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Informal payments for maternity health services in public hospitals in Greece

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ABSTRACT

Background: Private health expenditure for consuming maternity health services has been identified as an issue within public hospitals.
Aim: To estimate level of private health expenditure, in the form of informal payments, for maternal services in public hospitals in Greece.
Methods: The study population consisted of 160 women who had recently given birth in three provincial general hospitals and one general hospital in Athens. A three-part questionnaire was developed in order to collect financial information regarding the use of public obstetrics services in Greece.
Results: The mean age of respondents was 29.5 (±5.6) years. There was a high rate of informal payments with 74.4% of women involved in informal transactions. Mean total private payments were €1549 (±992), representing 7.9% of the mean annual per capita income in Greece. Mean informal payment was €848 (±714). For 56.3% of the respondents, it was at the obstetrician's request, on top of formal payment of €701 (±1351). Total informal payments were higher for women who gave birth in Athens ($p < 0.001$), for Greek women compared to non Greek ($p < 0.001$) and for deliveries that were conducted by women's personal obstetrician ($p = 0.001$).
Conclusion: There is a large black economy in the field of obstetric services, as 74.4% of women who used public maternity services had to pay under-the-table payments corresponding approximately to the net salary of an intern physician. There is a need for the state to adopt innovative strategies and mechanisms in order to reduce informal payments for obstetric services in the public sector.

1. Introduction

The Greek health care system is a dual system funded on a 60–40% basis from public and private sources. Public expenditure, at 66% of total health expenditure in 2010, is financed by 35% by general government and 65% by social security funds [1]. Tax revenues are derived from both direct income taxation and indirect taxes on goods and services (general and hypothecated), with the latter representing the largest proportion (58.4% of total tax revenue) [2]. Out of pocket payments represent 40% of total health expenditure [1], making the Greek Health System one of the most "privatised" among European

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Union (EU) countries [3]. A significant proportion of out of pocket payments are informal payments, as user charges represent only a small proportion. [2].

The high level of informal payments for health care poses a significant financial burden on Greek citizens. According to Balabanova and McKee, informal payments are defined as a monetary or in kind transaction between patients and health professionals for public health services, theoretically free of charge, and are caused by inadequacies of the health system [4]. The most common type of informal payment is where providers exploit their power or market position in order to extract a payment from patients and one of the most common ways to do so is for health professionals to delay treatment until a payment is made [5].

Informal payments are very common in many European countries, especially those of the former Soviet Union and Central & Eastern Europe [6–8]. In some cases, informal payments constitute an important source for sustaining the health care system as for example in Georgia and Azerbaijan, having at the same time severe consequences on both equity and efficiency [7,9]. In the Czech republic 59% of in hospital patients reported an informal payment [8] while in Poland, 69% of patients in non regional hospitals and 61% of patients in regional hospitals reported "envelope payments to physicians" [10]. Similar percentages are reported from the Slovak republic (60%), Bulgaria (43%) and Russia (53%) [5–7]. In some countries informal payments represent a remarkable part of per capita income. For example, according to published studies in India and Bulgaria informal payments constitute 35% of the monthly income. In Armenia, the respective figure has been estimated at 130% and in Albania at about 40% [11]. Informal payments for inpatient care are also considered to be a remarkable part of a household budget in Eastern Europe countries, accounting for 46% of all out of pocket payments in hospitals. [12].

According to a Greek study published in 2008, 36% of inpatients reported at least one informal payment to a physician [13]. Those payments, which represented almost 20% of the total hospital household expenditure, are not a cultural characteristic or a conscious luxury choice, but an established forced social behavior made necessary in the course of seeking easier access to quality treatment [3]. It was also reported that none of the socioeconomic characteristics of the respondents are related either with the probability or the size of extra payments [13], which is a compatible result with previous studies [14].

As a result, households (and especially poor ones) resort to various strategies to make informal payments such as selling property, borrowing from relatives or even banks [15,16]. Evidence from Romania and Georgia is that poorer patients make significant sacrifices to pay for essential health services, which in some cases they could not afford. In Kyrgystan, one in three patients reported borrowing money for inpatient care, while in the rural areas, 45% of inpatients sold property to cover hospital costs [11].

Concerning the impact of informal payments on efficiency and equity, a "compulsory" payment, may deter the poor from utilizing necessary health services, or place a disproportionate burden on their shoulders. This is not just an equity problem, but it also affects resource allocation, if services are not consumed by those who would benefit most. In the case, of urgent health services, the need for informal payments may cause a person to forgo other essential expenditure. Even voluntary, informal payments from the equity perspective imply unequal access for equal needs (horizontal inequity). Furthermore, supply and demand (or need) determine the impact of informal payment on efficiency, and in this respect it becomes important in the case of supplier-induced demand [8].

An example of the former is public obstetric services in Greece, where under-the-table payments are a common feature and the choice of delivery (cesarean section-CS vs vaginal births-VB), is driven by physicians. In Greece, 114.766 labors took place in 2010 (www.statistics.gr), half of which were conducted in public maternity units. The rate of cesarean sections in Greece is currently by far the highest in the EU. More than 50% of deliveries include CS while the corresponding rate in the EU in 2007 was 24% [17]. Mossialos et al. have shown that 60% of deliveries by Greek women are through CS in both public and private hospitals. Interestingly, this figure falls to 5% for Greek Roma women and 7% for immigrants, two categories with decreased ability to pay [18]. However, the extent of under-the-table payments for obstetric services in Greece is largely unexplored, and further research is needed to understand the issues involved. This article seeks to address this information gap.

2. Aim and methods

The aim of this study was to investigate informal payments during the prenatal period and delivery in public hospitals and to estimate private health expenditure during a labor at a public hospital. The sociodemographic characteristics of women who gave birth in public hospitals and the association between informal payments and the delivery method (CS, VB) were also analyzed. A three-part questionnaire was developed to collect information for unspecified and unknown economic aspects, regarding obstetrics services in Greece. The questionnaire was developed by a consensus of specialists in the area of health services management, health economics and obstetrics. The first part concerned informal payments to hospital staff and the frequency of use for hospital and outpatient services during pregnancy. It included questions on the type and day of labor, type of anesthesia, the frequency and size of informal payments to doctors, nurses or aids, as well as the reasons for such payments. As informal payments we considered all extra fees and gratuities to doctors for services which are officially provided free-of-charge. The second part concerned prenatal screening and the costs related with it. It included questions on the frequency of screening tests, the provider (public or private hospital, private diagnostic center etc.), the amount paid for the tests etc. The third part of the questionnaire referred to the demographic and socio-economic characteristics of the household. We placed this part at the end of the interview, in order to facilitate answers to the first and more sensitive part.

In Greece, as far as the public sector is concerned, births take place in the two public maternity hospitals in Athens and maternity wards in 73 general hospitals all over the country. We used simple random sampling with a table

of random numbers in order to select 10 general hospitals (out of 73) and the respective maternity wards. We chose to include the two public maternity hospitals, but finally we had access to only one of them and to three maternity wards probably due to the "sensitive nature" of the research issue. The final study population consisted of 160 women (out of 258 that were asked during the study period) who gave birth in three public general hospitals and one maternity hospital in Athens (a 62% response rate). Since under the table payments are a very "sensitive" matter for the health sector in Greece, a low response rate was expected. Participants were selected on the day of discharge and the data were collected by personal interviews conducted by two trained researchers. All women discharged during the first and last weeks of November 2010 were asked to participate. Those enlisted, were assured of confidentiality and gave their oral permission.

2.1. Statistical analysis

Continuous variables were expressed as a mean (±standard deviation) and categorical variables as absolute and relative frequencies. Continuous variables followed a normal distribution. Independent *t*-test and analysis of variance (with post hoc *t*-tests adjusted for multiple comparisons, Bonferroni correction) were used. Pearson's correlation coefficient was used to estimate correlations between continuous variables. Total informal payments were considered as the dependent variable. A multivariate linear regression model (backward stepwise) was applied to control for potential confounders. First, bivariate analysis was performed on all demographic characteristics. Variables with a value of $p < 0.25$ in the bivariate analysis were included in a multivariate linear regression model and adjusted beta coefficients with corresponding 95% confidence intervals (CI) were estimated. Also, nuchal translucency scan was considered as dependent variable and multivariate logistic regression model (backward stepwise) was applied. In that case, we calculated adjusted odds ratios (OR) with corresponding 95% CIs. All tests of statistical significance were two-tailed, and *p*-values < 0.05 were considered significant. Statistical analysis was performed using the Statistical Package for Social Sciences software (SPSS 16.0 for Windows, SPSS Inc., Chicago, IL, USA).

2.2. Ethical considerations

The study protocol was approved by the ethical committees of the hospitals. Participation in the study was voluntary. An introductory letter was attached to the questionnaire to explain the study purpose. The questionnaire was anonymous and the respondents were assured that all information would be kept confidential.

3. Results

Two hundred fifty eight women who had recently given birth were asked to participate in the study, and 160 accepted, with a response rate of 62%. The mean age of participants was 29.5 (±5.6) years. Demographic characteristics of the participants are shown in Table 1.

Table 1
Demographic characteristics of the participants (*N* = 160).

Characteristic	*N* (%)
Place of birth	
Athens	126 (78.8)
Rural area	34 (21.2)
Ethnicity	
Greece	115 (71.9)
Non Greece	45 (28.1)
Working status	
Employed	99 (61.9)
Unemployed	61 (38.1)
Education level	
Elementary	20 (12.5)
Secondary	84 (52.4)
Higher (university, master or PhD degree)	56 (35.0)
Monthly family income	
<3000€	143 (89.4)
≥3000€	17 (10.6)
Type of labor	
Cesarian section	91 (56.9)
Vaginal birth	69 (43.1)
Physician performing the labor	
On duty physician	24 (15.0)
Personal choice	136 (85.0)
Type of room	
Single room	70 (43.8)
Double room	55 (34.4)
Third room	35 (21.9)
Day of labor	
Monday	30 (18.8)
Tuesday	35 (21.9)
Wednesday	23 (14.4)
Thursday	19 (11.9)
Friday	26 (16.2)
Saturday	8 (5.0)
Sunday	19 (11.9)

Fifty-seven percent (*n* = 91) of the deliveries were Cesarian Sections (CS). The main reasons for selecting cesarian section were previous cesarian section (21.2%) and abnormalities of the fetus (21.2%). Of the women who underwent CS, only 17.5% stated that it was their choice while the other 82.5% did not favor CS. The vast majority of the respondents (99.4%, *n* = 159) realized the importance of antenatal tests and performed them.

Informal payments for labor were reported by 74.4% (*n* = 119) of the study population. Seventy eight percent of the women who underwent CS reported at least one informal payment, while the respective figure for vaginal birth (VB) was 69.6%. The most common reason given for "under the table" payment was the obstetrician's request (56.3%) (Table 2). In normal childbirth, the doctors' payments were on average 878€. In the cases of cesarian sections the average amount was 983€. The mean total private payment was 1549€ (±992). It included a mean informal payment estimated at 848€ (±714) and the formal payment at 701€ (±1351). The mean informal payment was higher for cesarian sections (921 ± 733) versus normal births (755 ± 675) ($p = 0.14$).

Bivariate analysis identified the relationship between total informal payments and the mother's age, place of

Table 2
Informal payments to physicians and possible reasons for the payments.

	N (%)
Informal payments to physician (*N* = 160)	
Yes	119 (74.4)
No	34 (21.2)
na	7 (4.4)
Informal payments for cesarian section (*N* = 91)	
Yes	71 (78)
No	17 (18.7)
na	3 (3.3)
Informal payments for vaginal births (*N* = 69)	
Yes	48 (69.6)
No	18 (26.1)
na	3 (4.3)
Of those who performed informal payments, reasons for paying informally (*N* = 119)[a]	
The doctor asked for the payment	67 (56.3)
I thought that the doctor would paid more attention to me	4 (3.4)
I paid after the labor as an expression of gratitude	48 (40.3)

[a] Women were allowed to choose only one possible answer.

birth, ethnicity, working status, educational level, monthly family income, type of room and type of physician performing the labor (Table 3). Specifically, those living in Athens, are Greek nationals, are employed, possess higher education degrees, and have a high monthly income pay higher informal payments. Additionally, those who undergo CS, with a doctor of their own choice, using a single room pay more than the rest.

Table 3
Relation between total informal payments (€) and demographic characteristics.

Characteristic	Total informal payments[a]	*P*-value
Place of birth		<0.001
Athens	989 (±670)	
Rural area	332 (±484)	
Ethnicity		<0.001
Greece	1031 (±697)	
Non Greece	385 (±514)	
Working status		<0.001
Employed	1044 (±687)	
Unemployed	534 (±637)	
Education level		<0.001
Elementary	488 (±596)	
Secondary	867 (±684)	
Higher (university, master or PhD degree)	1121 (±709)	
Monthly family income		0.046
<3000€	811 (±705)	
≥3000€	1177 (±721)	
Type of labor		0.14
Cesarian section	921 (±733)	
Vaginal birth	755 (±675)	
Physician performing the labor		<0.001
On duty physician	261 (±404)	
Personal choice	953 (±704)	
Type of room		<0.001
Single room	1121 (±666)	
Double room	897 (±697)	
Triple room	229 (±378)	
Age of the mother	0.2[b]	0.013

[a] Mean (±standard deviation).
[b] Pearson's correlation coefficient.

After adjusting for confounding factors, multivariate linear regression analysis showed that total informal payments were higher for women who gave birth in Athens instead of district hospitals ($p < 0.001$), for Greek women compared to immigrants ($p < 0.001$) and for deliveries conducted by the woman's personal obstetrician ($p = 0.001$) (Table 4). The other independent variables were not associated significantly with informal payments.

Multivariate logistic regression analysis identified that Greek women compared to non Greeks (OR = 3.6, 95% CI = 1.2–11.1, $p = 0.03$) and employed women compared to unemployed (OR = 8.3, 95% CI = 2.1–33.6, $p = 0.003$) did more frequently nuchal translucency scan.

4. Discussion

The frequency and height of informal payments in maternity units in Greece shows that it has become a common and accepted practice, posing, however, a significant economic burden on household budgets. Although there is no published research in Greece regarding informal payments for childbirth, limiting the chance to validate the results, data from similar studies indicate that 36% of patients admitted in public hospitals reported at least one informal payment to a doctor. The odds of making an extra, informal payment was 2.37 times higher for surgical specialties (including obstetricians). According to our findings, 74.4% of women who chose public obstetric services for their delivery reported paying on average 1549€ (±992) or else 7.9% of the mean annual per capita income, corresponding to 42% of the monthly household budget for 2009. The mean informal payments were 848€ (±714) and they were paid, on the majority of the cases (56.3%), after the physician request before or during the labor. The formal payments were estimated to be 701€ (±1351). The informal payments were higher for cesarian sections (921 ± 733) versus normal births (755 ± 675). Findings are similar to those of other countries, mostly of the eastern European countries and the developing world. In Poland, informal payments have become a "mandatory practice", especially for cesarean sections and during labor and delivery [19]. According to Chawla et al., 69% of patients in non regional and 61% in regional hospital pay under-the-table [10]. In Russia, informal payments for maternal services are common, including payments for elective CS and epidural anesthesia. Although there is limited evidence regarding the impact of these payments, they seem to provide an incentive for staff to serve in poorly funded health system [20]. In Hungary obstetricians and surgeons are the most frequent recipients of informal payments while in Bulgaria, childbirth is commonly the subject of "sizeable" under-the-counter payments [4]

According to a study in western Tanzania, a low income country, 73.3% of women reported having made out-of-pocket payments for delivery related costs. The average expenditure represented 8% of the annual per capita income, with nearly half of women reported borrowing money or selling household assets to pay for delivery [21]. In a population-based survey in 2003, in three African countries, women who had given birth in public services were interviewed about the costs during childbirth. The

Table 4
Multivariate linear regression model with total informal payments as dependent variable.

	Adjusted beta*	Standard error	95% CI	*P*-value
Place of birth (Athens = 1, rural area = 0)	633	114	407–857	<0.001
Ethnicity (Greece = 1, non Greece = 0)	487	108	271–702	<0.001
Physician performing the labor (personal choice = 1, on duty physician = 0)	494	139	220–769	0.001

R^2 = 34%.
* Adjusted for the other variables in the table and also for age, working status, educational level, monthly family income, type of labor and type of room.

majority of women reported out-of-pocket payments, with Kenya being the first as far as informal payments are concerned with informal payments reaching 35% of the mean monthly household income [22].

In our study, cesarian sections represent 56.9% of the labors in the study population. Results are similar with those from other Greek studies indicating a by far higher percentage than the EU mean (24.3%) [17]. A study conducted by Mossialos et al., showed that CS represented 41.6% of the deliveries in public hospitals and 53% in private [18] and according to a pilot study conducted in 2006 at two public hospitals of a Greek island, the Crete, almost half of the deliveries (50%) were conducted by cesarian section [23]. Similar percentages were reported from another Greek study, contacted at a university hospital of Athens, were CS represented 41.1% of labors during the period 2001–2005 [24]. Another finding of our study, which is also confirmed by the results of Mossialos et al. is the fact that on Saturdays less births take place, probably because the majority of doctors do not work this day [18]. There is an ongoing discussion that the increased frequency of cesarian sections in Greece may be due to the need of programming them so that obstetricians can conduct labors at their convenience. CS is usually completed within 3 h in contrast to the normal labor for which 12 h may be needed.

As far as the factors that lead to CS, according to the literature, previous cesarian section and abnormalities of the embryo were found to affect the type of labor [25], a finding similar to our results. However it seems that the large proportion of cesarian sections in Greece may be associated with "defensive medicine" as in normal childbirth unforeseen problems and complications may take place [24]. According to our findings, the majority of women do not prefer cesarian section as it is considered correctly a surgical intervention which may have different complications, a result which is opposed to that of similar research in Brazil, where cesarian section is preferred and considered to be of better quality [26].

Friends and relatives were reported to be the main source of information for the selection of a gynecologist–obstetrician and the vast majority of women realized the importance of examination of antenatal screening, findings that are consistent with those of other studies [27]. The use of prenatal screening tests was associated with nationality and employment, as also in other studies. For example, women with manual labor and Asian origin, had fewer visits to the gynecologist and as a result inadequate monitoring of pregnancy compared to the British population [28]. According to other findings, women who did not enjoy prenatal care were the younger, single, women of low educational level that did not give birth for the first time [29–33].

4.1. Policy implications

Informal payments constitute a tremendous issue for many countries as well as Greece. The main factor responsible for this problem is the inadequacy of the public health system in providing free services of high quality. Patients' misguided beliefs that informal payments are necessary, lack of knowledge or information regarding rights along with the absence of supply-side control mechanisms have created a black economy within the public sector. Medical associations blame informal payments on low medical salaries and fees [34]. While official doctors' income is indeed low [35], informal payments is a mean to improve it. In 2012, the mean net salary of physician under-training for obtaining specialty, is estimated at €1050 on average while the net salary of a middle rank physician in a public hospital is €1801, including subsidies. However, taking into account the economic crisis the country is currently facing, it is unlikely to provide sufficient funds or improved salaries, at least, for the next 5 years, in order to diminish informal payments. This is not only a Greek phenomenon. In many developing countries and countries in the Eastern Europe, informal payments are one key means of raising income by charging patients for services or supplies that should be provided for free [6,11,36]. Dual practice, whereby publicly employed doctors spend some time in their private clinic, is also common [37–40].

In general, there is strong evidence from more than 31 studies, conducted between 1995 and 2010, that informal payments are very common in order to support insufficient health care budgets [41]. Probably, this is the worst possible way of financing the health sector, as it causes several inequalities and problems. These payments affect the poor even more than official charges because there is no possibility to apply exemption policies and they direct the supply side to the provision of services that are more profitable rather than to those that are more effective (e.g. CS) and to patients that have the ability to pay rather than to those most in need [42,43]. Findings of the present study suggest that payments were not associated with the sociodemographic characteristics apart from the nationality and place of residence (Greeks had a greater possibility to pay than non Greeks and those who lived in the capital than inhabitants of rural areas) leading probably to inequity in access or to significant economic burden on households with low incomes. A survey by Siskou et al. found that one out of three patients uses informal payments in order to ensure

quick access to public hospitals and in order to obtain upgraded quality of care and those payments were also not associated with any socioeconomic characteristic [3].

4.2. Implementing a new financing scheme: is the formalization of informal payments an option?

There is probably no simple solution to the problem. As under-the-table payments in Greece are probably a way of improving the low salaries of medical personnel and have become a "common" characteristic of public health services, they may not be easily amenable to change. Despite the current legal system that prohibits such payments, banning informal payments has not proven a successful measure until now.

Probably the whole phenomenon should be dealt in a more sophisticated way and any proposals should take into account both the international experience and the current political and economic scene in the country. There is an ongoing debate the last years about the formalization of informal payments. In Kurgyz Republic and Cambodia, pilot programs were set in order to decrease informal payments by introducing formal fees and better management systems. In both countries the programs were characterized successful [11,44]. In Bulgaria however, a similar policy introduced in 1997 when fees were introduced for hotel costs and direct access to specialists did not yield the anticipated results [4].

The introduction of supplemented private insurance along with a universal health insurance system was another selected strategy and has decreased informal payments in Croatia and Czech Republic [4].

In Greece, despite the high private health expenditure and the dissatisfaction with the public system, private health insurance is still limited [45]. However, private insurance may act in a supplementary role, providing cover for faster access, better quality of services and increased consumer choice in the public sector, based on income and ability to pay. After all, evidence from the literature suggests that the public hospital sector in Greece is characterized by qualitative services, with better staffing rates and lower length of stay compared to private hospitals [46].

The operation of afternoon outpatient clinics, introduced by Law 2889/2001 aimed at filling an existing gap, by enhancing better access and increased choice to patients who were willing to proceed to out of pocket payments for public services (medical visits) [47]. At the same time the revenues of the hospitals which proceeded to this measure were increased by 3.1% [48]. Possibly, a similar approach could be examined for services like surgical interventions. Taking into account that the average occupancy rate for two public obstetric/maternity hospitals in Greece was 66% and for the majority of the maternity wards in general hospitals was 51% in 2011, it could be assumed that 30% of beds could be used for patients willing to pay for advanced "hotel" services and increased ability to choose their own doctor, without endangering the access for the poorer. From the state perspective, this may be seen as a win-win situation, since the doctors are offered the chance to increase income and at the same time decrease "black economy" through taxation of these extra payments. Additionally, as it is the case today with the operation of outpatient afternoon clinics, hospital staff and the hospital will also have the chance to increase revenues receiving a percentage of these payments.

Those thoughts should at least stimulate further debate and research; especially in the current economic situation given that health sector is one of those seriously affected. Between 2009 and 2011, hospital budgets were cut on average by 20.6% while expenditure for orthopedics was decreased by 67%, for pharmaceuticals by 33.5% and for other medical supplies by 38.5%. Under the current circumstances which raise a number of concerns including significant inefficiencies in public hospitals and the "unbearable" burden of health care on family budgets, all possible ways for increasing hospital revenues and controlling informal payments, should be examined thoroughly.

An effective approach toward limiting informal payments will also require the support of health workers and their professional associations [49]. The development of a clear system of patient rights and simple procedures of complaints could help to reduce the prevalence of informal payments [5]. Certain mechanisms that will increase the accountability of the whole health system and will create a climate of transparency should be developed in order to maximize the success of any efforts to eliminate informal payments [13]. Above all, what is required is the political will to face up to a serious injustice.

4.3. Limitations

For the findings presented in this paper some limitations should be taken into account. The small sample size represents a limitation. However it should be noted that the interviewers were not permitted to access other public hospitals. Moreover, some of the questions referred to past events and it was not possible for all women to recall them. As a result, there were some recall errors and the trustworthiness of the respondents was assumed. Furthermore, the fear that the responses to the questionnaire may have an impact on the doctor–patient relation may have led to the suppression or falsification of some information. Also, the inadequate understanding of the Greek language for non Greeks, may have resulted to a certain extent in incorrect responses. Finally, the findings represent the study population and may not be generalizable to the broader Greek population.

5. Conclusion

The findings suggest that in Greece, there is a large black economy in the field of obstetric services, since 74.4% of women who used public maternity services had to pay under-the-table payments which for the year 2009 were estimated at 848€ corresponding approximately to the net salary of an under-training physician. The majority of Greek families which use public hospitals for giving birth to their children are confronted with significant informal payments, reaching 42.4% of the mean monthly household income. However, since Greece has been affected more than any other European country by the financial

recession, especially from 2009 onwards, it may be argued that informal payments may be decreased, as an absolute figure. Yet, since the mean per capital income in Greece has been further decreased by 3.5% during 2010 and 5.5% during 2011 (Eurostat database), the amount of informal payments as a percentage of a monthly wage may be even bigger.

Although the findings of the study may not be generalized for the whole Greek population, if we make the hypothesis that a similar situation occurs in the rest maternal units of the country and having in mind that 50% of the 100.000 childbirths, take place in public units, it could be assumed that informal payments for maternal services could exceed €31.8 million annually corresponding to the total hospital expenditures (including salaries) of one public maternal hospital with 450 beds [48]. Finding a way to formalize such an amount or at least a part of it, may have a substantial impact in both hospital revenues and physicians' income, offering at the same time incentives for increased performance of the hospital personnel. At the same time, those who could afford to pay for more qualitative services may do so, but at a fixed charge within an upper limit. Yet, the introduction of such a policy should be very well monitored in order to reduce the danger of adding formal fees to the already significant burden of informal payments [5].

Despite the limitations of study, the results may contribute to the reinstatement of transparency in financial transactions in obstetric services as well as resistance to lawless transactions from the perspective of both citizens and doctors. Furthermore, our results may stimulate further research and debate on this issue, since internationally very few studies have investigated the black economy in obstetric services to date.

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