Corruption at Household Level in Cameroon: Assessing Major Determinants

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AERC Research Paper 247
African Economic Research Consortium, Nairobi
August 2012

THIS RESEARCH STUDY was supported by a grant from the African Economic Research Consortium. The findings, opinions and recommendations are those of the author, however, and do not necessarily reflect the views of the Consortium, its individual members or the AERC Secretariat.

Published by: The African Economic Research Consortium
P.O. Box 62882 – City Square
Nairobi 00200, Kenya

Printed by: Modern Lithographic (K) Ltd
P.O. Box 52810 – City Square
Nairobi 00200, Kenya

ISBN 978-9966-023-19-3

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Abstract

Corruption is a major blight on modern society. It is acute in sub-Saharan Africa, a region that has suffered economic ills for many years. It is difficult to tackle the problem due to its politically sensitive nature. Indeed, top officers are viewed as generally corrupt. Corruption is a topical issue in almost all countries in the region. Nevertheless, relevant empirical research is lacking, especially in countries where corruption is rampant. Existing studies highlight illegal practices in trade, finances, international relations, etc., but there are still many aspects to be addressed.

Cameroon is one of the most corrupt countries in the world, although the situation is improving each year according to the Corruption Perception Index issued by Transparency International. Today, the fight against corruption is part of the government agenda but important changes are yet to come. The household survey carried out in 2001 examined elements of corruption in common household domains like health, education, security and other services including external community variables. This can be termed petty corruption. This paper tries to explain if there are large differences between communities that can be explained by community variables.

Simple analysis using two variables shows important variations in the level of petty corruption, notably according to regions (increasing from rural to urban areas) with the poor being less likely to give bribes. Using multivariate analysis it appears that: a) modernization is associated with petty corruption; b) political environment does not really matter, except the influence of city councils; c) expenditure and level of education do not show similar trends; d) civil servants are not associated with bribe giving; and, e) positive impacts are found with age, number of years of education, low level of education and Islam. Some results observed with multivariate analysis contradict those found with bivariate analysis. All in all, although community variables can explain differences in petty corruption, household characterizations are equally important.

This is just an outline of corruption practices in Cameroon. Its foundation lies on a few variables whose measure is not perfect. For further research, it is necessary to enlarge the scope of the study and improve the measurement aspect. Nevertheless, the results can help make better decisions to reorient the fight against such bad practices, since corruption is recognized as a deterrent to development, especially when it becomes systemic.

Acknowledgements

The author is grateful to the African Economic Research Consortium (AERC), Nairobi, for their financial support. The author also wishes to thank the AERC resource persons for their useful and enriching comments. Finally, the author is grateful to external reviewers of this paper for well-articulated comments and observations. However, the author remains solely responsible for the views and shortcomings of the study.

1. Introduction

Corruption is synonymous with social wrongs; whether practised at macro or micro level, by politicians or businessmen, the consequences of corruption are negative on the whole population, especially when we distinguish between who corrupts and who is corrupted. Divergent views exist on the impact of corruption. With the spread of the phenomenon today, it is agreed that for Africa corruption is the greatest obstacle to social and economic development besides poverty. Regrettably, in view of the national and international policies adopted in the past years, it appears that not enough emphasis is placed on corruption. The outcome is bad governance and absence of democracy. However, there is no agreement on how best to bring dictators and the corrupt who impoverish the masses to account. Human rights are emphasized but there is no real strategy, internationally nor nationally, to assure that better behaviour can be obtained from policymakers and the society as a whole.

Despite worldwide concern over corruption, many African countries have taken time to admit that the problem is pervasive. Progressively, it has become obvious that the problem is real. It takes different forms and has varying levels. Given the political environment surrounding it, only a few empirical studies exist.

Corruption has always been with us but its magnitude seems to have increased with the last world economic crisis, going by the magnitude of empirical and theoretical studies.

No definition of corruption is clear-cut given its many dimensions: givers against receivers of bribes, sectors concerned, occasional or systematic etc. According to Transparency International, "Corruption is the abuse of a received power by delegation for private achievements". Many derivatives of the concept exist. Some compare corruption to a tax or a fee (Boycko, Shleifer and Vishny, 1995). Lambsdorff (2007) defined corruption as the misuse of public power for private benefit. Other criticisms are found in Djankov et al. (2003).

The common ratings of corruption are: (i) the Corruption Perception Index (CPI) produced by TI is the most widely disseminated (criticisms here concern the methodology); (ii) the International Country Risk Guide's (ICRG) corruption indicator is said to capture the likelihood that senior government officials will demand special payments and the extent to which illegal payments are expected throughout government (it does not determine a country's level of corruption, but the political risk involved in corruption); and (iii) the Control of Corruption (CC), drawn from a large set of data sources (Kaufmann et al., 2003). These three measures are similar with high correlation between them.

Others are the International Crime Victim Surveys (ICVS) conducted by the United

Nations Office on Drugs and Crime, focusing on individuals rather than firms; the Opacity Index of PricewaterhouseCoopers (OIP); and Transparent Agents and Contracting Entities (TRACE).

At household level, people practise what may be qualified as petty corruption. It is more harmful since it affects the poor directly. Even with low income, one is forced to pay different bribes to access basic services such as education, health and security. Although studies have been done on petty corruption, they are few due to the difficulties associated with conducting related surveys. A common view is that perceived corruption reduces foreign direct investment in transition countries. Grand corruption involving top policymakers — even authoritarian rulers — who may serve as guarantors, seems less inimical than unpredictable petty corruption, involving time-consuming negotiations with low-level bureaucrats. According to Lambsdorff (2007), the unpredictability of bribes is related to the absence of corruption, once gross domestic product (GDP) and legal alternatives are controlled for in regression analyses. In this paper we outline the Cameroonian case using qualitative data from a household survey.

Cameroon has benefited from international studies on corruption by Transparency International. Such studies give insights at macro level. The main constraint to the study is lack of data. The 2001 survey on household conditions included qualitative variables concerning bribe giving by household members. Obviously, those variables are inadequate, but we take the opportunity to draw from them corruption profiles in households while waiting for more appropriate data. We already know that corruption exists in schools, health centres, security forces, etc. This paper shows the main determinants of such practices.

Globally, community variables have little impact on corruption at household level. What matters is not the presence or density of some administrative functions, but their moral quality. The state may demand change of behaviour through legal directives, but when corruption seems systemic it means that the expected directives are not well implemented. At household level, the following characterizations matter: expenditures, poverty status, activity sectors and level of education. Since links between who benefits from and who suffers bribe giving are not very clear, such results may be doubted. This is the case when rich people are negatively associated with petty corruption while the most educated are positively associated.

Petty corruption as analysed in this paper from a national representative database aimed at assessing the living conditions of the population, has not benefited from an important range of related variables. With only four items (education, health, security forces and other services) to characterize corruption at household level without the possibility of distinguishing who is personally concerned or how much money is disbursed, this appears limited and the results obtained are just an outline of the problem.

The study:

1. Examined the links between petty corruption and household characteristics; and,
2. Drew corruption profiles seen at community level, but also explained by household characteristics.

The scope of this research does not take into account the monetary value of goods and services involved. Available data do not give details on how to tackle the problem.

The hypothesis of the study is that community variables explain corruption practices at household level. Regional differences in development and modernization are to be put forward, as are political and administrative influences. The paper will also examine different social stratifications of the population.

Corruption is often found in cities, mainly in public service and administration. These services also cover rural areas and people from villages feel obliged to join in and benefit from it. Moreover, in rural areas one finds some specificities linked to their activities (influence peddling, swindling on raw material prices, cheating on the quality of products, etc.).

In this paper, we restrict ourselves to the situation prevailing in households. This situation concerns the population as a whole, poor or rich. Therefore, our research questions were:

1. What are the profiles of corrupted households?
2. Can differences in petty corruption be explained by community variables?

Specific household characteristics matter, but some community variables may influence corruption. They are linked to political, social and economic environments. The level of modernization may be very important in this regard.

2. Literature review

Despite numerous observable facts about corruption half-heartedly denounced almost everywhere, only a few studies have been done in Cameroon. The matter is politically sensitive because corruption is often linked to top civil servants: bad management of state affairs, specifically misuse of public money.

Transparency International (1998, 1999) classified Cameroon as the most corrupt in the world. The country has improved its rank each year, but not enough to yield significant changes in corruption practices. An audit released by Fitch Ratings and Standard & Poor's indicates that for the 2000–2003 period, Cameroon lost US$460 million annually, about 18.6% of its operating budget for the 2004 fiscal year (Dikalo, 2004) because of corruption (procurement contracts, port transactions, public financial management, etc.).

At the international level, studies carried out focus on backhanders for public work contracts and consequences of corruption among others. However, researches do not give relevant examples of countries that have broken the vicious cycle. Economic and social sectors are affected by corruption, and those who suffer most are the poor. Furthermore, data are generally at macroeconomic level and studies on households are rare. Examples include bribes compared to lobbying, level of corruption between control administrations (customs, police, gendarmes, forestry authority, hygiene services) and administration delivering services to citizens (civil registration, health, justice, etc.) (Blundo et al., 2001).

Bribes at the household level have a negative impact on the standard of living. This is more acute with low earnings where household income may be significantly reduced. For 19 countries studied by TI, corruption represents about 10% of GDP in 11 of them, but the ratio is higher in Cameroon, Nigeria and Ghana where people pay about one-quarter of the GDP as "corruption tax" (TI, 2005). Other studies have investigated direct investments abroad (UN, 2001); the linkage between weak administration with ambiguous laws and corruption (Lapalombara, 1994; Tanzi, 1998); development and income inequality (Macrae, 1982; Alam, 1995;); and development of equitable and efficient markets (Shleifer and Vishny, 1993; Gupta and Alonso-terme, 1998; Boatright, 2000). These studies show that corruption has an impact on development and increases poverty. At sectoral levels, good management is necessary to ensure the good health of the population (Lewis, 2006).

As Treisman (2000) points out, what seems to reduce corruption is not the actual level of democracy, but whether a country has maintained democratic institutions for a continuous period. Equally, countries where citizens are predominantly Protestant seem less corrupt (La Porta et al., 1999; Treisman, 2000).

According to Peyton and Belasen (2010), human development and economic freedom are significant predictors of corruption perception levels. But when evaluated separately, increases in human development are shown to correspond to greater reductions in corruption perception than economic freedom.

Hunt and Laszlo (2005, 2007, 2009) studied corruption using data on household bribery of public officials in Peru and Uganda. They found that:

- Bribery acts as a flat tax on beneficiaries of public services in Peru, and that much of the apparent regressiveness of bribery among Ugandan users is an artifact of measurement error in income;
- The burden of bribery is not borne disproportionately by the poor;
- Poor bribers pay a greater share of their income than rich bribers do, but this is offset by the fact that rich users are more likely to bribe than poor users; and
- The rich use officials more often than do the poor.

Lambsdorff (2007) surveyed the comparative evidence on corruption, especially how to minimize it, its relation with growth, etc. The study is a summary of how corruption is perceived today and suggests ways for better reforms.

While it seems that there is no corruption-free system in the world, the magnitude of the practice and the extent to which it is systemic matter a lot. High level and persistent corruption is detrimental to the well-being of the population. Therefore, to really fight the vice, big corruption (judiciary, high political and administrative services) and petty corruption should be tackled.

3. Methodology and conceptual framework

This paper deals with petty corruption at household level. Household data is used for analysis, yet household behaviour may be governed by social, political or economic environment. Therefore, community variables are needed to explain the magnitude of petty corruption.

To determine the profile of petty corruption at community level or the victims of the corruption, we first perform a bivariate analysis. This determines the state of relations between petty corruption and relevant regional characteristics. Corruption is multifaceted; multivariate analysis is thus necessary to establish the main determinants.

Conceptually, while grand corruption has an impact on the poor indirectly through high costs, mitigation of social services, and deprivation of basic and fundamental rights, petty corruption directly touches the poor and affects their participation.

Svensson (2005) highlights eight frequently asked questions about public corruption. The questions are not exhaustive and do not include the review by Bardhan (1997) and Coolidge and Rose-Ackerman (1999). This paper is not concerned with public corruption as such, but with the petty corruption that hampers living conditions at household level.

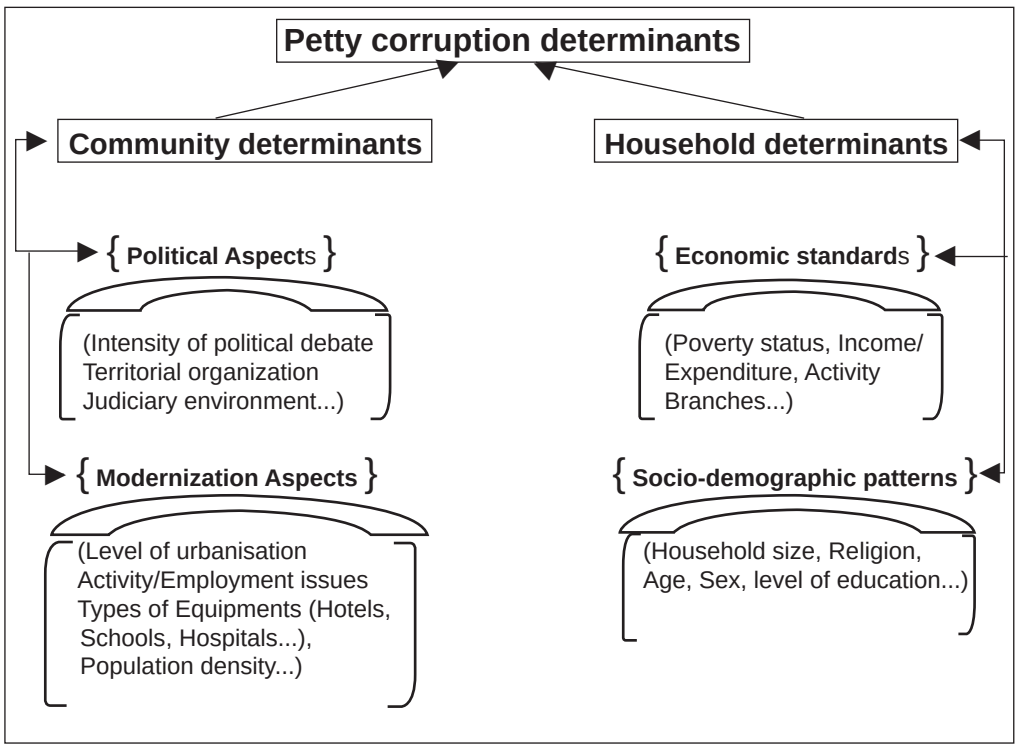
We assumed that bribery has social, economic, political and cultural foundations. It is part of everyday behaviour in society. It does not reflect the absence of laws and regulations, but demonstrates the extent to which they are not applied equitably. The overall context in which we worked is marked by a high degree of poverty (four out of 10 households are poor), bad governance that has resisted many years of structural adjustment, and a society not used to uprisings and is, therefore, resigned to its fate. Consequently, we expected political debate to play a great role in corruption practices: once somebody has political power, he and his entourage use this opportunity to demand and receive bribes. Bribing also refers to a large number of basic necessities that prevail in developed/urbanized regions. Therefore, modernization encourages bribery and the poverty status is connected to such situations. Social and cultural backgrounds may be determinants in the decision to give or receive bribes and this can be accessed through geographic/regional variables.

People often try to conform to the teachings of their faith. Religion may then determine the acceptance or not of bad practices. Another shared view is that women are more honest in affairs and debates about gender. This view assumes that women in power could do better in improving life and development. It is then important to determine whether differentiation in bribe giving is important between men and women. Furthermore, decision making often varies with age. It is, therefore, expected that the level of bribing

is related to age. That relationship may not be linear since young and old persons may participate in corruption for different reasons.

Figure 1 summarizes the determinants of petty corruption and informs the type of model we build. At community level, political and modernization issues must be taken into account, but at household level we mainly have variables describing economic standards and socioeconomic patterns (variables concern the household as a whole or the head of household).

Figure 1: Determinants of petty corruption



Magnitude of corruption in Cameroon

Cameroon has been classified as the most corrupt country or among the most corrupt in the world. It must take up the challenge to reduce corruption that is deeply entrenched in all sectors, whether public or private.

Many corruption practices are well known in Cameroon. For example, in some companies, everybody knows that some money has to be paid to get service (it is often a percentage of the amount due in the case of payment for work done). Moreover, when drivers say "eat one thousand", they refer to policemen who harass them in traffic, asking for CFAF1,000 for any actual or fictitious fault. Similar situations exist in exchequer services, customs, justice, etc. Corruption is not an urban-only affair. Rural areas have their own specificities such as influence peddling, swindling on raw material prices and cheating on the quality of products.

Whenever top state managers are accused of corruption, reactions are often defensive. This makes it difficult to tackle the problem peacefully and with an open mind.[1] Therefore, the magnitude and impact of the phenomenon on the various sectors of national life are yet to be studied. The matter is politically sensitive because corruption is often linked to top civil servants and generally involves bad management of state affairs and misuse of public money. How many public work contracts take place with transparent standards? Several irregular procedures are implemented, leading to overestimation of the value of jobs badly done but paid for by the government. Identifying actors is not always easy. The reality, however, is that Cameroonians face corruption in many common occasions including getting one's dossier forwarded, requesting for administrative promotion, being paid by the exchequer, passing an examination or official competition, etc.

The government has acted by sometimes charging its officials in a court of law. However, the impact is not felt since corruption has not been seen to reduce; if anything, there is a continuous spread of corruptive practices.[2] It is often said that "big dangerous fishes" are never worried, only some small fry are intercepted occasionally to demonstrate to development partners and the international community that the fight against corruption is a reality with tangible results.

An audit conducted by Fitch Ratings and Standard & Poor's covering the 2000-2003 period indicates that because of corruption — procurement contracts, port transactions, public financial management — Cameroon loses US$460 million annually, that is about 18.6 % of its operating budget for the fiscal year 2004 (Dikalo, 2004). On its part, the media published a short list of top officers who have billions of francs stashed away in accounts abroad. Many press articles attest to the recent nationwide concern on corruption and speculations [3]. Misuse of public money has been decried for many years, but the government answer is usually "Where is the proof?"

Some of the accused senior civil servants were arrested as a result of this anti-corruption campaign. But it is doubtful whether all the corrupt officers have been arrested and whether the judicial system is independent enough and has the capacity to help recover misused funds. Moreover, the ability of the judicial system to establish better governance is in doubt given that important state firms such as Social Security Office, National Hydrocarbon Office, Cameroon Airlines, SONEL (electricity company), SNEC (water company), FEICOM (communal development fund), CRTV (national TV), Ministries of Finance, Defence, Justice, Secretary of the Presidency and the Prime Minister's Office are involved.

In 2003, corruption was perceived to be pervasive in Bangladesh, Nigeria, Haiti, Paraguay, Myanmar, Tajikistan, Georgia, Cameroon, Azerbaijan, Angola, Kenya and Indonesia. All these countries scored less than two in the corruption index. Cameroon was highlighted in the following sectors: forest exploitation (about 45% of trees are cut illegally), a judicial system unable to guarantee free and fair elections, and restricted media.

As shown in Appendix 1, Cameroon's CPI has been improving. Although the methodologies vary through time and are criticized for various reasons with changes in the number of countries involved, the observed trend may signify an improvement in corruption behaviour. Unfortunately, given its everyday manifestations and the mitigated measures taken to overcome the phenomenon, it is clear that corruption is still a major

problem in Cameroon. The country had a better score in 2005, ranking 18th out of 159 surveyed countries. More than two-thirds of those countries scored less than five out of 10, indicating serious levels of corruption in a majority of them. It concluded that corruption is a major cause of poverty as well as a barrier to overcoming it. The two scourges feed off each other, locking their populations in a cycle of misery. Aid is expected to make a real difference in freeing people from poverty and for this dream to come through corruption must be vigorously addressed.

Data and model design

Availability of data

While poverty is well documented nowadays, corruption has only a few relevant statistics although its consequences are widely known. Moreover, corruption is a multifaceted phenomenon. It is developed by individuals, but has important community aspects. For a very long time, it has been considered a marginal problem, especially when the economy is performing well. Embezzlement by top officials, overestimated contracts, custom frauds, to mention but a few, could be developed almost daily without any political or social alert. Furthermore, with good income levels, corruption suffered by individuals and households was widely spread but less disparaged. The economic crisis has increased its magnitude, and with it the poverty burden. Households seem more concerned with the situation, the whole ill economy itself suffering the mismanagement and other irregular practices unanimously condemned locally and worldwide.

For the first time, a national household survey (ECAM 2) conducted in 2001 took into account some variables concerning corruption in Cameroon. These variables focus on social sectors and therefore have an impact on a large number of persons: education, medical care, and the security forces. These few sectors are representative of the problem of corruption at household level in Cameroon. We therefore used ECAM 2 as our main source of data.

Community variables are necessary to explain variations in petty corruption levels. They have different origins: a) the yearly statistic directory yields a large number of community variables, the last year available being 2001; b) the collection (in books, official publications, interview of ministers or their relatives) of other variables not stated in the yearly statistical book (linking each piece of information to a department for better disintegration).

The following variables in the household database ECAM 2 were explored for this analysis:

1. Variables connected to corruption:
   (a) Did you pay non-statutory expenses for schooling?
   (b) Did you pay non-statutory expenses for medical care?
   (c) Did you voluntarily pay expenses to an agent of the security forces?
   (d) Did you pay non-statutory expenses for any other service?

2. Variables connected to well-being:
   (a) level of well-being (poor, intermediate, rich);

(b total spending;
(c) Do you think that your household is poor?;
(d) number of times the household is deprived of water because of outstanding payments;
(e) number of times the household is deprived of electricity because of outstanding payments;
(f) number of times the household is deprived of telephone services because of outstanding payments;
(g) number of times a child is withdrawn from school because fees have not been paid; and
(h) evolution of the well-being between 1996 and 2001.

3. Other variables of interest:
   (a) sex of household head;
   (b) age of household head;
   (c) place of residence;
   (d) household size;
   (e) level of education of household head; and
   (f) religion of household head.

Available community variables were:

1. Variables disaggregated at departmental level (48 stratums):
   (a) number of political parties per headquarters;
   (b) number of ministers per origin;
   (c) influence of hotels (number of stars) per region;
   (d) distance of headquarters of departments from Douala and Yaoundé (the two main towns);
   (e) population density;
   (f) number of local advisers.

2. Variables disaggregated at provincial level (10 stratums only):
   (a) urbanization;
   (b) education (schools, school rooms, pupils per level, teacher, nurse school, primary and secondary schools, state universities);
   (c) health situation (infrastructures per standard, health personnel, ratios population/bed, doctor, hospital, health centre, pharmacy); and
   (d) justice personnel (barrister, lawyer, bailiff, notary public, magistrate, judge, court clerk or clerk of the court).

Model design

Our estimated function is of the following form:

$$Y = f(X_1, X_2) + \varepsilon \qquad (1)$$

where Y is the corruption function (dichotomous), X_1 a set of community variables, X_2 a set of household variables and ε an error term.

The goal is to explain the corruption status (petty corruption) by community variables and household characteristics.

A simple linear regression of Y on X(=X_1 or [X_1,X_2]) is not appropriate, since among other things, the implied model of the conditional mean places inappropriate restrictions on the residuals of the model. Furthermore, the fitted value of Y from a simple linear regression is not restricted to lie between zero and one. Instead, we adopt a specification that is designed to handle the specific requirements of binary dependent variables. We also assume that some regressors from household data may be endogenous. Since we work with STATA, using probit instead of logit allows us to easily perform regression with endogenous variables and binary dependent variable.

Probit model specification is as follows:

$$\Pr(y_i = 1 | x_i, \beta) = 1 - \Phi(-x_i'\beta) \qquad (2)$$

$$= \Phi(x_i'\beta)$$

where Φ is the cumulative distribution function of the standard normal distribution, which is based upon the cumulative distribution function for the logistic distribution.

Usually, estimated coefficients from a binary model cannot be interpreted as the marginal effect on the dependent variable. The marginal effect of x_i on the conditional probability is given by:

$$\frac{\partial E(y|x,\beta)}{\partial x_i} = f(-x'\beta)\beta_i \qquad (3)$$

where $f(x) = \frac{dF(x)}{dx}$ is the density function associated with F. The density function is non-negative, so the direction of the effect of a change in x_i depends only on the sign of the β_i coefficient. Positive values of β_i imply that increasing x_i will increase the probability of the response; negative values imply the opposite.

Table 1: Summary of variables of interest

Variable names	Variable labels
corrupt	Is the HH corrupt? The dependent variable
	HH variables (general information)
tailm_ag	HH size
male	Sex of HH head
noschool	HH head never attend school
primary	HH head has primary level school
second1	HH head has secondary 1 level school
second2	HH head has secondary 2 level school

age	Age of HH head
catholic	HH head is catholic
protest	HH head is protestant
oth_chr	HH head is other Christian
muslims	HH head is muslim
	HH variables related to well-being
increase	Well-being has increased (1996-2001)
reduce	Well-being has decreased (1996-2001)
poor_hh	HH is poor
interme	HH is neither poor nor rich
expend_c	Log of total expenditures
deprivat	Number of times HH has being deprived of water/electricity/tel.
la_class	Last class attended (level of education)
admini	HH head works in the administrative sector
pri_form	HH head works in formal private enterprises
tra_agri	HH head works in traditional agriculture
Douala	Live in Douala
Yaounde	Live in Yaounde
Oth_town	Live in other towns
forest	Live in Forest rural areas
plateau	Live in Plateau rural areas
urbanp	Live in urban areas
semi_ur	Live in semi-urban areas
	Community variables at departmental level (48 stratums)
Hot_size	Hotel size (no of stars)
density	Population density

continued next page

Table 1 Continued

Variable names	Variable labels
minister	Number of ministers
poli_par	Number of political parties
d_douala	Distance from Douala
d_yaoun	Distance from Yaounde
cit_coun	Number of city councils
	Community variables at provincial level (very aggregated)
empl_rat	Employment rate in 2003
per_doct	Number of persons per medical doctor
hi_insti	Number of high institutions per 100,000 inhabitants
se_class	Number of secondary classrooms
bailiffs	Number of bailiffs per 100,000 inhabitants
Magistra	Number of magistrates per 100,000 inhabitants

Our dependent variable is CORRUPT. It is derived from four variables concerning bribe payment for education, health, security forces and other services. A household is corrupt if it has paid a bribe for at least one of the four items. Other variables listed here are according to the conceptual framework.

Questions should be considered as related general statements. Therefore paying a bribe to send a child to school does not refer to the fact that one has a school-age child in the household. Also, paying a bribe for health care is not related to sickness last treated at a health centre. Generally, in the Cameroonian context where the extended family is

common, a working person cares for many people not living in the household. So, there is no need to select cases according to health status, presence of school-age children or demand for some specific services in a household since the questionnaire did not make such distinctions.

Other dichotomous variables were derived from nominal variables (necessary forms to be included in linear analysis). D_DOUALA and D_YAOUN are distances from department headquarters to Douala or to Yaoundé. Deprivation level of the household—DEPRIVAT—is given by the number of times the household has been deprived of water, electricity or telephone for unpaid bills during the past year.

Some of those variables of interest are likely to be endogenous. The use of probit model makes it easy to solve such problems through option ivprobit that also yields marginal effects in STATA. After examining some bivariate characteristics, we used multivariate analysis, assuming linear distribution of the variables involved.

4. Findings

Bivariate analysis

Data were processed through SPSS 11.5. Probit models were processed in STATA 9.2.

Table 2: Corruption indexes by region relative to schooling, medical care, other services and security forces (Total column = 100% not shown)

Region	Pay bribe for schooling		Pay bribe for health care		Pay bribe for other services		Pay bribe to security forces		Are you corrupt?	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Douala*	27.2	72.8	48.4	51.6	42.8	57.2	21.7	78.3	67.6	32.4
Yaoundé**	23.3	76.7	23.5	76.5	32.8	67.2	15.4	84.6	52.3	47.7
Adamaoua	7.5	92.5	19.1	80.9	29.2	70.8	17.9	82.1	42.8	57.2
Centre	26.0	74.0	32.7	67.3	32.3	67.7	29.8	70.2	56.4	43.6
East	9.3	90.7	16.6	83.4	14.5	85.5	10.1	89.9	28.4	71.6
Far-North	3.0	97.0	7.0	93.0	15.6	84.4	10.2	89.8	23.1	76.9
Coastal Region	17.0	83.0	18.9	81.1	21.1	78.9	9.9	90.1	36.6	63.4
North	5.1	94.9	9.7	90.3	14.8	85.2	8.5	91.5	24.5	75.5
North-West	8.7	91.3	10.3	89.7	14.5	85.5	11.9	88.1	27.6	72.4
West	23.2	76.8	34.6	65.4	32.8	67.2	26.8	73.2	59.6	40.4
South	14.7	85.3	13.1	86.9	23.5	76.5	19.7	80.3	37.0	63.0
South-West	15.8	84.2	18.5	81.5	38.5	61.5	27.0	73.0	49.3	50.7
Other towns	20.2	79.8	23.4	76.6	29.0	71.0	15.1	84.9	47.9	52.1
Rural Forest	18.0	82.0	22.7	77.3	24.8	75.2	22.0	78.0	42.6	57.4
Rural High Plateaus	13.2	86.8	19.6	80.4	24.9	75.1	20.7	79.3	41.0	59.0
Savannah	2.9	97.1	7.6	92.4	16.3	83.7	11.1	88.9	24.2	75.8
Total	14.9	85.1	21.1	78.9	26.1	73.9	17.4	82.6	42.2	57.8

* Douala is excluded from Coastal region; ** Yaoundé is excluded from Centre.
The last four regions are agro-ecological subdivisions.
Data source: ECAM 2.

This study dealt with a large volume of household data (more than 10,908 cases). For all tables issued, the Pearson Chi-Square was calculated and the results showed that linkages between corruption practices and other variables were high and very significant (less than 1%).

Table 2 shows that the more the region is modernized, the more corruption is prevalent. Overall, the maximum level of corruption practices was found in the biggest

economic town, Douala, while the minimum was found in one of the traditional and less developed zones, the Far-North Province. Therefore, we may assume that there is a positive correlation between level of well-being and corruption inside households. The same trend is seen in Table 2 through agro-ecological zones.

For different items, the variation of figures according to regions may be explained relative to the items. For example, parents were not likely to pay a bribe for school in regions where school enrolment is very low (Far-North, North, Adamaoua and East provinces). Parents are concerned about their children's education. They do not only count on the performance of these children, but also get involved in irregular practices with school officials. Often, parents pay undue fees for enrolment, promotions from class to the next or other school related matters in favour of their children. About 15% of households were involved in such practices.

The trend for health care was similar to that of school because in the poor regions access to health facilities is difficult forcing many people to use traditional healers. The health care referred to in this study is the one in modern medical centres, specifically in state health facilities.

Under "other services" many issues are covered. Indexes show lowest differences between regions. Harassment by security forces is not limited to policemen and gendarmes controlling cars or motor bikes mostly in towns, but also other officials such as tax collectors and forest wardens in rural areas. That is why rural areas also paid irregular fees to security forces. Some results are difficult to explain: in Yaoundé only 15.4% of households paid irregular fees to security forces, while in the rest of the province (Centre) the figure is up to 29.8%.

Table 3: Corruption indexes by place of residence, ability to read and write, gender and poverty status (Total column = 100% not shown)

Residence	Pay bribe for schooling		Pay bribe for health		Pay bribe for other services		Pay bribe to security forces		Are you corrupt?	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Urban	23.0	77.0	30.7	69.3	34.0	66.0	17.1	82.9	54.7	45.3
Semi-urban	15.1	84.9	17.4	82.6	22.3	77.7	11.9	88.1	39.6	60.4
Rural	10.0	90.0	15.9	84.1	21.8	78.2	18.3	81.7	34.9	65.1
Total	14.9	85.1	21.1	78.9	26.1	73.9	17.4	82.6	42.2	57.8
Read and write										
Yes	19.4	80.6	25.9	74.1	30.4	69.6	19.8	80.2	48.8	51.2
No	6.9	93.1	12.5	87.5	18.4	81.6	13.0	87.0	30.1	69.9
Total	14.9	85.1	21.1	78.9	26.1	73.9	17.4	82.6	42.2	57.8
Gender (HH head)										
Male	15.2	84.8	22.3	77.7	29.1	70.9	19.9	80.1	45.0	55.0
Female	14.0	86.0	17.6	82.4	16.4	83.6	9.3	90.7	33.1	66.9
Total	14.9	85.1	21.1	78.9	26.1	73.9	17.4	82.6	42.2	57.8

continued next page

Table 3 Continued

Residence	Pay bribe for schooling		Pay bribe for health		Pay bribe for other services		Pay bribe to security forces		Are you corrupt?	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Poverty status (calculated)										
Poor	12.0	88.0	15.3	84.7	19.8	80.2	16.5	83.5	33.9	66.1
Intermediate	16.4	83.6	21.3	78.7	26.2	73.8	17.6	82.4	42.6	57.4
Not Poor	16.1	83.9	24.8	75.2	30.1	69.9	17.9	82.1	47.3	52.7
Total	14.9	85.1	21.1	78.9	26.1	73.9	17.4	82.6	42.2	57.8
Poverty status (self-assessment)										
Very poor	15.0	85.0	23.0	77.0	22.7	77.3	16.7	83.3	38.8	61.2
Poor	14.6	85.4	19.8	80.2	26.7	73.3	17.4	82.6	42.0	58.0
Intermediate	15.7	84.3	22.7	77.3	29.7	70.3	18.9	81.1	47.8	52.2
Rich	11.1	88.9	3.6	96.4	15.6	84.4	11.6	88.4	32.7	67.3
Total	14.9	85.1	21.1	78.9	26.1	73.9	17.4	82.6	42.2	57.8

Using the calculated poverty status (after defining a poverty line), the results show that petty corruption in households increased from the poor to the rich. This agrees with the modernization standard seen before. The self-estimated poverty status did not show the same trend, but this is not worrying since we used two completely different approaches to estimate poverty status, the most reliable being the one that is not influenced by possible individual bias.

Households headed by illiterate people were less likely to give bribes. This also agrees with previous analysis since the literate household heads were more modernized and richer. Therefore, the literate household heads were more likely to be involved in corruption. The fact that households headed by women were less involved in corruption practices (also notice that households headed by women accounted for only 23.8% of total households) does not really give the gender aspect of the problem. No policy outcome can be derived from this result since women heading households were by no means representative of all women.

Table 4: Corruption indexes by type of household (Total column = 100% not shown)

Type of HH	Pay bribe for schooling		Pay bribe for health care		Pay bribe for other services		Pay bribe to security forces		Are you corrupt?	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
One person HH	6.7	93.3	18.1	81.9	25.5	74.5	16.8	83.2	37.7	62.3
Strictly one parent	15.6	84.4	19.0	81.0	20.3	79.7	10.3	89.7	37.1	62.9
One parent & relatives	21.8	78.2	21.8	78.2	20.6	79.4	15.7	84.3	43.8	56.2
Strictly 2 parents	14.4	85.6	19.7	80.3	27.6	72.4	19.3	80.7	43.0	57.0
2 parents & relatives	21.9	78.1	27.9	72.1	30.2	69.8	21.2	78.8	51.0	49.0
Other	12.4	87.6	19.9	80.1	25.8	74.2	16.2	83.8	38.8	61.2
Total	14.9	85.1	21.1	78.9	26.1	73.9	17.4	82.6	42.2	57.8

Other interesting household characteristics were matrimonial status and level of education of household heads. Households headed by widowed, divorced or separated

people were globally more corrupt. However, these households had different concerns: heads that were single dealt less with children and therefore did not pay too much bribes for schooling. Widows cared less about other services and security forces. Couples living together without official marriage certificates were the most corrupt. The results indicate that houses with married people (monogamous or polygamous) were more likely to pay fewer bribes.

Table 5: Corruption indexes by marital status of household head (Total column = 100% not shown)

Marital status	Pay bribe for schooling		Pay bribe for health		Pay bribe for other services		Pay bribe to security forces		Are you corrupt?	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Single	6.7	93.3	18.0	82.0	25.4	74.6	16.7	83.3	37.7	62.3
Monogamist	15.6	84.4	19.0	81.0	20.3	79.7	10.3	89.7	37.1	62.9
Polygamist	21.8	78.2	21.8	78.2	20.5	79.5	15.7	84.3	43.8	56.2
Widow	14.4	85.6	19.7	80.3	27.5	72.5	19.2	80.8	43.0	57.0
Divorcee/separated	21.9	78.1	28.0	72.0	30.3	69.7	21.2	78.8	51.0	49.0
Cohabitation	12.4	87.6	19.9	80.1	25.8	74.2	16.2	83.8	38.8	61.2
Total	14.9	85.1	21.1	78.9	26.0	74.0	17.4	82.6	42.2	57.8

According to Table 6, the higher the level of education of the household head, the less the household was corrupt. Differences were especially high between those who have never been to school and the others. However, those who had never been to school paid very few bribes for schooling. Was this because they do not see the need to educate their children since they are not educated themselves? This is difficult to determine. This group also dealt very little with security forces, probably because communication with uneducated people is difficult and they are not involved enough in means of transportation and other business that require high costs (uneducated people are generally poor).

Table 6: Corruption indexes by level of instruction of household head (Total column = 100% not shown)

Level of instruction	Pay bribe for schooling		Pay bribe for health		Pay bribe for other services		Pay bribe to security forces		Are you corrupt?	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Never attended school	6.4	93.6	12.1	87.9	17.6	82.4	12.7	87.3	28.9	71.1
Primary	15.3	84.7	22.2	77.8	26.2	73.8	18.8	81.2	42.9	57.1
Secondary General, Cycle 1	19.9	80.1	25.5	74.5	32.7	67.3	21.9	78.1	51.5	48.5
Secondary General, Cycle 2	25.4	74.6	27.5	72.5	32.0	68.0	17.4	82.6	51.6	48.4
Secondary Technical, Cycle 1	26.2	73.8	32.4	67.6	32.8	67.2	23.5	76.5	56.8	43.2
Secondary Technical, Cycle 2	21.0	79.0	30.2	69.8	34.3	65.7	22.2	77.8	53.6	46.4
Superior	21.0	79.0	31.1	68.9	37.8	62.2	17.5	82.5	57.2	42.8
Total	14.9	85.1	21.1	78.9	26.1	73.9	17.4	82.6	42.2	57.8

Corruption at household level as defined here deals with access to social services

and interacting with security forces. If it clearly appears that for their basic necessities the poor pay less bribes, it may also be a problem of capability: short of means, the poor will not have enough things to pass up. Naturally, if the poor are less involved in petty corruption, they will be more absent when talking about big corruption certainly developed by rich people and out of the scope of this study.

Table 7: Corruption indexes by religion of household head (Total column = 100% not shown)

Religion	Pay bribe for schooling		Pay bribe for health		Pay bribe for other services		Pay bribe to security forces		Are you corrupt?	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Catholic	18.1	81.9	25.8	74.2	27.5	72.5	19.2	80.8	46.4	53.6
Protestant	17.8	82.2	21.1	78.9	27.3	72.7	17.1	82.9	43.9	56.1
Other Christian	17.0	83.0	21.4	78.6	23.4	76.6	17.3	82.7	42.2	57.8
Muslim	7.0	93.0	14.5	85.5	24.8	75.2	15.0	85.0	35.5	64.5
Animist	7.4	92.6	13.1	86.9	19.3	80.7	15.9	84.1	30.3	69.7
Other	11.5	88.5	21.2	78.8	24.1	75.9	14.3	85.7	40.7	59.3
Total	14.9	85.1	21.1	78.9	26.1	73.9	17.4	82.6	42.2	57.8

Generally speaking, being corrupt or not is a matter of belief and moral behaviour. Therefore, it may be assumed that religion could play an important role in coping with corruption. Cameroon is a multicultural and religious country. We therefore tried to determine whether religion makes people behave differently when deciding whether to pay bribes. It appeared that paying bribes was very common in households headed by animists (70%) and relatively low in households headed by Catholics. Roughly, too, bribes at household level were more prominent within Muslim households than in Christian ones (the two largest religious groups in Cameroon).[4]

Petty corruption seems too complex to examine through simple statistics. We therefore conducted multivariate analysis to gain a better understanding of the problem. We assumed that the introduction of the community variable would help summarize the large number of characteristics examined in this study and would, therefore, fit better to explain relevant differences in corruption practices.

Multivariate analysis

Our variables of interest (Table 1) showed four different categories: socio-demographic determinants; well-being determinants; community determinants at very aggregated level (provinces); and community variables at more disaggregated level (departments). We therefore attempted four levels of analysis.

Ivprobit fits probit models where one or more of the regressors are endogenously determined. By default, ivprobit uses maximum likelihood estimation. Alternatively,

Newey's minimum chi-squared estimator can be invoked with the two-step option. When the model contains no endogenous regressors, probit alone fits probit estimation.

High aggregated variables

Table 8: Provincial determinants of petty corruption (high aggregated variables)

Number of obs = 10,953; Wald chi2(6) = 353.18; Prob > chi2 = 0.0000
Dependant variable y = corrupt (see labels for regressors in Table 1)

Regressors	Coef. (x) = dy/dx	z	[95% Conf. interval]		X (fitted values)
hi_insti	-0.4416036***	-2.79	-0.752041	-0.1311663	1.30492
se_class	-0.1395191***	-4.21	-0.2044805	-0.0745578	5.2402
Bailiffs	-0.6395414***	-6.12	-0.8443532	-0.4347296	2.32067
Magistra	0.0546514**	2.10	0.0036467	0.1056561	3.44903
empl_rat	-0.0596045***	-4.32	-0.0866515	-0.0325575	71.1917
per_doct	-0.0000944***	-6.89	-0.0001213	-0.0000676	13192 (IS THERE A DECIMAL MISSING?)
_cons(♣)	7.935841***	5.27	4.986539	10.88514	

Instrumented: hi_insti se_class bailiffs magistra
Instruments: empl_rat per_doct hot_size density minister poli_par
Wald test of exogeneity: chi2(4) = 99.38 Prob > chi2 = 0.0000
Marginal effects after ivprobit y = Fitted values (predict) = -0.15643127
p-value: *** p<1%, ** p<5%, * p<10%
♣ = Constant term is not concerned with dy/dx.

With high aggregated variables defined at provincial level, we suspected the presence of high institutions, the number of secondary classrooms, the number of inhabitants per bailiff or magistrate to be endogenous. The probit model performed with instrumental variables yielded high correlation between all variables of interest and petty corruption level. Unexpectedly, only the presence of a magistrate positively influenced that level. High institutions, classroom density, presence of bailiffs, number of medical doctors and employment rates had a negative impact on small bribe practices. It was not possible at this highly aggregated level of observation to assume that variables related to modernization (among which the judiciary, except magistracy, falls) reduce corruption. This assumption would need more disaggregated variables to examine what really happens. Marginal effects in absolute value were high for the number of bailiffs and high institutions but very low for medical doctors.

Relatively aggregated variables

The variables of interest were all found to be exogenous. They included geographic dispersion (distance from the main town, that is Douala), population density, political influence (number of ministers, political parties and elected city councils per region), and the modernization process (quantity/quality of hotels).

The population density did not significantly explain corruption. Distance from Douala, origin of ministers, and number of political parties had a negative impact on corruption

while the number of city councils and the importance of hotels had a positive impact. Therefore, modernizing the process is likely to increase bribe practices. A large number of city councils is linked to big councils that are generally more developed. Marginal effects in absolute values were maximum with hotel influence and minimum with civil councils.

Table 9: Departmental determinants of petty corruption

Number of obs = 10,953; Wald chi2(6) = 474.00; Prob > chi2 = 0.0000
Dependant variable y = corrupt (see labels for regressors in Table 1)

Regressors	Coef.	dy/dx	Std. Err.	z	[95% Conf.	Interval]
d_douala	-0.0004751***	-0.0001873	0.0000272	-17.46	-0.0005285	-0.0004218
Minister	-0.0041642***	-0.0016411	0.0009786	-4.26	-0.0060823	-0.0022462
poli_par	-0.0087928***	-0.0034653	0.0011911	-7.38	-0.0111273	-0.0064583
cit_coun	0.0003576**	0.0001409	0.0001804	1.98	3.92e-06	0.0007112
hot_size	0.0110135***	0.0043405	0.0014485	7.60	0.0081746	0.0138524
Density	0.0000289	0.0000114	0.0000201	1.44	-0.0000104	0.0000682
_cons	0.0497022		0.053482	0.93	-0.0551206	0.154525

Log pseudolikelihood = -7268.4897 Pseudo R2 = 0.0328
Marginal effects after dprobit: y = Pr(corrupt) (predict) = 0.43793608
*p-value: *** p<1%, ** p<5%, * p<10%*

Influence of well-being on petty corruption

The few household economic variables available in our database yielded a high correlation with petty corruption (Table 10).

Table 10: Household economic determinants of petty corruption

Number of obs = 10,921; Wald chi2(9) = 488.24; Prob > chi2 = 0.0000
Dependant variable y = corrupt (see labels for regressors in Table 1)

Regressors	Coef. (x) = dy/dx	Std. err.	z	[95% Conf.	interval]	X (fitted values)
expend_c	0.2264711**	0.1008785	2.24	0.0287529	0.4241893	12.5894
Deprivat	-0.1060822***	0.0067161	-15.80	-0.1192455	-0.0929188	23.0722
Increase ¥	0.0421728	0.0383754	1.10	-0.0330415	0.1173871	0.197876
reduce ¥	0.1733649***	0.0330478	5.25	0.1085924	0.2381375	0.376889
poor_hh ¥	0.4058424***	0.1468998	2.76	0.1179241	0.6937608	0.252266
interme ¥	0.3692897***	0.0920387	4.01	0.1888972	0.5496822	0.216555
admini ¥	-0.4925959***	0.0557273	-8.84	-0.6018193	-0.3833724	0.121967
pri_form ¥	0.0418604	0.0458275	0.91	-0.0479599	0.1316807	0.144859
tra_agri	-0.1153969***	0.0387939	-2.97	-0.1914316	-0.0393622	0.351616
_cons ♣	-0.7214651	1.294536	-0.56	-3.258709	1.815779	

Instrumented: expend_c deprivat
Instruments: increase reduce poor_hh interme admini pri_form tra_agri la_class hh_size
Wald test of exogeneity: chi2(2) = 303.78 Prob > chi2 = 0.0000
Marginal effects after ivprobit y = Fitted values (predict) = -0.15642572
(¥) dy/dx is for discrete change of dummy variable from 0 to 1
(♣) Constant not concerned with dy/dx
*p-value: *** p<1%, ** p<5%, * p<10%*

Most of these variables were dummies. Expenditure was linked positively to corruption while level of deprivation was linked negatively. From this result, we may think that the richer the people are, the more corrupt they are. However, the poverty status did not yield such a conclusion. Instead, it revealed that the rich were less likely to practise corruption than the poor.

Looking at employment, it appeared that people working in the administrative sector were less likely to practise corruption. This does not agree with the common behaviour of civil servants who are known to be very corrupt in all social branches including education, health, trade and security forces. A plausible explanation may be that these civil servants are bribe receivers and, therefore, do not usually give bribes themselves. If the non-poor give bribes for social services, some sub-categories of this group are less concerned since they receive the bribes. In formal private enterprises, giving bribes was very common, probably due to tax. Naturally, the phenomenon was less prevalent in farming families since rural areas were generally less corrupt.

Household characterization

Household characteristics are mainly those of the head. Controlling for different household characteristics in multivariate analysis, results are sometimes different from those of the bivariate analysis. The following are likely to increase bribe practices in households significantly: household head age, years of schooling of household head, household whose head is Muslim. Household size and male as head also had a positive, but not significant, impact. Trends observed were not always linear. Using the level of education that is normally a proxy of the number of years of schooling, we obtained different results: up to the first cycle of secondary school, the impact on corruption was positive; from the second cycle of secondary school to university the impact was negative, positive and then became negative. Examining marginal effects, the number of years of schooling had very little coefficient compared with those of the level of education. The marginal effect for age of household head was also small. Level of petty corruption was highly influenced by the presence of Muslims. Therefore, controlling for other household variables, Christians did not appear to be more associated with petty corruption (Table 11).

With all variable blocks entered together (Table 12), significant impacts were observed for the following: presence of high institutions (+), number of secondary classrooms (-) and bailiffs (+); distance from Douala (-) and number of ministers (+); expenditures (+), poverty status, activity sectors (+); age (+), level of education and to some extent religion. Once again, people working in administrative branches were not significantly concerned with giving of bribes. Globally, households whose head had a low level of education were more likely not to be active in corruption. Regarding religion, only Muslims seemed to be connected with corruption.

Therefore, to what extent were links with corruption important? This was shown by the marginal effects. They were high with expenditures, poverty status, activity sectors and level of education. In due course, only these four variables really characterize petty corruption in Cameroon.

Table 11: Socio-demographic determinants of petty corruption

Number of obs = 10,908; Wald chi2(12) = 347.91; Prob > chi2 = 0.0000
Dependant variable y = corrupt (see labels for regressors on Table 1)

Regressors	Coef. (x) = dy/dx	Std. err.	z	[95% Conf. interval]		X (fitted values)
Age	0.0777963***	0.0108544	7.17	0.0565221	0.0990704	42.8428
la_class	0.3716197***	0.0556014	6.68	0.262643	0.4805963	7.68849
hh_size	0.0552573	0.0419418	1.32	-0.0269472	0.1374618	3.48765
catholic(¥)	-0.1014863	0.0806698	-1.26	-0.2595963	0.0566237	0.401815
protest(¥)	-0.1856901**	0.0836397	-2.22	-0.3496209	-0.0217592	0.275394
oth_chr(¥)	-0.1580575	0.1196491	-1.32	-0.3925654	0.0764504	0.037037
muslims(¥)	0.517631***	0.0957139	5.41	0.3300353	0.7052268	0.216538
male(¥)	0.069318	0.0700835	0.99	-0.0680431	0.2066791	0.756692
noschool(¥)	2.464561***	0.7198187	3.42	1.053743	3.87538	0.26861
primary(¥)	0.6336801**	0.2633456	2.41	0.1175322	1.149828	0.31564
Second1(¥)	1.043573***	0.1480799	7.05	0.7533412	1.333804	0.367162
Second2(¥)	-0.1385049*	0.0772772	-1.79	-0.2899654	0.0129555	0.128438
_cons ♣	-7.839489***	0.7479529	-10.48	-9.30545	-6.373528	

Instrumented: age la_class hh_size
Instruments: catholic protest oth_chr muslims male noschool primary second1 second2 d_douala expend_c hot_size
Wald test of exogeneity: chi2(3) = 406.91 Prob > chi2 = 0.0000
Marginal effects after ivprobit y = Fitted values (predict) = -0.16240978
(¥) dy/dx is for discrete change of dummy variable from 0 to 1
(♣) Constant not concerned with dy/dx
*p-value: *** p<1%, ** p<5%, * p<10%*

Table 12: Determinants of petty corruption by groups of variables

Number of obs = 10,908, Wald chi2(25) = 444.67, Prob > chi2 = 0.0000
Dependant variable y = corrupt (see labels for regressors on Table 1)

Regressors	Coef. (x)= dy/dx	Std. err.	z	[95% Conf. interval]		X(Fitted values)
hi_insti	0.1502794***	0.0545225	2.76	0.0434172	0.2571416	1.30581
se_class	-0.3186491***	0.07673	-4.15	-0.4690371	-0.168261	5.24416
Bailiffs	0.1880674**	0.076985	2.44	0.0371796	0.3389553	2.32171
cit_coun	*0.0014443*	*0.0010713*	*1.35*	*-0.0006554*	*0.0035441*	*199.597*
d_douala	*-0.0005451****	*0.0001596*	*-3.41*	*-0.0008579*	*-0.0002322*	*552.555*
Minister	*0.0126051****	*0.0042748*	*2.95*	*0.0042267*	*0.0209835*	*10.7485*
expend_c	1.013936**	0.4340157	2.34	0.1632813	1.864592	12.5899
Deprivat	0.0263699	0.0294268	0.90	-0.0313055	0.0840453	23.0675
Increase ¥	0.160677**	0.0719452	2.23	0.019667	0.3016871	0.19802
reduce ¥	0.015189	0.0500504	0.30	-0.0829079	0.113286	0.376971
poor_hh ¥	1.077707**	0.4920253	2.19	0.1133552	2.042059	0.252017
interme ¥	0.6655849**	0.2696115	2.47	0.1371561	1.194014	0.216538
admini ¥	0.1473095	0.114369	1.29	-0.0768497	0.3714687	0.122112
pri_form ¥	0.8153329***	0.1599129	5.10	0.5019094	1.128756	0.145031
tra_agri ¥	0.3701563***	0.103754	3.57	0.1668023	.5735103	0.351485
tra_busi ¥	0.9672438***	0.1993329	4.85	0.5765585	1.357929	0.247433
Age	*0.0941727****	*0.0265401*	*3.55*	*0.042155*	*0.1461903*	*42.8428*

continued next page

Table 12 Continued

Number of obs = 10,908, Wald chi2(25) = 444.67, Prob > chi2 = 0.0000
Dependant variable y = corrupt (see labels for regressors on Table 1)

Regressors	Coef. (x)= dy/dx	Std. err.	z	[95% Conf.	interval]	X(Fitted values)
Catholic ¥	*-0.0445792*	*0.0779293*	*-0.57*	*-0.1973177*	*0.1081593*	*0.401815*
protest ¥	-0.0616972	0.0813071	-0.76	-0.2210561	0.0976617	0.275394
oth_chr ¥	-0.1283363	0.1224707	-1.05	-0.3683745	0.1117019	0.037037
muslims ¥	0.2532091***	0.0959255	2.64	0.0651985	0.4412197	0.216538
noschool ¥	-2.003316***	0.4766758	-4.20	-2.937583	-1.069048	0.26861
Primary ¥	-0.9606994***	0.2185891	-4.40	-1.389126	-0.5322727	0.31564
second1 ¥	0.2806524***	0.0995726	2.82	0.0854937	0.4758111	0.367162
second2 ¥	*0.1749114***	*0.0786133*	*2.22*	*0.0208322*	*0.3289907*	*0.128438*

Instrumented: hi_insti se_class bailiffs expend_c deprivat age cit_coun
Instruments: d_douala minister increase reduce poor_hh interme admini pri_form tra_agri tra_busi catholic protest oth_chr muslims noschool primary second1 second2 empl_rat per_doct density la_class hh_size hot_size poli_par
Wald test of exogeneity: chi2(7) = 274.81 Prob > chi2 = 0.0000
Marginal effects after ivprobit y = Fitted values (predict) = -0.16245585
(¥) dy/dx is for discrete change of dummy variable from 0 to 1
(♣) Constant not concerned with dy/dx
*p-value: *** p<1%, ** p<5%, * p<10%*

5. Conclusion

Petty corruption in households measured by the ability to pay irregular fees for education, health care, other services and security forces is widely spread. More than four out of 10 households are involved. Simple statistical analysis revealed some important outcomes related to the characteristics of the households for most variables. Specifically, petty corruption is more prevalent in modernized regions (towns and more developed provinces). It increases from rural to urban areas. The poorer the household, the less likely it is to be corrupt.

Relative to heads of households, being able to read and write or having a high level of education exposes them to more corruption. Corruption is more acute in houses headed by men. It is also high in houses headed by parents who are divorced/separated, polygamist or widowed. Concerning religion, two important groups exist in Cameroon: Christians and Muslims. Muslims are more likely to engage in petty corruption as compared to Christians (Catholics, Protestants, and other Christians).

It was expected that community variables should better explain petty corruption status. Given the variety in scope of those variables, we chose to examine different scenarios. Using only high aggregated variables (at provincial level), the number of bailiffs and high institutions unexpectedly had a high negative influence on petty corruption. At this high aggregated level, outcomes are questionable and modernization does not appear to be related to corruption.

With more disaggregated community variables, observed trends were more liable. Here petty corruption had higher levels in more developed areas. Origins of ministers as well as number of political parties (with headquarters in the department) did not increase corruption practices in households. People usually take such opportunities to position themselves socially and economically, but not through bribe giving. Like in the case of civil servants, the tendency may be to receive but not to give bribes. Also, a regional equilibrium is required by the government in order to appoint people from all regions of the country for equitable geographic representation.

At household level, regional and economic characteristics revealed the following negative impact: expenditures, poor status and decreased well-being. Although globally it appeared that the poor were more likely to give bribes, people with high expenditure capacity did the same. This is in line with the fact that deprived households are less associated with bribe giving. Workers in the administrative branches are also less associated with bribe giving, as are farmers. The corrupt image of civil servants is not rejected here, but the situation encountered translates into the fact that this category of workers usually solicits and receives bribes instead of giving.

Individual characteristics also clearly explain petty corruption. Older household head was an aggravated factor. This may be due to the fact that they have many dependants and are not necessarily rich. The level of education also mattered. Household heads with high levels of education do not easily give bribes. The way poverty status acts on corruption behaviour depends on how poverty is measured. It is then difficult to clearly assert the relationship between well-being and petty corruption. Religion too determines people's attitude towards corruption. There is a difference between Christians and Muslims, Christians being less associated with bribe giving after controlling for other household characteristics.

Sectors concerned with petty corruption are the basic ones. In normal conditions, that is, without corruption, accessing them is not easy for the poor since there are regular fees to be paid for education, health and other services. With the security forces, one needs to be in the clear (tax paid, official documents owned, etc.). If paying irregular fees becomes a habit, these become additional conditions to access basic necessities and consequently the poor will face more difficulties affording them. More inequality and inequity are developed; this is the essence of poverty.

Altogether, community variables only play minor rules in the type of bribe analysed here, given their small marginal effects. Increasing or reducing the number of magistrates, bailiffs, high institutions, doctors or lawyers will not have a significant impact on people's behaviour in giving bribes for health care, education and other necessities. Nevertheless, community variables include governance issues that are essential to change the behaviour of civil servants, especially in social domains like education and health. The population as a whole, with a focus on the poor, should be sensitized on their rights that should be respected while dealing with the administration. Actually, at household level, the following characterizations really matter: expenditures, poverty status, activity sectors and level of education. Because links between who benefits and who suffers from bribe giving are not very clear, such results may appear questionable. This is the case when rich people are negatively associated with petty corruption while the most educated are positively associated.

Petty corruption, as analysed in this paper, from a national representative database, has varied characterizations. But with only four items (education, health care, security forces and other services) linked to corruption in households with no possibility to distinguish either who is personally concerned or how much money is disbursed, this is limited and results obtained are just an outline of the problem. Data giving real magnitudes of the bribe (amount of money changing hands) could yield better outcomes. Extending the study to global corruption is also another challenge and outcomes from such a perception could give improved insights on corruption status and trends in Cameroon.

Notes

1. Mass arrests of officials found guilty of speculation were done, but it is difficult to tell if this fight against corruption and mismanagement will last long.

2. In spite of the imprisonment of the Minister in Charge of Posts and Telecommunications, a few years later clients of the "Caisse d'Epargne Postale" are yet to get their money back.

3. Some notable newspaper articles are:
   "Arrestations en série: jusqu'où peut aller Paul Bya?" — Mass-arrests, how far can Paul Bya go? — (*Mutations*, 28 February 2006).
   "Culture de la corruption: l'ambassadeur des Etats-Unis fustige" — Corruption Culture: US Ambassador castigates (*Mutations*, 20 January 2006)
   "Corruption, Port Autonome de Douala: de nouvelles arrestations" — Corruption, Douala Autonomous Port: New Arrests (*La Nouvelle Expression,* 28 February 2006)
   "Anti-corruption: US Ambassador Backs Campaign" (*Cameroon Tribune*, 20 January 2006)
   "Voici en exclusivité le hit parade des fonctionnaires milliardaires" — Exclusive: Here is the short list of government officials who are billionaires (*Le Front*, 9 February 2006). This last article gives names of senior civil servants who have CFAF1 billion and above in their bank accounts

4. Distribution of households by religion of the head in 2001 was as follows: Catholic (40.5%), Protestant (27.2%), Other Christian (3.5%), Muslim (19.3%), Animist (7.5%) and Other (2.0%).

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Appendix

Appendix 1: Evolution of Cameroon classification since 1995 according to CPI of TI

Rank	2005	2004	2003	2002	2001	2000	1999	1998	1996
Lower corruption level ↑	**Cameroon**	Ukraine	Kenya	**Cameroon**	Tanzania	Mozambique	Kenya	Russia	Phillipines
	Ethiopia	**Cameroon**	Angola	Ecuador	Ukraine	Kenya	Paraguay	Ecuador	Indonesia
	Indonesia	Irag	Azerbaijan	Haiti	Azerbaidjanie	Russia	Yugoslavia	Venezuela	India
	Iraq	Kenya	**Cameroon**	Moldova	Bolivie	**Cameroon**	Tanzania	Colombia	Russia
	Liberia	Pakistan	Georgia	Uganda	**Cameroon**	Angola	Honduras	Indonesia	Venezuela
	Uzbekistan	Angola	Tajikistan	Azerbaijan	Kenya	Indonesia	Uzbekistan	Nigeria	**Cameroon**
	Congo, D.R.	Congo, D.R.	Myanmar	Indonesia	Indonesie	Azerbaijan	Azerbaijan	Tanzania	China
	Congo, D.R.	Cote d'Ivoire	Paraguay	Kenya	Uganda	Ukraine	Indonesia	Honduras	Bangladesh
	Kenya	Georgia	Haiti	Angola	Nigeria	Yugoslavia	Nigeria	Paraguay	Kenya
	Pakistan	Indonesia	Nigeria	Madagascar	Bangladesh	Nigeria	**Cameroon**	**Cameroon**	Pakistan
	Paraguay	Tajikistan	Bangladesh	Paraguay					Nigeria
	Somalia	Turkmenistan		Nigeria					
	Sudan	Azerbaijan		Bangladesh					
	Tajikistan	Paraguay							
	Angola	had							
	Cote d'Ivoire	Myanmar							
	Equatorial Guinea								
	Nigeria	Nigeria							
	Haiti	Bangladesh							
	Myanmar	Haiti							
	Turkmenistan								
	Bangladesh								
Higher corruption level ↓	Chad								

Sources: Corruption Perception Indices, from 1996 to 2005.

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