

## Socio-Economic Determinants and Implication of Crime Rates in Lagos State, Nigeria, West Africa

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### Abstract

This study examines the socio-economic determinants and implications of crime rates in Lagos State, Nigeria in West Africa. The study is quantitative in nature. As a constituent of the sampling, the researchers distributed a questionnaire to over 800 respondents and analyzed 600 responses by using Cluster-random sampling techniques. Also, multinomial probit analysis was applied by using respondents' participation in white-collar crime as dependent variable, and attitudinal-predisposition statements (dealing with age, ethnicity, gender, education, unemployment, loss of sovereign, economic hardship, political orientation and aspiration to become rich overnight) as the independent variables resulted in significant interactions and effects. The study revealed that age, race, gender, education, unemployment, loss of sovereignty, economic hardship and aspiration to become rich overnight have influenced the behavior of individuals to engage in crime. Furthermore, the study illustrated that high crime rates discourages investors, foreign direct investments, grants, stable economic systems, which threaten the strength of state security. The study recommended that the Government of Nigeria, Non-Governmental Agencies and other stakeholders should strengthen security efforts and security systems through the development and implementation of effective policies that can generate better security outcomes for the citizens and the country.

**Keywords:** *Socio-economic factors, Crime rates, Probit analysis, Sovereignty, Investors and Education*

### 1.0: Introduction

Nigeria, like several other West African countries, has weak security systems, despite its enormous resources and substantial security budget. Criminal victimization, especially armed robbery, kidnapping, terrorism, and rape pose a big challenge with severe impacts on quality of life. One recent survey found that fear of being a victim of crime is a concern to 75 percent of Nigerians (CLEEN Foundation, 2012). Corruption is pervasive and deeply rooted in the governance system. According to a new report, Nigerians consider corruption to be third most important problem they face after high cost of living and unemployment (United Nations Office on Drugs and Crime & National Bureau of Statistics [UNODC & NBS], 2017). Nigerians spend an estimated N400 billion (\$4.6 billion) annually to bribe public officials with the police and judiciary in particular receiving the lion's share of nearly 50 percent and 33 percent, respectively (UNODC & NBS, 2017). And per Nigeria's Economic and Financial Crimes Commission (EFCC), Nigeria lost more than \$380 billion to waste and corruption between 1960 and 1999. More profound, corruption impedes honest public service, ravages the soul of the country and hinders development. In order to understand the depth of crime and corruption, an anatomy of crimes in Nigeria is provided.

#### *Genesis of crime in Nigeria:*

Nigeria became an independent country from Britain in 1960. During the first-five years of this transition from colonial rule to indigenous leadership, crime was at its lowest level. After the Nigerian Civil-war (1967-1970), one of the after-effects of the war was a spike in crime and this was expected because of the ravages of war, especially economic dislocation and lack of employment opportunities, which are factors that contribute to

crime. The war can indeed be referred to as the beginning of a serious crime wave in Nigeria. Adding to the effects of the war was the discovery of oil and gas. Oil has been the biggest factor promoting corruption in Nigeria. Some commentators have called this tendency the “curse of oil.” This is because oil generates huge revenues with poor accountability systems. As a result, oil revenue offered the easiest way for the elite, especially state actors to misappropriate and mismanage revenues as much as their positions allowed them without been held accountable.

Meanwhile, the state-run oil agency, the Nigerian National Petroleum Corporation (NNPC) is the most egregious culprit in the thefts and abuses of Nigeria’s oil and gas resources. Some examples will be in order. According to a recent report by Chatham House, a renowned British think tank: NNPC is widely seen as one of the most politicized and compromised institutions of any oil producing nation. Nigerian crude oil is being stolen on an industrial scale. The estimated annual value of oil stolen from Nigeria is between \$3 billion and \$8 billion (Katsouris and Sayne, 2013). Also, at a Senate Finance Committee hearing in 2014, then Governor of Nigeria Central Bank, Mr. Lamido Sanusi, disclosed that the NNPC failed to remit \$20 billion in oil revenues between January 2012 and July 2013 to the Federation Account (Aborisade, 2014). Furthermore, in June 2017, government sponsored Nigeria Extractive Industry Transparency Initiative (NEITI) reported that it had no proof that the NNPC remitted \$15.8 billion it received between 2000 and 2014 from the Nigeria Liquefied Natural Gas Company to the government (Nnodim, 2017).

Surprisingly, government efforts to deter, investigate, and punish criminals has been lackluster and poorly coordinated. Meanwhile, the crime epidemic ravaging states as well as the entire nation continues unabated. However, in perusing several literatures, journals, and online libraries, no current study has looked into the crime problem from the perspective of the socio-economic analysis of crime in the Lagos state in Nigeria as a proposed topic for investigation. This research is conducted to fill the gap. The main objective of the study is to establish the socio-economic determinants and implications of Crime Rates in the Lagos State, Nigeria, West Africa.

## **2.0: Literature Review**

In perusing several literatures, there are few multivariate analyses of crime rates and trends, even in the United States. Taking an emblematic example from the work of Fox (1976) on the study of property and violent crime rates in the United States, since 1950, as a proportion of the inhabitants consisting of young nonwhites and the rates at which crimes are cleared by arrest, the Fox study ignored the growth pattern in the numbers of offenders over time. Unfortunately, Durbin-Watson H-statistics evidenced the spuriousness of the model specification (i.e. misspecification).

Again, following the most recent empirical evidence on the studies by Gould (1969), Mansfield, Gould and Namenwirth (1974) as well as the Cohen et al. (1980), the studies have demonstrated that variables such as offender attributes and economic factors are the key determinants of crime rates after the post-world war II. In relation to their findings, the studies do not investigate how these social and economic changes cause a change in justice, crime, homicides, and domestic violence in the United States.

Lastly, Cohen (1981) did a study on modeling crime trends from the criminal opportunity perspective. The study used a macro-dynamic social indicator framework to demonstrate how accurate crime rate forecasts can be produced. The study revealed that poverty ratio and unemployment rate variables were considered important predictors of crime.

Surprisingly, none of these studies looked at the socio-economic analysis of the all kinds of crime in Lagos state in Nigeria as a proposed topic for investigation.

## **3.0: Method and Materials**

A multinomial probit analysis is applied by using respondents ‘participation in crime as dependent variable, and both attitudinal-disposition, and stimulus-response statements (dealing with age, ethnicity, gender, education, unemployment, loss of sovereign, economic hardship, political orientation and aspiration to become rich overnight) as the independent variables resulted in significant interactions and effects. As constituent of the sampling, the researcher distributed a questionnaire to over 800 respondents and, in the end, analyzed 600 responses with the help of Cluster-random sampling techniques. The study is exploratory in nature. Closed-

ended questionnaires were administered, but were centered on crime committers in Lagos state prisons of Nigeria. STATA 12 was used to analyse the field data with the help of a multinomial probit regression model, the socio-economic determinants of crime in the State of Lagos is established.

### 3.1: Model Design

A conceptualized multinomial probit analysis was applied by using respondents 'participation in crime as independent variable, and both attitudinal-disposition, and stimulus-response statements (dealing with age, ethnicity, gender, education, unemployment, lack of sovereign, economic hardship, political orientation and aspiration to become rich overnight) as the dependent variables resulted in significant interactions and effects.

The dependent variable is qualitative/ binary variable which takes into accounts yes or no responses. It would be useful to capture the dependency of  $Y$  on  $X$  as a simple function, particularly when there are several explanatory variables. For example, in ordinary multiple regressions, the link function is called the identity link since

$$g(\mu_i) = \mu_i \text{ and so } \mu_i = \eta_i, \text{ or}$$

$$E(y_i) = x_i' \delta = \mu_i = \eta_i$$

The usual assumption

$$Y_i = \delta_0 + \delta_1 X_1 + \dots + \delta_k X_k + \varepsilon_k$$

where  $\varepsilon_k \sim N(0, \sigma_\varepsilon^2)$  and  $\varepsilon_i$  and  $\varepsilon_k$  are independent for  $i \neq k$ . The expectation of  $Y$  i.e

$$E(Y_i) = E(\delta_0 + \delta_1 X_1 + \dots + \delta_k X_k + \varepsilon_k) \text{ and so } \pi_i = \delta_0 + \sum \delta_k X_k$$

For this reason, the regression model to a dummy response variable is called the probability model. For a probit model

$$p_k(Y = 1) = \Phi^{-1}(p_i) = \sum_{k=0}^{k=n} \delta_k X_{ik} = \Phi(X' \delta)$$

Hence the probit model for the study is given as;

$$p_k(Y_i = 1) = \Phi (\delta_0 + \delta_1 GN + \delta_2 EDU + \delta_3 ETH + \delta_4 UNEMP + \delta_5 POL + \delta_6 RON + \delta_7 LOS + \varepsilon_k)$$

Where  $Y_i$  = Qualitative dependent variable: if respondent crime is a white-collar type =1; if not=0.

**GN** = Gender (a dummy variable: if male =1, if not =0)

**EDU**= Number of years spent on education

**ETH**= Ethnicity (i.e. if from the south of Nigeria =1, if not =0)

**UNEMP**= Unemployment as a proxy for economic hardship (a dummy variable: if unemployed =1, if not =0)

**RON**= Desperate to be rich overnight (a dummy variable: if desperate to be rich overnight =1, if not =0)

**POL**= Political Orientation (a dummy variable: if belong to the ruling party =1, if not =0)

**LOS**= Loss of Sovereignty (a dummy variable: if the people are powerless in decision making =1, if not =0)

$\Phi$ = Cumulative standard normal distribution function

$\varepsilon$ =Error-term

### Study Hypotheses

In consideration to an output that would be revealed from the analyses, the study tested the appropriateness or otherwise of each of the model parameters such that one of the coefficient of the

$$\delta_i \neq 0 \quad \text{for at least one } i.$$

The appropriate hypothesis is given as

$$H_0 : \delta_1 = \delta_2 = \dots = \delta_k = \mathbf{0} \text{ against the alternative that}$$

$$H_1 : \delta_i \neq \mathbf{0} \text{ for at least one } i$$

At  $\alpha = 0.01, 0.05$  and  $0.1$  level of significance respectively. Where  $\delta_i$  are the model parameters or coefficients of the independent variables.

#### 4.0: Empirical Results

##### The Quantitative Analysis of the Multinomial Probit Determinants of White-Collar Crime in Lagos State, Nigeria, West Africa

Table 1 recapitulates the estimations for parameter coefficients for the multinomial probit regression results. The coefficients of the independent variables (i.e. age, ethnicity, gender, education, unemployment, lack of sovereign, economic hardship, political orientation and aspiration to become rich overnight) are the values with the asterisked and their probability effect of establishing a socio-economic factors of white-collar crime due to the various tested predictive variables is the sign the value possesses. Figures that has been asterisked (\*), (\*\*) and (\*\*\*) denote significance at the 10%, 5% and 1% level, respectively for each model.

**Table 1: Socio-Economic Determinants of White-Collar Crime in the Lagos State of Nigeria**

VARIABLES	Coefficients	Standard Errors	p-values
<i>GN</i>	0.1521421***	(0.01312041)	0.020
<i>EDU</i>	-0.1630322***	(0.01314041)	0.010
<i>ETH</i>	0.1521432***	(0.01246043)	0.011
<i>UNEMP</i>	0.1621422***	(0.01226043)	0.000
<i>POL</i>	0.1521413***	(0.01216043)	0.000
<i>RON</i>	0.1521431***	(0.01216043)	0.000
<i>LOS</i>	0.1621423***	(0.01216043)	0.012
<b>Observations</b>		<b>600</b>	
<b>R-squared</b>		<b>0.863</b>	

Note: Standard errors are presented in parentheses. \*, \*\* and \*\*\* denote significance at the 10%, 5% and 1% level, respectively. The study through STATA 12 used p-values computed to determine the statistical significance of the variables estimated. The rejection of the null hypothesis was set at the 5%, significance levels of the Two-tailed, with p-critical value of 0.05. Results were obtained from STATA 12. *Source: Field data, January, 2017.*

The independent variables (i.e. age, ethnicity, gender, education, unemployment: economic hardship, loss of sovereignty, political orientation and aspiration to become rich overnight) with respect to specific time point's interaction with respondents' responses on whether they commit white-collar crime or not as the dependent variable were tested to be significant at  $\alpha = 0.1$  and  $0.05$  respectively. About 86% of the data points were explained and taken into consideration the analyses as seen from our R-squared estimate of 0.86 to one (1) decimal place (86%). This implies that about 86% fluctuation or variation in the establishment of socio-economic determinants of white-collar crime rate in Lagos was explained by the changes in the independent variables (i.e. age, ethnicity, gender, education, unemployment: economic hardship, loss of sovereignty, political orientation and aspiration to become rich overnight). The parameter estimates for the models are approximately the same for all the assumptions when we consider estimation at 1 decimal point.

The explanatory variable gender (GN) was statistically significance at 5% and 10% significance level for white-collar crime rate. This implies that the probability rate for a male to be involved in a white-collar crime is high as compared to the females counter-part as the control group.

Education (EDU) was also statistically significant to white-collar crime rate at 5% significance level. Given the magnitude and direction of education estimate (-0.1630322) at 5% significance level, education recorded a negative influence on white-collar crime. This is because education was negatively related to white-collar crime. This implies that the more people are being educated the lesser their involvement in crime rate.

Ethnicity (ETH) was also statistically significant at 5% significance level as a determinant of white-collar crime. It was positively related to white-collar crime. This implies that people from different background or tribes are likely to align themselves to a particular political party to raise an enmity among one another.

Unemployment (UNEMP) was also statistically significant at 5% significance level as a determinant of white-collar crime (i.e. P-value of 0.000 which is less than 0.05). It was positively related to white-collar crime

(0.1621422\*\*\*). This implies that economic hardships are likely to triggers the prevalence rate of crime in the economy.

Also, political orientation (POL) was positively related to white-collar crime (0.1521413\*\*\*) and also significant at 5% significance level (i.e. p-value of 0.000, which is less than 0.05). Interestingly, political orientation also increases the rate at which white-collar crime occurs. That is, partisan politics is a key to vandalism and brutality among the minorities.

Meanwhile, the extent to which elected officials are desperate to be rich overnight (RON) as a predictive variable was positively related to white-collar crime (0.1521431\*\*\*) and significant at 5% significance level (i.e. p-value of 0.000, which is less than 0.05). This implies that at 5% significance level, the rate at which elected officials want to be rich overnight increases the tendency of white-collar crime prevalence rate.

Lastly, loss of sovereignty as a predictive variable was positively related to white-collar crime in Nigeria (0.1621423\*\*\*) and also statistically significant at 5% significance level (i.e. p-value of 0.012, which is less than 0.05).

**Table 2: Implications of Crime Cases on the Economy of Lagos States**

VARIABLES	Coefficients	Standard Errors	p-values
<i>Corruption</i>	0.421413***	(0.0031203)	0.010
<i>Low Investors</i>	0.3530332***	(0.0031403)	0.001
<i>Unstable Economy</i>	0.3421413***	(0.0024603)	0.012
<i>Fear and Anxiety</i>	0.2521412***	(0.0022603)	0.010
<i>Loss of Lives</i>	0.2421412***	(0.0021603)	0.020
<i>Loss of Properties</i>	0.1521413***	(0.0031603)	0.021
<b>Observations</b>		<b>600</b>	
<b>R-squared</b>		<b>0.861</b>	

Note: Standard errors are presented in parentheses. \*, \*\* and \*\*\* denote significance at the 10%, 5% and 1% level, respectively. The study through STATA 12 used p-values computed to determine the statistical significance of the variables estimated. The rejection of the null hypothesis was set at the 5%, significance levels of the Two-tailed, with p-critical value of 0.05. Results were obtained from STATA 12. **Source: Field data, January, 2017.**

Table 2 summarizes the estimations of socio-economic implications of white-collar crime rates on Nigeria's economy. The coefficients of the independent variables (i.e. corruption, loss of lives, loss of property, fear and anxiety, low investors and unstable economy) are the values with the asterisked and their probability effect of white-collar crime due to the various tested predictive variables is the sign the value possesses. All the socio-economic implications of white-collar crime are statistically significant at 5% significance level. This implies that white-collar crime rates in Lagos are associated with the following socio-economic implications: corruption, loss of lives, loss of property, fear and anxiety, low investors and unstable economy.

## 5.0 Conclusions and Recommendations

White-collar crime rate needs to be forestalling in order to lift-up the image of the nation. In relation to the analyzed data, white-collar crime rates have repelled the growth of the nation by causing and influencing; corruption, loss of lives, loss of property, fear and anxiety, low investors and unstable economy. Notably, this study is expected to serve as a catalyst for many erudite to do an in-depth research more on the various kinds of white-collar crimes. Based on the findings, the study strongly recommends the following;

1. The Government of Nigeria, Non-Governmental Agencies and other stakeholders should help brawl white-collar crime by discouraging discrimination (i.e. not-partisan).
2. The Government of Nigeria, Non-Governmental Agencies and other stakeholders should strengthen security efforts and security systems through the development and implementation of effective policies that can generate better security outcomes for the citizens and the country.
3. The citizens should be empowered by law to become sovereign in the state, in order to hold the government officials accountable for embezzling the state resources (i.e. funds).

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