Determinants of Bribery and Corruption in Public Service Delivery: A Case Study in Nepal

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ABSTRACT

Bribery is a multi-faceted phenomenon prevalent in Nepal's public service delivery. The amount of bribe provided differs by type and nature of services. This paper aims to assess the level of corruption in Nepal. It analyses the additional amount the service receivers supplied to the public officials and their determinants using logistic regression. It uses cross-sectional data collected by the Commission for Investigation of Abuse of Authority in 2017 from 1668 service receivers who received service out of 3400 applicants seeking different public services. It is revealed that the CPI score is 34, which indicates that the level of corruption is high in Nepal. Among the service receivers, 39% provided bribes to public officials and used intermediaries to complete their work, increasing public service costs. Analysing the determinants of giving fixes shows that gender, education, number of times visiting public offices, perception about the staff behaviour, age and the occupation of the service receiver were significant variables. These findings imply that it is crucial to promote integrity and accountability among public officials by enforcing and monitoring the compliance mechanism and providing different benefits to motivate them to deliver quality services on time. It is equally essential to develop transparent approaches and tools for service delivery.

Keywords
Bribe
Corruption
Nepal
Public Service

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Introduction

Corruption is as aged as the existence of man. Globally, corruption is perceived as a significant threat to public service delivery, good governance, and the development of a country. It has created obstacles to properly utilising scarce resources for economic growth and prosperity. Hence, corruption undermines the goals of achieving equity, quality, and responsiveness, including social security, for the citizens of a nation. This has made the services costlier for poor and disadvantaged people.

Citizens of a country look for and need different public services related to health, education, agriculture, land management, security, vital civil registration, etc., for which they approach government offices. In countries with corrupt public officials, people may need to pay additional charges in bribes directly to the officials and indirectly through intermediaries to get these services. The behaviour of paying bribes for these services violates the rule of law and stimulates public distrust in government, and reduces the quality of governance [1].

Public institutions and their reputation play a critical role in the access to and costs of the government's public services to its citizens. Poor governance can significantly influence the delivery of public services, directly through higher prices and indirectly through availing of lower quality or quantity services. In the quest for public service, some users may be discriminated against and pay more than what is officially set (because of corruption). Consequently, some users may get discouraged and choose not to seek the service needed due to the higher price imposed by the bribery "tax" [2].

Transparency International (TI) defines corruption as “the abuse of entrusted power for private gain or specific group interest”. The United Nations points out that corruption can take many forms that vary in degree, from the minor use of stimulus to institutionalised bribery, and that “this can mean not only financial gain but also non-financial advantages” [3].

In many low-income countries, curbing corruption for good governance has become a vital objective of any elected government. The bribery of low-level public servants is possibly the most common form of corruption experienced by ordinary citizens, especially in institutionally fragile settings [4]. Bureaucrats controlling access to public service are likely to extract bribes from people relying on the particular service to their clients. In line with the model developed by Ref. [5], it can be assumed that bureaucrats have a monopoly on providing public services, and potentially corrupt bureaucrats trade off a safe, honest wage for the expected benefit of demanding a bribe [6].

Corruption can take place in many forms, including bribery. It is a multi-faceted and many-faced phenomenon, still a wicked problem in many countries worldwide. Bribery is the corrupt payment, receipt, or solicitation of a private favour for actions or decisions from
influential or powerful agents or authorities, such as public officials, corporations or people inside corporations, to generate personal benefits of the bribery [7]. Cultural and institutional differences across countries and regions play an essential role in determining the incidence of bribery [8][9].

Bribery is not the first choice of people who seek public services. The most commonly endorsed strategy to get things done when bureaucracy fails is to use connections, that is, to go to a friend or a friend of a friend or relative who has informal access to officials in the relevant public authority. If the radius of friendship extends far enough, this need not involve the payment of a bribe; instead, the service will be delivered as a favour to a person who is part of a network [10].

Public officials may have discretionary power or authority within the given regulatory system to customise the nature and amount of harassment of people to extract bribes. The extent to which fixes can be collected depends upon officials controlling rights over people. Bureaucrats' degree of control rights differs across sectors and locations.

Corrupt public officials also engage with third-party middlemen who behave as ‘gatekeepers’. They may block or facilitate access to public services based on the payment of a fee and their unique position as an access provider [11]. There may be non-transparent negotiations between officials/ bureaucrats and the mediators/intermediaries about the prices of the service and ways of sharing it. These middlemen socialise the corrupt practices and usually act as the ‘bridges’ between the corrupted and the corruptor [12]. They may establish contacts between two parties, assist in negotiations and hand over bribes physically.

With the above background, this paper attempts to assess the level of corruption, analyses the amount of extra money provided by the service receiver to get the service and identifies the factors that determine the motivation for giving bribes to public officials.

Methods

A. Data Source and Sampling

This paper uses cross-sectional data from 1668 service receivers who completed the entire process of receiving a service from the government, out of 3400 people who applied for the service. The data collected by the Commission for the Investigation of Abuse of Authority (CIAA) of Nepal in 2017 has been used for this paper. Data was collected using a pre-tested questionnaire and focus group discussions (FGDs) to elicit bribery, use of intermediaries and other related information on different public services.

The survey was conducted at the district-level offices and local government, which deliver public services to the citizens. The districts were chosen considering the number of complaints reported to CIAA, representing all ecological belts (3) and selecting at least two districts from each province (7). Considering these criteria, 17 districts were designated as sample districts.
The sample size from each district was determined based on probability proportionate to the extent (PPS) of the total population. In this regard, at least 100 samples should be drawn from each district. With this, 3400 service receivers were selected, and an exit survey with the service receivers was carried out at the gate of the 16 concerned public offices. Based on a priori information, more service receivers were contacted/surveyed from offices like land revenue, land survey, municipality, transport, and district administration. In addition, other offices surveyed included education, health (hospital), police, cottage and small industry, inland revenue, agriculture, water supply, electricity, and communication.

**B. Empirical Model and Variables**

Adopting different approaches/means to complete the service-receiving process involves decisions on whether to adopt or not such practices, such as providing bribes to public officials and using intermediaries to complete the applied work on service delivery. Previous studies also used binary logit or probit models when the number of choices available is limited to only two cases. This paper uses a binary logistic model to examine the factors influencing adopting practices for completing the task for service receivers once they apply for public service. In this case, the logit model has been used as the dependent variable is dichotomous, and the distribution functions are bounded between 0 and 1. The model is based on the cumulative logistic probability function. It uses logistic CDF and is specified as [13]:

\[
P_{1/i} = \frac{1}{1 + e^{-(\alpha + \beta X_i)}} = \frac{e^{(\alpha + \beta X_i)}}{1 + e^{(\alpha + \beta X_i)}}
\]

where:
- \( F \) = cumulative logistic probability function,
- \( e \) = base of natural logarithm,
- \( P_{1/i} \) = probability that the individual makes a particular choice.

\[
P_{1/i} (1 + e^{-(\alpha + \beta X_i)}) = e^{\alpha + \beta X_i}
\]

\[
P_{1/i} = (1 - P_{1/i}) * e^{\alpha + \beta X_i}
\]

\[
P_{1/i} / (1 - P_{1/i}) = e^{\alpha + \beta X_i}
\]  

\[
log (P_{1/i} / P_{2/i}) = log e^{P1/i} / (1 - P_{1/i}) = \alpha + \beta X_i = Z_i
\]

The left-hand side of equation (2) is known as the log odds or the logit transformation, and the model is known as the linear logit model. [14] pinpointed the importance of logit transformation: it increases from \(-\infty\) to \(+\infty\) as \( P_{1/i} \) increases from 0 to 1. Thus, while the probability is bounded, the logit is unbounded concerning the values of \( X \). According to [14], the predicted Logit values

\[
L_{1,2,i}^* = \log e^{(P_{1/i} / P_{2/i})} = \alpha^* + \beta^* X_i
\]

are likewise unbounded, but the predicted probability (which can be found by substituting \( \alpha^* \) and \( \beta^* \) into equation (3)) is confined to the 0-1 range. In this study, \( P_{1/i} \) represents the probability that an individual service receiver ‘i’ provides bribes directly to public officials and also uses
middlemen and, \( P_{1/i} = P_{2/i} = 1/(1 + e^{(\alpha + \beta X_i)}) \) represents the probability that individual 'i' does not.

The estimation of marginal effects is also considered essential. Marginal effects refer to the partial derivatives of the expected value concerning the vector of characteristics. They are computed at the means of the \( X \). Marginal results show the change in probability when the predictor or independent variable increases by one unit.

Since \( P_{1/i} = 1/(1 + e^{(\alpha + \beta X_i)}) \) as per equation (1).

Taking the partial derivative of the above equation concerning \( X \), the following formula is derived to estimate the marginal effect of \( X_i \):

\[
\frac{\partial P (1/i)}{\partial X_i} = P1/i x (1-P1/i) x \beta_i
\]  

(4)

C. Dependent and explanatory variables

The general model used for identifying the determinants of bribery or the use of intermediaries for receiving public service is given below:

\[
\text{MEANS ADOPTED} = \beta_0 + \beta_1 \text{GENDER} + \beta_2 \text{LOCATIONDUM} + \beta_3 \text{EDUCATION} + \beta_4 \text{ECODUM} + \beta_5 \text{AGE} + \beta_6 \text{OCCUPDUM} + \beta_7 \text{TIMESVISIT} + \beta_8 \text{PERSTAFDUM} + \varepsilon_i
\]

where,

\text{MEANS ADOPTED} is a binary variable with a value of 1 for service receivers who provide bribes and use intermediaries to complete applications for services.

\text{GENDER} is the gender of the service receivers, taking a value of 1 for males and 0 otherwise.

\text{LOCATIONDUM} is where the service receiver belongs with a value of 1 for Municipality, 0 otherwise.

\text{EDUCATION} is the level of formal schooling of the service receiver.

\text{ECODUM} is the service receiver’s ecological region, taking a value of 1 for Terai and 0 otherwise.

\text{AGE} is the age of the service receivers.

\text{OCCUPDUM} is the occupation of the service receiver taking a value of 1 for having worked as a trader/businessman and employed in foreign countries, 0 otherwise.

\text{TIMESVISIT} is the no. of times a service receiver visits the public offices to complete the work after making the application.

\text{PERSTAFDUM} is the perception of the service receiver about the behaviour of staff, taking a value of 1 if they perceive good conduct of the team and 0 otherwise.

<table>
<thead>
<tr>
<th>Definition of Variables</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATIONDUM</td>
<td>0.69</td>
<td>0.46</td>
</tr>
<tr>
<td>EDUCATION</td>
<td>4.31</td>
<td>1.64</td>
</tr>
<tr>
<td>ECODUM</td>
<td>0.49</td>
<td>0.50</td>
</tr>
<tr>
<td>AGE</td>
<td>37.5</td>
<td>11.0</td>
</tr>
<tr>
<td>OCCUPDUM</td>
<td>0.58</td>
<td>0.49</td>
</tr>
<tr>
<td>TIMESVISIT</td>
<td>1.80</td>
<td>1.11</td>
</tr>
<tr>
<td>PERSTAFDUM</td>
<td>0.53</td>
<td>0.56</td>
</tr>
</tbody>
</table>
Results and Discussion

A. Prevalence of Corruption

Corruption and elite capture are two apparent problems in Nepal’s devolved service delivery system. This inhibits the effectiveness and efficiency of local public service delivery in quantity and quality. Generally, corruption at the local level is a petty type of corruption. Lack of transparency, accountability, and the existence of elite capture, ambiguity etc. led to misallocation and misappropriation of available resources at the local level [15]. The nexus of Nepal’s bureaucracy, politicians, and business sector has fueled corruption in development projects. It is a big challenge to the development of modern Nepal [16]. Work speeds up with bribes and corruption in public service delivery and development-related jobs. Corrupt behaviours have adversely impacted the development activities as well as the economic growth of the country [17]. The corruption, irregularities, and rent-seeking behaviour are rooted in Nepalese politics and public administration, which has jeopardised economic growth and promoted underdevelopment in the country. Corruption has led to weakening productivity and lowering economic growth [18].

Delivery of quality public services remains vital to government institutions since it fosters citizens’ trust and confidence in public services [19]. Citizens’ faith in public institutions is also linked with the quality of public services. Suppose citizens receive hassle-free quality services from public institutions without paying more than prescribed. In that case, they feel confident and give the respective public service providers a higher rating.

Public service delivery continues to face challenges, as evidenced by the finding of various studies carried out in Nepal. Nearly two-thirds of the respondents report difficulties receiving public services such as drinking water, electricity connection, and land ownership transfer. Moreover, over one-third believe public services are not provided on time with specified standards and without intermediaries [20]. Principally, civil servants should not seek or accept bribes from the citizens they serve. However, it is revealed that civil servants accept bribes and ask for bribes for public services. According to the NNGS 2017/18, 10% of citizens who obtained public service from government offices had to pay a bribe. Similarly, 13% of the citizens reported that they paid additional fees other than service fees to receive service [20]. Accepting/asking for a bribe for public service violates integrity. The confidence of service users in receiving public services differed by their locale, education level, caste/ethnicity, not having a person with close contact, and the presence of intermediaries in Nepal [21].

The Corruption Perception Index (CPI), as published by Transparency International (TI), ranks countries “by their perceived level of public sector corruption, as determined by expert assessments and opinion surveys.” In the case of Nepal, the highest CPI score remained at 34
in 2019 (with a rank of 113) and 2022 (with a level of 110 out of 180 countries), while the lowest score of 22 was obtained in 2010 and 2011. TI considers scores below 50 to be failing, while scores below 30 indicate severe systemic corruption. Hence, this score shows that corruption is rampant in Nepal.

![CPI Score and Ranking of Nepal](image)

**Fig. 1.** CPI score and ranking of Nepal

### B. Ways Adoption

Of the 3400 service receivers applying for the service, 49.7% (1668) completed receiving the applied public service. They were asked to mention the method/approach adopted to complete their work. They said that 55.1% of the respondents completed their work by adopting due process without a bribe, 3.8% by having personal contact with the officials of the service-providing organisation, 31.3% by providing additional money directly to the officials or their coworker while 7.9% completed by using the advice of the intermediaries. This is to mention that the respondents paid an extra amount for the intermediaries’ service. It indicates that extra money is used to complete work, i.e., a bribe was paid to the officials and middleman (Table 2).

**Table 2. Ways Adopted for Completing Work**

<table>
<thead>
<tr>
<th>Approaches Adopted</th>
<th>Work completed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>With the required document and process</td>
<td>919</td>
</tr>
<tr>
<td>Personal contact with staff</td>
<td>64</td>
</tr>
<tr>
<td>Additional money (bribe)</td>
<td>522</td>
</tr>
<tr>
<td>Middleman</td>
<td>131</td>
</tr>
<tr>
<td>Others</td>
<td>32</td>
</tr>
<tr>
<td>Total</td>
<td>1668</td>
</tr>
</tbody>
</table>
C. Additional Amount for the Service

The survey identified that the service receivers paid more for their work. About one-third of the respondents paid more to complete their work directly to the officials. Table 3 shows that out of 1668 service receivers, 522 or 31.3% who directly paid to the officials and through intermediaries mentioned the amount they paid, while 131 (7.8%) respondents did not mention the amount but paid to or through the intermediaries. For those who paid directly, the amount paid from NPR 501 to 2000 was the highest (49.4%), while the amount above NPR 10,000 was the lowest (1.9%).

Table 3. Additional Money Paid for the Service

<table>
<thead>
<tr>
<th>Additional Amount (NPR*)</th>
<th>Total No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upto 500</td>
<td>76</td>
<td>14.6</td>
</tr>
<tr>
<td>501-2,000</td>
<td>258</td>
<td>49.4</td>
</tr>
<tr>
<td>2,001-5,000</td>
<td>155</td>
<td>29.7</td>
</tr>
<tr>
<td>5,001-10,000</td>
<td>23</td>
<td>4.4</td>
</tr>
<tr>
<td>Above 10,000</td>
<td>10</td>
<td>1.9</td>
</tr>
<tr>
<td>Total</td>
<td>522</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Exchange rate in March 2017: 1 USD equals 106 Nepali Rupee (NPR)

Offices like land management (including land revenue and survey), transport, cottage industries, education, etc., were offices visited by many respondents. The amount of bribe given varied by the type and nature of public service provided by the concerned offices. Hence, the additional amount paid by the service recipients has a broader range presented in Table 4.

Table 4. Bribe Amount by Public Service Offices

<table>
<thead>
<tr>
<th>No.</th>
<th>Service providing offices</th>
<th>Range of additional amount paid (NPR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Land management</td>
<td>400-25000</td>
</tr>
<tr>
<td>2</td>
<td>Education</td>
<td>1000-20000</td>
</tr>
<tr>
<td>3</td>
<td>Cottage industry</td>
<td>300-6000</td>
</tr>
<tr>
<td>4</td>
<td>Forest</td>
<td>500-4500</td>
</tr>
<tr>
<td>5</td>
<td>Electricity</td>
<td>500-2500</td>
</tr>
<tr>
<td>6</td>
<td>Internal Revenue</td>
<td>500-2000</td>
</tr>
<tr>
<td>7</td>
<td>Drinking Water</td>
<td>300-800</td>
</tr>
</tbody>
</table>

D. Quantitative Analysis of the Bribe

The factors influencing the approach adopted for completion of the services after lodging application by the service receiver are carried out using logistic regression. The results of the strategies the service receivers adopted to complete their application are presented in Table 5. The Likelihood Ratio Chi-square value was 53.62, implying that the model fits very
well with the data; that is, the likelihood of the null hypothesis, which states that the coefficients are equal to zero being correct, is extremely low.

Most of the variables tested had the expected signs. The results indicate that several factors drive service receivers’ decisions to adopt the approach for public services. It shows that the gender, education, number of visits to public offices, and perception about the behaviour of the staff appeared to be significant at 1% level, and age of the service receivers at 5% level. In comparison, the service receivers’ location and occupation were substantial at a 10% level. The ecological dummy for the place of the service receivers was not significant.

Table 5. Logistic Regression Estimates

<table>
<thead>
<tr>
<th>Variables</th>
<th>Odds ratio</th>
<th>Marginal effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>GENDER</td>
<td>1.642</td>
<td>0.117***</td>
</tr>
<tr>
<td>LOCATIONDUM</td>
<td>-0.814</td>
<td>-0.050*</td>
</tr>
<tr>
<td>EDUCATION</td>
<td>-0.914</td>
<td>-0.022***</td>
</tr>
<tr>
<td>ECODUM</td>
<td>1.066</td>
<td>0.015</td>
</tr>
<tr>
<td>AGE</td>
<td>-0.991</td>
<td>-0.002**</td>
</tr>
<tr>
<td>OCCUPDUM</td>
<td>1.229</td>
<td>0.049*</td>
</tr>
<tr>
<td>TIMESVISIT</td>
<td>1.117</td>
<td>0.027***</td>
</tr>
<tr>
<td>PERSTAFDUM</td>
<td>-0.715</td>
<td>-0.081***</td>
</tr>
<tr>
<td>CONSTANT</td>
<td>0.984</td>
<td>-</td>
</tr>
</tbody>
</table>

No. of observations = 1668, Log likelihood = 1099.626, LR chi² (8) = 53.62, Prob>chi² = 0.0000, Pseudo R² = 0.0238, Predicted value of y = 0.4024

Marginal effects refer to the partial derivatives of the expected value concerning the vector of characteristics. ***. **, and * denotes 1%, 5%, and 10% significant level respectively.

The negative and significant coefficient of the education level of the service receiver implies that the probability of bribery and using intermediaries is lower for respondents with higher educational attainment compared to less educated or illiterate ones. With a unit increase in the schooling level, the service receiver’s probability of giving bribes and using intermediaries would decrease by 2.2%.

The male respondents (dummy for GENDER) were a significant factor and positively correlated with the probability of providing bribes and using intermediaries. This implies that the likelihood of using those approaches is higher for males by 11.7% compared to female service receivers.

The location of the service receiver-urban or rural areas (LOCATIONDUM) is negative and significant, implying that the probability of providing bribes and using intermediaries for services is lower for urban dwellers than for rural dwellers. The age of the service receiver (AGE) was a negative and significant variable affecting the use of the approaches mentioned above for service. With one unit increase in the age of the service receiver, the probability of using such an approach would decline by 0.2% compared with the younger service receivers.
The dummy variable for the occupation of the service receivers (OCCUPDUM) was positive and significant. This implies that the likelihood of providing bribes and using intermediaries for public service will be higher for those with a business, involved in trade, and having foreign employment by 4.9% compared with service receivers with other occupation types. The number of times a service receiver visited (TIMESVISIT) was a positive and significant variable. This signifies that as the number of visits to public offices and contact with concerned persons increases, the probability of providing bribes and using intermediaries increases. With one unit increase in the visit, the chance would increase by 2.7%. The perception of the service receivers towards the behaviour of the public officials (PERSTAFDUM) was negative and significant. This reveals that the probability of providing bribes and using intermediaries to get the service would be lower by 8.1% for those who perceive the excellent behaviour of the public staff compared to those who do not.

**Conclusion**

Bribery is a complex phenomenon entrenched in individual motives and the greater institutional context. The people are most often in contact with public officials when they seek public services and pay bribes to corrupt public officials to get these services.

In the case of Nepal, public service delivery is facing challenges in terms of quality and cost. The cost has increased due to the additional amount above the prescribed price, which public officials demand in getting services. Asking for bribes for public service violates public servants’ integrity, which minimises citizens’ confidence in the government. The analysis revealed that for receiving assistance, the probability of providing bribes is higher for males than females and lower for people with higher levels of education and higher age. Moreover, if the service receivers visit more often to public offices after applying, the probability of giving bribes increases, while if the service receivers have good perceptions about the behaviour of the officials, the chance will decrease. The findings imply that the government should promote public officials' integrity and accountability by enforcing and monitoring the compliance mechanism through a dedicated institution and providing monetary and non-monetary benefits to motivate them to deliver quality services on time. As a step towards anti-corruption reform in the public sector, it is necessary to develop transparent approaches and mechanisms for service delivery, including digitised apps/services, which may reduce physical contact between public servants and service receivers. In addition, it is equally important to build the capacity of the service receivers through educational and awareness-raising programs on the types and costs of public services and their role in promoting good governance.
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Conflict of Interest

The authors declare that there is no conflict of interest.

References

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