Corruption in schools? The scale and sources of corruption perceptions in Poland

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This paper analyses the scale and sources of views on the prevalence of corruption in the education sector in Poland. Through the use of public opinion surveys, I answer questions on how the corruption level in Polish educational institutions has changed over time and how it compares to other public institutions (such as the health care sector and police) and to the situation in other European countries. My goal is to investigate the effect of individual-level predictors of perceiving schools as corrupt in Poland, with special attention given to structural determinants and previous bribe-giving experiences of respondents. The results reveal that in Poland relatively few respondents have experienced recent acts of giving bribes in schools or perceive educational institutions as corrupt. However, there is a structural pattern behind the sources of negative opinions. The effect of socio-economic determinants on views relating to corruption in Polish schools is strongly pronounced and trends in the opposite direction compared to the effects reported in other European countries.

Keywords: corruption perception; bribe-giving experience; education sector; public opinion survey; Poland.

The Polish educational system has been undergoing a number of reforms, each of which (directly or indirectly) addresses a list of educational problems. Bribery and corruption generally do not seem to be at the top of the agenda for educational change in Poland. Does this mean that the problem is marginal or marginalised? This paper offers an analysis of corruption perceptions and bribe-giving experiences in the education sector in Poland, its scale and determinants.

Although the topic of corruption receives much attention, especially in political science and economy, little is known yet about the individual predictors and mechanisms behind corruption in particular institutions, including the education sector. According to Mark Granovetter (2007, p. 166), corruption

The aim of this paper is twofold. First, it is to answer the question of whether corruption is common in the education sector in Poland. To do so, I use a public opinion survey and crime victimisation survey, both representative of the adult population in Poland. The paper presents an analysis of the scale of the corruption perception and experiences in Polish schools, comparing it (a) over time, (b) to other public institutions in Poland, and (c) to other countries in Europe.

Second, the aim of this paper is to investigate individual-level predictors of the perception of corruption in the education sector. I verify the individual level effects that proved to be significant in previous research

has "an irreducible sociological component that has been given surprisingly little [sociological] attention".

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in developed countries. I also investigate the relationship between the perception that corruption is prevalent in the education sector and personal experiences of bribe-giving, controlling for recent contact with a public school. With this analysis, I attempt to address the question of whether bribery is a problem that can be confined to dishonest individuals or whether it is structural and/or institutional (e.g. Heath, Richards and Graaf, 2016; Porta and Vannucci, 2012).

Following Dieter Haller's and Cris Shore's (2005) metaphor: are these "individual [rotten] apples rather than the barrel that contains them"?

"Petty" vs "grand" corruption: forms of corruption and their societal impacts

Corruption is the misuse of public power for private gain. One of the first uses of this definition and the argumentation behind it can be found in Susan Rose-Ackerman's publication (1999; see also: Bardhan 1997; Brown, 2006; Johnston 1996; Kurer 2005; 2015; Williams 1999). This definition is often challenged, but is still largely used by researchers and international anti-corruption organisations. It is also the definition that is often given in the instructions for interviewers for major corruption surveys, among others, the Global Corruption Barometer (GCB) and questionnaire of Transparency International.

In broad terms, the misuse of public power includes an understanding of its "proper use", which is usually defined by a work contract and professional code of ethics. From normative perspectives, misuse of the workplace includes a wide spectrum of possible deviant behaviours (Haller and Shore, 2005). This includes not only taking bribes, but also hiring an unqualified relative or even looking for a Christmas present for a child during work hours. One important characteristic of corruption is that it occurs

in secrecy (Abbink and Wu, 2013; Kaufmann, 2005). This means that actors either informatively or intuitively know that a misuse of the workplace is taking place.

Corruption can be divided into two broad forms: (a) political, "grand" corruption and (b) administrative "petty" corruption (e.g. Karklins, 2005; Rose-Ackerman, 1999). Social studies exhibit an evident lack of research that treat these forms of corruption separately (due to the relatively high correlation between two scales), although there is some empirical evidence that they differ in character and have a different impact on individual behaviour (Osipian, 2009; Rose and Peiffer, 2015).

Corruption in public sector institutions, often being petty corruption, is a practice that can greatly influence the everyday life of the actors involved in it. Petty corruption has an impact on perceptions of reality, attitudes and behaviour. Despite this, petty corrupt practices in public institutions are given less attention in the social sciences today, compared to grand political corruption.

Distinguishing between forms of corruption is especially important when analysing survey data on the experiences of corruption of respondents in public institutions, such as giving an informal payment to a doctor or teacher, and their perception of corruption in general, which is the respondent's evaluation of the overall level of corruption in a country or institution. The perception of corruption may but does not have to include personal experiences of a corrupt exchange (Charron, 2016; McManus-Czubińska, Miller, Markowski and Wasilewski, 2004). The perception that grand corruption in a country occurs on a high level may in itself create a "culture of distrust" towards some institutions even without personal experiences of petty corruption. This could constitute the justification and acceptance of corrupt practices on "lower levels" (Melgar, Rossi and Smith, 2010; see also Slomczynski and Shabad, 2012).

Petty corruption is unequally harmful for different groups in society. Social scientists have observed that the poor suffer more from corruption in two respects: first, corruption acts as a "regressive tax", where it consumes a larger percent of the wages of those with lower incomes than for those with higher ones; second, it causes an unequal distribution of public goods and services, in which the poor are more affected by such deterioration than the rich, who are able to pay higher bribes (Jain, 2008). Thus, corruption is one of the mechanisms of social exclusion (Heidenheimer and Johnston, 2002; Porta, 2000; Warren, 2004). Moreover, Pranab Bardhan (2006) discovered that corruption is frequency dependent: the greater the number of corrupt acts - the fewer the chances that others will act honestly. This means that petty corruption is not only a mechanism supporting the reproduction of social inequalities, but also a mechanism functioning as a "contagious disease", with the tendency to spread (Tanzi, 1998).

The specificity of the education sector and its implications for research on corruption

Given that participating in the education system is compulsory in Poland, attending a school is a common experience for all citizens. Contact with school as an institution has a regular character, often occurring on a day-to-day basis for a minimum of ten years of life. School is compulsory for children from 5 to 15-18 years of age; homeschooling is rare; the public school sector significantly dominates over private schools, and local schools are more often chosen over schools in other neighbourhoods (Eurydice, 2015). School is first experienced as a child, later often as a parent and grandparent or as a teacher, school administrator, education specialist, invited guest or student intern. Compared to other institutions, such as the police or health care service, contact with

educational institutions can be characterised as compulsory, repetitive and often regular for people from various social groups.

The specificity of contact with educational institutions in the context of corruption research has several implications. First, although all citizens are guaranteed equal and free of charge access to education by Poland's Constitution, the actual cost of participating in the system is not negligible both in monetary and psychological terms. Special attention should be given to groups that might be or feel excluded and who bear additional costs of participation in the system. Members of these groups may try to offer bribes as compensation for their maladjustment, or be forced to bribe as a weaker and "less dangerous" group that is not likely to report such occurrences. As Jennifer Hunt (2007) states: "corruption hits people when they are down" (see also Shahe Emran, Islam and Shilpi, 2013).

Second, school plays a socialising role for children and young people, which also includes the mechanisms of dealing with institutions and public officials, especially in problem-solving situations. The examples of such situations in a school setting may be passing an exam, getting better grades, moving to a better group or to a better teacher, or even getting a better school desk (Baniak, 2012). Achieving these goals by bribery or "turning a blind eye" is a practical lesson that may be learnt by children and later transferred to other institutions and situations.

Third, compared to other public officials, the character of a teacher's work is specific. The education system involves repeated contact between a teacher, child and parent in contrast to the "random" contact one has with medical staff or police officers. The contact between a teacher and a parent strongly relies on trust and respect, as many previous studies have shown (i.e. Lortie, 2000). As a consequence, the distinction between a gift and a bribe in schools is

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ambiguous, and motivations of gratitude or personal gain are often blurred. The overview of the most popular forms of corruption that may occur in education can be found in Omar Azfar's publication (2005). In this paper, I concentrate only on giving bribes, which is only one of the possible forms of corruption in Polish schools.

Giving a bribe is not the only common form of corruption in a school setting. There is a rich spectrum of different types of corruption in education that can happen at any level of educational governance (Chapman, 2002) and at any step on the educational ladder, from preschool to higher education (OECD, 2017). It includes, for example, inappropriate spending of parental contributions or government expenditures, informal transactions or favour reciprocation in access to educational institutions, undue recognition of academic achievements and turning a blind eye to academic dishonesty (such as cheating or plagiarism), the demand of private supplementary tutoring; or corrupt interest in textbook choices (Chapman, 2002; Sabic-El-Rayess and Mansur, 2016; see also Transparency International, 2013). According to Nataliya Rumyantseva (2005), special attention should be given to those forms of corruption in education that most explicitly involve students (among others, bribe-giving or unjustified private tutoring), as it has a more direct impact on student's beliefs and values than, for example, corruption in education administration. Broadening the nuances of corruption types, Amra Sabic-El-Rayess and Naheed Mansur (2016) argue that different types of corruption can be matched to different social groups, as, for example, in postwar Bosnia and Herzegovina, where "elites gravitate towards and benefit from nonpecuniary corruption [in education] while the poor tend to bribe" (Sabic-El-Rayess and Mansur, 2016, p. 20). Following this conclusion, it is important to distinguish forms of corruption in yet another dimension: pecuniary (i.e. bribes and informal payments) versus non-pecuniary (favour-based reciprocations). The recent developments in the field also suggest that the peculiar feature of corruption in education is that it often consists not of individual corrupt acts, but of collective ones, such as bribes from the class or group to pass an exam (Sabic-El-Rayess and Mansur, 2016; Borcan, Lindahl and Mitrut, 2017).

Corruption in the education sector, like corruption in other institutions, can have a number of harmful effects. Due to the specificity of schools as institutions, corruption in the education sector has a more direct influence on the general well-being and overall trust level compared to other public institutions (Rothstein, 2011). It may also undermine trust in education credentials and impact the meritocratic values of individuals. Above all, a malfunctioning education system may contribute to the reproduction of social inequalities in society – an alarm raised by many in education research (i.e. Bardhan, 2006).

Corruption in Polish schools: previous research

According to the review of Heath et al. (2016), there is a current tendency in corruption research to take a broad-brush approach that rarely concentrates on the specificity of particular institutions. Corruption research in Poland is not an exception, and most corruption studies do not distinguish cross-sector peculiarities. However, there are a few earlier studies on corruption in Polish schools that provide important insight into the problem.

From previous research of corruption in Polish schools, I would like to underline the study of Beata Łaciak (2000). To answer questions on the forms and scale of corruption in Polish schools, she conducted

a study among pedagogy students, many of whom had been working as teachers. The important observation of this study is that although only a small percent of respondents declared that they had had personal contact with corruption, many of them were able to tell stories of instances of corruption occurring around them (only 6% of all respondents said that they were not familiar with occurrences of corruption in the education sector). It is also important to underline that as many as 80% of respondents declared that they had been offered a bribe, but refused it (Łaciak, 2000). It seems that refusing a bribe or an expensive gift has become an important element of work ethics after the systemic change in Poland.

Łaciak's (2000) study results were repeated to a degree in the research of Józef Baniak (2012), who surveyed students from different faculties and asked (among other things) about their experiences and attitudes towards various types of corrupt behaviour in schools. He came to the conclusion that 3/4 of his sample of 480 students encountered petty corruption in Polish schools, but only 1/4 of them considered it to be inappropriate.

Public opinion surveys of the adult population in Poland conducted by the Public Opinion Research Centre (Centrum Badania Opinii Społecznej, CBOS) in 2013 suggest that "science and education" are not perceived as the most corrupt spheres of life in Poland (CBOS 2013a). Although CBOS did not include specific questions on corruption in schools, there are two important tendencies reported by CBOS on attitudes regarding corruption (2013a) and bribe-giving (2013b): first, the percent of respondents who knew someone accepting bribes (in any institution) has been decreasing in past years (from 28% in 2010 to 16% in 2013); and second, there is an overall decrease in the opinion that bribegiving may be justified in some situations (from 41% in 2010 to 32% in 2013).

Research questions and hypothesis

The aims of this research are to analyse the scale of corruption in the education sector and to investigate the significance and effect of structural factors in predicting the perception of corruption in public schools in Poland. The analysis also touches upon the problem of the link between the perception of corruption and individual experiences with bribe-giving, as well as contact with local public schools – the predictors that are rarely included in corruption analyses mostly due to the lack of appropriate data. My main research questions are:

- What is the scale of personal experiences of bribe giving in the education sector as declared in crime victimisation surveys? How does it relate to the declared level of the perceived prevalence of corruption in local public schools? Has the scale changed over the last few years? How does it compare to other institutions, such as the health sector and police, and how does it compare to the situation in neighbouring countries?
- Do the socio-structural characteristics of respondents, such as gender, age, place of residence and education, shape the perception of the prevalence of corruption in public schools? What is the character of the observed relationship between individual micro-level predictors and the perception of corruption in the context of educational institutions?

My hypothesis for the first set of questions is based on previous corruption research in Poland. It suggests that the prevalence of perceiving schools as corrupt and having experience in bribing officials in schools is lower in comparison to the medical sector and police, and that it does not diverge from other countries.

My hypothesis for the second set of questions is mainly based on previous research of the micro-level determinants of

corruption using survey data of developed European countries, which suggests that:

Turning to the individual-level predictors, there is a reasonably clear picture that men and those with higher income and education have more pessimistic views on the prevalence of corruption [...]

and

[in developed countries] there is a fairly consistent pattern that men, those receiving higher incomes, or those with higher education are more likely to experience corruption.

(Heath et al., 2016, p. 67)

The conclusions on individual level predictors drawn by Heath et al. (2016) were based on an overview of a number of empirical studies. However, the previous studies are usually not sector-specific. In this paper, I aim to verify whether the pattern of individual-level predictors of corruption summarised by Heath et al. is relevant for the context of educational institutions in Poland. I assume that the effects of structural factors may vary in different institutions and thus may be different in schools.

Data and methods

In answering the questions and testing the above-mentioned hypothesis, I used survey data presenting the opinions of the adult population in Poland that include both questions on perceptions, as well as questions on personal experiences of bribe-giving.

In this paper, I mainly rely on data from the Quality of Government survey (2013), but also use the Global Corruption Barometer (2004–2010). Both survey projects are cross-national and include Poland among other European countries.

The wording of the questions on the perception of corruption in schools used in those surveys is:

- "Corruption is prevalent in my area's local public school system" (on an 11-point scale from 0 *strongly disagree* to 10 *strongly agree*; QoG, 2013);
- "To what extent do you perceive the following categories in this country to be affected by corruption? [...] Education" (on a 5-point scale from 1 not at all corrupt to 5 extremely corrupt; GCB 2004; 2005; 2006; 2007; 2010);

Personal experience with bribe-giving is captured by the questions:

- "In the past 12 months have you or anyone living in your household paid a bribe in any form to: Education services?" (1 yes; 2 no; 99 don't know/refused; QoG, 2013);
- "In the past 12 months have you or anyone living in your household paid a bribe in any form to each of the following institutions/organisations? Education system" (1 yes; 2 no; 8 don't know; 9 no response; GCB, 2006; 2010).

Available survey data indicates the opinions about the scale of corruption and personal bribe-giving experience, which allows us to investigate the predictors of corruption in schools and could be treated as a proxy for the experience of other forms of corruption not directly captured by these surveys.

In terms of the analysis, I attempt to explain the likelihood of perceiving public schools as corrupt by means of logistic regression equations. The models presented in the results section are based on the Quality of Government survey from 2013. The Survey

¹ This and other question wordings presented in this paper are based on an English master questionnaire prepared by survey organisations. The question from the national questionnaire in Polish is: "Na terenie, który Pan/Pani zamieszkuje, korupcja w szkolnictwie publicznym jest powszechnym zjawiskiem". Here and elsewhere in this paper affirmative responses are recoded (values 6–8 as *rather agree* and 9–10 as *strongly agree*, following the CBOS 2013a coding scheme).

² Exact wording from the Polish national questionnaire: "Dał(a) Pan/Pani lub ktoś z Pana/Pani domu łapówkę w ostatnich 12 miesiącach: (a) W szkolnictwie? (tak/nie)".

offers design weight, which accounts for the sampling procedures that pooled an equal number of respondents in NUTS regions in different countries. Design weight in this case corrects the probability of respondents from larger/ smaller regions to be selected. I performed the analysis with and without design weights and decided to report the estimates without weights, as in the case of Poland, the influence of the weights on the estimates was minimal.

The dependent variable for all models is the perception that corruption is prevalent in a local public school. The variable is recoded from an 11 point scale into a dichotomous variable, where 1 means that respondents agree with the statement (answers 6 to 10) and 0 means all other responses. The variable was reduced to a binary one due to the character of the distribution, which is non-normal and polarised at the extreme ends. "Refused to answer" responses are treated as missing data. The main individual level predictors included in the logistic regression model are (Table 1):

- gender: 1 = female, 0 = male,
- age: recoded to three categories 18–29, 30–49 and 50 and older,

- place of residence: 1 = rural, 0 = otherwise (the size of urban community appeared not to be significant, thus the dichotomous division is included in the model),
- education level: lower secondary and less, upper secondary (upper secondary and post-secondary) and tertiary education.

I also include the variable on bribe-giving experience in the model as a predictor of the perception of corruption, which is a dichotomous variable, where 1 means that a respondent or someone in the immediate family gave a bribe in the education sector in the last twelve months, 0 – otherwise. Additionally, I control for contact with the local public school in the model, by means of a dichotomous variable, where 1 means that a respondent or someone from the immediate family has been enrolled or employed in the public school system in his/ her area in the past 12 months³. The measure of contact with educational institutions refers only to

Table 1
Descriptive statistics

Variable	No. of obs.	Mean	SD	Min	Max
Bribe perception (1 = agree/strongly agree)	5 827	0.13	0.34	0	1
Female	5 827	0.54	0.50	0	1
Education level					
Lower secondary or less	5 827	0.23	0.42	0	1
Upper secondary	5 827	0.42	0.49	0	1
Tertiary	5 827	0.35	0.48	0	1
Age					
18–29	5 827	0.18	0.39	0	1
30–49	5 827	0.34	0.48	0	1
50 <	5 827	0.47	0.50	0	1
Rural area	5 827	0.46	0.50	0	1
Contact with school (1 = yes)	5 827	0.42	0.49	0	1
Bribe experience (1 = yes)	5 827	0.01	0.08	0	1

³ From the Polish questionnaire: "Czy uczęszczał(a) Pan/ Pani lub któreś z Pana/Pani dzieci do państwowej (to znaczy nie prywatnej) szkoły na terenie, który Pan/Pani zamieszkuje, względnie czy był(a) Pan/Pani w niej zatrudniony(a) w ciągu ostatnich 12 miesięcy? (*tak/nie*)".

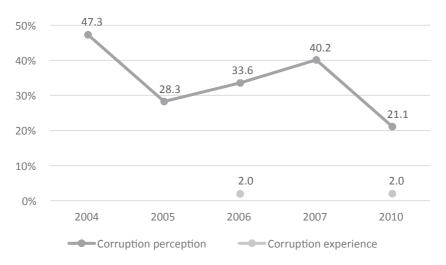


Figure 1. Percentage of respondents who perceive schools as corrupt or extremely corrupt in Poland, 2004–2010 and who declared giving bribes in schools, 2006 and 2010.

Source: GCB (2004-2010).

local public schools (państwowa szkoła), but the measure of corruption perception and bribe-giving experience captures the entire education sector (szkolnictwo), which can also include the preschool level or university. An exploration of alternative models did not influence the results – the direction of the relationship between variables remains the same, although the effect of gender is less pronounced if we compare the group that perceives school as corrupt or rather corrupt with those who completely disagree with this statement.

Results

Bribe-giving and the perception of corruption in schools

Is bribe-giving a common practice in Polish schools? The descriptive statistics on bribe-giving in Poland from the Quality of Government survey show that relatively few respondents have this experience. In 2013, out of 6400 interviewed Poles, 35 (0.6%) declared that they or someone from their

immediate family gave bribes in the education sector in the past 12 months. However, when asked if corruption is prevalent in the local public school system, 278 respondents (5%) answered *strongly agree*, and 491 respondents (8%) answered that they *rather agree* with this statement.

The discrepancy between the perception of corruption and bribe-giving experience in the education sector is especially interesting and can be observed over time. Figure 1 shows the percentage of positive perceptions of bribe-giving and experience in public schools over time in Poland as reported in the Global Corruption Barometer. The questions on both the perception of bribe-giving and experience in schools appeared in two survey waves - 2006 and 2010. Additionally, the figure presents those waves that contain the question on the perception of bribe-giving in schools, but do not have experiential data - as do the 2004, 2005 and 2007 waves of the survey.

Figure 1 demonstrates that the percentage of respondents who perceive schools

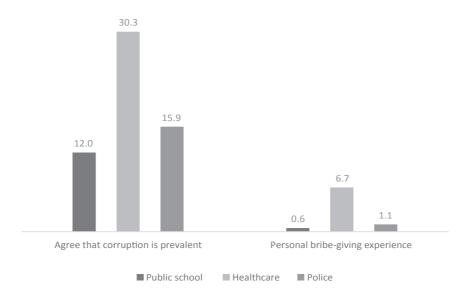


Figure 2. Percentage of affirmative responses to corruption prevalence questions and bribe-giving experience questions in public school, health care and police in 2013.

Source: QoG (2013).

as corrupt or extremely corrupt in Poland is rather high and strongly fluctuates in this short, six-year period of 2004 to 2010 (from 47.3% to 21.1% respectively). Based on the Quality of Government survey, we can assume that in 2013, there is further improvement in the direction of lower levels of perceived and experienced bribe-giving in the education sector in Poland⁴. Interestingly enough, in both 2006 and 2010, respondents reported a rather low level of experienced bribe-giving in Polish schools, which is about 2% (Figure 1). It seems that these reported bribe-giving experiences do not to reflect changes in the level of perception, which is 34% in 2006 and 21% in 2010 – lower by thirteen percentage points.

Compared to other institutions, public schools do not lead in the rankings of the most corrupt ones (Figure 2; see also CBOS,

2013a). Poles declare a greater scale of corruption in public medical and health care services, as well as in the police force. As of 2013, based on victimisation survey data, 7% of respondents gave a bribe in the health care sector, and 32% agree that corruption is prevalent in the local health care system – which is much higher than the declared scale of corruption in local schools.

The analysis based on Quality of Government survey data from 2013 reveals that the perception of the prevalence of corruption in the education sector in Poland is similar to other developed (mostly central-northern) countries in Europe⁵. Figure 3 shows that the average of affirmative answers of all

⁴ The results for 2013 are not included in Figure 2, as they are from other surveys and cannot be directly compared.

⁵ Please note that the survey does not include all European countries and countries were not selected at random, which is a common country selection bias problem in cross-country research. The comparison also assumes the similarity of the "hard components" of the concept of corruption, keeping in mind possible cross-country differences on the "soft" (contextual) components of the concept's definition (i.e. Kurer, 2015).

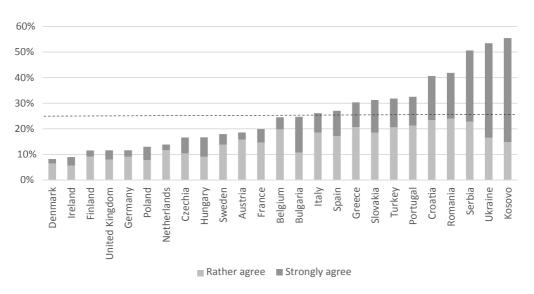


Figure 3. Percentage of moderate and strong affirmative responses to the corruption prevalence question in the education sector by country in 2013.

Source: QoG (2013).

countries surveyed in the 2013 European Quality of Government (QoG) wave is 25.5%. Poland, as well as neighbouring Germany, Hungary and the Czech Republic, are located below that average. However Poland, like the Czech Republic and Hungary, has a greater percent of extreme opinions on corruption prevalence, which is 5%, 6%, and 7% respectively. Other developed countries below the average of the QoG survey have less than 3% of respondents strongly agreeing that corruption is prevalent in local public schools. As QoG data show, the problem of corruption in public schools is more pronounced in southern and eastern countries. For example, in neighbouring Ukraine, 17% of respondents rather agree and 37% strongly agree that corruption is prevalent in local public schools.

All in all, descriptive statistics show us a rather positive result that corruption in schools is lower with time and the situation is better than in other institutions, such as, for example, health care or the police. The previous analysis also reveals that corruption in the education sector in Poland is not more widespread than in other neighbouring countries. Still, even 1% of the declared personal experience of bribe-giving and more than 14% agreeing that bribe-giving is prevalent in Polish schools are results that should be treated with caution when considering the possible negative consequences of corruption. The most pressing question that appears when thinking about declared bribe-giving cases and the perceptions of Poles is whether this problem can be confined to dishonest individuals or whether it has structural sources.

Determinants of corruption perceptions in schools

By means of the multivariable logistic regression models, I attempted to identify the individual-level predictors of corruption perception in the education sector in Poland, with special attention given to the link between corruption perception and respondents'

socio-economic status depicted in educational attainment. Due to the large amount of missing data on respondents' main occupation and income level, I decided to use educational level as a proxy for socio-economic status. I verified the effect of individual level predictors of corruption perception that proved to be significant in previous research on developed countries in Europe. Additionally, I included the models that took into account declared contact with the local public school (either as a parent or as an employee) and bribe-giving experience in the education sector (victimisation experience) within twelve months prior to the survey.

Table 2 presents the estimates of the three logistic regression models. The dependent variable in all three models is the perceived prevalence of corruption in local educational institutions. The first model includes such factors as respondents' gender, age, education level and place of residence. The second model includes the mediating variable of contact with the public school within the last twelve months. The third model controls for the effect of respondents' previous bribe-giving experiences in the education sector. The fit statistics provide the most positive support for Model 3, although differences in the BIC statistics are not large between the first and third models.

The results presented in Table 2 confirm that corruption perception is linked to socio-economic status as depicted by a respondent's educational level. However, the direction of this impact in the context of Polish schools is different than expected from the micro-level patterns presented by Heath et al. (2016). Heath et al. summarise that being a male and having higher education levels predict pessimistic perceptions of corruption. In Poland, being a female and having a lower educational level increases the likelihood of perceiving schools as corrupt – ceteris paribus the odds of agreeing that corruption is prevalent in a local public

school is three times higher if the respondent's educational level is lower secondary or less and almost two times higher if it is upper secondary compared to tertiary. The effect of gender is not so strongly pronounced compared to educational level, but it is also significant – the likelihood that women perceive school as corrupt is higher by around 20% compared to men.

Another significant predictor of perceived corruption prevalence in Polish schools is age. The odds of having an opinion that the local public school is corrupt is higher by 35% among respondents who are 18 to 29 years old and by 18% among those who are 30 to 49 years old compared to respondents older than 50 (Table 2, Model 3). The results presented in Table 2 also suggest that living in a rural area decreases the odds of perceiving schools as corrupt by 24% compared to urban areas.

Controlling for contact with the local public school, added in Model 2 in Table 2, did not change the significance of the other estimates included in the model, but it also did not increase the model's explanatory power or model fit. Although the effect is weak, it suggests that a pessimistic evaluation of corruption in schools is more likely to prevail among those who have not had recent contact with educational institutions in Poland. However, there is a variation of opinion on corruption of both groups, those with and without current contact with public schools.

Model 3 presented in Table 2 shows that after controlling for bribe-giving experience, the direction and strength of other predictors in the model did not change. As mentioned, model fit statistics provide the most positive support for this model compared to Models 1 and 2. However, the interpretation of the bribe-giving experience predictor itself is limited due to the small number of affirmative cases. Yet, based on the data we have, the results suggests a highly significant effect of bribe-giving experience on the

 Table 2

 Logistic regression of perceiving schools as corrupt on respondents' individual characteristics and bribe-giving experience

		Model 1			Model 2			Model 3	
Variable	Coefficient	SE	Odds ratio	Coefficient	SE	Odds ratio	Coefficient	SE	Odds ratio
Female	0.19*	0.08	1.20	.10*	0.08	1.21	0.19*	0.08	1.21
Education level									
Lower secondary or less	1.10^{**}	0.11	3.01	1.09**	0.11	2.97	1.11**	0.11	3.03
Upper secondary	0.56**	0.10	1.75	0.55**	0.10	1.74	0.58**	0.10	1.76
Tertiary (ref)									
Age									
18–29	0.31**	0.11	1.36	0.33**	0.11	1.39	0.30**	0.11	1.35
30–49	0.17	0.09	1.18	.19*	0.09	1.20	0.16^*	60.0	1.18
50 <									
Rural area	-0.28**	0.08	0.76	-0.27**	0.08	0.76	-0.27**	0.08	0.76
Contact with school (yes = 1)				-0.16	0.08	0.85			
Bribe experience (yes = 1)							1.34**	0.37	3.83
Constant	-2.55**	0.11	0.08	-2.49**	0.11	0.08	-2.57**	0.11	0.08
Number of obs.	5 827			5 827			5 827		
LR chi²(6)	105.55			109.31			116.94		
Prob > chi²	0.00			0.00			0.00		
Log likelihood	-2 186.3			-2 184.4			-2 180.6		
Pseudo R ²	0.02			0.05			0.03		
BIC	4 433.3			4 438.2			4 430.6		

Levels of significance: $^*p < 0.05$; $^{**}p < 0.01$.

Source: QoG (2013).

likelihood of perceiving corruption as prevalent in local educational institutions. The odds of perceiving educational institutions as corrupt are four times higher if a respondent or someone from the immediate family had bribe-giving experience in the education sector. This result also means that the lack of bribe-giving experience in the education sector significantly decreases the likelihood of perceiving educational institutions as corrupt, which is an especially important reverse interpretation of victimisation questions, where respondents might be reticent to provide answers.

Discussion and conclusions

Corruption constitutes one of basic social problems that is still far from being solved. It is a deviant behaviour that has a number of harmful long-term consequences and might happen in the context of different public institutions. In this paper, my goal was to investigate the scale and sources of perceiving corruption as a problem in the education sector in relation to personal bribe-giving experience and recent contact with a local public school. Special attention is given in this paper to the effect of structural factors in predicting the perception of corruption in public schools in Poland. Victimisation survey data also allowed the inclusion of experiential information and declared recent contact with institution in the analysis – predictors rarely available in public opinion survey data.

The analysis shows that relatively few respondents have personal bribe-giving experiences in Polish schools and perceive corruption as a prevalent problem in local educational institutions. The perception and bribe-giving experience fluctuate over time, but generally, we can observe a decrease in the level of corruption in the education sector. Educational institutions are better perceived in this respect than the health care sector or the police. Generally,

the declared level of corruption in Poland's educational institutions is similar to the level in central-northern European countries, and is much lower than in southern and eastern European countries. Neighbouring countries, such as the Czech Republic and Hungary, have similar levels of a pessimistic estimation of corruption prevalence in public schools as in Poland, whereas the level in Ukraine is much higher.

Although not widespread, the mechanism behind the popular perception of corruption in the education sector is worrisome. The results of the analysis reveal an association of individual socio-structural characteristics and perception of corruption in education. In Poland, these are young women from urban areas with a lower educational level who are likely to have pessimistic views on the prevalence of corruption. The link between respondents' socio-economic status as depicted by educational level is strongly pronounced and significant. The odds of perceiving corruption is three times higher if a respondent's educational level is lower secondary or less and almost two times higher if it is higher secondary compared to tertiary. The analysis also revealed that the general pattern of individual predictors of corruption behaviour is not applicable in the context of Polish educational institutions. In further investigations of this issue, it is important to explore the possible sources and consequences of these differences.

What is interesting, the results of the analysis suggest that pessimistic views on the corruption level in local public schools in Poland are more likely to prevail among persons who have not had recent contact with educational institutions. The results also show that there is a strong and significant relationship between the perception of corruption and personal bribe-giving experience in the education sector, which means that the lack of personal bribe-giving experience (although being only one of a number

of possible forms of corruption) significantly decreases the likelihood of perceiving educational institutions as corrupt. However, both of these effects need further investigation.

Keeping in mind that corruption is a secretive interaction, we can assume that the experiential survey gives us insight into the group that could be called the "victims" of the interaction, a group that is dissatisfied and willing to report. However, we should remember that this is only one type of actor that may be involved in corruption in schools. It is very likely that the survey context does not capture the answers of those who justify corrupt acts or of those who participate in secretive and profitable corrupt schemes. The popular forms of corruption may also change, together with the motives and mechanisms behind them.

From a methodological perspective, the results support the trend of asking questions both on perceptions as well as on experiences of corruption, indicative of groups who consider themselves "victims" of corrupt interactions. The analysis shows strong support for asking sector-specific questions, as the pattern behind corruption differs depending on the institutional context.

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