
*BRIBERY EPISODES AMONGST GEOPOLITICAL ZONES IN
NIGERIA*

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Abstract

In this paper, One-Way ANOVA was used to test for equality of mean bribery prevalence amongst the six geopolitical zones in Nigeria. Dataset used was obtained from the 2017 Nigeria Corruption Statistics Survey. The results obtained from the study revealed that although there exists a difference in mean bribery prevalence amongst the six geopolitical zones, this difference is not statistically significant. This implied that all geopolitical zones made equal contribution to bribery prevalence. None is said to be more corrupt than the other on the average. Suggestions were made on how to curb prevalence of bribery along with its consequences in Nigeria.

Keywords: bribery, ANOVA, prevalence, corruption, geopolitical zone.

Introduction

Bribery can be defined as an act of giving money or any item of value to a public official so as to obtain favour, privilege or preferment which the giver would ordinarily not offer. Bribery which is also termed ‘gratification’ is a crime and punishable under *The Corrupt Practices and other related Offences Act, 2000*.

“The fact that almost one-third of Nigerians who had contact with a public official paid

one or more bribes over the course of the year shows that bribery is clearly a significant issue in the lives of Nigerians” (UNODC, 2017). They noted that although the public sector bribery as well as the private sector bribery exist in Nigeria, the citizens are most accustomed with bribe payment to public officials. More so, in a rank of about 13 issues that are burdensome on Nigerians currently, Unemployment is

the first. This was followed by high cost of living while corruption ranked 3rd.

The prevalence of bribery was calculated as proportion of persons who had at least one contact with a public official and who paid a bribe to a public official, or were asked for a bribe by those officials during the previous twelve (12) months (UNODC, 2017).

The World Bank Group stated that bribes, being one of the principal tools of corruption could manifest in two ways such that there exists a strong correlation between bribes in public sector and those in private sector. Firms can influence receipt of government contracts, negotiate for lower taxes, speed up issuance of license or twist legal outcomes through bribes.

Olaleye-Oruene (1998) stated that corruption infiltrates from the uppermost tier of government to the lowest level of the public service.

Malomo (2013) studied factors that prompt the tendency to collect bribe as well as size of bribe payment amongst industrial firms in Nigeria. It was observed that traffic violations invite kickback demands from public officers and consequently boost offers from firms.

Herrera et al. (2007) investigated the effect of corruption on firms and thus observed

that bribery incidence is low for firms that operate in countries with high quality of infrastructure and regulatory systems. They therefore proffered that when public infrastructures are upgraded, corruption could reduce to a great extent.

Hunt and Laszlo (2012) considered how bribery episode affects the rich and the poor. In as much as the poor offer what they consider a great deal out of their meagre income, the rich have greater likelihood to offer bribe freely than the poor.

Boles (2014) stated that bribery has double faces. The first being perpetrated by public officials while its twin, the private bribery is being executed in the private sector. He asserted that although the two forms of bribery are functionally comparable crimes, the manner of response from stakeholders is completely different. For instance, there is serious outbursts from citizens coupled with remedial action from the government when public bribery is executed while response is usually mild and most times ignored by the government when it is perpetrated in the private sector. He therefore advocated for equal punishment for offenders from both sectors as they both cripple economic growth and erode trust.

Monyake (2016) examined diverse methods in which individuals prefer to tackle corruption especially those who have

firsthand experience of bribery. Those who paid bribes more often preferred to engage in protests while the rest preferred to report supposed cases of bribery.

Adeyeye (2017) expressed dissatisfaction towards the manner in which firms in Africa are perceived as chief actors in foreign bribery. He stressed that bribery should not be perceived as a normal way of business engagement by Africans in foreign markets while commending countries that have tightened their anti-corruption standards.

Mbate (2018) studied the effects of economic, social and political capital on individual's tendency to pay bribes. There was decrease in incidence of bribery as social capital increased, bribery incidence increased in the presence of political network and generally, the poor bore the largest burden of bribery.

Shaheer et al. (2019) compared the contribution that state-owned enterprises (SOE) make towards bribe payments as against the private-owned enterprises (POE). On the basis of data collected, they asserted that on average, SOEs are 12% less likely to engage in bribery than POEs.

Statement of Problem

Bribery, which is one of the most significant present – day issues throughout

the globe; manifests across all geopolitical regions as well as all sectors in Nigeria. It ranges from the Law enforcement agency to the Judiciary; the revenue, customs and the public utilities offices not left out. Although there exists a difference in mean bribery prevalence across the geopolitical zones, this paper seeks to examine whether this difference is statistically significant.

This gave rise to the research question and consequently, hypothesis stated below at 0.05 level of significance.

Research Question

Is there any significant difference in mean bribery prevalence amongst the six geopolitical regions in Nigeria?

Hypothesis

$H_0: \mu_1 = \mu_2 = \dots = \mu_6 = 0$

$H_1: \text{at least one mean differs}$

$\alpha = 0.05$

Decision rule: Reject H_0 if $p - \text{value} < 0.05$, otherwise accept H_0 .

3.0 Methodology

We employed dataset obtained from the 2017 Nigerian Corruption Statistics Survey. This dataset contains values representing the prevalence of bribery for each of the 36 states of the federation as

well as the Federal Capital Territory. The states were further grouped according to their corresponding geopolitical zones. A brief summary of this dataset is presented in Table 1. Dataset is available at [https://nigerianstat.gov.ng/elibrary?queries\[search\]=corrup](https://nigerianstat.gov.ng/elibrary?queries[search]=corrup) . The statistical method applied in testing the afore-mentioned hypothesis is one-way Analysis of Variance (ANOVA). It is presented below.

ONE – WAY ANOVA

When a researcher is interested in testing for equality of more than two means, Analysis of Variance comes in handy. Since we considered the impact of geopolitical zones on the prevalence of bribery, the geopolitical zone is one factor (independent variable). Now, since only one factor is being considered, one-way ANOVA is the statistical technique to apply. More so, there are several levels of this factor (which is also called ‘treatment’). These levels are the 6 geopolitical zones. Having observed that the geopolitical zones do not have equal number of states under them, one-way ANOVA with unequal sample size formula was employed.

The model for one-way ANOVA is given by

$$X_{ij} = \mu + \alpha_i + e_{ij} \quad , i = 1, 2, \dots, p ; \quad j = 1, 2, \dots, q \text{ ----- (1)}$$

where

e_{ij} is the error associated with the observation X_{ij} . It follows the normal distribution with mean 0 and variance σ^2 . That is, $e_{ij} \sim N(0, \sigma^2)$

p represents the 6 treatments (6 geopolitical zones)

q represents the number of states under each geopolitical zone

X_{ij} is the j th observation from the i th treatment

μ is the overall mean

α_i is the mean effect of the i th treatment

Let N be the total number of observations and q_i be observations taken under i th treatment. The Sum of Squares are given by

$$SS_{\text{Total}} = \sum_{i=1}^p \sum_{j=1}^q y_{ij}^2 - \frac{y_{..}^2}{N}$$

$$SS_{\text{Treatment}} = \sum_{i=1}^p \frac{y_{i.}^2}{q_i} - \frac{y_{..}^2}{N}$$

$$SS_{\text{Error}} = SS_{\text{Total}} - SS_{\text{Treatment}}$$

For more information on Analysis of Variance, See Montgomery and Runger (2003).

There are 3 basic assumptions which must be met before One-Way ANOVA can be

applied in data analysis. If any of the assumptions are not met, the non-parametric version can be applied. These assumptions are:

- Normality: The dependent variable must be normally distributed. The Shapiro-Wilk's test for normality will be used. The null hypothesis for this test is that the data is normally distributed. If p-value is less than the alpha value, reject the null hypothesis.
- Homogeneity of Variance: The variances in the population from which samples were drawn must be equal. Levene's test will be used. The null hypothesis for this test is that population variances are equal. If p-value is less than the alpha value, reject the null hypothesis.
- Independence of observations

al zones							
North	0.	0.	0.	0.	0.	0.	0.
–	45	36	32	28	28	20	13
Centr al	5	8	3	6	5	4	0
North	0.	0.	0.	0.	0.	0.	
– East	52	51	45	30	20	19	
	4		3	8	0	4	
North	0.	0.	0.	0.	0.	0.	0.
–	51	50	38	35	30	26	26
West	7	4	3	6	6	5	5
South	0.	0.	0.	0.	0.		
– East	35	27	21	21	18		
	8		7	4	7		
South	0.	0.	0.	0.	0.	0.	
–	42	40	35	33	26	17	
West	1	1	1	4	2	2	
South	0.	0.	0.	0.	0.	0.	
–	40	40	37	34	33	18	
South	0	0	6	9	5	1	

Data Analysis And Results

SPSS Version 20 was used to run the analysis

Table 1: Data Presentation

Geopolitic	Bribery prevalence for each state under each zone
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Table 2: Tests of Normality

	Kolmogorov-Smirnov ^a		
	Statistic	df	Sig.
Prevalence of bribery	.092	37	.200*

Table 4: Data Summary where N represents the number of states in each zone, Mean (mean bribery prevalence)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
North-Central	7	.29300	.105965	.040051	.19500	.39100	.130	.455
North-East	6	.36483	.150841	.061581	.20654	.52313	.194	.524
North-West	7	.37086	.104937	.039663	.27381	.46791	.265	.517
South-East	5	.24920	.067851	.030344	.16495	.33345	.187	.358
South-West	6	.32350	.092858	.037909	.22605	.42095	.172	.421
South-South	6	.34017	.082320	.033607	.25378	.42656	.181	.400
Total	37	.32605	.105949	.017418	.29073	.36138	.130	.524

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Within Groups	.343	31
Total	.404	36

Table 3: Test of Homogeneity of Variances

Discussion of Findings

Prevalence of bribery

• The result of Shapiro Wilk's test for normality (Table 3) shows that the data is normally distributed with p-value 0.392.

Levene Statistic	df1	df2	Sig.
1.665	5	31	.173

• The result of Levene's test for homogeneity of variance (Table 4) shows that variance is equal across all groups with p-value 0.173.

Table 5: ANOVA Result

Prevalence of bribery

• The first and second points above confirm the assumptions of One-

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.061	5	.012	1.193	.374

- There was indeed a difference in mean bribery prevalence as seen in Table 2.
- The ANOVA test result (Table 5) with p-value 0.374 shows that significant difference does not exist between the means. Therefore, no need for Post Hoc or multiple comparison test.

Conclusion

This study concluded that although difference in mean bribery prevalence exists amongst the six geopolitical zones, this difference is not statistically significant. This implied that all geopolitical zones played equal role in bribery prevalence. Therefore none is said to be more corrupt than the other.

Policy implications

- The Nigerian citizens should be sensitized on the need to report public officials who demand for bribes.
- Since bribery is a crime and punishable under law, agencies responsible for punishing such crimes should not 'take a softer line' in discharging their duties effectively.
- Since all geopolitical zones played equal role in prevalence of bribery, all citizens should be law-abiding so as not to boost bribe payment in a bid to circumvent due protocols.

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