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RETHINKING INFORMAL PAYMENTS BY PATIENTS IN EUROPE: AN INSTITUTIONAL APPROACH

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Abstract

The aim of this paper is to explain informal payments by patients to healthcare professionals for the first time through the lens of institutional theory as arising when there are formal institutional imperfections and asymmetry between norms, values and practices and the codified formal laws and regulations. Reporting a 2013 Eurobarometer survey of the prevalence of informal payments by patients in 28 European countries, a strong association is revealed between the degree to which formal and informal institutions are unaligned and the propensity to make informal payments. The association between informal payments and 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, institutional theory, institutional asymmetry, health policy, European Union.

Introduction

Over the last two decades or so, a growing literature reveals how patients in many countries around the world, particularly in the former communist countries and other low and middle income countries, use informal payments to seek either better treatment [1-6], an additional service [7], due to their fear of being denied treatment [5,8], because the "doctor demanded payment" [4], because there is a tradition of giving a gift to express gratitude [4,5,9] or just

"because everybody does it" [4]. Given that some 35-60% of patients make informal payments in Bulgaria, Hungary, Lithuania, Poland, Romania and Ukraine [10], tackling this phenomenon can be seen as central and essential to building a healthcare system which is not based on bribes and corruption, and provides more equal access [11-13].

The aim of this paper is to advance and evaluate a new way of explaining and tackling informal patient payments. Until now, institutional theory [14,15] has been widely applied in health services research and related fields to evaluate for example the adoption of health information technology [16-18], healthcare reform policies in public systems [19], patient-centred preventive care [20] and healthcare expenditure [21]. In this paper, and drawing inspiration from the application of institutional theory to the study of informal economic practices beyond healthcare [22,23], we here for the first time analyse informal payments to patients through the lens of institutional theory.

Viewed through this institutional lens, two approaches to understanding informal payments by patients can be adopted. On the one hand, informal payments to patients can be viewed as resulting from formal institutional imperfections in healthcare services. Indeed, previous literature on the structural conditions that lead to informal payments has identified a number of structural conditions, 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 [11,24-26]. On the other hand, however, and reflecting the advances in institutional theory when studying other informal practices [22,23], it can be argued that institutions are "the rules of the game" which prescribe what is socially acceptable, and thus both constrain and encourage different types of activity [15]. In all societies, there are not only formal institutions (i.e., codified laws and regulations) that lay out the legal rules of the game, but also informal institutions which are the "socially shared rules, usually unwritten, that are created, communicated and enforced outside of officially sanctioned channels" [27, p.727]. Informal payments will thus 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 the institutional asymmetry, the greater is the likelihood of informal payments by patients. Until now, neither the formal institutional imperfections nor the institutional asymmetry thesis have been evaluated as explanations for informal payments by patients. This paper seeks to fill that gap.

To begin to evaluate these institutional explanations, section 2 briefly reviews the previous literature on informal patient payments. The outcome will be a set of hypotheses

regarding the association between informal patient payments and the degree of asymmetry between formal and informal institutions as well as the association between informal patient payments and formal institutional imperfections. To start to test these hypotheses, section 3 then reports the data used, namely a 2013 Eurobarometer survey involving 21,121 face-to-face interviews with patients in the 28 member states of the European Union (EU-28), and the analytical methods employed (multi-level logistic regression). The fourth section then reports the results on the relationship between the propensity to make informal patient payments and institutional asymmetry, and how this institutional incongruence and thus the prevalence of informal patient payments might be reduced. The final section draws conclusions on the policy implications of this new way of understanding informal patient payments.

Before commencing however informal patient payments have to be defined. A definition [28] is provided by Gaal et al. [29] according to whom, informal patient payments represent 'a direct contribution, which is 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 that the patients are entitled to'. This phenomenon is also known in literature as 'under-the-table' payments [13], under-the-counter payments [6,13] or unofficial payments [7].

Explaining the informal patient payments: an institutional approach

Since the turn of the millennium, a burgeoning literature has revealed how, especially in developing and transition countries, patients make an additional informal payment to the medical staff apart from the official fees for medical services. This has been identified in studies conducted in large geographical areas, such as in 35 European countries [26], Central Asia [30] as well as in 33 African countries [31], or in smaller studies comprising only one nation as, for example, Bulgaria [1,6,13,32,33], Poland [34,35], Hungary [2,36-40], Greece [4,41], Lithuania [34,42], Russia [43,44]; Ukraine [34,45], Moldova [46], Serbia [47], Kazakhstan [48], Albania [5,49,50], Kosovo [8], Tajikistan [51,52], Kyrgyzstan [53], Taiwan [54], Cameroon [55], Tanzania [3,56] and Turkey [57]. Nevertheless, informal patient payments phenomenon is poorly examined at a cross-country level. Examining the prevalence of this informal practice, previous studies reveal considerable cross-national variations in the proportion of patients who make informal payments, ranging from 50% in Tajikistan [52], 43% in Bulgaria [13], 36% in Greece [4], 29% in Turkey [57], 25% in Moldova [46] and 23% in Russia [44].

To explain these cross-national variations in the commonality of informal payments by patients, such payments are for the first time here analysed through the lens of institutional theory [15]. Following advances in institutional theory in relation to the study of broader informal economic practices, it can be argued that all societies have both codified laws and regulations (i.e., formal institutions) that define the legal rules of the game [14,15,58], as well as informal institutions, which are the 'socially shared rules, usually unwritten, that are created, communicated and enforced outside of officially sanctioned channels' [27, p.727]. When there is asymmetry between these codified laws and regulations (formal institutions) and the socially shared unwritten rules (informal institutions), the result is the emergence of practices based on unwritten socially shared rules which are 'illegitimate' in terms of the formal written rules. Informal payments to patients can be thus seen to result from this institutional asymmetry. The greater the institutional asymmetry, the higher is the prevalence of informal payments. Whether health services can be treated theoretically in the same way as other informal practices (e.g., buying food products) is open to discussion, especially when the decision to pay (or not) to skip a queue can be a matter of life and death in some instances. Here therefore, and to test whether the likelihood to make informal payments to medical staff is associated with the degree of asymmetry between formal and informal institutions, the following hypothesis is proposed for investigation:

> Institutional asymmetry hypothesis (H1): the propensity to make informal payments is higher in populations with greater asymmetry between their formal and informal institutions.

Indeed, most previous studies reveal that women are more likely to make informal payments for health care services [6,40,42,46,59], as do younger persons [6,45,47,49,60], better educated persons [6, 40-42,47,49], those having a job [41], those married [49], those living in a smaller household [40,49,50], those living in rural areas [45,60,61], and those with lower income [31,37,57,61]. By testing this hypothesis, whether these populations also have a higher institutional asymmetry can be evaluated.

It is important however, not only to test this new institutional asymmetry thesis. Institutional asymmetry is propounded to exist due to formal institutional imperfections. Viewed through this institutional lens, therefore, the structural conditions that previous literature has identified as associated with the greater prevalence of informal payments need to be evaluated as both determinants of, and ways of tackling, the level of institutional asymmetry.

As previous studies reveal, these formal institutional imperfections include not only the existence of formal institutional voids, such as lower expenditures on healthcare [6] and inefficient resource allocation which results in a low range and reach of healthcare services [12,25,26,39,44,62], 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 [12,24-26,33,34,43,61]. To test whether these formal institutional voids and inefficiencies are associated with greater levels of informal payment, the following hypotheses can be thus evaluated:

Formal institutional imperfections hypothesis (H2): the propensity to make informal payments is higher in health systems with greater formal institutional imperfections.

Formal institutional voids (H2A): the propensity to make informal payments is higher in health systems with greater formal institutional voids.

Lack of financial resources (H2A1): the propensity to make informal payments is higher in health systems with low expenditures on health.

Lack of a basic health service (H2A2): the propensity to make informal payments is higher in health systems with a low range and reach of service provision.

Formal institutional inefficiencies (H2B): the propensity to make informal payments is higher in countries with greater formal institutional inefficiencies.

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

Health system performance (H2B2): the propensity to make informal payments is higher in health systems with lower performance levels.

Resource misallocations (H2B3): the propensity to make informal payments is higher in health systems focusing on curative health services rather than prevention.

Methodology

In order to analyse the relationship between the likelihood of patients making informal payments and the degree of institutional asymmetry, along with the explanations relating to formal institutional imperfections, we here use an extensive dataset, namely Special Eurobarometer No. 397 (‘Corruption’), conducted as part of wave 79.1 of the Eurobarometer

survey [63]. This survey involved 27,786 face-to-face interviews conducted during February and March 2013 across the 28 member states of the European Union (EU-28), of which 21,121 were conducted with citizens who had visited a public healthcare practitioner or institution in the past 12 months. Interviews were carried out in the national language with adults aged 15 years and older, based on a common questionnaire and a multi-stage random (probability) sampling methodology to 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. Those respondents with missing values were excluded from the analysis, resulting in a sample of 20,278 respondents being used for analytical purposes. For the univariate analysis therefore, we employed the sampling weighting scheme as recommended in the wider literature [64,65] and the Eurobarometer methodology [66]. Regarding the multivariate analysis, debate exists over whether such a weighting scheme should be used [64,67,68]. Considering the majority opinion in the literature and previous studies on informality [e.g. 59] we here decided not to use the weighting scheme for the multivariate analysis.

In this study, the dependent variable is 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 analyse H1 regarding whether the propensity to make 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 relationship between informal payments and formal institutional imperfections (H2), akin to previous studies on informal payments, various country-level structural conditions are considered [e.g. 24,69,70], whilst holding constant the Institutional Asymmetry Index and a range of individual-level variables (gender, age, marital status, household composition, occupation, difficulties paying bills and community size). Similar socio-demographic, socio-economic and spatial characteristics were used in previous studies evaluating informal patient payments [39,71]. Despite the existence of some minor

associations between these individual-level variables, such as age and occupation, they are not sufficiently substantial to cause serious multi-collinearity problems.

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 expressed as a percentage of GDP [72].
- Per capita total expenditure on health expressed in Purchasing Power Parities (PPP international dollars) to facilitate international comparisons [73].
- Range and reach of health services provided in a country – sub-discipline in Euro Health Consumer Index, 2013 [74].

To evaluate the relationship between informal patient 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 [75].
- Outcomes – sub-discipline in Euro Health Consumer Index, 2013 [74].
- Death rate, crude per 1000 people [72].

For evaluating resource misallocations by formal institutions, such as when focusing on curative health services rather than prevention, two indicators are used:

- Hospital beds per 100000 inhabitants [76].
- Prevention – sub-discipline in Euro Health Consumer Index, 2013 [74].

To evaluate our hypotheses, after using a descriptive analysis, a multi-level mixed logistic regression analysis is conducted, utilising the hierarchical nature of the data, namely individuals within countries. Given the significant correlation between the macro-level indicators (Table A2 in Appendix), each country-level structural condition is added in turn to the individual-level variables (i.e., the Institutional Asymmetry Index and socio-economic control variables) to evaluate whether they are significantly associated with the propensity to make informal payments.

Thus, our logit random intercept model specification is the following [77]:

$$\log\left(\frac{\pi_{ij}}{1-\pi_{ij}}\right) = \beta_0 + \beta_1 X_{ij} + \beta_2 X_j + u_j$$

where, β_0 is the overall intercept, β_1 is the cluster specific effect, β_2 is the contextual effect, X_{ij} is the vector with individual level explanatory variables, X_j is the vector with country level explanatory variables and u_j is the group (random) effect.

Below, we report the findings.

Findings

Of the 27,786 face-to-face interviews conducted in 2013 in EU-28, 21,121 had visited a public healthcare practitioner or institution in the past 12 months, of whom one in 21 (4.7%) had made informal payments for a public healthcare service. Extrapolating from this, in the year prior to the survey, approximately 18 million of the 388 million Europeans visiting a public healthcare institution made informal payments.

Not all countries and not all population groups display the same propensity to make informal payments. As Table 1 displays, this practice is more common in East-Central Europe where 9% of patients make informal payments, compared with 4% in Western Europe, 3% in Southern Europe and less than 1% in Nordic countries. It is similarly the case that informal payments are not distributed evenly across nations. Table 1 reveals that the share of patients reporting informal payments is higher in Romania (28%), Lithuania (21%), Greece (11%) and Hungary (10%) and lower in Finland, Denmark, Spain, Netherlands, Sweden, Luxembourg and United Kingdom (less than 1%). Moreover, although just 18% of the patients surveyed were from Romania and Lithuania, more than half (54%) of those making informal payments in East-Central Europe were from these two countries, displaying how this practice is therefore heavily concentrated in these countries in East-Central Europe. Similarly, in Western Europe informal payments are concentrated in Germany (although just 32% of patients surveyed, they constituted 60% of all patients making informal payments in Western Europe), while in Southern Europe such payments are relatively concentrated in Greece (Table 1).

[INSERT TABLE 1 HERE]

Not only is the practice of making informal payments concentrated in certain countries, it is also more prevalent in some patient groups rather than others. Examining the patient groups more likely to make informal payments, the finding is that patients aged 40-54 years are more likely to give extra payments or valuable gifts for healthcare services than younger patients (5% compared with 3%). Indeed, although just 26% of the patients surveyed were aged between

40-54 years old, they constituted 29% of all patients making informal payments. Married patients or those living with a partner are more likely than unmarried patients to make informal payments (5% compared with 3%). So too are patients who face difficulties in paying their bills more likely to make informal payments than those who never, or almost never, have difficulties. Indeed, although 61% of the patients surveyed had few difficulties in paying their bills (almost never/never), only 47% of informal payments involved such patients.

[INSERT TABLE 2 HERE]

To evaluate whether these cross-national and socio-economic variations in informal payments are related with the level of institutional asymmetry, the final columns of Table 1 and Table 2 report the variations in the Institutional Asymmetry Index. This reveals that Institutional Asymmetry Index is lower (and thus institutional asymmetry is greater) in East-Central Europe (2.64), compared with Western Europe (2.79), Southern Europe (2.80) or Nordic nations (2.87). Indeed, most of the post-communist countries in East-Central Europe experiencing high prevalence rates of informal patient payments are reporting higher levels of institutional asymmetry: 2.39 in Hungary and Lithuania, 2.40 in Latvia, 2.43 in Slovakia, 2.57 in Czech Republic and 2.63 in Romania. Similarly, with a value of 2.59, Greece has a high level of institutional asymmetry. Lower levels of institutional asymmetry, meanwhile, exist in Finland (2.93), Portugal (2.88), Malta (2.87), Sweden (2.86) and Denmark (2.83). Turning to the socio-economic variations in the Institutional Asymmetry Index, the final column in Table 2 shows that no important fluctuation could be identified in the analysed data.

Analysing these descriptive statistics therefore, the tentative finding is that, although ubiquitous across all regions and socio-economic groups, informal payments are more common in areas where there is a higher level of asymmetry between formal and informal institutions.

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 investigate the country-level structural conditions (formal institutional imperfections – H2) associated with a higher propensity to make informal payments, we here report the results of a multi-level logistic regression. Indeed, estimating a baseline random intercept model with no explanatory variables, the likelihood-ratio test for the null hypothesis that there are no variations in the prevalence of informal payments displays that this can be rejected. This analysis shows that over 27% of the variance in informal payments was accounted for at the country level (Wald = 12.02, df=1, $p<0.001$), indicating that multilevel

mixed-effects logistic regression should be used. Table 3 reports the results. The first stage of the analysis involves individual-level characteristics and the second stage both individual-l and country-level variables (details on the variables used in the analysis are in Table A1 in Appendix).

[INSERT TABLE 3 HERE]

The first row in Models 1-11 in Table 3 reveals that the propensity to make informal payments is strongly associated with higher levels of institutional asymmetry (i.e., a low Institutional Asymmetry Index) across all models, whether only individual-level variables are analysed, or country-level structural conditions are added. As institutional asymmetry increases, the propensity to make informal payments significantly increases (confirming H1). Moreover, Model 1 identifies that patients in single-person households are more likely to make informal payments, as are those aged 40-54 years old. When adding socio-economic individual-level characteristics in Model 2, the finding is that informal payments are significantly less prevalent among those who have never or almost never had difficulties in paying their bills. Adding spatial variables in Model 3, meanwhile, reveals that patients in East-Central Europe are significantly more likely to make informal payments than patients in any other EU region. However, no strong significant correlation with informal payments is found with respect to gender, marital status, occupation or size of the community where the patient lives.

Models 4-11 in Table 3 meanwhile, test the formal institutional imperfection hypothesis (H2) to explain informal payments. Models 4 and 5 reveal that the prevalence of informal payments is higher in countries with lower levels of health expenditure in GDP or per capita terms. These models thus confirm that the propensity to make informal payments is greater in health systems with low expenditure levels on health (H2A1). To evaluate the lack of a basic health service hypothesis, Model 6 provides strong evidence that informal payments are more likely in health systems with a low range and reach of services provision (confirming H2A2).

Turning to the formal institutional inefficiencies, Models 7-9 reveal strong evidence that informal payments are higher in countries with lower qualities of government (confirming H2B1), and low health outcomes and high death rates (confirming H2B2). Resource misallocation as another formal institutional inefficiency is evaluated in Model 10 and Model 11. The finding is that informal payments are more likely in health systems focusing on curative health services (large number of beds per 100000 inhabitants) rather than preventive services (low quality preventive care), confirming H2B3.

To better analyse 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' European patient making informal payments by their level of institutional asymmetry and various country-level structural conditions. By taking the mean and modal values of other independent variables, the representative European patient is here a 55+ years-old unemployed women, married or single with a partner, living in a household with two persons or more, located in a small or middle sized town, who never or almost never has financial difficulties in paying the household bills. As graphically displayed in Figure 1.A-H, as institutional asymmetry decreases and country-level structural conditions improve, the predicted odds of this representative patient making informal payments becomes smaller. These graphs clearly reveal how patients living in countries with higher expenditure levels on health (Figure 1.A,B), large range and reach of health service provision (Figure 1.C), higher qualities of government (Figure 1.D), a higher-performing health system (Figure 1.E,F), and oriented towards prevention (Figure 1.H) rather than curative health services (Figure 1.G), have lower predicted odds of making informal payments. The consequence is that it can be asserted that formal institutional failings appear to engender greater institutional asymmetry and consequently higher predicted odds of making informal payments.

Discussion

This paper has advanced a new way of explaining informal payments by patients. Drawing upon institutional theory, it has displayed that, when formal and informal institutions are not aligned, informal practices emerge embedded in unwritten socially shared rules that are 'illegitimate' in terms of the formal written rules. The higher is the asymmetry between formal and informal institutions, the greater is the likelihood of such informal practices. Using multilevel logistic regression analysis, this has been shown to be the case when both the individual level variables were solely analysed (i.e., socio-economic characteristics) and when country level variables (i.e. structural conditions related with formal institutional imperfections) were analysed along with the individual-level ones.

To reduce informal payments therefore, it will be necessary to reduce this institutional asymmetry. This requires changes in not only the norms, practices and beliefs that constitute the informal institutions but also in the formal institutions by tackling the formal institutional imperfections that lead to institutional asymmetry and thus informal payments.

To alter the informal institutions, three policy initiatives can be pursued. Firstly, advertising campaigns (targeting the groups identified above with high levels of institutional asymmetry) can be used, which can inform patients of the costs and risks of making informal payments to the medical staff. Secondly, normative appeals to both patients and medical staff can be used to try to curb the tendency to pay for/ask for ask informal payments. Indeed, as previous studies show, anticorruption measures combined with awareness campaigns have proved to be a potent approach for tackling informal patient payments in East European countries [10,45]. And third and finally, tax education is required to inform citizens and patients 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). If successful, the medical staff would no longer feel they need informal payments and patients would 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 4, 5 and 6 in Table 3 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, and as models 7-11 in Table 3 display, governments also need modernisation and to pursue wider economic and social developments. These models clearly reveal how countries with lower quality of government, lower health outcomes, high death rates and systems focusing on curative health services rather than preventive services, have a higher prevalence of informal payments.

Conclusions

In sum, this paper has advanced a new way of understanding informal payments by patients using the lens of institutional theory. This has revealed that informal payments by patients in Europe are indeed higher when there are formal institutional failings and an asymmetry between the norms, beliefs and practices and the codified laws and regulations. This quantitative analysis, however, has been unable to explore in any depth the question of why patients decide to make informal payments. This will require qualitative research in order to complement these quantitative findings by exploring in more depth the social relations and motives involved in informal payments by patients.

Whether this institutional asymmetry approach is more widely relevant when explaining and tackling informal payments beyond the European Union in other global regions also now needs to be evaluated. If this paper stimulates such evaluations using the lens of institutional theory in a wider range of geographical contexts, then one of the intentions of this

paper will have been achieved. If it also encourages governments to recognise how informal payments result from such institutional asymmetry and to begin exploring how this can be tackled, and to evaluate different policy measures and combinations of policy measures, then it will have achieved its fuller intention.

References

[1]. Atanasova E, Pavlova M, Groot W. Out-of-pocket patient payments for public health care services in Bulgaria. Frontiers in Public Health 2015;3:175. doi: 10.3389/fpubh.2015.00175.

[2]. Baji P, Pavlova M, Gulácsi L, Groot W. User fees for public health care services in Hungary: Expectations, experience, and acceptability from the perspectives of different stakeholders. Health Policy 2011;102:255-62.

[3]. Mæstad O, Mwisongo A. Informal payments and the quality of health care: Mechanisms revealed by Tanzanian health workers. Health Policy 2011;99:107-15.

[4]. Liaropoulos L, Siskou O, Kaitelidou D, Theodorou M, Katostaras T. Informal payments in public hospitals in Greece. Health Policy 2008;87:72-81.

[5]. Vian T, Grybosk K, Sinoimeri Z, Hall R. Informal payments in government health facilities in Albania: Results of a qualitative study. Social Science & Medicine 2006;62:877-87.

[6]. Balabanova D, McKee M. Understanding informal payments for health care: the example of Bulgaria. Health Policy 2002;62:243-73.

[7]. Ensor T. Informal payments for health care in transition economies. Social Science & Medicine 2004;58:237-46.

[8]. Tahiri Z, Toci E, Rrumbullaku L, Hoti K, Roshi E, Burazeri G. Patients' evaluation of primary health care services in Gjilan region, Kosovo. Journal of Public Health 2013;36(1):161-9.

[9]. Fomenko T, Stepurko T. Informal patient payments in oncology practice. Tobacco Control and Public Health in Eastern Europe 2 (Supplement 1, 2nd conference 'Economics, sociology, theory and practice of public health') 2012; s13-s14. doi:10.6084/m9.figshare.92826.

[10]. Stepurko T, Pavlova M, Gryga I, Groot W. Informal payments for health care services – Corruption or gratitude? A study on public attitudes, perceptions and opinions in six Central and Eastern European countries. Communist and Post-Communist Studies 2013;46(4):419-31.

[11]. Gaal P, McKee M. Fee-for-service or donation? Hungarian perspectives on informal payment for health care. Social Science & Medicine 2005;60:1445-57.

[12]. Lewis M. Informal health payments in central and eastern Europe and the former Soviet Union: issues, trends and policy implications. In: Mossialos E, Dixon A, Figueras J, Kutzin J, editors. Funding health care: options for Europe. Buckingham: Open University Press; 2002, p.184-205.

[13]. Delcheva E, Balabanova D, McKee M. Under-the-counter payments for health care: Evidence from Bulgaria. Health Policy 1997;42:89-100.

[14]. Baumol WJ, Blinder A. Macroeconomics: principles and policy. Cincinnati, OH: South-Western Publishing; 2008.

[15]. North DC. Institutions, Institutional Change and Economic Performance. Cambridge: Cambridge University Press; 1990.

[16]. Nilashi M, Ahmadi H, Ahani A, Ravangard R, bin Ibrahim O. Determining the importance of Hospital Information System adoption factors using Fuzzy Analytic Network Process (ANP). Technological Forecasting & Social Change 2016;111:244-64.

[17]. Fareed N, Bazzoli GJ, Mick SSF, Harless DW. The influence of institutional pressures on hospital electronic health record presence. Social Science & Medicine 2015;133:28-35.

[18]. Sherer SA. Information Systems and Healthcare XXXIII: An Institutional Theory Perspective on Physician Adoption of Electronic Health Records. Communications of the Association for Information Systems 2010;26(7):127-40.

[19]. Contandriopoulos D, Brousselle A. Reliable in their failure: An analysis of healthcare reform policies in public systems. Health Policy 2010;95:144-52.

[20]. Ledderer L. Bringing about change in patient-centred preventive care. International Journal of Public Sector Management 2010;23(4):403-12.

[21]. Burnett S, Mendel P, Nunes F, Wiig S, van den Bovenkamp H, Karltun A, Robert G, Anderson J, Vincent C, Fulop N. Using institutional theory to analyse hospital responses to external demands for finance and quality in five European countries. Journal of Health Services Research & Policy 2016;21(2):109-17.

[22]. Williams CC, Horodnic IA. Evaluating the prevalence of the undeclared economy in Central and Eastern Europe: an institutional asymmetry perspective. European Journal of Industrial Relations 2015;21(4):389-406.

[23]. Williams CC, Horodnic IA. Explaining the Prevalence of Illegitimate Wage Practices in Southern Europe: An Institutional Analysis. South European Society and Politics 2015;20(2):203-21.

[24]. Cohen N. Informal payments for health care – the phenomenon and its context. Health Economics, Policy and Law 2012;7:285-308.

[25]. Gaal P, McKee M. Informal payment for health care and the theory of 'INXIT'. International Journal of Health Planning and Management 2004;19:163-78.

[26]. Tambor M, Pavlova M, Golinowska S, Sowada C, Groot W. The formal–informal patient payment mix in Europeancountries. Governance, economics, culture or all of these? Health Policy 2013;113:284-95.

[27]. Helmke G, Levitsky S. Informal institutions and comparative politics: a research agenda. Perspectives on Politics 2004;2(6):725-40.

[28]. Chereches R, Ungureanu MI, Sandu P, Rus IA. Defining informal payments in healthcare: A systematic review. Health Policy 2013;110:105-14.

[29]. Gaál P, Jakab M, Shishkin S. Strategies to address informal payments for health care. In: Kutzin J, Cashin C, Jakab M, editors. Implementing health financing reforms: lessons from countries in transition. Copenhagen: World Health Organization; 2011, p.327-61.

[30]. Rechel B, Ahmedov M, Akkazieva B, Katsaga A, Khodjamurodov G, McKee M. Lessons from two decades of health reform in Central Asia. Health Policy and Planning 2012;27:281-7.

[31]. Kankeu HT, Ventelou B. Socioeconomic inequalities in informal payments for health care: An assessment of the 'Robin Hood' hypothesis in 33 African countries. Social Science & Medicine 2016;151:173-86.

[32]. Pavlova M, Groot W, van Merode G. Public attitudes towards patient payments in Bulgarian public health care sector: results of a household survey. Health Policy 2002;59:1-24.

[33]. Rechel B, Blackburn CM, Spencer NJ, Rechel B. Regulatory barriers to equity in a health system in transition: a qualitative study in Bulgaria. BMC Health Services Research 2011;11(1):219.

[34]. Stepurko T, Pavlova M, Gryga I, Murauskiene L, Groot W. Informal payments for health care services: The case of Lithuania, Poland and Ukraine. Journal of Eurasian Studies 2015;6(1):46-58.

[35]. Chawla M, Berman P, Windak A, Kulis M. Provision of ambulatory health services in Poland: a case study from Krakow. Social Science & Medicine 2004;58:227-35.

[36]. Gaal P, Evetovits T, McKee M. Informal payment for health care: Evidence from Hungary. Health Policy 2006;77:86-102.

[37]. Szende A, Culyer AJ. The inequity of informal payments for health care: The case of Hungary. Health Policy 2006;75:262-71.

[38]. Baji P, Pavlova M, Gulácsi L, Groot W. Changes in Equity in Out-of-pocket Payments during the Period of Health Care Reforms: Evidence from Hungary. International Journal for Equity in Health 2012;11:36.

[39]. Baji P, Pavlova M, Gulacsi L, Groot W. Exploring consumers' attitudes towards informal patient payments using the combined method of cluster and multinomial regression analysis - the case of Hungary. BMC Health Services Research 2013;13-62. DOI: 10.1186/1472-6963-13-62.

[40]. Baji P, Pavlova M, Gulácsi L, Zsófia HC, Groot W. Informal payments for healthcare services and short-term effects of the introduction of visit fee on these payments in Hungary. The International Journal of Health Planning and Management 2012;27:63-79.

[41]. Kaitelidou DC, Tsirona CS, Galanis PA, Siskou OC, Mladovsky P, Kouli EG, Prezerakosc PE, Theodoroud M, Sourtzi PA, Liaropoulos LL. Informal payments for maternity health services in public hospitals in Greece. Health Policy 2013;109:23-30.

[42]. Riklikiene O, Jarasiunaite G, Starkiene L. Informal patient payments in publicly financed healthcare facilities in Lithuania. Scandinavian Journal of Public Health 2014;42:488-96.

[43]. Fotaki M. Informal Payments: A Side Effect of Transition or a Mechanism for Sustaining the Illusion of 'Free' Health Care? The Experience of Four Regions in the Russian Federation. Journal of Social Policy 2009;38(4):649-70.

[44]. Kutzin J, Jakab M, Cashin C. Lessons from health financing reform in central and Eastern Europe and the former Soviet Union. Health Economics, Policy and Law 2010;5(2):135-47.

[45]. Danyliv A, Pavlova M, Gryga I, Groot W. Preferences for physician services in Ukraine: a discrete choice experiment. The International Journal of Health Planning and Management 2015;30:346-65.

[46]. Mokhtari M, Ashtari M. Reducing informal payments in the health care system: Evidence from a large patient satisfaction survey. Journal of Asian Economics 2012;23(2):189-200.

[47]. Arsenijevic J, Pavlova M, Groot W. Out-of-pocket payments for health care in Serbia. Health Policy 2015;119:1366-74.

[48]. Sharipova D. State retrenchment and informal institutions in Kazakhstan: people's perceptions of informal reciprocity in the healthcare sector. Central Asian Survey 2015;34(3):310-29.

[49]. Tomini S, Groot W, Pavlova M. Paying informally in the Albanian health care sector: a two-tiered stochastic frontier model. The European Journal of Health Economics 2012;13(6):777-88.

[50]. Tomini S, Groot W, Pavlova M. Informal payments and intra-household allocation of resources for health care in Albania. BMC Health Services Research 2012;12:17.

[51]. Falkingham J. Poverty, out-of-pocket payments and access to health care: evidence from Tajikistan. Social Science & Medicine 2004;58:247-58.

[52]. Tediosi F, Aye R, Ibodova S, Thompson R, Wyss K. Access to medicines and out of pocket payments for primary care: Evidence from family medicine users in rural Tajikistan. BMC Health Services Research 2008;8:109.

[53]. Falkingham J, Akkazieva B, Baschieri A. Trends in out-of-pocket payments for health care in Kyrgyzstan, 2001–2007. Health Policy and Planning 2010;25:427-36.

[54]. Chiu YC, Clegg Smith K, Morlock L, Wissow L. Gifts, bribes and solicitions: Print media and the social construction of informal payments to doctors in Taiwan. Social Science & Medicine 2007;64:521-30.

[55]. Kankeu HT, Boyer S, Toukam RF, Abu-Zaineh M. How do supply-side factors influence informal payments for healthcare? The case of HIV patients in Cameroon. The International Journal of Health Planning and Management 2016;31:E41-E57.

[56]. Lindkvist I. Informal payments and health worker effort: a quantitative study from Tanzania. Health Economics 2013;22(10):1250-71.

[57]. Tengilimoğlu D, Güzel A, Toygar A, Akinci F, Dziegielewski SF. Informal Payments in Health Systems: Purpose and Occurrences in Turkey. Journal of Social Service Research 2015;41(5):684-96.

[58]. Webb JW, Tihanyi L, Ireland RD, Sirmon DG. You say illegal, I say legitimate: entrepreneurship in the informal economy. Academy of Management Review 2009;34:492-510.

[59]. Williams CC, Horodnic IA. Evaluating the Illegal Employer Practice of Under-Reporting Employees' Salaries. British Journal of Industrial Relations 2016; DOI: 10.1111/bjir.12179.

[60]. Tomini S, Maarse H. How do patient characteristics influence informal payments for inpatient and outpatient health care in Albania: Results of logit and OLS models using Albanian LSMS 2005. BMC Health Services Research 2011;11:375.

[61]. Tomini SM, Groot W. Paying informally for public health care in Albania: scarce resources or governance failure? Applied Economics 2013;45(36):5119-30.

[62]. Gaal P, Belli PC, McKee M, Szócska M. Informal Payments for Health Care: Definitions, Distinctions, and Dilemmas. Journal of Health Politics, Policy and Law 2006;31(2):251-93.

[63]. European Commission. 2014. Eurobarometer 79.1 (2013), TNS Opinion, Brussels [producer]. GESIS Data Archive, Cologne. ZA5687 Data file Version 1.0.0, DOI:10.4232/1.11855.

[64]. Solon G, Haider SJ, Wooldridge J. What are we weighting for? Bucharest: National Bureau of Economic Research Working Paper No. 8; 2013.

[65]. Winship C, Radbill L. Sampling weights and regression analysis. Sociological Methods and Research 1994;23:230-57.

[66]. European Commission. Special Eurobarometer 397 / Wave EB79.1 (2013) [report]. Brussels: European Commission; 2014.

[67]. Pfeffermann D. The role of sampling weights when modelling survey data. International Statistical Review 1993;61:317-37.

[68]. Sharon L, Liu J. A comparison of weighted and unweighted analyses in the National Crime Victimization Survey. Journal of Quantitative Criminology 1994;10:343-60.

[69]. Belli P, Shahriari H, Gotzadze G. Out of pocket and informal payments in the health sector: evidence from Georgia. Health Policy 2004;70:109-23.

[70]. Bloom G, Han L, Li X. How health workers earn a living in China. Human Resources for Health Development Journal 2001;5(1):25-38.

[71]. Williams CC, Horodnic IA, Horodnic AV. Who is making informal payments for public healthcare in East-Central Europe? An evaluation of socio-economic and spatial variations. Eastern Journal of European Studies 2016;7(1):49-61.

[72]. World Bank. World DataBank–Health Nutrition and Population Statistics; 2013. Available at: http://databank.worldbank.org/data/reports.aspx?source=health-nutrition-and-population-statistics [Accessed 12 June 2016].

[73]. World Health Organization. Global Health Expenditure Database – Per capita total expenditure on health (PPP int. $); 2013. Available at: http://apps.who.int/nha/database/Select/Indicators/en [Accessed 20 July 2016].

[74]. Health Consumer Powerhouse. Euro Health Consumer Index 2013 (Report). Brussels: Health Consumer Powerhouse Ltd.; 2013.

[75]. Charron N, Dijkstra L, Lapuente V. Mapping the Regional Divide in Europe: A Measure for Assessing Quality of Government in 206 European Regions. Social Indicators Research 2015;122(2):315-46.

[76]. Eurostat. Eurostat Database - Hospital beds per 100000 inhabitants; 2013. Available at: http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do [Accessed 6 June 2016].

[77]. Steele F. Multilevel Models for Binary Responses. Centre for Multilevel Modelling. Bristol: University of Bristol; 2009.

Table 1. Distribution of informal payments in the EU28: by region and country

Region/ Country	Patients surveyed	Informal payments	Percent of all patients making informal payments	Percent of all patients	Institutional Asymmetry Index
	(no.)	(%)	(%)	(%)	-
EU 28	21,121	4.72	--	--	2.77
East-Central Europe	8,090	8.88	100	100	2.64
Romania	525	27.52	46.06	14.85	2.63
Lithuania	777	21.04	8.21	3.47	2.39
Hungary	751	9.75	10.76	9.80	2.39
Slovakia	827	8.84	5.97	6.00	2.43
Bulgaria	680	8.25	6.65	7.17	2.68
Latvia	789	6.66	1.38	1.84	2.40
Czech Republic	786	3.87	4.90	11.25	2.57
Poland	743	3.19	13.69	38.11	2.76
Slovenia	750	3.18	0.75	2.10	2.84
Estonia	745	3.05	0.39	1.12	2.72
Croatia	717	2.57	1.24	4.29	2.65
Western Europe	6,949	4.36	100	100	2.79
Germany	1,264	8.05	59.54	32.28	2.79
France	934	4.74	28.10	25.87	2.81
Austria	814	3.26	2.49	3.33	2.71
Ireland	724	2.14	0.76	1.56	2.80
Belgium	889	1.92	1.98	4.51	2.81
United Kingdom	1,049	0.98	5.76	25.52	2.79
Luxembourg	450	0.95	0.05	0.24	2.82
Netherlands	825	0.86	1.32	6.69	2.79
Southern Europe	3,601	2.92	100	100	2.80
Greece	621	10.59	23.68	6.54	2.59
Italy	728	3.79	59.67	46.03	2.81
Cyprus	315	2.23	0.39	0.51	2.76
Portugal	794	1.93	5.08	7.70	2.88
Malta	335	1.71	0.15	0.25	2.87
Spain	808	0.83	11.03	38.97	2.82
Nordic Nations	2,481	0.64	100	100	2.87
Sweden	806	0.88	62.20	44.99	2.86
Denmark	867	0.60	27.75	29.46	2.83
Finland	808	0.25	10.05	25.55	2.93

Table 2. Distribution of informal payments in the EU28: by socio-demographic and socio-economic characteristics

n = 21,121	Informal payments	Percent of all patients making informal payments	Percent of all patients	Institutional Asymmetry Index
	(%)	(%)	(%)	-
All EU 28	4.72	100	100	2.77
Gender				
Male	4.41	42.47	45.43	2.77
Female	4.98	57.53	54.57	2.77
Age				
15-24	3.16	8.33	12.46	2.68
25-39	4.62	22.76	23.25	2.74
40-54	5.33	28.84	25.53	2.80
55+	4.88	40.07	38.76	2.80
Marital status				
Unmarried	3.09	12.29	18.80	2.75
(Re)Married/Single with a partner	5.24	72.92	65.88	2.77
Divorced or separated	4.17	5.76	6.55	2.80
Widowed	4.87	9.03	8.77	2.77
Household composition				
One person	4.60	18.51	19.00	2.79
Two and more	4.75	81.49	81.00	2.76
Occupation				
Self-employed	4.41	6.74	7.22	2.76
Employed	4.98	41.92	39.77	2.77
Not working	4.57	51.35	53.01	2.77
Difficulties paying bills last year				
Most of the time	5.39	15.15	13.17	2.75
Time to time	5.67	31.42	25.98	2.73
Almost never\ Never	4.12	53.43	60.85	2.79
Community size				
Rural/ Village	4.91	35.00	33.70	2.78
Small/ Middle sized town	4.53	39.16	40.85	2.77
Large town	4.80	25.84	25.45	2.76

Table 3. Multilevel logistic regressions of the propensity to make informal payments by socio-demographic, socio-economic, spatial characteristics and institutional imperfections

	Model 1			Model 2			Model 3		
Fixed part	β	se(β)	Exp(β)	β	se(β)	Exp(β)	β	se(β)	Exp(β)
Constant	-0.367	0.298	0.693	-0.172	0.336	0.842	0.349	0.362	1.418
Institutional Asymmetry Index	-1.244 ***	0.071	0.288	-1.244 ***	0.071	0.288	-1.235 ***	0.071	0.291
Gender (Male)									
Female	0.124 *	0.070	1.132	0.122 *	0.071	1.130	0.118 *	0.071	1.126
Age (15-24 years)									
25-39	0.278 *	0.147	1.321	0.296 *	0.154	1.345	0.292 *	0.154	1.340
40-54	0.300 **	0.149	1.350	0.332 **	0.157	1.394	0.339 **	0.157	1.403
55+	0.182	0.151	1.199	0.229	0.154	1.257	0.236	0.154	1.266
Marital status (Unmarried)									
(Re)Married/Single with a partner	0.206 *	0.123	1.229	0.208 *	0.124	1.231	0.215 *	0.124	1.240
Divorced or separated	0.073	0.159	1.076	0.030	0.161	1.030	0.023	0.161	1.023
Widowed	-0.093	0.158	0.911	-0.101	0.159	0.904	-0.103	0.159	0.902
Household composition (One person)									
Two and more	-0.265 **	0.116	0.767	-0.259 **	0.117	0.772	-0.257 **	0.117	0.773
Occupation (Self-employed)									
Employed				-0.139	0.142	0.870	-0.150	0.142	0.860
Not working				-0.105	0.146	0.900	-0.107	0.146	0.898
Difficulties paying bills last year (Most of the time)									
Time to time				0.005	0.098	1.005	0.006	0.098	1.006
Almost never\ Never				-0.233 **	0.102	0.792	-0.223 **	0.102	0.800
Community size (Rural/ Village)									
Small/ Middle sized town							0.127	0.085	1.136
Large town							0.141	0.088	1.151
Region (East-Central Europe)									
Southern Europe							-0.841 **	0.405	0.431
Western Europe							-0.873 **	0.365	0.418
Nordic Nations							-2.067 ***	0.564	0.127
N			20,549			20,294			20,278
Random part									
Country-level variance			0.9634***			0.9115***			0.5595***
(Standard error)			0.2830			0.2686			0.1647
Countries			28			28			28
Variance at country level (%)			22.65			21.69			14.53

Notes: Significant at *** p<0.01, ** p<0.05, * p<0.1; All coefficients are compared to the benchmark category, shown in brackets.

Table 3. Multilevel logistic regressions of the propensity to make informal payments by socio-demographic, socio-economic, spatial characteristics and institutional imperfections – continued

	Model 4			Model 5			Model 6			Model 7		
Fixed part	β	se(β)	Exp(β)	β	se(β)	Exp(β)	β	se(β)	Exp(β)	β	se(β)	Exp(β)
Constant	1.571*	0.879	4.811	7.797***	2.425	2.434	2.493***	0.554	12.09	-0.205	0.314	0.814
Institutional Asymmetry Index	-1.239***	0.071	0.290	-1.237***	0.071	0.290	-1.236***	0.071	0.291	-1.236***	0.071	0.291
Gender (Male)												
Female	0.120*	0.071	1.127	0.120*	0.071	1.127	0.119*	0.071	1.127	0.119*	0.071	1.126
Age (15-24 years)												
25-39	0.294*	0.154	1.342	0.294*	0.154	1.342	0.293*	0.154	1.340	0.290*	0.154	1.336
40-54	0.340**	0.157	1.405	0.340**	0.157	1.405	0.339**	0.157	1.403	0.335**	0.157	1.398
55+	0.236	0.154	1.266	0.234	0.154	1.264	0.232	0.154	1.262	0.229	0.154	1.257
Marital status (Unmarried)												
(Re)Married/Single with a partner	0.214*	0.124	1.238	0.214*	0.124	1.239	0.213*	0.124	1.238	0.215*	0.124	1.240
Divorced or separated	0.023	0.161	1.023	0.022	0.161	1.022	0.024	0.161	1.025	0.026	0.161	1.026
Widowed	-0.101	0.159	0.904	-0.102	0.159	0.903	-0.103	0.159	0.902	-0.104	0.159	0.901
Household composition (One person)												
Two and more	-0.254**	0.117	0.776	-0.255**	0.117	0.775	-0.260**	0.117	0.771	-0.262**	0.117	0.770
Occupation (Self-employed)												
Employed	-0.150	0.142	0.861	-0.151	0.142	0.860	-0.143	0.142	0.867	-0.145	0.142	0.865
Not working	-0.107	0.146	0.898	-0.108	0.146	0.897	-0.103	0.146	0.903	-0.105	0.146	0.900
Difficulties paying bills last year (Most of the time)												
Time to time	0.008	0.098	1.008	0.011	0.098	1.011	0.014	0.098	1.014	0.012	0.098	1.012
Almost never\ Never	-0.226**	0.102	0.797	-0.220**	0.102	0.803	-0.206**	0.102	0.814	-0.208**	0.102	0.812
Community size (Rural/ Village)												
Small/ Middle sized town	0.123	0.085	1.131	0.125	0.085	1.133	0.120	0.085	1.128	0.125	0.085	1.134
Large town	0.138	0.088	1.148	0.136	0.088	1.146	0.131	0.088	1.140	0.136	0.088	1.146
Health expenditure, % of GDP (2013)	-0.210**	0.094	0.810									
Health Expenditure/ Capita, log PPP (2013)				-1.024***	0.306	0.359						
Range and reach of services provided[1] (2013)							-0.027***	0.005	0.973			
EQI (2013)										-0.738***	0.149	0.478
N			20,278			20,278			20,278			20,278
Random part												
Country-level variance			0.7572***			0.6306***			0.3758***			0.4542***
(Standard error)			0.2251			0.1879			0.1154			0.1365
Countries			28			28			28			28
Variance at country level (%)			18.71			16.08			10.25			12.13

Notes: Significant at *** p<0.01, ** p<0.05, * p<0.1; All coefficients are compared to the benchmark category, shown in brackets.
[1] Sub-discipline in Euro Health Consumer Index (2013)

Table 3. Multilevel logistic regressions of the propensity to make informal payments by socio-demographic, socio-economic, spatial characteristics and institutional imperfections – continued

	Model 8			Model 9			Model 10			Model 11		
Fixed part	β	se(β)	Exp(β)	β	se(β)	Exp(β)	β	se(β)	Exp(β)	β	se(β)	Exp(β)
Constant	2.288***	0.703	9.859	-3.133***	0.802	0.044	-10.41***	2.702	0.001	2.660***	0.993	14.30
Institutional Asymmetry Index	-1.236***	0.071	0.290	-1.237***	0.071	0.290	-1.241***	0.071	0.289	-1.237***	0.071	0.290
Gender (Male)												
Female	0.119*	0.071	1.127	0.120*	0.071	1.128	0.119*	0.071	1.126	0.119*	0.071	1.126
Age (15-24 years)												
25-39	0.292*	0.154	1.340	0.296*	0.154	1.344	0.296*	0.154	1.344	0.295*	0.154	1.343
40-54	0.339**	0.157	1.403	0.341**	0.157	1.406	0.341**	0.157	1.407	0.340**	0.157	1.405
55+	0.234	0.154	1.263	0.233	0.154	1.263	0.236	0.154	1.267	0.234	0.154	1.263
Marital status (Unmarried)												
(Re)Married/Single with a partner	0.214*	0.124	1.238	0.214*	0.125	1.239	0.214*	0.125	1.239	0.215*	0.125	1.240
Divorced or separated	0.023	0.161	1.023	0.020	0.161	1.020	0.018	0.161	1.018	0.022	0.161	1.022
Widowed	-0.104	0.159	0.902	-0.100	0.159	0.905	-0.098	0.159	0.906	-0.098	0.159	0.906
Household composition (One person)												
Two and more	-0.256**	0.117	0.774	-0.250**	0.117	0.779	-0.248**	0.117	0.780	-0.252**	0.117	0.777
Occupation (Self-employed)												
Employed	-0.150	0.142	0.860	-0.157	0.142	0.855	-0.156	0.142	0.856	-0.152	0.142	0.859
Not working	-0.109	0.146	0.897	-0.111	0.146	0.895	-0.110	0.146	0.895	-0.108	0.146	0.898
Difficulties paying bills last year (Most of the time)												
Time to time	0.010	0.098	1.010	0.009	0.098	1.009	0.004	0.098	1.004	0.007	0.098	1.007
Almost never\ Never	-0.219**	0.102	0.803	-0.227**	0.102	0.797	-0.239**	0.102	0.787	-0.230**	0.102	0.794
Community size (Rural/ Village)												
Small/ Middle sized town	0.128	0.085	1.137	0.120	0.085	1.128	0.124	0.085	1.133	0.124	0.085	1.132
Large town	0.138	0.088	1.148	0.133	0.088	1.142	0.141	0.088	1.152	0.137	0.088	1.147
Outcomes[1] (2013)	-0.016***	0.004	0.984									
Death rate, crude per 1000 people (2013)				0.283***	0.071	1.327						
Hospital beds per 100000 inhabitants (log, 2013)							1.640***	0.432	5.154			
Prevention[1] (2013)										-0.035***	0.012	0.965
N		20,278			20,278			20,278				20,278
Random part												
Country-level variance		0.5534***			0.5481***			0.5615***				0.6557***
(Standard error)		0.1665			0.1669			0.1727				0.1968
Countries		28			28			28				28
Variance at country level (%)		14.40			14.28			14.58				16.62

Notes: Significant at *** p<0.01, ** p<0.05, * p<0.1; All coefficients are compared to the benchmark category, shown in brackets.
[1] Sub-discipline in Euro Health Consumer Index (2013)

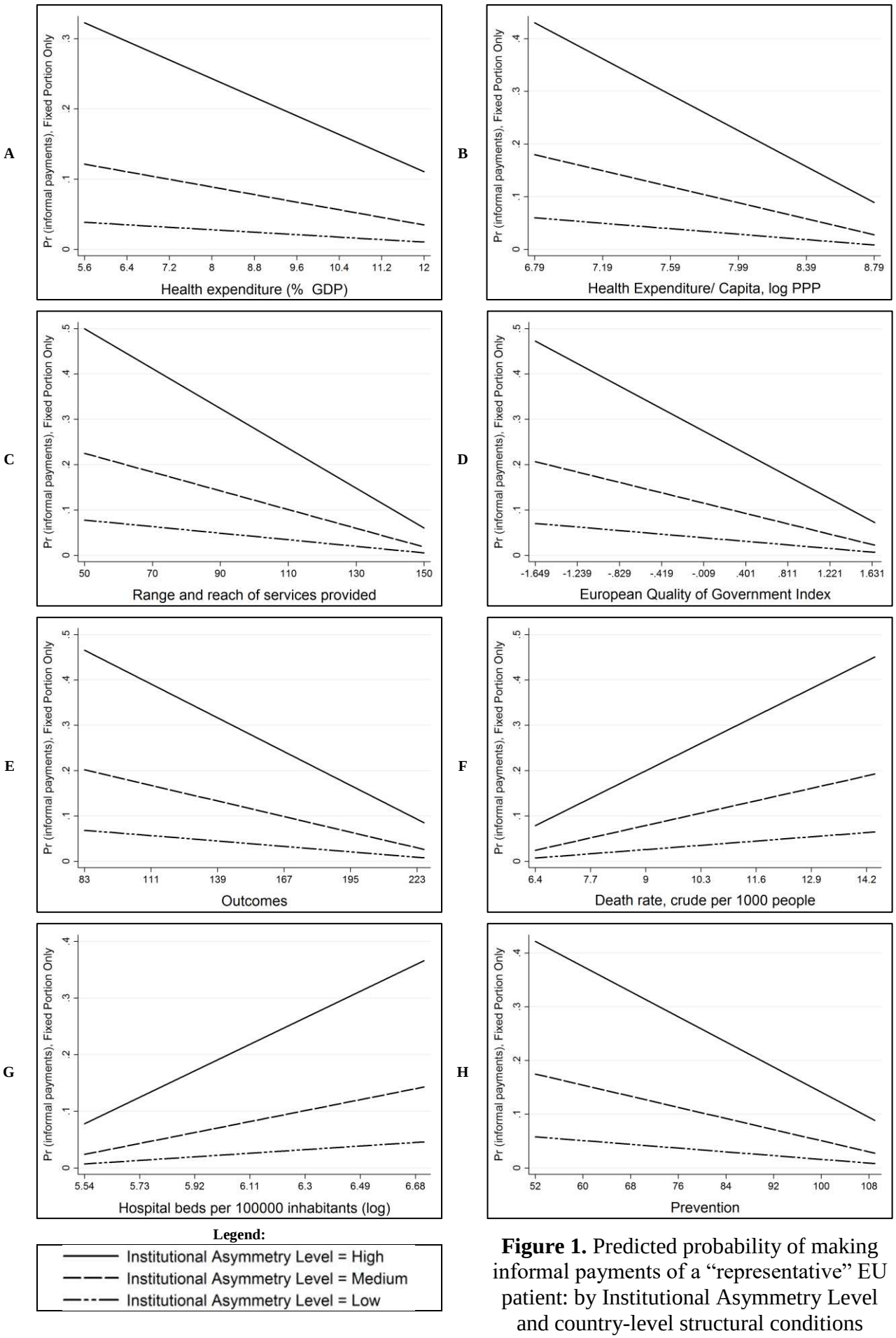

Figure 1. Predicted probability of making informal payments of a "representative" EU patient: by Institutional Asymmetry Level and country-level structural conditions