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Explaining informal payments for health services in Central and Eastern Europe: an institutional asymmetry perspective

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Abstract

The aim of this paper is to propose and evaluate a new institutional theory explanation for patients making informal payments for health services in Central and Eastern Europe. This views informal payments by patients to healthcare professionals as arising when formal institutional failures lead to an asymmetry between the laws and regulations of formal institutions and the unwritten rules of informal institutions. Reporting a 2013 Eurobarometer survey of the prevalence of informal payments by patients in Central and Eastern European countries, a strong association is revealed between the level of asymmetry between the formal and informal institutions, and the propensity to make informal payments. The association

between informal payments and various formal institutional imperfections is then explored to evaluate which structural conditions might reduce this institutional asymmetry, and thus the propensity to make informal payments. The paper concludes by exploring the implications for tackling such informal practices.

Keywords: informal payments, health services, institutional theory, institutional asymmetry, East-Central Europe.

Introduction

Since the turn of the millennium, a burgeoning literature has shown how patients, particularly in post-socialist countries, make informal payments in return for healthcare services. These informal payments are commonly defined as direct contributions, made in addition to any contribution determined by the terms of entitlement, in cash or in kind, by patients or others acting on their behalf, to health care providers for services to which patients are entitled (Chereches, Ungureanu, Sandu, & Rus, 2013; Gaal, Jakab, & Shishkin, 2011). Other terms used in the literature to describe what we here term informal payments include “under-the-table” payments (Delcheva, Balabanova, & McKee, 1997), “under-the-counter” payments (Balabanova & McKee, 2002; Delcheva et al., 1997) and “unofficial” payments (Ensor, 2004). These informal payments by patients, in addition to any official fees, are variously made in order to receive better treatment (Atanasova, Pavlova, & Groot, 2015; Baji, Pavlova, Gulácsi, & Groot, 2011; Balabanova & McKee, 2002; Habibov, 2016; Mæstad & Mwisongo, 2011; Liaropoulos, Siskou, Kaitelidou, Theodorou, & Katostaras, 2008; Vian, Grybosk, Sinoimeri, & Hall, 2006), an additional service (Ensor, 2004), due to the fear of being denied treatment (Tahiri et al., 2013; Vian et al., 2006), because the “doctor demanded payment” (Liaropoulos et al., 2008), because it is a tradition to give a gift (Fomenko & Stepurko, 2012; Liaropoulos et al., 2008; Vian et al., 2006) or just “because everybody does it” (Liaropoulos et al., 2008).

Previous studies display the extensiveness of such informal payments, with some 35-60% of patients making informal payments (in-kind payments included) in Bulgaria, Hungary, Lithuania, Poland, Romania and Ukraine (Stepurko, Pavlova, Gryga, & Groot, 2013). Informal payments by patients, therefore, are not a minority practice and strategies are needed for tackling this phenomenon.

The objective of this paper is to propose and evaluate a new institutionalist theory explanation for patients making informal payments for health services in Central and Eastern European countries. From the perspective of institutionalist theory, institutions are “the rules of the game” that exist in any society, or the ‘humanly devised constraints that shape human interaction’ (North, 1990, p. 3), and govern behaviour in society. Institutions are “the rules of the game” which prescribe what is socially acceptable, and thus both constrain and encourage different activities (North, 1990). All societies have both formal institutions (i.e., codified laws and regulations) that set out the legal rules of the game, as well as informal institutions which are the “socially shared rules, usually unwritten, that are created, communicated and enforced outside of officially sanctioned channels” (Helmke and Levitsky, 2004, p. 727), and are the norms, values and beliefs held by citizens reflecting their individual morale about what is acceptable (Denzau and North, 1994). The term “institution” commonly applies to both informal institutions such as the behaviour patterns in a society, and to formal institutions created by entities such as the government and public services. Therefore, by adopting an institutionalist theory lens, two different approaches to explaining informal payments by patients can be adopted. Firstly, such informal payments can be explained as resulting from formal institutional imperfections in healthcare services and, secondly, informal payments can be seen to arise when the norms, practices and values of the informal institutions are not in symmetry with the formal rules of the game. Indeed, the greater is this institutional asymmetry, the higher is the likelihood of informal payments.

This paper consequently advances knowledge in three ways. Theoretically, and drawing inspiration from institutionalist theory (North, 1990) and from the application of institutionalist theory to the study of the wider informal economy beyond healthcare (Williams & Horodnic, 2015a, 2015b), we here for the first time evaluate the validity of explaining informal payments by patients for health services in Central and Eastern Europe through the lens of institutionalist

theory. Until now, neither the formal institutional imperfections nor the institutional asymmetry theses have been evaluated as explanations for patients making informal payments in Central and Eastern Europe. Empirically, meanwhile, this paper reports an evaluation of the cross-national variations in the prevalence and determinants of informal payments in 11 countries in Central and Eastern Europe. In terms of policy implications, knowledge is here advanced by identifying the changes required in both the formal and informal institutions in order to tackle informal payments in healthcare.

The next section therefore, briefly reviews the previous literature on informal payments by patients in the health services sector, followed by the outline of a new institutionalist theory for explaining this phenomenon. The outcome will be a set of hypotheses regarding the association between informal payments by patients and: a) the degree of asymmetry between formal and informal institutions and b) formal institutional imperfections. The third section then reports the methodology and dataset used to evaluate the validity of this new theoretical explanation, namely a probit regression analysis with sample selection (using a 2013 Eurobarometer survey undertaken in 11 Central and Eastern European nations), followed in the fourth section by a reporting of the results. The fifth and final section then discusses the implications for theory and draws conclusions on the policy implications of this new way of explaining informal payments.

Informal payments by patients in Central and Eastern Europe: an institutionalist approach

Over the past two decades, an expanding literature has shown how in many developing and transition countries, patients make an additional informal payment to healthcare staff apart from the official fees for health services. This has been identified in cross-national studies conducted across 35 European countries (Tambor, Pavlova, Golinowska, Sowada, & Groot,

2013), six Central and Eastern European countries (Stepurko, Pavlova, Gryga, & Groot, 2015a), Central Asia (Rechel et al., 2012) and 33 African countries (Kankeu & Ventelou, 2016). It has also been identified in single nation studies conducted in for example Bulgaria (Atanasova et al., 2015; Balabanova & McKee, 2002; Delcheva et al., 1997; Pavlova, Groot, & van Merode, 2002; Rechel, Blackburn, Spencer, & Rechel, 2011), Poland (Chawla, Berman, Windak, & Kulis, 2004; Stepurko, Pavlova, Gryga, Murauskiene, & Groot, 2015b), Hungary (Baji et al., 2011; Baji, Pavlova, Gulácsi, & Groot, 2012a; Baji, Pavlova, Gulácsi, Zsófia, & Groot, 2012b; Baji, Pavlova, Gulacsi, & Groot, 2013; Gaal, Evetovits, & McKee, 2006; Szende & Culyer, 2006), Lithuania (Rikliene, Jarasiunaite, & Starkiene, 2014; Stepurko et al., 2015b), Russia (Fotaki, 2009; Kutzin, Jakab, & Cashin, 2010); Ukraine (Danyliv, Pavlova, Gryga, & Groot, 2015; Stepurko et al., 2015b) and Moldova (Mokhtari & Ashtari, 2012). These studies report marked cross-national variations in the proportion of patients making informal payments, ranging from 43% in Bulgaria (Delcheva et al., 1997) to 25% in Moldova (Mokhtari & Ashtari, 2012) and 23% in Russia (Kutzin et al., 2010). However, these results on the prevalence of informal payments are extracted from different studies using different methodologies and need to be cautiously interpreted.

To explain such cross-national variations in the prevalence of informal payments for health services in Central and Eastern Europe, an institutionalist theory approach is here for the first time adopted. Institutionalist theory (Baumol & Blinder, 2008; North, 1990) has been widely applied in health services research, such as to explain the adoption of health information technology (Fareed, Bazzoli, Mick, & Harless, 2015; Nilashi, Ahmadi, Ahani, Ravangard, & bin Ibrahim, 2016; Sherer, 2010), healthcare reform (Contandriopoulos & Brousselle, 2010), patient-centred preventive care (Ledderer, 2010) and healthcare expenditure (Burnett et al., 2016). Therefore, following advances in institutionalist theory in relation to the wider study of

the informal economy (Williams & Horodnic, 2015a, 2015b), two different approaches to explaining informal payments by patients can be adopted.

On the one hand, informal payments by patients can be explained as resulting from formal institutional imperfections in healthcare services. Indeed, previous literature has identified a number of structural conditions that lead to informal payments, including legal-ethical, social-cultural (the social custom of expressing gratitude through informal payments), governance failures (e.g. poor accountability) and economic (e.g. underfunding in the face of growing healthcare needs and expectations; explanations based on economic behaviour) conditions (Cohen, 2012; Gaal & McKee, 2005; Gaal & McKee, 2004; Tambor, Pavlova, Golinowska, Sowada, & Groot, 2013).

On the other hand, however, it has been recognised that focusing upon solely formal institutional imperfections ignores the role played by informal institutions (Godfrey, 2015; North, 1990). It is here asserted that all societies have both laws and regulations (i.e., formal institutions) that set out the legal rules of the game (Baumol & Blinder, 2008; North, 1990; Webb, Tihanyi, Ireland, & Sirmon, 2009), as well as informal institutions, which are the “socially shared rules, usually unwritten, that are created, communicated and enforced outside of officially sanctioned channels” (Helmke & Levitsky, 2004, p. 727). The norms, values and beliefs of a society’s informal institutions can be either “complementary” if they reinforce formal institutions, or “substitutive” if the rules they prescribe are incompatible with the formal institutions (Helmke & Levitsky, 2004; North, 1990). Therefore, even if there are formal institutional imperfections (e.g. poor access to healthcare), informal payments by patients would not necessarily occur unless the socially shared norms, values and beliefs of patients were not aligned with the formal rules. If formal and informal institutions do not align (there is asymmetry between formal and informal institutions), the result is the presence of informal

payments in healthcare system, which, although formally illegitimate, is deemed socially legitimate (e.g., “everybody does it”; Liaropoulos et al., 2008).

Informal payments by patients are thus here represented as endeavour occurring outside of formal institutional prescriptions but within the norms, values and beliefs of informal institutions and are viewed as arising “because of the incongruence between what is defined as legitimate by formal and informal institutions” (Webb et al., 2009, p. 495). The greater the asymmetry between these formal and informal institutions, the more prevalent are informal payments. To test the validity of this institutionalist perspective that the likelihood of making informal payments for health services is associated with the degree of institutional asymmetry, the following hypothesis can be evaluated:

Institutional asymmetry hypothesis (H1): the prevalence of informal payments is higher in populations with greater asymmetry between the formal and informal institutions.

This thesis can be tested not only on a cross-national level but also across various demographic and socio-economic groups. Previous studies reveal that the prevalence of informal payments for health services is greater among women (Baji et al., 2012b; Balabanova & McKee, 2002; Mokhtari & Ashtari, 2012; Rikliene et al., 2014; Stepurko et al., 2015a; Williams, Horodnic, & Horodnic, 2016), younger people (Arsenijevic, Pavlova, & Groot, 2015; Balabanova & McKee, 2002; Danyliv et al., 2015; Tomini & Maarse, 2011; Tomini, Groot, & Pavlova, 2012a), those spending with more years in education (Arsenijevic et al., 2015; Baji et al., 2012b; Balabanova & McKee, 2002; Kaitelidou et al., 2013; Rikliene et al., 2014; Stepurko et al., 2015a; Tomini et al., 2012a), the employed (Kaitelidou et al., 2013), married people (Tomini et al., 2012a), those living in smaller households (Baji et al., 2012b; Stepurko et al., 2015a; Tomini et al., 2012a; Tomini, Groot, & Pavlova, 2012b), rural populations (Danyliv et

al., 2015; Tomini & Groot, 2013; Tomini & Maarse, 2011) and lower-income groups (Kankeu & Ventelou, 2016; Szende & Culyer, 2006; Tengilimoglu, Güzel, Toygar, Akinci, & Dziegielewski, 2015; Tomini & Groot, 2013). By testing this hypothesis, whether these populations also have a higher institutional asymmetry and therefore higher propensity to make informal payments can be evaluated.

It is important however, not only to test this new institutional asymmetry thesis. London et al. (2014) display that the influence of informal institutions becomes stronger in the presence of formal institutional imperfections and thus institutional asymmetry can be argued to prevail as a result of formal institutional imperfections in healthcare services. For instance, lower expenditures on healthcare (associated with lower salaries for healthcare professionals) can be associated with higher institutional asymmetry and consequently the higher prevalence of informal payments (i.e., the patient will consider it an acceptable and appropriate behaviour “to compensate” the medical staff for the received services). Moreover, the poor quality of government, expressed in a lack of capacity to enforce policies or ability to provide incentives to encourage adherence to the formal rules (i.e., the codified laws and regulations), may favour informal payments by patients.

Viewed through an institutional lens, therefore, the structural conditions identified in previous literature as associated with the greater prevalence of informal payments need to be evaluated as determinants of the level of institutional asymmetry. These formal institutional imperfections identified in previous literature as associated with the greater prevalence of informal payments include not only the existence of formal institutional voids, such as lower expenditures on healthcare (Balabanova & McKee, 2002; Tambor et al., 2013) and inefficient resource allocation which results in a low range and reach of healthcare services (Baji et al., 2013; Gaal & McKee, 2004; Gaal, Belli, McKee, & Szócska, 2006; Kutzin et al., 2010; Lewis, 2002; Tambor et al., 2013; Tomini & Groot, 2013), but also formal institutional inefficiencies,

such as the poor quality of government, poorer performing healthcare systems and those concentrating on curative rather than preventative care (Cohen, 2012; Fotaki, 2009; Gaal & McKee, 2004; Lewis, 2002; Rechel et al., 2011; Stepurko et al., 2015b; Tambor et al., 2013; Tomini & Groot, 2013). Moreover, other theories explaining informal payments such as “inxit” theory (Gaal & McKee, 2004) or the “alternative politics” theory (Cohen, 2012) are also grounded in institutional failure and citizens dissatisfaction with healthcare services. Therefore, to specify what precise formal institutional failings are associated with a greater likelihood that informal payments will be made by patients, and to identify what changes are required in formal institutions so as to reduce informal payments, the following hypotheses can be evaluated:

Formal institutional imperfections hypothesis (H2): the prevalence of informal payments is higher in healthcare systems with greater formal institutional imperfections.

Formal institutional voids (H2A): the prevalence of informal payments is higher in healthcare systems with greater formal institutional voids.

Lack of financial resources (H2A1): the prevalence of informal payments is higher in healthcare systems with lower levels of healthcare expenditure.

Lack of a basic health service (H2A2): the prevalence of informal payments is higher in healthcare systems with a lower range and reach of health service provision.

Formal institutional inefficiencies (H2B): the prevalence of informal payments is higher in healthcare systems with greater formal institutional inefficiencies.

Quality of government (H2B1): the prevalence of informal payments is higher in countries with a lower quality of government.

Health system performance (H2B2): the prevalence of informal payments is higher in healthcare systems with lower level of performance.

Resource misallocations (H2B3): the prevalence of informal payments is higher in healthcare systems focusing more on curative rather than preventative health services.

Methodology

To evaluate the relationship between the likelihood of informal payments by patients and the degree of institutional asymmetry, along with the formal institutional imperfections associated with higher informal payments, we here use an extensive dataset, namely Special Eurobarometer No. 397 ('Corruption'), conducted as part of wave 79.1 of the Eurobarometer survey (European Commission, 2014a). This survey involved 11,100 face-to-face interviews conducted in February and March 2013 across the 11 Central and Eastern European countries, of which 8,090 reported that they had visited a public healthcare practitioner or health care institution in the 12 months prior to the survey. Here, only those respondents are kept for which data on each and every variable analysed is available, which totals 10,765 interviews, of which 7,816 respondents have visited a public healthcare practitioner or health care institution.

The interviews were undertaken in the national language with adults aged 15 years and older, based on a common questionnaire, and a multi-stage random (probability) sampling methodology which ensure that on the issues of gender, age, region and locality size, each country as well as each level of sample was representative in proportion to its population size. Thus, the sample represents the whole territory of the countries surveyed according to the Nuts II regions, or equivalent (details in the Special Eurobarometer No. 397 methodology; European Commission, 2014b). For the univariate analysis therefore, we employed the sampling

weighting scheme as recommended in the wider literature (Solon, Haider, & Wooldridge, 2015; Winship & Radbill, 1994) and the Eurobarometer methodology (European Commission, 2014b). Regarding the multivariate analysis, there is debate over whether such a weighting scheme should be used (Pfefferman, 1994; Sharon & Liu, 1994; Solon et al., 2015). Following the majority opinion in the literature and previous studies on the wider informal economy (e.g. Williams & Horodnic, 2016), we here have not used the weighting scheme for the multivariate analysis.

The dependent variable is here whether patients made extra informal payments apart from the official fees. This is based on their response 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?”. To evaluate H1 regarding whether the prevalence of informal payments is associated with the degree of institutional asymmetry, an Institutional Asymmetry Index for each respondent is constructed. Participants were asked to rate on a 3-point Likert scale (where 1 means always acceptable and 3 means never acceptable) the acceptability of three behaviours, namely: a) to give money, b) to give a gift or c) to do a favour, in order to get something from the public administration or a public service. The index has been calculated here using the mean score across these three attitudinal questions. A lower index value indicates that the norms, values and beliefs of a society’s informal institutions are not aligned with those of the formal institutions (i.e., patients are not seeking to adhere to the “legal rules of the game”). The lower the index value, the higher is the institutional asymmetry.

Meanwhile, to analyse the association between informal payments and formal institutional imperfections (H2), akin to previous studies on informal payments, various country-level structural conditions are considered (e.g. Belli, Shahriari, & Gotzadze, 2004; Bloom, Han, & Li, 2001; Cohen, 2012), whilst holding constant the Institutional Asymmetry Index and a range of individual-level variables (gender, age, employment status and whether

the respondent lives in an urban/rural area). Similar socio-demographic, socio-economic and spatial characteristics were used in previous studies evaluating the prevalence of informal payments (Baji et al., 2013; Williams et al., 2016).

To evaluate the lack of financial resources hypothesis (H2A1) and the lack of a basic health service hypothesis (H2A2), the indicators used are:

- Level of total expenditure on health services expressed as a percentage of GDP (World Bank, 2013).
- Range and reach of health services provided in a country – a sub-component of the European Health Consumer Index, 2013 (Health Consumer Powerhouse [HCP], 2013).

To evaluate the relationship between informal payments and governance (H2B1) and health system performance (H2B2), the analysed indicators are:

- European Quality of Government Index – this includes both perceptions and experiences with public sector services. The index is standardised with a mean of zero, with higher scores implying a higher quality of government (Charron, Dijkstra, & Lapuente, 2015).
- Outcomes – a sub-component of the European Health Consumer Index, 2013 (HCP, 2013).

To evaluate resource misallocations by formal institutions (H2B3), such as when focusing on curative health services rather than prevention, we here use:

- Prevention – a sub-component of the European Health Consumer Index, 2013 (HCP, 2013).

To evaluate the hypotheses, and after a descriptive analysis, a probit regression with sample selection is conducted. Of all interviews in the analysed subset of the dataset, some were conducted with respondents who have visited a public healthcare practitioner or health care

institution. For these health service users, we aim to investigate whether they made extra informal payments apart from the official fees. Indeed, informal payments are observable only if the respondent has used health services. Therefore, considering the selection issue, we use a selection equation which contain an indicator for patients` age, their education and the area where they live (country, urban/rural) as predictors for the propensity to visit a public healthcare practitioner or health care institution. According to previous studies, peoples` age, education and geographical area are considered factors influencing healthcare utilisation (d'Uva & Jones, 2009; Geitona, Zavras, & Kyriopoulos, 2007; Maurer, 2007; Sirven & Or, 2010; Zyaambo, Siziba, & Fylkesnes, 2012).

Given the significant correlation between some macro-level indicators (Table A2 in Appendix), the variable investigating health system performance (Outcomes) is added separately to the individual-level variables (i.e., the Institutional Asymmetry Index and socio-economic control variables) to evaluate whether it is significantly associated with the propensity to make informal payments. Below, we report the findings.

Findings

Of the 10,765 face-to-face interviews undertaken in 2013 in Central and Eastern Europe, 7,816 had visited a public healthcare practitioner or institution in the past 12 months, of whom 9% had made informal payments for a public healthcare service. Extrapolating from this, in the year prior to the survey, some one in 11 Central and Eastern European citizens using healthcare services made informal payments.

However, not all countries and population groups display the same propensity to make informal payments. Starting with the cross-national variations, and as Table 1 displays, making informal payments is more common in Romania (30% of those using healthcare services made

informal payments), Lithuania (22%), Hungary (10%), Slovakia (9%), Bulgaria (9%) and Latvia (7%), and lower in the Czech Republic (4%), Slovenia (3%), Estonia (3%), Poland (3%) and Croatia (less than 3%). Indeed, although just 17% of the healthcare users surveyed were from Romania and Lithuania, more than half (54%) of those making informal payments in Central and Eastern Europe were from these two countries. This practice, therefore, is heavily concentrated in these two countries. Similarly, in a study conducted in July–August 2010 in six Central and Eastern European countries (Bulgaria, Hungary, Lithuania, Poland, Romania and Ukraine), using national representative samples, Stepurko et al. (2015a) show that the share of healthcare users who report informal payments is the highest in these two countries (35% in Romania and 25% in Lithuania).

[INSERT TABLE 1 HERE]

Not only is the practice of making informal payments concentrated in certain countries, it is also more prevalent in some population groups rather than others. Examining those population groups more likely to make informal payments, Table 1 displays that patients under 47 years old are more likely to give extra payments or valuable gifts for healthcare services than older patients (10% compared with 8%). Indeed, although just 50% of the patients surveyed were under 47 years old, they constituted 58% of all patients making informal payments. Employed patients are also more likely than unemployed patients to make informal payments (11% compared with 8%), and women more likely than men (10% compared with 8%). Similarly, Stepurko et al. (2015a) found that being female (in Bulgaria, Hungary, Lithuania and Romania) increases the probability of making informal payments for health services.

To evaluate whether these cross-national and socio-economic variations in informal payments are related with the level of institutional asymmetry, columns three and four in Table

1 report the variations in the Institutional Asymmetry Index. This reveals that Institutional Asymmetry Index is lower (and thus institutional asymmetry is greater) for patients making informal payments (2.37) compared with patients not making informal payments (2.67). The same trend can be identified in the socio-economic variations in the Institutional Asymmetry Index. Indeed, most Central and Eastern European countries reporting a higher prevalence of informal payments by patients have higher levels of institutional asymmetry among patients making informal payments than among those who have not: 2.40 and 2.74 in Romania, 2.24 and 2.44 in Lithuania, 1.96 and 2.45 in Hungary, and 2.02 and 2.47 in Slovakia. Similarly, with a value of 2.17 for patients making informal payments and 2.42 for patients not making informal payments, Latvia has a high level of institutional asymmetry. Lower levels of institutional asymmetry, meanwhile, exist among patients making informal payments than those not in Slovenia (2.83 and 2.84), Estonia (2.34 and 2.73) and Poland (2.74 and 2.77).

Analysing these descriptive statistics therefore, the tentative finding is that, although ubiquitous across all regions and socio-economic groups, informal payments are generally more prevalent in populations with a greater level of institutional asymmetry.

To determine firstly, whether the association between informal payments and institutional asymmetry (H1) is significant when other control variables are taken into account and held constant, and secondly, to determine the country-level structural conditions (formal institutional imperfections – H2) significantly associated with the greater prevalence of informal payments, Table 2 reports the results of a probit regression with sample selection. Indeed, the likelihood-ratio test of independent equations conclusively rejects the null hypothesis with an estimated rho of 0.90, 0.94 and 0.96 between the two equations` errors, indicating that ignoring the selection into healthcare user status would render the estimates of univariate probit equation for informal payments equation inconsistent. In the selection equation, a significant positive association between healthcare utilisation and age and

education is revealed. Moreover, individuals living in urban areas are significantly more likely to use health services than those living in rural areas, confirming therefore previous findings in the literature on healthcare utilisation (e.g. Geitona et al., 2007; Maurer, 2007; Zyaambo et al., 2012).

Given this justification for considering a selection issue, the first stage of the analysis involves individual-level characteristics and dummies for countries and the second stage of the analysis individual and macro-level variables to investigate structural conditions (details on the variables used in the analysis are in Table A1 in Appendix).

[INSERT TABLE 2 HERE]

The first row in Models 1-3 in Table 2 reveals that the prevalence of informal payments is strongly associated with higher levels of institutional asymmetry (i.e., a low Institutional Asymmetry Index). This is the case in all models, whether only individual-level variables are analysed, or country-level structural conditions added. As institutional asymmetry increases, the prevalence of informal payments significantly increases (confirming H1). Moreover, Model 1 identifies that women are more likely to make informal payments than men, as are older than younger patients. Patients living in urban areas are also more likely to make informal payments than patients living in rural areas. However, no significant correlation with informal payments is found with respect to employment status. Moreover, when comparing other countries with those in the Czech Republic, patients in Romania, Lithuania, Bulgaria, Slovakia and Hungary are significantly more likely to make informal payments. These findings are in line with the results of Tambor et al. (2013) who classify Romania, Lithuania, Bulgaria, Slovakia and Hungary in the group of countries with widespread informal payments.

Models 2 and 3 in Table 2 meanwhile, evaluate the formal institutional imperfection hypothesis (H2) to explain informal payments. Model 2 reveals that informal payments are significantly higher in countries with lower levels of health expenditure as a share of GDP (confirming H2A1). To evaluate the lack of a basic health service hypothesis, Model 2 provides strong evidence that informal payments are greater in health systems with a low range and reach of services provision (confirming H2A2). Turning to the formal institutional inefficiencies hypotheses, Model 2 reveals strong evidence that informal payments are higher in countries with lower qualities of governance (confirming H2B1) and Model 3 reveals strong evidence that informal payments are higher in countries with low health outcomes (confirming H2B2). Resource misallocation as a formal institutional inefficiency is evaluated also in Model 2. The finding is that informal payments are significantly more common in health systems with low quality preventive care (confirming H2B3). Similar results were obtained by Tambor et al. (2013) who found that informal payments are widespread in countries having the lowest share of public health expenditure and the lowest government effectiveness. These findings are also in line with legal and economic explanations of informal payments by patients who explicitly linked this phenomenon to the imperfections of the healthcare system (Cohen, 2012; Gaal & McKee, 2005; Gaal & McKee, 2004).

To graphically display the relationship between informal patient payments, institutional asymmetry and formal institutional imperfections and to help interpret the findings, Figure 1 presents the predicted probabilities of a “representative” patient in Central and Eastern Europe making informal payments, according to their level of institutional asymmetry and various country-level structural conditions. By taking the mean and modal values of other independent variables, the representative patient in Central and Eastern Europe is here a 47+ years-old unemployed women, located in an urban area in a country with average values of the analysed macro-level indicators. As graphically displayed in Figure 1A, as institutional asymmetry

decreases, the predicted odds of this representative patient making informal payments becomes smaller. Moreover, if analysing Figure 1B.1-5, the finding is that as institutional asymmetry decreases and country-level structural conditions improve, the predicted odds of the representative patient making informal payments in Central and Eastern Europe becomes smaller. These graphs therefore graphically portray how patients living in countries with higher expenditure levels on health (Figure 1B.1), a larger range and reach of health service provision (Figure 1B.2), higher qualities of government (Figure 1B.3), a higher-performing health system (Figure 1B.5), and with a healthcare system oriented towards prevention (Figure 1B.4), have lower predicted odds of making informal payments. In consequence, formal institutional failings appear to engender greater institutional asymmetry and therefore higher predicted odds of making informal payments.

Discussion and conclusions

This paper has proposed and evaluated a new way of explaining informal payments by patients in Central and Eastern Europe. Drawing inspiration from institutional theory, it has shown that when formal and informal institutions are not aligned, informal practices are more prevalent than are embedded in unwritten socially shared rules but “illegitimate” in terms of the formal written rules. The higher is the asymmetry between formal and informal institutions, the greater is the likelihood of informal payments. Using probit regression analysis with sample selection, this has been revealed to be the case when both the individual level variables alone are analysed (i.e., socio-economic characteristics) and when country level variables (i.e. structural conditions related to formal institutional imperfections) are evaluated along with the individual-level ones.

To reduce informal payments in consequence, policy will need to reduce this institutional asymmetry. This necessitates changes in the norms, practices and beliefs that constitute the informal institutions as well as the formal institutional imperfections that lead to institutional asymmetry and thus informal payments.

To change the informal institutions in order to align them with the formal rules, three policy initiatives can be pursued. Firstly, advertising campaigns (targeting the groups identified above with high levels of institutional asymmetry) can be employed, such as informing patients of the costs and risks of making informal payments for healthcare services. Secondly, normative appeals to both patients and healthcare professionals can be employed in a bid to reduce the tendency to either pay or ask for informal payments. Certainly, as previous studies indicate, anticorruption measures in association with awareness campaigns have proven to be a strong combination in reducing informal payments in Eastern European countries (Danyliv et al., 2015; Stepurko et al., 2013). And third and finally, educational campaigns are required to inform citizens about the benefits of paying taxes so as to pay for public services such as healthcare (e.g., so that higher salaries can be paid) and informal payments reduced because the healthcare professionals would no longer demand informal payments and patients no longer feel the need to make such informal payments.

To improve the social contract between governments, and patients and medical staff, nevertheless, formal institutions also need to change. On the one hand, and as models 2 and 3 in Table 2 reveal, informal payments are more common in systems with low expenditure on health and a low range and reach of services provision. On the other hand, governments also need to pursue modernisation and wider economic and social developments, with the models revealing how countries with lower quality government, lower health outcomes and systems focusing on curative health services rather than preventive services, have a higher prevalence of informal payments.

The major limitation of this paper, nevertheless, is that the quantitative analyses has only shown that institutional asymmetry is a result of formal institutional imperfections. Therefore, whilst the current institutional asymmetry theory towards informal payments by patients has explored the issue of “vertical trust” (between formal institutions/ government and informal institutions/ patients), another important issue that has been under-researched are the social norms. Social norms represent the “horizontal trust” (amongst patients and amongst healthcare professionals). Thus, patients and healthcare professionals are more likely to make/accept informal payments if they live in a society where the phenomenon is considered widespread (they might be less worried about the sanctions and they might consider that “everybody does it”). Future qualitative and quantitative research is therefore required to explore the “horizontal trust” in informal payments by patients. Secondly, there is a potential bias related to whether respondents answered honestly, given that the subject matter is related to illegal practices, and thus, the reported percentages might be underestimated.

In sum, this paper has advanced a new institutionalist explanation for patients making informal payments Central and Eastern Europe. Whether this institutional asymmetry approach is more widely valid as an explanation for informal payments beyond Central and Eastern Europe now needs evaluating. If this paper stimulates such evaluations, then one intention of this paper will have been achieved. However, if this paper contributes to stimulating Central and Eastern European governments to recognise how informal payments result from institutional asymmetry and to begin tackling the structural conditions that lead to this asymmetry, then it will have achieved its fuller intention.

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Table 1. Informal payments and institutional asymmetry in Central and Eastern Europe: by socio-demographic, socio-economic and spatial characteristics

Healthcare users	Healthcare users: respondents visiting a public healthcare practitioner or institution (last 12 months)					Percent of:			
	Institutional Asymmetry Index		Informal payments						
	Informal payments - YES	Informal payments - NO		All patients making informal payments	All patients				
	no.	-	%			%	%		
Central & Eastern Europe	7,816	2.37	2.67	8.95		100	100		
Gender									
Male	3,162	2.30	2.66	7.72	37.18	43.09			
Female	4,654	2.40	2.67	9.88	62.82	56.91			
Age (47 years)									
Bellow mean	3,485	2.41	2.65	10.34	57.76	50.01			
Above mean	4,331	2.31	2.69	7.56	42.24	49.99			
Employment									
Employed	3,616	2.39	2.64	10.56	53.39	45.23			
Unemployed	4,200	2.34	2.69	7.61	46.61	54.77			
Area									
Rural	2,796	2.44	2.67	8.53	33.99	35.67			
Urban	5,020	2.33	2.67	9.18	66.01	64.33			
Country									
Romania	470	2.40	2.74	29.65	46.07	13.90			
Lithuania	737	2.24	2.44	21.60	8.26	3.42			
Hungary	722	1.96	2.45	9.86	10.83	9.82			
Slovakia	806	2.02	2.47	8.74	5.97	6.12			
Bulgaria	657	2.48	2.70	8.55	6.89	7.21			
Latvia	768	2.17	2.42	6.72	1.40	1.87			
Czech Republic	769	2.42	2.58	3.96	5.07	11.47			
Slovenia	729	2.83	2.84	3.27	0.78	2.13			
Estonia	736	2.34	2.73	3.09	0.40	1.16			
Poland	719	2.74	2.77	3.03	13.04	38.51			
Croatia	703	2.33	2.66	2.62	1.28	4.38			

Table 2. Probit regression (with sample selection) of the propensity to make informal payments in Central and Eastern Europe

Variables		Model 1	Model 2	Model 3
INFORMAL PAYMENTS	Institutional Asymmetry	-0.595 *** (0.044)	-0.654 *** (0.039)	-0.634 *** (0.038)
	Female	0.112 *** (0.041)	0.010 ** (0.040)	0.089 ** (0.040)
	Age (exact)	0.003 ** (0.001)	0.003 ** (0.001)	0.003 ** (0.001)
	Employment (Employed): Unemployed	-0.057 (0.042)	-0.039 (0.041)	-0.043 (0.041)
	Area (Rural): Urban	0.134 *** (0.044)	0.147 *** (0.043)	0.155 *** (0.042)
	Country (Czech Republic)			
	Estonia	-0.090 (0.123)		
	Hungary	0.307 *** (0.102)		
	Latvia	0.149 (0.106)		
	Lithuania	0.795 *** (0.095)		
	Poland	-0.037 (0.124)		
	Slovakia	0.347 *** (0.102)		
	Slovenia	0.101 (0.120)		
	Bulgaria	0.362 *** (0.104)		
	Romania	0.896 *** (0.099)		
	Croatia	-0.146 (0.126)		
HEALTHCARE USERS	Health expenditure, % GDP		-0.035 * (0.021)	
	Range and reach of services provided ¹		-0.006 *** (0.001)	
	European Quality of Government Index		-0.243 *** (0.046)	
	Prevention ¹		-0.011 *** (0.003)	
	Outcomes ¹			-0.005 *** (0.001)
	Constant	-0.662 *** (0.146)	1.111 *** (0.295)	0.432 *** (0.133)
	Age (exact)	0.015 *** (0.001)	0.015 *** (0.001)	0.015 *** (0.001)
	Area (Rural): Urban	0.145 *** (0.028)	0.145 *** (0.028)	0.146 *** (0.028)
	Age education ended (-15 years)			
	16-19	-0.003 (0.047)	-0.001 (0.047)	-0.001 (0.047)
	20+	0.131 ** (0.051)	0.133 *** (0.051)	0.133 *** (0.051)
	Still studying	0.260 *** (0.071)	0.263 *** (0.071)	0.264 *** (0.071)
	No full-time education	0.247 (0.237)	0.239 (0.236)	0.240 (0.236)
	Country (Czech Republic)			
	Estonia	-0.189 *** (0.063)	-0.176 *** (0.063)	-0.178 *** (0.063)
	Hungary	-0.175 *** (0.063)	-0.181 *** (0.063)	-0.158 ** (0.062)
	Latvia	0.001 (0.064)	0.017 (0.063)	0.029 (0.063)
	Lithuania	-0.134 ** (0.064)	-0.211 *** (0.064)	-0.228 *** (0.064)
	Poland	-0.155 ** (0.064)	-0.132 ** (0.063)	-0.134 ** (0.063)
	Slovakia	0.182 *** (0.066)	0.176 *** (0.066)	0.171 *** (0.066)
	Slovenia	-0.174 *** (0.063)	-0.185 *** (0.063)	-0.182 *** (0.063)
	Bulgaria	-0.382 *** (0.062)	-0.335 *** (0.062)	-0.368 *** (0.061)
	Romania	-0.831 *** (0.061)	-0.902 *** (0.061)	-0.927 *** (0.061)
	Croatia	-0.230 *** (0.063)	-0.214 *** (0.062)	-0.214 *** (0.062)
	Constant	-0.010 (0.082)	-0.009 (0.082)	-0.008 (0.082)
Observations		10,765	10,765	10,765
Censored		2,949	2,949	2,949
Uncensored		7,816	7,816	7,816
χ^2		501.46	406.65	371.82
p>		0.0000	0.0000	0.0000
Rho		0.900	0.944	0.958
LR test of indep. eqns. (rho = 0): p>		0.0365	0.0000	0.0000

Notes: Significant at *** p<0.01, ** p<0.05, * p<0.1; Standard errors in parentheses; Coefficients compared to the benchmark category, shown in brackets; ¹ Sub-component of the European Health Consumer Index (2013)

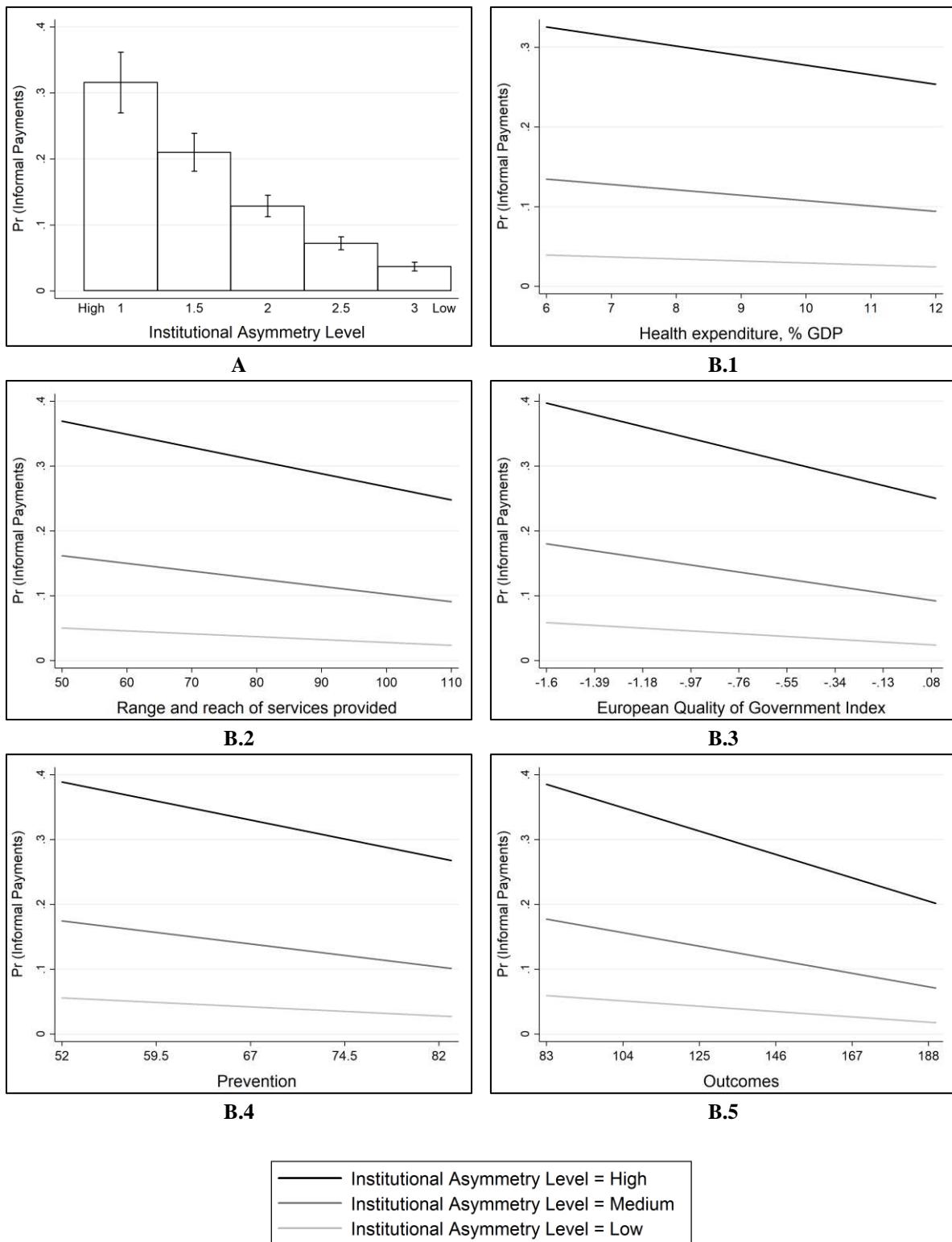


Figure 1. Predicted probability of informal payments by a “representative” patient in Central and Eastern Europe, by institutional asymmetry level and formal institutional imperfections

Appendix

Table A1. Descriptive statistics of variables used (n = 7,816)

Variables	Definition	Mode or mean	Min / Max
Institutional Asymmetry	Constructed index of self-reported acceptability towards three behaviours: to give money, a gift or to do a favour for public services.	2.6	1 / 3
Gender	Dummy for the gender of the patient.	Female (57%)	0 / 1
Age	Patient exact age.	47 years old	15 / 92
Employment	Dummy for the employment status of the patient.	Unemployed (55%)	0 / 1
Area	Dummy for the area where the respondent lives.	Urban (64%)	0 / 1
Country	Country where the patient lives in categories.	Poland (39%)	1 / 11
Health expenditure, % GDP	Total expenditure on health as a percentage of Gross Domestic Product.	6.8	6 / 9
Range and reach of services provided	Sub-discipline in Euro Health Consumer Index, evaluating European health systems by Range and reach of services provided.	75.2	50 / 113
European Quality of Government Index	Perceptions and experiences regarding the quality of government.	-0.7	-1.6 / 0.1
Prevention	Sub-discipline in Euro Health Consumer Index, evaluating European health systems considering Prevention.	70.1	52 / 83
Outcomes	Sub-discipline in Euro Health Consumer Index, evaluating European health systems by Outcomes.	123.6	83 / 190
Informal payments (dependent variable)	Dummy variable for patient payments (apart from official fees), in return to public healthcare services.	No informal payments (91%)	0 / 1

Table A2. Correlations: institutional imperfection variables

	Health expenditure, % GDP (2013)	Range and reach of services provided (2013)	European Quality of Government Index (2013)	Prevention (2013)
Range and reach of services provided (2013)	0.214 ***			
European Quality of Government Index (2013)	-0.013	0.501 ***		
Prevention (2013)	0.310 ***	-0.002	-0.129 ***	
Outcomes (2013)	0.303 ***	0.872 ***	0.713 ***	0.093 ***

Note: Significant at ***p<0.001