Effects of Taxing on Bribing in Agro-processing Enterprises in Nepal

Krishna Prasad Pant[1]

Abstract

Paying bribes in getting public services and utilities is considered to be bad as it decreases the reputation of the public agencies and efficiency of service delivery and the economy. Information about temptation and compulsion in paying bribes can help in anti-corruption policymaking. This paper, using bribe paying data from a survey of 415 agro-processing enterprises in operation in five districts in Nepal, estimates the effects of tax policy on paying bribe for getting public services. Ordinary least square estimates are used on firm level data to estimate the effects of tax policy on bribing and investments controlling fixed effects related to the industry and geographic areas. The results show that taxes, fees, and fixed costs are among the major factors inducing temptation in paying bribes. Firms in some industries and districts pay larger amounts of bribes than to others. The results may help in developing targeted policy measures in controlling corruption.

Keywords: Agro-processing enterprises, bribe, Nepal, tax policy.

JEL Code: D73.out

1.   Introduction

Corruption is widely understood as the misuse of public power for private benefit and involves money-changing hands. A widely used narrative is that corruption is a transaction between the private and the public sector actors through which collective goods are illegitimately converted into private-regarding payoffs (Heidenheimer *et al.*, 1989:6). The World Bank has identified corruption as the single greatest obstacle to economic and social development. Corruption undermines development by distorting the rule of law and weakening the institutional foundation on which economic growth depends[2].

Bribing is the form of corruption that is one most visible to the common people. The direct sufferers of bribing practices are weaker sections rather than the people with political or other power and, as a result, the rich and corrupt become richer at the expense of the honest and poor. The distributional consequences of bribing can trigger resentments in the majority of the ordinary

[2] http://www1.worldbank.org/publicsector/anticorrupt/index.cfm accessed on 11/24/2004.

people, particularly among those who are weak but aware of their rights of receiving public services. But due to the lack of information on marginal estimates these distributional effects are not easily linked to public welfare as economists commonly define it. There is a growing empirical literature, mostly based on comparative country studies, stressing that corruption lowers investment, capital productivity, capital inflows, and many other macroeconomic data relevant to public welfare (Lambsdorff, 1999a). High costs of doing business have impeded investment in productive sectors, increasing unemployment and out-migration of youths. All these problems suggest a grave need for reducing corruption for making public service delivery smooth and increasing human welfare in the country.

Public policies in Nepal emphasize commercialization of the hitherto largely subsistence agriculture. A major effort in the commercialization of agriculture is to promote agro-processing enterprises that create demand for farm products providing price incentive to farmers to grow more food and other raw materials. Although the primary agricultural productions are not taxed, the tax policy is not lenient toward the registered agribusinesses. Establishment and operation of such agro-processing enterprises need permission from government line agencies and, in the case of utilities, from parastatal institutions with some prescribed fees. The entrepreneurs of agro-processing firms often claim that they have to pay bribes to get such services. Citizens, particularly after the declaration of multiparty democracy in 1990 and republic in 2009, better understand their rights and demand better performance from government service providers. They are now increasingly aware of the costs of poor management and corruption in the public service providing institutions. The quality of the government is often rated with respect to corruption levels that affect the predictability of policymaking and reliability of implementation. Minimization of corruption is thus emerging as an urgent need for realization of the agricultural commercialization policy and agricultural development in the country.

Demand for bribe in public service delivery is beyond the scope of this paper which focuses on the effects of taxing on paying bribes to avail public services. This paper quantifies bribe payments made by agro-processing entrepreneurs to government line agencies and other utility providing agencies and tests whether the level of taxes and fees affects the payment of bribes.

2. Methodology

The study tested hypotheses that (i) Taxing affects the level of bribing; (ii) Bribing is directly proportional to sunken costs; and (iii) The nature of the business also affects bribing. The study tested the hypotheses mainly on the basis

of primary data obtained from a survey of 500 agro-processing enterprises selected randomly from purposively selected five districts in Nepal, namely, Kathmandu, Lalitpur, Bhaktapur, Chitwan, and Nawalparasi where a majority of such agro-processing enterprises are concentrated. The list of agro-processing enterprises was obtained from the registration and renewal registers maintained by the registration agency of the government. However, 85 enterprises were found closed and the analysis is based on the data from 415 agro-processing enterprises. The enterprises registered during the year 2001 – 2006 formed the sampling frame. From the sampling frame thus constructed, the sample enterprises were selected randomly from five sample districts. The sample was allocated to the districts and the types of the enterprises following the probability proportionate to the size. The number of agro-processing enterprises surveyed is given in Table 1.

Table 1: Type of sample enterprises surveyed

Type of enterprises	Kathmandu	Lalitpur	Bhaktapur	Chitwan	Nawalparasi	Total
Food processing	24	25	4	16	5	**74**
Spices processing	30	13	10	13	10	**76**
Food manufac-ring	31	26	9	14	7	**87**
Poultry farming	14	8	8	26	4	**60**
Grain mill	28	13	25	44	64	**174**
Oil mill	6	9	0	6	7	**28**
TOTAL	**133**	**94**	**56**	**120**	**97**	**500**

The types of agro-enterprises included in the study are food processing enterprises (food processing, jam, jelly production), spice processing (grinding and packing spices like ginger and turmeric), food manufacturing (bakery, noodle, dalmoth), poultry farming, grain mills, and oil expeller mills. The sample enterprises were surveyed using a structured questionnaire in the year 2007.

Reinikka and Svensson (2006) discuss the survey techniques aimed at a better measurement of corruption at the micro-level and claim that collecting quantitative micro-level data on corruption is possible with appropriate survey methods and interview techniques. Following their recommendations, the entrepreneurs were asked how much bribe they paid for getting service from public line agencies and utility providing parastatal organizations. Direct firm-level data were used to estimate the amount of the bribe paid. The sample was post - stratified on the basis of the ethnicity of entrepreneurs of agro - processing enterprises. Multiple regression model was used to estimate the effect of taxes

and fees on the volume of bribe paid to discover the factors affecting the amount of bribe payments to obtain public services.

3.   Theory of Causes and Consequences of Corruption

3.1   Vicious Circle of Bribing, Defaming, and Inefficiency

Nepal is trapped in a vicious circle of bribing. Poor institutional conditions and their inadequacies provide a fertile ground for corruption to flourish. For the client, a tradeoff exists between administrative delays and bribing in the case when public service delivery is not timely and efficient. Given the excessive demand for public goods and services over the supply capacity of the public sector, applicants for services have to wait long for their turn. The files get piled and not processed according to the needs of the applicants. Low paid, improperly positioned, less trained, and less motivated employees have no enough zeal and enthusiasm to provide services efficiently. The resulting waiting costs of clients increase with increase in the opportunity costs of their time. For clients, the costs of transaction can be reduced if the payment of speed money can induce bureaucrats to increase their efforts and process cases according to urgency, a need which might be measured by the applicants' willingness to pay (WTP) for getting the job done quickly (Figure 1). They are often not the basis, but themselves a consequence of corruption (Lambsdorff, 2001a). However, Myrdal (1968a: 952-3) opposed this by arguing that the corrupt officials might, instead of speeding up, actually cause administrative delays to attract more bribes. A similar proposition is put forward by Rose-Ackerman (1978: 90), arguing that bureaucrats behave like monopolists who profit from increasing prices by creating scarcity of services. To the contrary, with the help of a formal model, Lui (1985: 773) argues that the effort required for a bureaucrat to serve a client represents a disincentive and induces the tendency to avoid the norm among the bureaucracy. Lambsdorff (2001b) reports that the total effect of corruption cannot be determined a priori, but depends on the size of externalities. A similar conclusion can be drawn for a minor case of corrupt misdeed, the payment of speed money. A vicious circle of inefficient regulation emerges, leading to corruption, which in turn cultivates the further spread of the tendency to enhance administrative power and opportunity to exact further payoffs.

Figure 1: Vicious circle of bribing and inefficiency
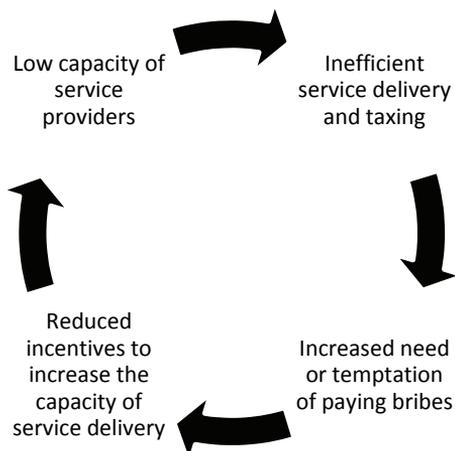
A vicious circle of bribing and law making is thus clearly visible. Increased corruption perception increases the need for anticorruption law making. We put lots of efforts in controlling corruption by increasing legal provisions, standards, guidelines, terms, and conditions for service delivery. Increased regulation of it makes difficult for the client to comply with the regulations. When prospective service recipients feel that it is very difficult to comply with all the sets of rules and regulations, they ultimately resort either to availing a political power or paying bribes direct to service providers or some intermediaries who have established linkages with service providers. Increased regulation ultimately breeds a group of intermediaries who, in addition, spread the fear of law among the general people distancing the service seeking people from the service providers. As a result, even those service providers who are ready to provide services most sincerely and austerely, are distanced by the intermediaries who put efforts in defaming the agency increasing corruption perception among the people at large.

3.2 Causes of Corruption

Empirical work on corruption relies more on detailed questionnaire survey. The World Bank has developed such questionnaires. The enterprises are asked how large shares of their expenditures are paid out in bribes, whether they try to bribe to put forth advantageous laws, and whether they pay out bribes to win single contracts (Hellman *et al.,* 2000). The direct, firm-level data from the World Bank

are briefly presented in Wei (2000a) and applied in Kaufmann and Wei (1999). Most of the data published have so far focused on the so-called transition countries. Svensson (2000), however, applies firm-level data from Uganda, based on the Ugandan Industrial Enterprise Survey, initiated by the World Bank but implemented by the Ugandan Manufacturer Association. Empirical research on corruption has for long been hampered by the lack of reliable data. This has been partly rectified by Transparency International bringing into the public domain the results of mainly commercial risk analysis institutes. This has until now mainly consisted of quantification and indexation of rather vague and loosely structured conceptions of corruption. Economic perspectives and quantitative analyses of the causes of corruption are fairly new undertakings. Lambsdorff (1999b) provides a comprehensive review of the literature on empirical research about the causes of corruption, focusing on political institutions, government regulations, legal systems, GDP-levels, salaries of public employees, gender, religion and other cultural dimensions, poverty, as well as the role of colonialism. Most of this econometric research assumes first approximation independent variables causing corruption without feedback from corruption itself. Moreover, there is little discussion of any interesting interaction patterns among the causal variables. It is often difficult to assess whether corruption causes other variables or is itself the consequence of certain characteristics (Lambsdorff, 1999b). Empirical research based on various corruption indexes reports correlation between certain forms of government regulations, poor public institutions, poverty, and inequality. But conclusions with respect to causality remain blurred. A major obstacle to cross-national comparative empirical research is the difficulty of measuring levels of relative corruption in different countries. A number of econometric studies using Corruption Perception Index (CPI) and Bribe Payers Index (BPI) as explanatory variables examine historical, cultural, political, and economic determinants of a variety of indicators of government quality, including corruption (La Porta *et al*., 1999; Paldam, 1999; Treisman, 2000). Cross-country ratings – based on the respondents' perceptions – are by definition subjective. However, empirical work confirms that subjective evaluations of corruption do themselves appear to influence investment decisions, growth, and the political behavior of citizens (Mauro, 1995). The most widely used index in regression analysis, i.e., Transparency International's CPI, correlates positively with the size of the unofficial economy as estimated by Johnson *et al.* (1998).

In terms of analytical approach and methodology, Lancaster and Montinola (1997) suggest that comparative research on corruption should include three related tasks: (a) provision of causal explanation of co-variation among cases and

correlation between corruption and other variables, (b) development of theoretical models that incorporate differences in context in order to illuminate causal relations, and (c) empirical verification of theoretically derived models or regressions to estimate numerical values for coefficients in theoretical models. Similarly, Paldam (1999) presents the cross-country pattern in CPI as explained by a combination of cultural and economic variables. He constructs a simple one-equation function that can be separated into an economic and cultural sub-model. The regression analysis is initially conducted separately for the two sub-models. The corruption variable is presented by the CPI. Subsequently, the entire model is explored in a multiple regression analysis. Interestingly, the conclusions differ between the sub-model regressions and the full-model regressions. The study finds dynamic changes in corruption level within individual countries. It explains these changes by a seesaw effect where the level of corruption in a country moves toward a high or low equilibrium depending on the initial situation. This seesaw effect is consistent with the theoretical models of multiple corruption equilibria, for instance, the one developed in Andvig and Moene (1990). Treisman (2000) follows the research approach outlined by Paldam (1999). This article is probably the most comprehensive quantitative analysis available on the causes of corruption. His point of departure is corruption perceived to be more widespread in some countries than in others. Economists and political scientists have suggested a variety of characteristics of countries' economic, political, cultural, and social systems that may affect the expected costs and benefits of corruption for individual officials. Thus, by assuming rational behavior, corruption can be modeled as a gamble where the public official is weighing the expected benefits from a successful act of corruption against the expected costs (including social, psychological, and financial costs). Decrease of honesty in the society is a major cause of corruption. Paldam (1999) reports that household honesty is a good with high income elasticity. The demand for honesty increases with income levels. For firms, honesty is a time saving device that becomes more necessary as countries grow rich. Thus, honesty is hypothesized as a production factor. An additional reason to expect that corruption might decrease with economic development is related to social stigma. Some scholars argue that the social stigma facing corrupt officials, if exposed, changes with economic development. Ekpo (1979), for instance, suggests that in traditional societies, where the lines between public and private are less clearly drawn and where gifting is not clearly distinguished from bribery, social stigma may be lower. Thus, it is argued, the attempt to apply traditional norms and practices to a modern market-based economy is a modus operandi for corruption with lower costs of stigma.

In cross-country regression analyses, Paldam (1999) and Treisman (2000) find that by far the most important determinant of corruption is economic development, measured by real GDP per capita. Causation runs from economic development to lower corruption, and from corruption to lower economic development. Corruption and levels of economic development are related. Misuse of public office is more likely to be exposed in more economically developed countries where media are strong. Rich countries are, relatively spoken, efficient countries, where transactions have to be fast and transparent. Assuming that the society considers corruption as an illegitimate and undesirable act, one may tend to argue that the negative externalities of corruption outweigh the gains. But where poor institutional preconditions and extensive distorting regulation exist, some economists would rather downplay the size of these externalities and favor corruption as a means to open up new contractual possibilities (Ades and Di Tella, 1999).

In literature, the linkages between corruption and democracy are not obvious. For instance, competitive politics may escalate the demand for campaign funds, and thus be a breeding ground for questionable political influence (Goldsmith, 1999). Political candidates may sell their political influence to the biggest donors. On the other hand, the risk of revealing corrupt officials is higher in more democratic, open societies (Diamond and Plattner, 1993). Greater civic engagement may lead to closer monitoring and exposure of civil servants and politicians. In democratic systems, people through free elections may avoid voting for corrupt politicians. A number of empirical studies have explored the possible correlation between corruption and democracy (Harris-White and White, 1996; Paldam, 1999; Goldsmith, 1999; and Treisman, 2000).

The redistribution of power between the center and the periphery is another possible determinant of corruption. Some studies argue that concentrated power is an aggravating factor in corruption. Proudhon (1963:48) contends that the centralized state, instead of serving its citizens, expropriates and crushes them. It is also argued that bringing government to the door of the people through decentralization could mitigate these problems (Wunsch and Olowu, 1990; Enemuo, 2000; Rondinelli *et al.*, 1989; Oates, 1972). Since everyone tends to know everyone else's business in decentralized settings, it is harder to conduct under-the-table deals (Goldsmith, 1999). Due to social pressure, local officials may thus be less prone to cheat or abuse people they know and live near.

However, the empirical studies of the linkages between corruption and decentralization in developing countries are relatively few. In a case study from Tanzania, Fjeldstad and Semboja (2000) find that fiscal administrations in many

local authorities are highly corrupt, partly due to the extreme degree of discretionary powers of local officials and poor monitoring from the center. In a cross-country regression analysis based on corruption perception indexes, Goldsmith (1999) suggests that federal or decentralized systems are not favorable settings because they make it easier to hide corrupt practices or even intimidate whistleblowers. These results are supported by Treisman (2000) who finds that federal states are more corrupt than the unitary ones.

Literatures also link public sector salaries and recruitment policies to corruption. Rijckeghem and Weder (1997) explore to what extent the level of public sector salaries is linked to the level of corruption. Their basic argument is that low salaries force public officials to supplement their incomes by taking bribes while high salaries imply higher alternative costs if detected for fraudulent behavior. If public sector wages were doubled, the corruption index of a country would be improved by the order of 2 points in the corruption index (CPI) of Transparency International. However, there may be a problem of causality in their analysis since corrupt (and poor) countries tend to have poor budgetary performance and, thus, may keep civil service wages low. Rauch and Evans (2000) do not find robust evidence for any impact of public salary levels and corruption.

International openness and trade is believed to affect corruption. Wei (2000b) tests the claim that low trade volumes are one of the roots to corruption, rather than one of its consequences. Broadman and Recanatini (2000) include the effects of trade openness in their study of the effects of market institutions on the degree of graft in a sample of transition countries. Again the effects of what is denoted 'residual' openness are surprisingly weak. Countries with high corruption levels have lower shares of foreign direct investment (FDI) in their foreign (gross) debt stock, and low FDI levels altogether (Wei, 2000b).

The causes of corruption explored are thus the level of economic development, political rights and democracy, federalism and decentralization, public sector salaries and openness to international trade. This reflects the current state of the empirical studies on corruption that have so far, with few exceptions, been restrained to studies of what explains corruption. But, literatures are scanty to describe the effects of tax policy on bribing.

3.3 Consequences of Corruption

Corruption can make economic transactions inefficient, slow, and sometimes unpredictable (Schleifer and Vishny, 1993 and Myrdal, 1968b). Literature claims that corruption harms economic development. From this line of partly theoretical

arguments and intuition, political scientists and economists have derived hypotheses on the linkages between corruption and economic development.

An important line of thinking in the corruption literature argues that the economic benefits of corruption outweigh the costs (Leff, 1964; Nye, 1967; Huntington, 1968). One point often made is that bribery greases the wheels by cutting red tape and thus improves efficiency. The argument that corruption improves efficiency is based on the assumption that the economic costs of extensive public regulations may be reduced or avoided through bribery. Using data from three worldwide firm-level surveys, Kaufmann and Wei (1999) examine the relationship between bribe payment, management time wasted with bureaucrats, and the capital cost. Contrary to the efficient grease theory, they find that firms that pay more bribes are also likely to spend more, not less, management time with bureaucrats negotiating regulations, and face higher, not lower, cost of capital. Positive and negative effects of corruption are both plausible, and without a systematic review of evidence there is not much basis for deciding which side gets the better of the argument (Goldsmith, 1999).

It is likely that increased number of regulations is associated with the level of corruption, but, it is not clear whether corruption leads to extensive regulations or vice versa. Some scholars argue that extensive public regulations are the result of a deliberate strategy by civil servants to increase their clients' willingness to pay bribes (Myrdal, 1968c; Rose-Ackerman, 1978; Tanzi, 1998). Assuming that bureaucrats are driven by rational, self-serving motives, the logical presumption is that they will seek even more ways to create bribe-producing delays in the work. This line of reasoning may also contribute to explain observed resistance from bureaucrats for public sector reforms. For instance, Myrdal (1968c) argues that corrupt officials, instead of speeding up, actually cause administrative delays to attract bribes.

In other cases, many regulations may be introduced in genuine efforts to avoid corruption, in which they may be at least partly successful. Nevertheless, an observed covariation between corruption and extensiveness of regulations may be observed, but in this case the main causal link is from corruption to regulation, not from regulation to corruption. Similarly, Winters (1996:166) finds the strongest resistance to tax reforms in Indonesia from the tax officials themselves, since they had the most to lose from the depersonalisation and simplification of the tax system. Flatters and Macleod (1995:409), also referring to Indonesia, assert that tax collectors actively opposed simplification in property tax administration, income tax laws, and tariff structures.

An influential empirical study of the impacts of corruption by Mauro (1995) attempts to identify the channels through which corruption and other

institutional factors affect economic growth, and to quantify the magnitude of these effects. He finds that corruption has a negative impact on the ratio of investments to GDP, its investment rate. According to the study, a more precise indicator of corruption is the simple average of three indicators: i.e., the judiciary system, bureaucratic red tape, and corruption. These three indicators correlate well, and by aggregating them into a composite index bureaucratic efficiency the risk of measurement errors is expected to be reduced.

This review of the theory of causes and consequences of corruption leads to the conclusion that there are several studies of cross-country comparison of corruptions, particularly using the corruption index and GDP, but the micro-level studies on corruption relating to the fiscal status are very limited.

4.   Results

Each agro-processing enterprise is found to visit two types of organizations for completing the formalities and facilitating to establish the production unit. The organizations of the first type are statutory agencies that enforce legal provisions that the enterprises are required to comply with. The organizations of the second type are those that provide service to enterprises and the services are generally necessary for profitable running of the enterprises. The first category of the institutions provides services like registration of firm, permission to establish enterprise, permission for starting production, renewal of permission, quality control, and paying the taxes. The second category includes the organizations that need to be visited by the enterprises to get loan and to get utilities such as electricity, telephone, and water connections.

4.1   Hassles in Receiving Public Services

Entrepreneurs are concerned with ten agencies for registration of various agro-enterprises (the names of the agencies concerned are not disclosed for the purpose of anonymity). The average legitimate fee and tax for registration of each of the enterprises is Rs 1,986, ranging from Rs 3 to Rs 25,000. On an average, each enterprise pays Rs 184 as an illegitimate payment to the statutory institutions to get the firm registered. Some entrepreneurs even feel embarrassed to pay the small amount of bribe directly to the employees, increasing their temptation for hiring an agent. Among the payments made by the entrepreneurs to the agents, a part goes to the agent as fee and the rest might go to the service provider. For the enterprises, the amount paid to the agent is less than or equal to the hassles and other costs they have to face and incur.

Aspirant agro-processing entrepreneurs who want to set up a processing plant have to meet several criteria of firm registration and production unit establishment based on the type of the commodity they want to produce. These multiple agencies are both the cause and the effects of bribing. When the government sees some undesirable practices, it tries to add a new agency and/or legal provision to control such activities. In effect, the entrepreneurs find difficulties in meeting all the requirements and try to find some shortcuts through bribing. It is evident from Table 2 that an agro-processing enterprise in Nepal, on an average, needs to visit ten agencies for meeting formalities for firm registration and ten others for permission to establish the production unit. It also needs to visit several agencies for getting connected with utilities such as water, electricity and telephone, and permission on starting the production, and also for the renewal of permissions. The time taken and costs incurred for getting permission and services from each agency are large. It is evident that the frequency of visits and time taken are lower in renewal compared to those in the initial permissions. The travel costs per visit, including the fare and opportunity costs of the time spent, affect bribing and bribing can reduce the number of visits necessary. The total travel cost for firm registration is higher than the legitimate fees and taxes the entrepreneur has to pay. This is also true for the permission for starting production. It means the transaction costs for firm registration and other formalities are much higher than the formal fees prompting the entrepreneurs to pay bribes to reduce such transaction costs. The high travel cost increases the temptation of entrepreneurs to pay bribes.

Table 2: Hassles and payments for completing tasks from statutory institutions (N=500)

Particulars	Unit	Registration of firm	Permission to establish enterprise	Permission for starting production	Renewal of permission
Agencies visited by entrepreneurs	No	10	10	5	7
Number of visits per case	No	42.54	33.59	12.14	10.65
Time taken for each visit	Minutes	51.57	4.36	2.78	1.04
Travel fare for each visit	Rs/visit	33.86	1.48	0.67	0.96
Travel costs for the entire process	Rs	2354.48	110.74	22.20	14.84
Legitimate fees and taxes	Rs	1985.84	159.96	6.20	56.57

Source: Field survey, 2007.

4.2 Taxes and Fees Affecting the Supply of Bribes

On an average, an agro-processing firm pays Rs 4810 in bribe to meet the formalities of registration, operation, and renewal. The agro-processing enterprises are small in nature with an average fixed cost of less than one million rupees. The operating expenses are still smaller. The rent paid and the costs of raw materials just exceed a half million rupees (Table 3). As most of the enterprises are family operated, labor employment is not included in the study. The gross return per annum is also less than one million rupees. The large revenue as compared to the fixed investment shows that most of the agro-enterprises are low technology enterprises with small machines. The size of the tax and fees paid to the government is about Rs 22,480. This is because the primary agriculture products are not taxed in Nepal. For processed agricultural products too, the taxes on cottage and small agro-enterprises are low.

For quantification of the hassles the agro-processing enterprises face from the regulatory agencies, an indirect approach was followed. A hypothetical private agency 'SERVASEVA' is thought to complete all the government formalities for any enterprise within one day. But, the fees and taxes of the government or other agencies as usual are to be paid by the concerned enterprises. If any enterprise orders SERVASEVA by a phone call, it will collect the required papers and normal government fees and taxes from the enterprise and complete all the formalities from all government offices within a day. The entrepreneurs were asked to bid for a payment to this hypothetical agency. The average willingness to pay (WTP) is Rs 1,822 per enterprise with a range from zero to Rs 48,000. WTP is much lower than the tax and fees because the WTP was asked from the existing agro-enterprises and they have already completed the registration formalities and they know how to complete the renewal formalities. The hassle faced by the agro-processing enterprises during the early stages of the establishment is, however, not counted by this measure.

Table 3: Descriptive statistics of size of firms and bribing variables (N=415)

Variable	Mean	Standard Deviation	Minimum	Maximum
Bribe (aggregated)	4809.78	17167.08	0.00	301000.00
WTP for a hypothetical agent– Servasewa	1821.74	3995.67	0.00	48000.00
Tax and fees	22,480.45	27285.13	0.00	248100.00
Fixed costs (Rs 1000)	46.50	74.43	0.00	681.35
Variable costs (Rs 1000)	919.62	1833.27	30.78	20011.85
Food processing (Fruits and vegetables)	0.15	0.36	0.00	1.00

Variable	Mean	Standard Deviation	Minimum	Maximum
Spices grinding and packing enterprises	0.14	0.35	0.00	1.00
Food manufacturing (Bakery/noodle/dalmoth)	0.17	0.37	0.00	1.00
Poultry farms	0.11	0.32	0.00	1.00
Oil mill	0.06	0.24	0.00	1.00
Grain mill (base category)	0.36	0.48	0.00	1.00
Lalitpur	0.19	0.39	0.00	1.00
Bhaktapur	0.10	0.30	0.00	1.00
Chitwan	0.25	0.44	0.00	1.00
Nawalparasi	0.19	0.39	0.00	1.00
Kathmandu (base category)	0.27	0.45	0	1.00

Source: Field survey, 2007.

In other cases, many regulations may be introduced in genuine efforts to avoid corruption, in which they may be at least partly successful. Nevertheless, an observed covariation between corruption and extensiveness of regulations may be observed, but in this case the main causal link is from corruption to regulation, not from regulation to corruption. Similarly, Winters (1996:166) finds the strongest resistance to tax reforms in Indonesia from the tax officials themselves, since they had the most to lose from the depersonalisation and simplification of the tax system. Flatters and Macleod (1995:409), also referring to Indonesia, assert that tax collectors actively opposed simplification in property tax administration, income tax laws, and tariff structures.

An influential empirical study of the impacts of corruption by Mauro (1995) attempts to identify the channels through which corruption and other institutional factors affect economic growth, and to quantify the magnitude of these effects. He finds that corruption has a negative impact on the ratio of investments to GDP, its investment rate. According to the study, a more precise indicator of corruption is the simple average of three of the indicators, i.e., the judiciary system, bureaucratic red tape, and corruption. These three indicators correlate well, and by aggregating them into a composite index bureaucratic efficiency the risk of measurement errors is expected to be reduced.

This review of the theory of causes and consequences of corruption leads to conclusion that there are several studies of cross-country comparison of corruptions, particularly using the corruption index and GDP, but the micro-level studies on corruption relating to the fiscal status are very limited.

The higher the taxes and fees payable by the enterprises, higher is the payment for bribes. Every rupee increase in the tax and fee increases the bribe

amount by Rs 0.10 (Table 4). Bribing also increases with increase in the sunken costs. Every thousand increase in the fixed costs increases the bribe paid by Rs 67. This means that higher the sunken costs, higher are the urgency to pay bribes for official formalities. The amount of bribe paid is significantly lower in Chitwan compared to that in Kathmandu. It shows that Chitwan has advanced in good governance. This may be the reason that many agro-processing enterprises are emerging in Chitwan. The bribe payment in other survey districts is not significantly different from that in Kathmandu. The payment of bribe, however, is not significantly different among different types of agro-processing enterprises. Dix (2011) identified a social order that maintains client-patron relations and obligations to one's network in a way that is directly contrary to the rule of law as the major factors of corruption in the country.

Table 4: Factors affecting supply of bribes

Variable	Bribe payment			WTP to Servasewa Agent		
	Basic model	With industry fixed effects	With district fixed effects	Basic model	With industry fixed effects	With district fixed effects
Taxes and fees	0.10***	0.10***	0.11 ***	0.04***	0.05***	0.05***
Fixed cost	67.62***	65.78***	67.11***	10.71***	12.92***	13.83***
Variable costs	-0.11	-0.07	-0.05	0.16	0.14	0.07
Bribe paid				-0.02**	-0.02**	-0.03**
Food processing enterprises		-999.60	-1854.103		1255.81**	871.94
Spices grinding and packing		-1257.36	-1795.179		3155.31***	2663.82***
Food manufacturing (Bakery/noodle/ dalmoth)		-1079.60	-2184.617		869.55*	404.83
Poultry		1.58	1473.330		382.56	341.15
Oil mills		-2346.11	-3653.450		-74.94	-311.89
Lalitpur			2892.211			-1146.85**
Bhaktapur			-866.305			-1311.98**
Chitwan			-6046.322***			-2117.88***
Nawalparasi			708.083			-1944.78***
Constant	-537.48	217.46	1060.237	344.401	-709.91**	697.79
Sample size	415	415	415	415	415	415
Adjusted R^2	0.140	0.132	0.155	0.167	0.226	0.257

Note: Numbers in parentheses are standard errors. Statistical significance: *** at 1% level, ** at 5% level, * at 10% level.

Source: Field survey, 2007.

The WTP of agro-processing enterprises for SERVASEVA is regressed with the individual characteristics of enterprises. The level of tax and fees significantly affects the WTP for the agent. Every rupee increase in tax and fees increased the WTP by Rs 0.05. The higher the fixed cost of enterprises, the higher is the WTP for SERVASEVA. Every thousand rupees increase in the fixed costs increases WTP by Rs 13. The amount of bribe paid significantly decreases WTP. Among the industries, such service agency is found to be most accepted by the spices grinding and packing enterprises. It means this type of enterprises is facing greatest hassle in completing the official formalities. The WTP of entrepreneurs in other districts is significantly lower than that in Kathmandu.

5.   Conclusion and Recommendations

Bribing is a bad practice as it not only reduces the efficiency of the service delivery of public agencies but also competitiveness in the establishment and operation of enterprises. The practice of bribing may have eliminated many potential entrepreneurs in agro-processing enterprises by imposing unpredictable costs and increasing risk allowances to the cost-benefits analysis of such enterprises.

The bribes paid to public agencies with mandatory services is more damaging to the agro-enterprises than the bribe paid to voluntary transactions such as taking loans. In taking loans, for example, the loanee can compare the benefits from taking loan to the costs of the loan including the bribe amount. Moreover, the sources of loans are more than one offering alternatives. The payment of bribes is exploitative to the enterprises if the enterprises have no option but have to pay bribes if they want to be in the business. In renewal of certificates, environmental conformity, and getting electricity connected, there are no options left with the entrepreneurs except closing their enterprises. When there is no option left, the demand for bribes is higher and any hesitation on the payment delays production or reduces resource productivity. Though most of the employees of service providing agencies are honest, their honesty is less visible than the corrupt practices of a few of them. Nepalese law considers the bribe payers and receivers equally guilty. This discourages bribe payers to fight against the bribing after paying a bribe. Policy reform is necessary to empower the bribe payers to claim back their money paid as a bribe if they can substantiate bribing. In addition, such bribe payers should also get additional compensation 20% out of the penalty changed to the bribe receiver. This provision will create mistrust between the bribe payers and receivers discouraging bribing.

Agro-enterprises are found paying bribes to complete official formalities and receive services from agencies. Most of the sample enterprises reported that they have paid bribes to the offices from which they received the service. The actual payment of bribes increases significantly with increase in the taxes and fix costs. This means higher the tax and sunken costs, higher the urgency to pay bribes for official formalities. Therefore, policies are required to safeguard the investment incurred in the economy in productive sectors, such as agro-enterprises. H igher the taxes and fees payable by enterprises, higher is the bribe paid. This means that bringing the cottage and small agro-enterprises under the tax net will increase the risks of corruption. Public policies and tax structures governing these enterprises need to be reviewed so that corruption can be reduced.

REFERENCES

Ades, A. and R. Di Tella. 1999. "Rents, Competition, and Corruption", *The American Economic Review*, LXXXIX: 1023-1042.

Andvig, J. and K. Moene. 1990. "How corruption may corrupt", *Journal of Economic Behaviour and Organization*, 3: 63–76.

Broadman, H.G. and F. Recanatani. 2000. "Seeds of corruption: Do market institutions matter?", World Bank Policy Research Working Paper No. 2368, June.

Diamond, L. and M.F. Plattner. 1993. *The Global Resurgence of Democracy*. Baltimore: Johns Hopkins University Press.

Dix, S. 2011. *Corruption and Anti-Corruption in Nepal: Lessons Learned and Possible Future Initiatives.* Oslo: Norwegian Agency for Development Cooperation.

Ekpo, M.U. 1979. "Gift-giving and bureaucratic corruption in Nigeria." In *Bureaucratic Corruption in Sub-Saharan Africa: Toward a Search for Causes and Consequences,* M.U. Ekpo, Ed. Washington, D.C.: University Press of America.

Enemuo, F. C. 2000. "Problem and prospects of local governance", chapter 7 (pp. 181-204). In Goran Hyden, Dele Olowu, and Hastings Ogendo (Eds.), *African Perspective of Governance*. Trenton/Asmara: Africa World Press.

Fjeldstad, O-H. and J. Semboja. 2000. "Dilemmas of fiscal decentralisation: A study of local government taxation in Tanzania", *Forum for Development Studies*, 27: 7-41.

Flatters, F. and W.B. Macleod. 1995. "Administrative corruption and taxation", *International Tax and Public Finance*, 2: 397-417.Goldsmith, A. A. 1999. "Slapping the grasping hand: Correlates of poltcal corruption in emerging markets", *American Journal of Economics and Sociology*, 58: 866-883.

Harris-White, B. and G. White (Eds.). 1996. "Liberalization and the new corruption". IDS Bulletin, 27 (2). Sussex.

Heidenheimer, A., M. Johnston, and V. LeVine. 1989. *Political Corruption - A Handbook*. New Brunswick: Transaction Publishers. Hellman, J. S., G. Jones, D.

Kaufmann, and M. Schankerman. 2000. *Measuring governance, corruption and state capture*, World Bank Policy Research Working Paper, no. 2312.

Huntington, S. P. 1968. Modernization and Corruption: Political Order in Changing Societies, New Haven: Yale University Press, 59-71. Reprinted in A. Heidenheimer, M. Johnston and V. LeVine, Political Corruption - A Handbook. New Brunswick: Trans-action Publishers, 1989: 377-88.

Johnson, S., D. Kaufmann, and P. Zoido-Lobaton. 1998. *Regulatory discretion and the unofficial economy*, American Economic Review Papers and Proceedings, 88: 387-392.

Kaufmann, D. and S-J. Wei. 1999. "Does grease money speed up the wheels of commerce?", NBER Working Paper, No. 7093 (April).

La Porta, R., F. Lopez-de-Silanes, A. Schleifer, and R.W. Vishny. 1999. "The quality of government, " *Journal of Law, Economics and Organization*, 15: 222-279.

Lambsdorff, J. G. 1999a. *Corruption in Empirical Research — A Review*, Transparency International Working Paper, November 1999. http://www.transparency.org/documents/work-papers/lambsdorff_eresearch.html.

---1999b. *Corruption in international research   A   review*, Transparency International Working Paper, Berlin. www.transparency.de [10.11.00].

Lancaster, T. D. and G. R. Montinola. 1997. "Toward a methodology for the comparative study of political corruption", Crime, Law and Social Change, 27: 185-206.

Leff, N. H. 1964. "Economic development through bureaucratic corruption", *American Behavioral Scientist*, 8/3 (November), pp. 8–14. (Re-published as chapter 24 in *Political corruption: A Handbook*. Heidenheimer et al. New Brunswick, 1989: Transaction Publishers.

Lui, F. T. 1985. "An equilibrium queuing model of bribery", *Journal of Political Economy*, 93: 760-81.Mauro, P. 1995. "Corruption and growth" , *Quarterly Journal of Economics*, CX/3 (August): 681, 712.

Myrdal, G. 1968a. *Asian Drama*. Vol. II., New York: Random House.

---b. "Corruption as a hindrance to modernization in South Asia". *In Asian drama: An Enquiry into the Poverty of Nations,* Gunnar Myrdal, Vol. II. New York: The Twentieth Century Fund, pp. 937-951. (Re-published as chapter 25. In *Political Corruption: A Handbook*. Heidenheimer et al., New Brunswick, 1989: Transaction Publishers).

---c. "Corruption: Its causes and effects". In *Asian drama: An Enquiry into the Poverty of Nations*. Gunnar Myrdal, Vol. II. New York: The Twentieth Century Fund, pp. 951–958.Nye, J. S. 1967. "Corruption and political development", *American Political Science Review*, 61: 417-427.

Oates, W. E. 1972. *Fiscal Federalism.* New York: Harcourt Brace Jovanovich.

Paldam, M. 1999. *The big pattern of corruption: Economics, culture and the seesaw dynamics, Working Paper* No. 1999-11. University of Aarhus: Department of Economics.

Proudhon, P.J. 1963. *The Principle of Federation*. Translated by R. Vernon. Toronto: University of Toronto Press (1979).

Rauch, J. E. and P. B. Evans. 2000. "Bureaucratic structure and bureaucratic performance in less developed countries", *Journal of Public Economics*, 75: 49-71.

Reinikka R. and J. Svensson. 2006. "Using Micro-Surveys to Measure and Explain Corruption", *World Development* 34(2), pp. 359–370.

Rijckeghem, C. V. and B. Weder. 1997. "Corruption and the rate of temptation: Do low wages in the civil service cause corruption?", Working Paper WP 97/73. Washington, D.C.: International Monetary Fund.

Rondinelli, D. A., J. McCullough, and R. W. Johnson. 1989. "Analysing decentralization policies in developing countries: A political-economy framework", *Development and Change*, 20: 57-87.

Rose-Ackerman, S. 1978. *Corruption - A Study in Political Economy*. New Haven: Academic Press.

Schleifer. A., R. W. Vishny. 1993. "Corruption", *Quarterly Journal of Economics*, CVIII: 599-617.

Svensson, J. 2000. "Who must pay bribes and how much? Evidence from a cross-section of firms", World Bank Policy Research Working Paper, No. 2486, November.

Tanzi, V. 1998. "Corruption around the world: Causes, consequences, scope, and cures", IMF Working Paper 98/63. Washington D.C. Reprinted as Chapter 7 in Vito Tanzi (2000), *Policies, Institutions and the Dark Side of Economics*. Cheltenham: Edward Elgar.

Treisman, D. 2000. "The causes of corruption: a cross-national study", *Journal of Public Economics*, 76: 399-457.

Wei, S.-J. 2000a. "Bribery in the economies", Working Paper, Brookings.

Wei, S.-J. 2000b. "Natural openness and good government", *NBER Working Paper* 7765 (June).

Winters, J.A. 1996. *Power in Motion: Capital Mobility and the Indonesian State*. Ithaca, NY: Cornell University Press.

Wunsch, J. S. and D. Olowu. 1990. *The Failure of the Centralized State: Institutions and Self-Governance in Africa*. Boulder, Colorado: Westview Press.

***