

# Who is making informal payments for public healthcare in East-Central Europe? An evaluation of socio-economic and spatial variations

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## Abstract

*Informal patient payments are a widespread phenomenon in post-communist countries. In order to identify who is more likely to make informal payments in East-Central Europe, a 2013 survey is used. Reporting data from Special Eurobarometer No. 397 ('Corruption'), the finding is that patients in Hungary, Latvia, Lithuania, Slovakia, Bulgaria and Romania are significantly more likely to make extra informal payments or to give valuable gifts to medical practitioners or to make a hospital donation additional to the official fees. Women are more likely to make informal payments for healthcare services whilst unemployed patients or those never or almost never having difficulties in paying bills are less likely to make informal payments. The implications of the findings are then explored, displaying the population groups and spaces that need targeting when seeking to tackle informal patient payments.*

**Keywords:** informal payments, informal patient payments, East-Central Europe, socio-economic variations, health policy

## 1. Informal payments in healthcare

Informal payments, often labelled as “envelope” or “under-the-table” payments, are a widespread phenomenon in many transition economies of post-communist East-Central Europe. As an important feature of healthcare systems and a form of public sector corruption, informal patient payments are a major concern. They are usually defined as “payments to individual and institutional

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providers, in kind or in cash, that are made outside official payment channels” or “purchases that are meant to be covered by the health care system” (Lewis, 2000). Besides the nature of informal payments (cash, in kind, or in a form of services like trips, sponsorships or donations), other key characteristics related with the nature (Allin, Davaki and Mossialos, 2006) or the amount of the informal payment (Tomini, Groot and Pavlova, 2012) have been identified. Expressing the patient's gratitude (Adam, 1989) or demanded for obtaining access to certain services or better quality care (Thompson and Witter, 2000), informal patient payments can be directed towards health workers, healthcare institutions (including quasi-informal payments involving a “kind of receipt”) or the administration staff of those institutions (Stepurko, Pavlova, Gryga and Groot, 2010).

Informal patient payments are generally considered a form of corruption (Gordeev, Pavlova and Groot, 2014), even though, for example, ‘gratitude payments’ can be seen, in some countries, as legal or at least controversial activities (Cohen, 2011). Hence, attitudes towards this phenomenon range from strongly negative if the demand for informal payment is initiated by the medical staff, to tolerant if it is initiated by the patient (Atanasova, Pavlova, Moutafova, Rechel and Groot, 2013; Balabanova and McKee, 2002; Gaal, Belli, McKee and Szocska, 2006a). Which countries in East-Central Europe, however, witness a high prevalence of informal payments? And which patient groups are more likely to make informal payments?

Various authors investigating the problem of informal patient payments have conducted single and cross-country analyses in East-Central Europe, covering countries like Bulgaria (Atanasova et al., 2013; Stepurko, Pavlova, Gryga and Groot, 2013; Atanasova, Pavlova, Moutafova, Rechel and Groot, 2012; Belli, 2002; Balabanova and McKee, 2002), Hungary (Gaal, Evetovits and McKee, 2006b; Szende and Culyer, 2006; Gaal and McKee, 2005; Gaal and McKee, 2004), Poland (Stepurko, Pavlova, Gryga, Murauskiene and Groot, 2015a; Stepurko et al., 2013; McMenemy and Timonen, 2002; Shahriari, Belli and Lewis, 2001), Romania (Manea, 2015; Stepurko et al., 2013; Stan, 2012; Cherecheş, Ungureanu, Rus and Baba, 2011; Belli, 2002) and Ukraine (Polese, 2014; Stepurko et al., 2013).

Focusing on measuring the phenomenon's magnitude in Hungary, Gaal et al. (2006b) found that informal patient payments constituted between 64.8 and 203.6 million EUR in 2001 and accounted for 1.6 – 4.6 per cent of total health expenditure. In Bulgaria, moreover, 43 per cent of patients had paid for services that were officially free in the mid-90s (Delcheva, Balabanova and McKee, 1997).

In a cross-country study by Belli (2002), informal patient payments were investigated in the Czech Republic, Hungary, Poland, and Romania. With small gifts for medical staff (doctors and nurses) after treatment, informal payments have been shown to be a marginal phenomenon in some countries such as the Czech Republic, but more prevalent in Hungary where 16.9 per cent of households

utilizing health services had given, at least once, informal cash payments, 3.5 per cent had given only gifts, and 5.3 per cent used both cash and gifts as informal payments. The study also showed that compared with the Czech Republic, informal payments are more prevalent not only in Hungary but also in Poland, and most widespread in Romania. Furthermore, of the four analysed countries, the study on Romania found evidence that informal payments can restrict access to healthcare services. This is also reflected in the work of Farcasanu (2010) who reveals that patients found corruption to be the main problem of the Romanian healthcare system.

In Baltic countries, even if approximately 50 per cent of citizens consider the level of corruption in government health services as being high, very few admitted to making informal payments (8 per cent in Lithuania, 3 per cent in Latvia and just 1 per cent in Estonia) (Cockcroft, Andersson, Paredes-Solis, Caldwell, Mitchell, Milne, Merhi, Roche, Konciviciute and Ledogar, 2008). When discussing the issue of giving gifts for government health services, around 14 per cent of household members across Baltic countries reported doing so (Cockcroft et al., 2008).

A more recent study conducted in six Central and Eastern European countries shows that 41 per cent of healthcare users in Ukraine reported making informal payments in the last 12 months, 34.5 per cent in Romania, 25.2 per cent in Lithuania, 24.8 per cent in Hungary, 12.2 per cent in Bulgaria, and 8.4 per cent in Poland (Stepurko, Pavlova, Gryga and Groot, 2015b). It should be mentioned however that the share of patients reporting informal payments is higher in Ukraine and Romania despite the low number of health care service users (59 and 65 per cent in Ukraine and Romania respectively).

Turning to the socio-economic status of patients making informal payments, previous studies rarely indicate the patients which are significantly more likely to make informal payments (Belli, 2002) but rather argue that these payments are observed in all patient groups irrespective of the socio-economic status (European Commission, 2013). However, some studies have done so and identify a positive association with the income and educational level of the patient, and a negative association with age (Cockcroft et al., 2008; Liapopoulos, Siskou, Kaitelidou, Theodorou and Katostaras, 2008; Szende and Culyer, 2006). For instance, patients under 50 in Baltic countries are three to four times more likely than older people to make informal payments in order to avoid waiting lists, and households with high incomes are also more likely to pay (Cockcroft et al., 2008). Moreover, and according to Stepurko et al. (2015), the likelihood of reporting informal payments (in the previous 12 months) is higher for women (in the case of Bulgaria, Hungary and Lithuania) and for patients with fewer family members or living in households with a higher income (in case of Hungary, Lithuania and Romania). Nevertheless, patients with lower income are paying proportionally more through informal payments than more income advantaged groups (Szende and Culyer, 2006).

Despite the numerous single-country analyses, multi-country studies are still very few (for an exception, see Stepurko et al., 2015). This is even the case when it comes to analysing the patients which are more likely to make informal payments according to socio-economic and spatial variations. The aim of this study and its original contribution is therefore to report a survey conducted in 11 East-Central European countries and by using a set of socio-economic and spatial characteristics, the objective is to identify who is more likely to make informal patient payments in East-Central Europe by testing the following general hypotheses:

- (H1): *Informal payments are equally distributed in all patient groups irrespective of the socio-economic status.*
- (H2): *Informal patient payments are not evenly spread across East-Central Europe.*

The paper proceeds with introducing the data and methodology used and then continues by reporting the results. In the final section the implications of the findings are presented.

## **2. Data and methodology**

For analysing who is more likely to make informal patient payments in East-Central Europe, data is reported from Special Eurobarometer No. 397 ('Corruption'), conducted as part of wave 79.1 of Eurobarometer Series (European Commission, 2014). During February and March 2013, 27,786 face-to-face interviews were carried out in the national language with adults aged 15 years and older, of which 11,100 were conducted in East-Central Europe (with some 1,000 in each country). Of those in East-Central Europe, 8,090 had visited a public healthcare practitioner or institution in the past 12 months. In every country, along with a common questionnaire, a multi-stage random (probability) sampling methodology was used to ensure that on the issues of gender, age, region and locality size, the sample was representative in proportion to its population size. Here, we used weights to ensure that the sample was proportionate to the universe of the population in each country.

In the analysis, the dependent variable used is a dummy variable with recorded value 1 for patients who had visited a public healthcare practitioner or institution and who answered "yes" to the question "Apart from official fees, did you have to give an extra payment or a valuable gift to a nurse or a doctor, or make a donation to the hospital?" and with recorded value 0 otherwise.

To evaluate patients' willingness to make extra payments or give valuable gifts to the public practitioner, or to make a donation to a public hospital, two categories of variables were selected. On the one hand, independent variables relating to the socio-economic status and, on the other hand, independent variables related with spatial distribution were selected. Therefore, here, we used gender (male, female), age (exact age), household composition (one, two, three, four and

more persons), social class (working class of society, middle class of society, and higher/ other/ none class of society), employment status (employed, unemployed) and difficulties in paying bills (most of the time, from time to time, almost never \ never) as socio-economic variables and type of community (rural area or village, small or middle sized town, large town) and country (Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia, Bulgaria, Romania) as spatial variables (see Table A1 in Appendix ).

To report the findings, a descriptive analysis is firstly used. Secondly, as the dependent variable is a dummy, we employ a logistic regression analysis to explore the socio-economic and spatial variations of patients making informal payments in East-Central Europe.

### 3. Findings

Table 1 shows that out of a total of 11,100 interviews conducted in East-Central Europe, 68 percent of respondents reported that they have visited a public healthcare practitioner or a public healthcare institution during the past 12 months. However, the percentage of people who have visited a public healthcare practitioner or institution is not evenly distributed across East-European countries.

**Table 1. Informal payments in healthcare in East-Central Europe, by country**

Region/ Country	<i>N = 11,100</i>		<i>N = 8,090</i>		
	People receiving public healthcare services		Informal payments		
			Yes	No	DK, Ref.*
	(%)	(%)	(%)	(%)	(%)
<i>East-Central</i>	68				
<i>Europe</i>			9	90	1
Czech Republic	77		4	95	1
Estonia	73		3	97	0
Hungary	72		10	88	2
Latvia	78		7	92	1
Lithuania	75		21	77	2
Poland	72		3	97	0
Slovakia	81		9	90	1
Slovenia	73		3	96	1
Bulgaria	67		8	90	2
Romania	50		28	67	5
Croatia	70		2	97	1

\* Notes: Don't know, Refusal.

Source: own calculations based on Special Eurobarometer No. 397 ('Corruption')

Those living in Slovakia, Latvia and Czech Republic received public healthcare services in a higher number of instances (81 per cent, 78 per cent, 77 per cent respectively) whilst those living in Croatia, Bulgaria and Romania received public healthcare services in a small number of instances (70 per cent, 67 per cent and 50 per cent respectively). Moreover, as Table 1 shows, the share of patients paying, apart from official fees, extra payments or giving valuable gifts for healthcare services, is larger in some East European countries compared with others.

With 28 per cent of patients reporting informal payments, Romania turns out to be a particular case. While in Romania only 50 per cent of persons reported receiving public healthcare services, 28 per cent of them declared that they made an additional informal payment apart from the official fee, which is a large deviation from the East-Central Europe average of 9 per cent of people making informal payments. Furthermore, 5 per cent of Romanians refused to answer or said that they did not know, compared with the mean of 1 per cent in East-Central Europe as a whole, indicating that these estimates should be treated as lower-bound estimates. Meanwhile, in Croatia, Slovenia and Estonia a much smaller share of people declared informal payments for healthcare services (2 per cent and 3 per cent respectively).

Analysing this further in terms of the moment when the payment is made and the motives for making informal payments in the healthcare system, Table 2 displays important differences between East-European countries. For example, the largest number of patients that made extra payments or gave valuable gifts before the care was given is registered in Romania (50 per cent) while the largest number of patients that made informal additional payments after the care was given is registered in Hungary (47 per cent). Meanwhile, the largest share of people making additional informal payments apart from the official fees because it was requested in advance is registered in Bulgaria, Slovenia and Slovakia (with 24 per cent, 17 per cent and 14 per cent respectively). Interestingly, only 6 per cent of Romanian patients engaged in making informal payments were asked for an extra payment or a valuable gift in advance, but 50 per cent of them made the payment before the care was given. Therefore, considering the high percentage of informal payments and the low number of instances when the payment was requested in advance, it could be concluded that in Romania, informal payments in healthcare system are rather related to patient behaviour.

On average in East-Central Europe, 23 per cent of those interviewed considered that the doctor and/or the nurse expected an extra payment or a valuable gift following the procedure with the highest percentage of persons believing so in Hungary. As for making additional informal payments for privileged treatment (e.g., jumping the queue), the largest share of people reported doing this in Slovakia (41 per cent), Slovenia (38 per cent) and Czech Republic (24 per cent).

**Table 2. Situations for informal payments occurrence in East-Central Europe, by country**

*N* = 688

Region/ Country	Informal payment:				
	Before the care was given	After the care was given	Requested in advance	Expected following the procedure	For a privileged treatment
	(%)	(%)	(%)	(%)	(%)
<i>East-Central Europe</i>	36	28	7	23	11
Czech Republic	16	14	11	11	24
Estonia	20	22	0	8	10
Hungary	32	47	7	36	9
Latvia	39	31	3	11	7
Lithuania	32	28	3	16	4
Poland	16	21	0	19	14
Slovakia	37	18	14	16	41
Slovenia	10	8	17	4	38
Bulgaria	15	32	24	11	11
Romania	50	28	6	28	7
Croatia	20	14	6	0	0

*Source:* own calculations based on Special Eurobarometer No. 397 ('Corruption')

Therefore, across East-Central European countries, the moment when people make the additional informal payments for the healthcare services differ and so too does the reason for doing so. But who is more likely to make such payments? In order to answer this, Table 3 analyses if the likelihood to make extra payments or give valuable gifts is different with socio-economic (gender, age, household composition, social class, employment status and difficulties paying bills) and spatial (type of community and country) characteristics. Therefore, an additive model is used.

The first specification (model 1) examines the association between informal payments and the socio-economic variables whilst the second stage model (model 2) adds spatial characteristics to examine their association with the informal payments healthcare services.

Model 1 in Table 3 reveals that women are more likely to make additional informal payments for healthcare services. Meanwhile, those unemployed and those never or almost never facing difficulties in paying their bills are less likely to make additional informal payments when receiving healthcare care in the public sector.

**Table 3. Logistic regressions of the propensity to make informal payments for healthcare in East-Central Europe**

Variables	Model 1			Model 2		
	$\beta$	se( $\beta$ )	Exp( $\beta$ )	$\beta$	se( $\beta$ )	Exp( $\beta$ )
Gender (Male)						
Female	0.243 **	0.120	1.275	0.286 **	0.126	1.331
Age (exact)	-0.003	0.004	0.997	-0.001	0.004	0.999
Household composition (One person)						
Two	-0.303 *	0.160	0.738	-0.401 **	0.165	0.670
Three	-0.108	0.189	0.898	-0.048	0.201	0.954
Four and more	-0.223	0.182	0.800	-0.140	0.196	0.869
Social class (Working class of society)						
Middle class of society	0.135	0.128	1.144	0.086	0.137	1.090
Higher/ Other/ None class of society	0.105	0.291	1.110	0.008	0.302	1.008
Employment status (Employed)						
Unemployed	-0.374 ***	0.125	0.688	-0.462 ***	0.136	0.630
Difficulties paying bills (Most of the time)						
From time to time	-0.167	0.154	0.846	-0.032	0.158	0.968
Almost never\ Never	-0.730 ***	0.161	0.482	-0.462 ***	0.174	0.630
Type of community (Rural area or village)						
Small or middle sized town				0.123	0.156	1.131
Large town				0.044	0.157	1.045
Country (Croatia)						
Czech Republic				0.381	0.311	1.464
Estonia				0.163	0.338	1.177
Hungary				1.365 ***	0.275	3.916
Latvia				0.864 ***	0.285	2.374
Lithuania				2.247 ***	0.259	9.456
Poland				0.188	0.331	1.207
Slovakia				1.247 ***	0.279	3.481
Slovenia				0.263	0.320	1.301
Bulgaria				1.041 ***	0.291	2.832
Romania				2.782 ***	0.263	16.16
Constant	-1.636 ***	0.294	0.195	-3.221 ***	0.400	0.040
N			24,410			24,408
Subpop. N			7,724			7,722
Prob > F			0.0000			0.0000

Notes: Significant at \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 (standard errors in parentheses); all coefficients are compared to the benchmark category, shown in brackets; sample size is lower due to missing data.

Source: own calculations based on Special Eurobarometer No. 397 ('Corruption')

However, no significant associations were identified with respect to respondent's age and social class (partially confirming hypothesis *H1*). Offering different local perspectives, studies analysing the Iranian healthcare system found that elders, members of small and wealthier families or employed persons are more likely to pay under the table money for health services (Meskarpour-Amiri,



Arani, Sadeghi and Agheli-Kohnehsahri, 2016). This shows that the socio-economic groups willing to make informal payments for healthcare services differ from country to country and therefore, policy makers should adopt measures which consider the specificity of each country or region.

When spatial characteristics were added in Model 2, no major changes were identified to the significance of socio-economic characteristics, associated with informal payments. Model 2 reveals that, compared with patients living in the newest EU country, namely Croatia, patients living in Hungary, Latvia, Lithuania, Slovakia, Bulgaria and Romania are significantly more likely to make extra payments or to give valuable gifts for healthcare services. However, no significant association is found between the type of community and informal payments in healthcare (partially confirming hypothesis *H2*).

#### **4. Conclusions**

Based on these results, it can be argued that in East-Central Europe a large share of patients make informal payments for healthcare services. Whilst women are more likely to make additional payments apart from official fees, unemployed patients or those never or almost never having difficulties in paying bills are less likely to make such payments. Moreover, compared with Croatia, people living in some more affluent countries as well as in some less affluent countries in East-Central Europe are more likely to make informal payments for healthcare services. Therefore, there is no pattern that can be identified in East-Central Europe with respect to the informal payments in the healthcare sector, and further studies are needed for a more variegated understanding of this phenomenon. One of the implications of this paper is that these results display the population groups and spaces that need targeting when seeking to tackle informal patient payments. Indeed, tackling the phenomenon will be difficult, considering the fact that neutral or even positive attitude persists towards patients making informal payments. Tougher penalties for those caught making informal payments can be an approach, although it is doubtful that such a measure could have political support. Another approach is to provide incentives (e.g. higher salaries for medical staff) so that the medical staff would no longer feel they need informal payments and patients would no longer feel the need to make such unofficial payments. Another approach is to use awareness raising campaigns about the negative impacts of making and receiving informal payments for healthcare services (Williams and Onoshchenko, 2015). These measures, furthermore, can be combined in various ways in order to tackle the problem, perhaps starting with awareness raising campaigns and then incentives followed by punishments only for those who continue to demand such payments. Importantly, however, action is required to tackle this problem. A *laissez-faire* approach is not an option.

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## APPENDIX

**Table A1. Descriptive statistics of the variables used in analysis**

Variables	Description	Mode or mean
<b>Dependent variable</b>		
Informal payment	Dummy variable for extra payment, valuable gift, or donation to the hospital paid (apart from official fees) for public healthcare services.	No (91%)
<b>Independent variables</b>		
<i>Socio-economic variables</i>		
Gender	Dummy variable for the gender of the respondent.	Female (57%)
Age	Respondent exact age.	47 years
Household composition	People in respondent's household (including the respondent) in categories.	Two persons (31%)
Social class	Respondent perception regarding social class of society to which he/she and his/her household belong in categories.	Working class of society (50%)
Employment status	Dummy variable for the employment status of the respondent.	Unemployed (55%)
Difficulties paying bills	Respondent difficulties in paying bills in categories.	Almost never\ Never (53%)
<i>Spatial variables</i>		
Type of community	Type of community where the respondent lives in categories.	Rural area or village (36%)
Country	Respondent country in categories.	Poland (38%)

Source: own calculations based on Special Eurobarometer No. 397 ('Corruption')