruption.” The most one can say based on this is that some fine-grained legislative reforms may have reduced the opportunities for specific types of corruption.

## 5 Payments for different purposes

The surveys offer insight into the different purposes for which firms make unofficial payments in different countries. Besides asking whether it was necessary to make unofficial payments “to get things done”, the survey asked about the need for such payments to accomplish a list of specific objectives. Respondents were asked how often a firm like theirs would typically make unofficial payments: to get connected to and

maintain public services (electricity and telephone); to deal with courts; to deal with customs/imports; to obtain business licenses and permits; to influence the content of new legislation, rules, decrees etc.; to obtain government contracts; to deal with taxes and tax collection; to deal with environmental inspections; to deal with occupational health and safety inspections; and to deal with fire and building inspections. (The questions about inspections were asked in 2002 but not in 1999.) I constructed a measure of the frequency of corruption for each of these subcategories as of 2002 (as before, combining the percentages of respondents that said it was “always”, “usually”, or “frequently” necessary to make unofficial payments).

As can be seen from Table 3, the frequency of different types of payments varied a great deal within a given country. For instance, 23 percent of Estonian respondents thought unofficial payments were necessary for obtaining government contracts, but less than one percent thought they were necessary for dealing with the courts. Frequencies also varied greatly across countries. Unofficial payments to deal with tax issues were considered common by less than two percent of Estonian respondents—but by almost half those in Tajikistan.

What might explain why unofficial payments are much more common for particular purposes in some countries than in others? Some types of corruption were strongly correlated with lower economic development—but this was not true of others (see Table 4). Unofficial payments to deal with tax administration, the allocation of business permits and licenses, for connection to public utilities, over customs, and to a lesser extent over the courts correlated negatively with country income. These

Table 3: Frequency of unofficial payments for different purposes, 2002

Public services	%	Courts	%	Customs	%	Environmental inspections	%	Fire & building inspections	%	Health inspections	%	Permits	%	Government contracts	%	Legislation	%	Tax	%
Lith	0.5	Sloven	0.6	Sloven	1.1	Sloven	2.8	Arm	3	Arm	1	Lith	3	Arm	1	Arm	1	Est	1.6
Sloven	0.5	Est	0.8	Arm	3	Arm	3	Sloven	4.9	Kaz	3.6	Hung	6	Mold	4.2	Czech	1.7	Sloven	2.3
Lat	1.2	Arm	1	Est	4	Lith	3	Hung	5.1	Mold	4.1	Pol	6.9	Azer	6	Bel	2	Arm	5
Arm	2	Pol	2.2	Lat	5.1	Croat	4	Lith	5.5	Sloven	4.3	Arm	7	Sloven	6.5	Uzb	2.3	Lith	5
Est	2.1	Lith	2.5	Czech	5.3	Kaz	4.1	Alb	6	Hung	5.2	Sloven	7	Lith	9.2	Mold	2.8	Pol	5.1
Mold	2.4	Azer	3	Pol	5.6	Uzb	4.4	Est	7.5	Tajik	5.3	Czech	8.1	Uzb	9.6	Sloven	2.9	Lat	6
Slovak	2.5	Kaz	3.9	Lith	5.7	Alb	5	Pol	8.1	Lat	5.5	Est	8.5	Kaz	12.7	Azer	3	Czech	6.9
Pol	2.6	Hung	4.3	Rus	10	Lat	5.1	Croat	8.5	Lith	5.5	Lat	9.2	Bel	13	Kaz	3	Croat	7.1
Bel	3	Czech	4.5	Hung	10.8	Czech	5.7	Uzb	8.7	Uzb	5.6	Uzb	10.8	Rus	14	Lith	3	Bel	9
Croat	3.4	Mold	4.6	Azer	11	Hung	6	Czech	8.9	Azer	8	Croat	12.3	Kyrg	14.1	Hung	3.5	Hung	9.8
Uzb	4.3	Bel	5	Uzb	11.4	Est	6.2	Mold	8.9	Rus	9	Bel	14	Bulg	15.8	Est	3.9	Slovak	10.1
Kaz	4.5	Uzb	5.3	Croat	11.5	FYRM	7.4	Slovak	10.3	Kyrg	9	Kaz	14.6	Pol	16.7	Rus	4	Rom	10.6
Rom	4.6	Rus	6	Kaz	11.5	Pol	7.4	Geor	11.4	Est	9.1	Serb	15.6	Lat	17.1	Slovak	4.1	Bulg	12.6
Hung	5	Lat	6.7	Bel	12	Bel	8	Kaz	12.4	Bulg	10.3	Mold	16.3	Hung	17.9	Croat	5	Serb	13.5
Czech	5.2	Croat	8.3	Ukr	17.3	Mold	8.7	Azer	13	Geor	10.4	Slovak	16.4	Croat	18	Pol	5.1	Kaz	15.8
FYRM	5.6	Ukr	8.6	Serb	17.9	Bulg	9.1	Lat	13	Alb	12	Azer	17	Ukr	18.1	Tajik	5.1	Uzb	16.4
Ukr	8.3	Serb	10.6	Slovak	17.9	Geor	9.6	Rom	13.4	Pol	12.7	Geor	19.9	Serb	19.1	FYRM	5.6	FYRM	16.9
Kyrg	9	Slovak	12.3	FYRM	19.6	Rus	10	FYRM	13.6	Czech	13.1	Rus	20	Tajik	19.1	Bulg	6	Rus	18
Rus	10	Rom	14	Rom	20.5	Bos	10	Serb	13.7	Slovak	13.1	Kyrg	21	Czech	19.5	Serb	6.4	Ukr	21.1
Azer	10	Kyrg	14.1	Kyrg	21.7	Serb	10.7	Tajik	13.9	Croat	14.4	Bos	22	FYRM	20.3	Ukr	6.4	Azer	23
Bulg	10	Bulg	14.3	Geor	24.4	Slovak	11.2	Bel	15	Bel	15	Alb	24	Rom	21.4	Lat	6.7	Mold	30.8
Geor	11.1	FYRM	14.4	Bulg	25.9	Tajik	11.7	Bos	16	Serb	18.5	Ukr	24.2	Geor	21.6	Alb	8	Bos	31
Alb	14	Geor	14.8	Tajik	26.9	Azer	12	Bulg	16.4	Rom	20.8	Rom	24.6	Bos	23	Kyrg	8.8	Geor	43.9
Bos	15	Tajik	16	Mold	27.6	Ukr	12.6	Kyrg	18	FYRM	20.9	Bulg	25.5	Est	23.3	Rom	8.8	Alb	44
Serb	15.5	Alb	21	Bos	30	Rom	14.8	Rus	21	Ukr	22	FYRM	25.9	Slovak	27.5	Geor	8.9	Kyrg	44.2
Tajik	19.1	Bos	24	Alb	45	Kyrg	16.6	Ukr	25.1	Bos	27	Tajik	31.1	Alb	33	Bos	11	Tajik	48.8

Source: data downloaded from the World Bank BEEPS interactive gateway <http://info.worldbank.org/governance/beeps2002/> on January 25, 2005. Percentages are the proportion of respondents who said it was "always", "usually/mostly", of "frequently" necessary to make unofficial payments for this purpose, 2002.

Respondents were asked: "Thinking now of unofficial payments/gifts that a firm like yours would make in a given year, could you please tell me how often would they make payments/gifts for the following purposes: To get connected to and maintain public services (electricity and telephone); To deal with courts; To deal with customs/imports; To obtain business licenses and permits; To influence the content of new legislation rules decrees etc.; To obtain government contracts; To deal with taxes and tax collection.

correlations were as strong or stronger when economic development was measured *as of 1989* than when it was as of 2001.<sup>9</sup> By contrast, corruption over government contracts and environmental inspections did not correlate—or perhaps even correlated *positively*—with economic development. Some relatively developed countries—Estonia, Slovakia, Hungary—had a relatively high frequency of corruption over government contracts, and in each of these countries the reported frequency rose in 1999-2002, by 7, 8, and 15 percentage points respectively.<sup>10</sup>

Table 4: Correlations between frequency of corruption for particular purposes (2002) and economic development

Correlation with	Tax	Permits	Public services	Customs	Courts	Fire & building inspections	Legislation	Health inspections	Government contracts	Environmental inspections
2001 GDP per capita PPP	-.68**	-.56**	-.50**	-.53**	-.37	-.31	-.29	.03	.14	.14
1989 GDP per capita PPP	-.68**	-.46*	-.53**	-.58**	-.47*	-.11	-.35	.07	-.05	.20

Sources: see notes to previous tables. 1989 data from Fischer and Sahay (2000). Similar results if one uses PPP estimates from the World Bank's *World Development Indicators*.

Table 5 shows the change in reported frequencies of unofficial payments for these different purposes in 1999-2002. Some types of corruption seem to be declining in the average postcommunist country. This is true for bribery involving public services, courts, and customs. By contrast, corruption over legislation, government contracts, and taxes appears to be becoming more widespread. In both the average and the median country,

<sup>9</sup> The one exception is corruption over business permits, which correlated more strongly with GDP per capita in 2001.

<sup>10</sup> Controlling for GDP per capita, there did not appear to be any significant relationships between these variables and the Freedom House measure of political rights (as of 2001).



the perceived frequencies with which firms make unofficial payments to influence government rule-making, to get public contracts, or to extract tax breaks increased.

Between 1999 and 2002, a few countries—Armenia, Azerbaijan, and Romania—reduced the frequency of each type of corruption. In some others—Kyrgyzstan, Serbia and Montenegro—the frequency of each type of corruption increased. The remaining countries had a more mixed picture of improvements and declines.

Table 5 Change in frequency of unofficial payments for different purposes, 1999-2002, percent of respondents

	Public services	Courts	Customs	Permits	Legislation	Government contracts	Tax
Albania	-10.1	-17	-2.6	8.4	5.3	0.7	17
Armenia	-6	-6.2	-5.8	-13.8	-2.2	-6.4	-16.6
Azerbaij	-13.6	-23.6	-20.3	-21.4	-10.3	-19.9	-9.3
Belarus	-2.6	3.1	8.4	10.8	0.2	11.2	1.7
Bih	-0.6	15	20.6	12.3	4.3	8.1	21.3
Bulg	-8.6	5.1	17.6	6.5	2.8	3.6	-0.3
Croat	-1.5	0.8	3.8	8.1	0.6	5	2.1
Czech	1.4	-1.2	-1.2	0.9	-1	-1.4	2.9
Est	1.3	-0.9	-7.8	2.3	1.5	7	0
fyrn	2	-3.2	-10.3	-3.7	2.3	-11.7	1.8
Geor	-3.8	1.8	10.7	3.1	4.6	13.7	23.9
Hung	0.1	2.7	6.8	-8	1.9	14.7	7
Kaz	-4	-2.6	-1.2	1.8	1.2	3.9	4.8
Kyrg	6.5	8.1	11.2	11.9	7.6	7.8	20.5
Lat	-4.4	-1.9	-5.5	0.2	1.1	6.4	2.8
Lith	-10.8	-10.5	-15.4	-10.7	-3	1.1	-7.9
Mold	-14.2	-8.1	11.6	-5.4	-3.2	-4.6	12.2
Pol	-3.5	-5.1	-7	-11.2	1.6	-2.1	-4
Roma	-22.2	-5.3	-10.4	-18.4	-0.5	-3.3	-2.4
Russia	-2.3	-2.2	0.2	2.9	-0.9	2.3	7.2
Serbm	4.7	8.9	11.2	6	4.8	12.6	2.7
Slovak	-4.7	-0.7	6.8	1.7	2.1	7.5	7.4
Sloven	-2.1	-4.4	-4.1	-3.4	0.3	-3.3	-0.3
Ukraine	-11.3	-11.1	-1	0.1	-0.3	-5.3	-3
Uzb	-14.4	-11	-3.9	-15.9	2.3	-3.3	-4.2
<i>Mean</i>	-4.8	-2.6	-0.2	-1.6	+9	+1.0	+3.5
<i>Median</i>	-3.7	-2.1	-1.2	+6	+1.2	+1.7	+2.4
<i>No. of countries with decrease (out of 25)</i>	19	17	14	10	8	10	9

Source: See Table 3.

Regressions in Table 6 suggest that higher economic growth was associated with reductions in the frequency of each of these types of corruption, although this was only significant for corruption of the courts and legislation. (However, there was no clear relationship between change in the frequency or burden of corruption *overall* and the change in income during these years.) As before, it is difficult to tell what—if anything—is causing what. Reductions in corruption during these years might lead to faster growth, rather than—or as well as—the reverse.

Table 6: Explaining change in frequency of unofficial payments for different purposes, 1999-2002

	Public services	Courts	Customs	Permits	Legislation	Government contracts	Tax
Dependent variable 1999	-.69** (.12)	-.66** (.10)	-.47* (.21)	-.70** (.09)	-.69** (.20)	-.62** (.19)	.14 (.23)
Real GDP per capita 2002/1999	-6.02 (5.60)	-22.01* (8.48)	-19.84 (12.56)	-7.88 (10.44)	-8.56* (3.93)	-18.13 (12.29)	-31.54 (19.17)
Constant	10.16 (6.66)	31.83* (11.40)	32.00 (16.50)	20.05 (13.26)	14.36** (4.93)	33.26 (16.17)	40.85 (23.06)
Rsquare	.657	.608	.307	.555	.531	.436	.139
N	25	25	25	25	25	25	25

OLS regressions. White heteroskedasticity-corrected standard errors in parentheses. \*\*  $p < .01$ ; \*  $p < .05$ .

## 6 Concluding remarks

One should be careful not to over-interpret data collected in difficult circumstances about controversial subjects—even when the surveys were designed and carried out by teams as professional as those of the World Bank and EBRD. In particular, inferences about changes between 1999-2002 must be tentative, given the high level of regression to the mean demonstrated. This paper has aimed more to describe the patterns that the survey

uncovered than to offer convincing explanations of them. In closing, it is worth noting some patterns that would be worth exploring further in future research.

First, the apparent link between corruption and economic development in the postcommunist world remains extremely strong. The link between higher income and lower corruption is the strongest regularity to emerge from the study of different sources of data on corruption worldwide. But what does it mean? Political economists have not been able to answer definitively to what extent corruption slows development, and to what extent it is development that reduces corruption. This question remains unanswered—but vital for drawing policy implications—in the postcommunist world as well.

Second, however, there is a great deal of variation among poorer postcommunist countries. Relatively underdeveloped former communist countries are not doomed to suffer from high (reported) corruption. Among those with per capita GDP at purchasing power parity of less than \$4,000 in 2001, some—Armenia and Uzbekistan—have impressively low reported corruption on just about any of the indicators studied, while others—Kyrgyzstan and Albania—have high estimated corruption on all indicators. Still others, such as Azerbaijan and Moldova, place somewhere in between. What accounts for the low frequency and scale of unofficial payments by businesses in Armenia and Uzbekistan is a puzzle for future examination.

Third, not all types of corruption decline with higher national income. One might even speak tentatively of “rich country” and “poor country” types of corruption. Whereas bribery over taxation and customs, business permits and utilities, were much lower in more economically developed postcommunist countries, corruption to influence

legislation and obtain government contracts was not systematically lower among the richer countries. Unofficial payments to health and environmental inspectors also did not decrease with development—perhaps because these types of inspections are more frequent in richer countries.

Finally, since this paper was prepared for a conference in Moscow, it is interesting to consider how Russia fits into the general patterns. In most respects, Russia was fairly typical of the postcommunist countries during this period. The reported financial burden imposed by unofficial payments in Russia was exactly the median for the region in 2002, and the improvement in this in 1999-2002 was also about the median. Less reassuringly, the frequency of unofficial payments was relatively high—and increased by more than in most other countries between 1999-2002 (8.2 percentage points). If the results of this survey are to be believed, the Putin administration was not particularly successful in disciplining venal bureaucrats during its first two years.

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