

The Study of the Remote Causes of Restiveness in the Niger Delta Area of Southern Nigeria

(An Empirical Analyses of the Impact of Criminal Activities along the Water Ways on the Economy in the Niger Delta Area)

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ABSTRACT

This study projected the theme: 'The Study of the Remote Causes of Restiveness in the Niger Delta Area of Southern Nigeria: An Empirical Analyses of the Impact of Criminal Activities along the Water Ways on the Economy in the Niger Delta Area'. The aim of the study is pointedly to investigate of the remote causes of criminal activities along the water ways in the Niger Delta area through the specific objectives of ascertaining the relationship between the dimensions of Criminal Activities along the Niger Delta area and the measures of Poor Economy, and how the moderating variables positively influenced and the suppressor variables negatively influenced the relationship between Criminal Activities and Poor Economy. By the doctrine of agreement reality, Rivers State, Bayelsa State and Delta State were the areas covered by this study. A population of 4130 persons, made up of the boat operators, the inland waterways officials and the passengers was the parameter for this study. A sample size of 897 persons, determined by Krejcie and Morgan (1970) sample determination table was used as the information base. A cross-sectional design method was used to extract primary information from the research respondents, using a questionnaire. The researchers applied hypotheses to analyse the information. The objective findings of this study were that: there was a significant relationship between criminal activities along the water ways and Poor Economy in the Niger Delta area; Desire, Opportunity and Target positive influencers, while Duty of Care and Employment were negative influencers in the relationship between criminal activities and poor economy in the Niger Delta area. There were also a number of serendipitous findings from this study. The conclusion from this study was that government's negligence of providing duty of care and employment are the root causes of restiveness in the Niger Delta area. Recommendations, based on the objective and serendipitous findings were proposed.

Keywords: Inland Waterways Transportation, Economic Impact, Boat Jacking, Small Arms and Light Weapon Trafficking, Criminal Activities, Duty of Care, Employment, Poor Economy, Under Development, Pipeline Vandalism

1. INTRODUCTION

Inland Waterways Transportation is the major means of transportation and plays a significant role in moving people from community to community, having 80% of its area covered by water, within the areas of concentration in this study, which represent the Niger Delta area – (Adejare, Opaluwa, Nwilo, 2013) in Okee¹. The Niger delta area covers about 70,000kmsq with a population of 42,583.000 – Callie & Ronald². The Niger Delta area is the economic life wire of Nigeria. Colin, Farhad, Ana & Priyanthi³ stipulated the water transportation means is the best mode and most suitable means of moving huge cargos from place to place.

According to Ukoji⁴, the nature of the waterways provide a hiding place for the perpetration of different forms of crimes ranging from boatjacking, kidnapping, pipeline Vandalisation, Small Arms and Light Weapon Trafficking, etc. Although, crime is a universal phenomenon, Mueller⁵, it has become a main source of income to those who engage in it within the geographical area of this study - Bello & Jamilu⁶. Badejo⁷ admitted that crimes in the Niger Delta enough to encourage development and economic growth. He added that except the issue of the Niger Delta consciously and positively addressed, the overall economic state of

Nigeria would remain in comatose. This work would be confined to a purely empirical study and its subsequent findings. It therefore, would not include a bogus literature review beyond the opinions of other authorities have already been shared in this introduction. This work would be subjected to a rigorous assumption testing on the adopted data, the subsequent scientific suitable variables that would involve the normality of the measures of the criterion variable, the non multicollinearity of the dimensions of the explanatory variable, the stationary nature (unit root test) of all the factor dimensions of the explanatory variable and the measures of the target variable, confirmation of the causality behaviour of the explanatory variable on the target variable, the autocorrelation and the serial correlational behaviour of the variables, the long or short term relationship (Bound Test) between the explanatory and the target variables, the Kaiser Meyer- Olkin and Bartlett's tests and so on.

2. OBJECTIVES OF THE STUDY

Contextually, the objectives of this study include:

1. To ascertain the relationship between Boat Jacking (BJ) and Economic Impact (EI).
2. To determine the relationship between Kidnapping for Ransom (KfR) and Economic Impact (EI).
3. To determine the relationship between Pipeline Vandalism (PV) and Economic Impact (EI).
4. To determine the relationship between Small Arms and Light Weapon Trafficking (SALWT) and Economic Impact (EI).
5. To determine the positive influence of Desire (DS) in the relationship Criminal Activities (CA) and Economic Impact (EI)
6. To determine the positive influence of Opportunity (OP) in the relationship Criminal Activities (CA) and Economic Impact (EI)
7. To determine the positive influence of Target (TG) in the relationship Criminal Activities (CA) and Economic Impact (EI)
8. To determine the negative influence of Duty of Care (DoC) in the relationship Criminal Activities (CA) and Economic Impact (EI)
9. To determine the negative influence of Employment (EM) in the relationship Criminal Activities (CA) and Economic Impact (EI)

3. RESEARCH QUESTIONS

The following are the research questions:

- Q1. What relationship that exists between Boat Jacking (BJ) and Economic Impact (EI).
- Q2. What relationship that exists between Kidnappings for Ransom (KfR) and Economic Impact (EI).
- Q3. What relationship that exists between Pipeline Vandalism (PV) and Economic Impact (EI).
- Q4. What relationship that exists between Small Arms and Light Weapon Trafficking (SALWT) and Economic Impact (EI).
- Q5. What positive influence of Desire that exists in the relationship Criminal Activities (CA) and Economic Impact (EI)
- Q6. What positive influence of Opportunity (OP) that exists in the relationship Criminal Activities (CA) and Economic Impact (EI)
- Q7. What positive influence of Opportunity (OP) that exists in the relationship Criminal Activities (CA) and Economic Impact (EI)
- Q8. What negative influence of Duty of Care (DoC) that exists in the relationship Criminal Activities (CA) and Economic Impact (EI)
- Q9. What negative influence of Employment (EM) that exists in the relationship Criminal Activities (CA) and Economic Impact (EI)

4. Research Hypotheses

- Ho₁ – There is no significant relationship between Boat Hijacking (BJ) and Poor Economy (PE)
Ho₂ – There is no significant relationship between Boat Hijacking (BJ) and Under Development
Ho₃ – There is no significant relationship between Kidnapping for Ransom (KfR) and Poor Economy (PE)
Ho₄ – There is no significant relationship between Kidnapping for Ransom (KfR) and Under Development (UD)
Ho₅ – There is no significant relationship between Pipeline Vandalism (PV) and Poor Economy (PE)
Ho₆ – There is no significant relationship between Pipeline Vandalism (PV) and Under Development (UD)
Ho₇ – There is no significant relationship between Small Arms and Light Weapon Trafficking (SALWT) and Poor Economy (PE)
Ho₈ – There is no significant relationship between Small Arms and Light Weapon Trafficking (SALWT) and Under Development (UD)

- Ho₉ - There is no positive influence of Desire (DS) that exists in the relationship Criminal Activities (CA) and Economic Impact (EI)
- Ho₁₀ - There is no positive influence of Opportunity (OP) that exists in the relationship Criminal Activities (CA) and Economic Impact (EI)
- Ho₁₁ - There is no positive influence of Target (TG) that exists in the relationship Criminal Activities (CA) and Economic Impact (EI)
- Ho₁₂ - There is no negative influence of Duty of Care (DoC) that exists in the relationship Criminal Activities (CA) and Economic Impact (EI)
- Ho₁₃ - There is no negative influence of Employment (EM) that exists in the relationship Criminal Activities (CA) and Economic Impact (EI)

METHODOLOGY

The data used in this work is a secondary data from the field work of Okee¹. In his work, a cross-sectional method was adopted in his study, using a ‘Niger Delta Waterways Operations’ questionnaire instrument administered to 897 persons, representing a total population of 4130 persons from Rivers State, Bayelsa State and Delta State. The 897 persons were extracted from three groups – the boat operators, the Inland Waterways Officials and the Passengers. Krejcie and Morgan (1970) sample determination table was used to determine the sample size. The purposive and convenient sampling techniques were adopted in selecting the 3 states and the 897 persons representing the population. A univariate analysis was carried out on the secondary data. The outcome of the univariate analysis structured the form of the null hypotheses. Multiregression analyses were carried out on the null hypotheses to ascertain that the conclusion from the univariate analyses were not by chance. Statistical Package for Social Sciences (Version 25) and EViews 10 were used for the univariate, bivariate and the assumption testing on the data and subsequent variables. The following models were used in the analyses:

1. Poor Economy = a + b(Boat jacking) + b(Kidnapping for Ransom) + b(Pipeline Vandalisation + b(Small Arms and Light weapon Trafficking)
2. Under Development = a + b(Boat jacking) + b(Kidnapping for Ransom) + b(Pipeline Vandalisation + b(Small Arms and Light weapon Trafficking)
3. Poor Economy = a + b(Boat jacking) + b(Kidnapping for Ransom) + b(Pipeline Vandalisation + b(Small Arms and Light Weapon Trafficking) + E

Where E is the Error Correction Term

The Study Sample in their various Groups

Research Respondents in Rivers State

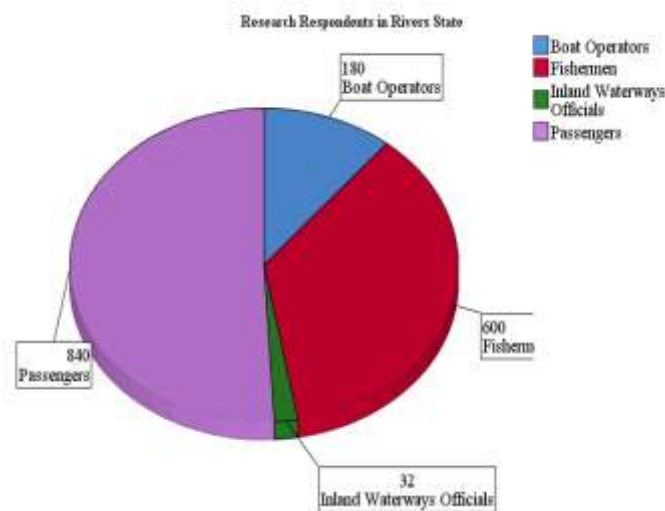


Figure 6.1 Research Respondents in Bayelsa State

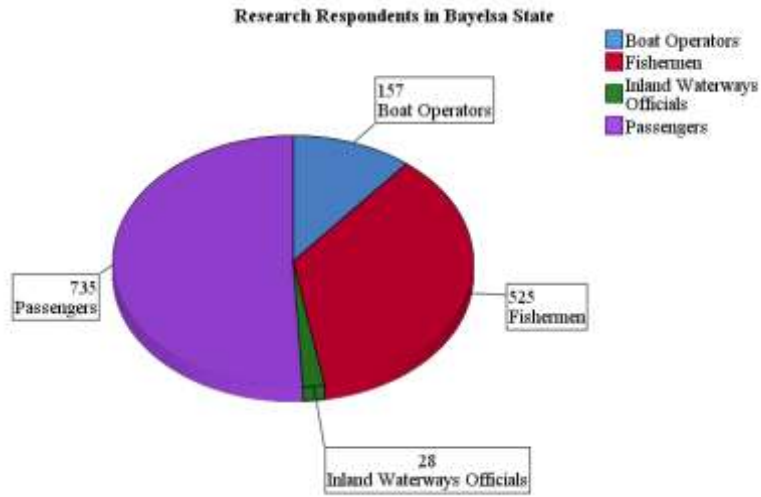


Figure 6.2 Research Respondents in Delta State

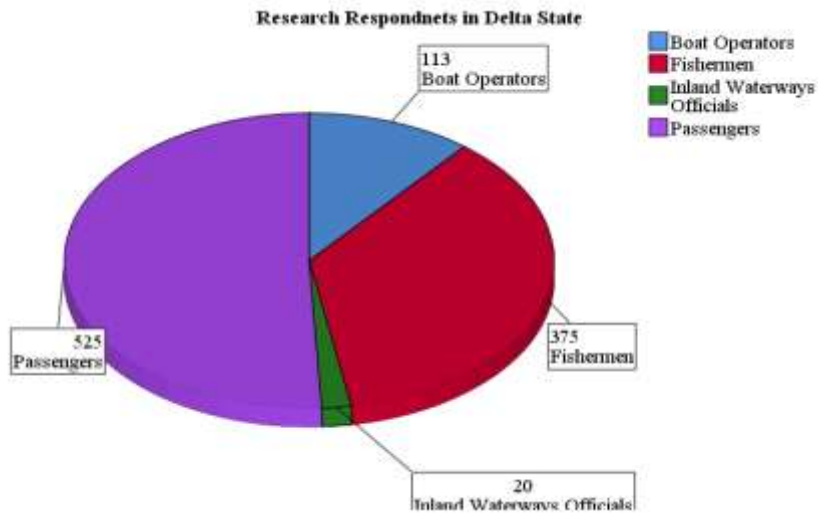


Figure 6.3 The Study Population by their States

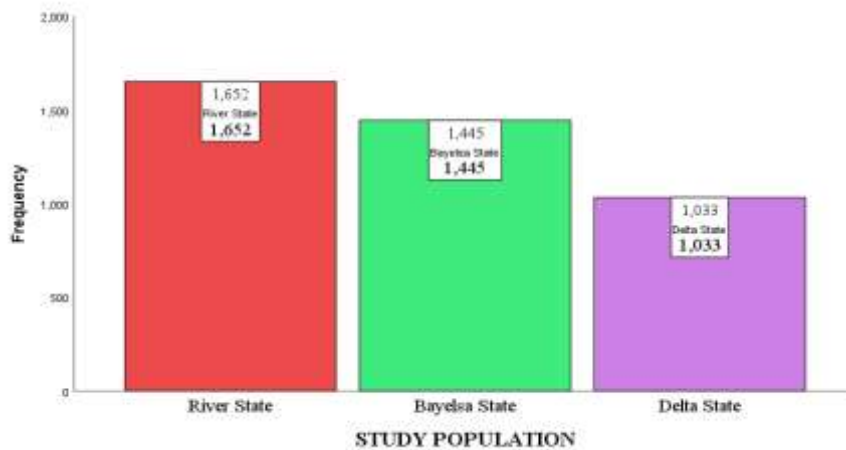


Figure 6.4 Study Sample by their various States

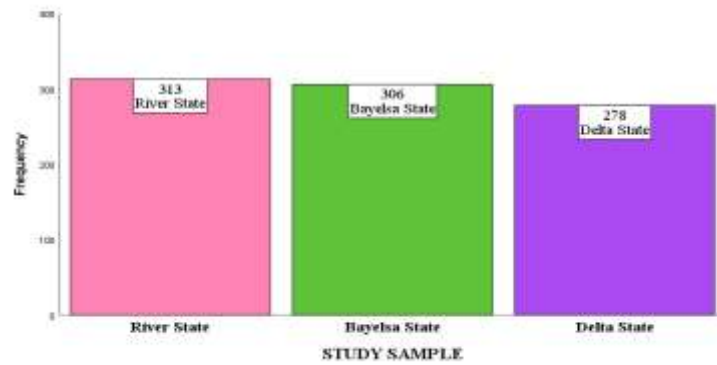


Figure 6.5: Add Figure Caption

(7) Assumption Testing

Table 7.1 Internal Consistency of the Data (The Cronbach’s Alpha of the 36 Items)

<i>Reliability Statistics</i>		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.844	.867	36

Source: Reliability Test, 2022

Table 7.2 Kaiser Meyer- Olkin and Bartlett’s Tests

<i>KMO and Bartlett's Test</i>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.828
Bartlett's Test of Sphericity	Approx. Chi-Square	24677.486
	Df	630
	Sig.	.000

Source: KMO and Bartlett’s Test, 2022

Table 7.3 Causality Test of Criminal Activity (CA) and Economic Impact (EM)

Pairwise Granger Causality Tests

Date: 03/06/22 Time: 15:40

Sample: 1 898

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
CRIMINAL_ACTIVITY does not Granger Cause ECONOMIC_IMPACT	877	0.37467	0.6876
ECONOMIC_IMPACT does not Granger Cause CRIMINAL_ACTIVITY		27.1011	4.E-12

Decision Rule: P-Value of 0.6876 is greater than 0.05. Therefore, the Null Hypothesis is rejected and the alternative hypothesis accepted that Criminal Activity causes Economic Impact. **Source:** Causality Test, 2022

Table 7.4 A Non-Spurious model of Criminal Activity (CA) and Economic Impact (EM)

Dependent Variable: ECONOMIC_IMPACT
 Method: Least Squares
 Date: 03/06/22 Time: 15:37
 Sample (adjusted): 1 897
 Included observations: 891 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CRIMINAL_ACTIVIT				
Y	0.489936	0.009115	53.74889	0.0000
C	25.89650	0.910766	28.43376	0.0000
R-squared	0.764687	Mean dependent var		72.62514
Adjusted R-squared	0.764422	S.D. dependent var		16.69107
S.E. of regression	8.101241	Akaike info criterion		7.024154
Sum squared resid	58345.16	Schwarz criterion		7.034911
Log likelihood	-3127.260	Hannan-Quinn criter.		7.028265
F-statistic	2888.943	Durbin-Watson stat		0.895053
Prob(F-statistic)	0.000000			

Table 7.4 shows that the model is not spurious with the Coefficient of R-Squared of 0.764687 is less than the Durbin-Watson statics of 0.895053 **Source:** Non-Spurious of the Equation Test, 2022

Table 7.5 A Non-Spurious Model of the Dimensions of Criminal Activity (CA) and the and the Measures of Economic Impact (EM)

Dependent Variable: POOR_ECONOMY
 Method: Least Squares
 Date: 03/06/22 Time: 17:18
 Sample (adjusted): 1 897
 Included observations: 890 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
UNDER_DEVELOPMENT	-0.538662	0.039552	-13.61906	0.0000
BOAT_JACKING	0.197901	0.032813	6.031196	0.0000
KIDNAP_FOR_RANSOM	1.127312	0.034013	33.14359	0.0000
PIPELINE_VANDALISATI ON	0.201561	0.024411	8.256845	0.0000
SMALL_ARMS_AND_ LIGHTWEAPON_TRAFFI CKING	0.088491	0.041627	2.125809	0.0338
R-squared	0.853102	Mean dependent var		46.07416
Adjusted R-squared	0.852438	S.D. dependent var		8.869578
S.E. of regression	3.407143	Akaike info criterion		5.295228
Sum squared resid	10273.63	Schwarz criterion		5.322144
Log likelihood	-2351.376	Hannan-Quinn criter.		5.305515
Durbin-Watson stat	0.488968			

Table 7.5 shows that the model is not spurious with the Coefficient of R-Squared of 0.8538662 is less than the Durbin-Watson statics of 5.305515 **.Source:** Causality Test, 2022

Table 7.6 Causality Test of the Dimensions of Criminal Activity (CA) and the Measures of Economic Impact (EI)

Pairwise Granger Causality Tests

Date: 03/06/22 Time: 17:22

Sample: 1 898

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
UNDER_DEVELOPMENT does not Granger Cause POOR_ECONOMY	877	2.42560	0.0890
POOR_ECONOMY does not Granger Cause UNDER_DEVELOPMENT		11.2277	2.E-05
BOAT_JACKING does not Granger Cause POOR_ECONOMY	877	3.66487	0.0260
POOR_ECONOMY does not Granger Cause BOAT_JACKING		9.50177	8.E-05
KIDNAP_FOR_RANSOM does not Granger Cause POOR_ECONOMY	874	5.08844	0.0064
POOR_ECONOMY does not Granger Cause KIDNAP_FOR_RANSOM		5.31997	0.0051
PIPELINE_VANDALISATION does not Granger Cause POOR_ECONOMY	877	4.76085	0.0088
POOR_ECONOMY does not Granger Cause PIPELINE_VANDALISATION		26.5201	7.E-12
SMALL_ARMS_AND_LIGHTWEAPON_TRAFFICKING does not Granger Cause POOR_ECONOMY	877	4.50172	0.0113
POOR_ECONOMY does not Granger Cause SMALL_ARMS_AND_LIGHTWEAPON_TRAFFICKING		3.55955	0.0289
BOAT_JACKING does not Granger Cause UNDER_DEVELOPMENT	877	3.76456	0.0236
UNDER_DEVELOPMENT does not Granger Cause BOAT_JACKING		1.40470	0.2460
KIDNAP_FOR_RANSOM does not Granger Cause UNDER_DEVELOPMENT	874	5.13695	0.0061
UNDER_DEVELOPMENT does not Granger Cause KIDNAP_FOR_RANSOM		1.31042	0.2702
PIPELINE_VANDALISATION does not Granger Cause UNDER_DEVELOPMENT	877	4.11384	0.0167
UNDER_DEVELOPMENT does not Granger Cause PIPELINE_VANDALISATION		40.4617	2.E-17
SMALL_ARMS_AND_LIGHTWEAPON_TRAFFICKING does not Granger Cause UNDER_DEVELOPMENT	877	6.91610	0.0010
UNDER_DEVELOPMENT does not Granger Cause SMALL_ARMS_AND_LIGHTWEAPON_TRAFFICKING		8.04298	0.0003
KIDNAP_FOR_RANSOM does not Granger Cause BOAT_JACKING	874	4.46953	0.0117
BOAT_JACKING does not Granger Cause KIDNAP_FOR_RANSOM		1.74417	0.1754
PIPELINE_VANDALISATION does not Granger Cause BOAT_JACKING	877	2.76580	0.0635
BOAT_JACKING does not Granger Cause PIPELINE_VANDALISATION		31.7329	5.E-14
SMALL_ARMS_AND_LIGHTWEAPON_TRAFFICKING does not Granger Cause BOAT_JACKING	877	7.37145	0.0007
BOAT_JACKING does not Granger Cause SMALL_ARMS_AND_LIGHTWEAPON_TRAFFICKING		6.63316	0.0014
PIPELINE_VANDALISATION does not Granger Cause KIDNAP_FOR_RANSOM	874	1.67436	0.1880
KIDNAP_FOR_RANSOM does not Granger Cause PIPELINE_VANDALISATION		47.1636	4.E-20
SMALL_ARMS_AND_LIGHTWEAPON_TRAFFICKING does not Granger Cause KIDNAP_FOR_RANSOM	874	3.60560	0.0276
KIDNAP_FOR_RANSOM does not Granger Cause SMALL_ARMS_AND_LIGHTWEAPON_TRAFFICKING		13.6185	2.E-06

SMALL_ARMS_AND_LIGHTWEAPON_TRAFFICKING does not Granger Cause PIPELINE_VANDALISATION	877	46.5690	6.E-20
PIPELINE_VANDALISATION does not Granger Cause SMALL_ARMS_AND_LIGHTWEAPON_TRAFFICKING		11.7370	9.E-06

Decision Rule: P-Value of 0.6876 is greater than 0.05. Therefore, the Null Hypothesis is rejected and the alternative hypothesis accepted that Criminal Activity causes Economic Impact

Source: Causality Test, 2022

Table 7.7 Causality Test between Criminal Activities (CA) and Economic Impact (EI)

Pairwise Granger Causality Tests
 Date: 03/06/22 Time: 09:55
 Sample: 1 898
 Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
CA does not Granger Cause EI	877	0.37467	0.6876
EI does not Granger Cause CA		27.1011	4.E-12

In table 7.7, Criminal Activities (CA) control the behavior of the Economy

Source: Causality Test, 2022

Normal Distribution of the Dependent Variable, Poor Economy (PE)

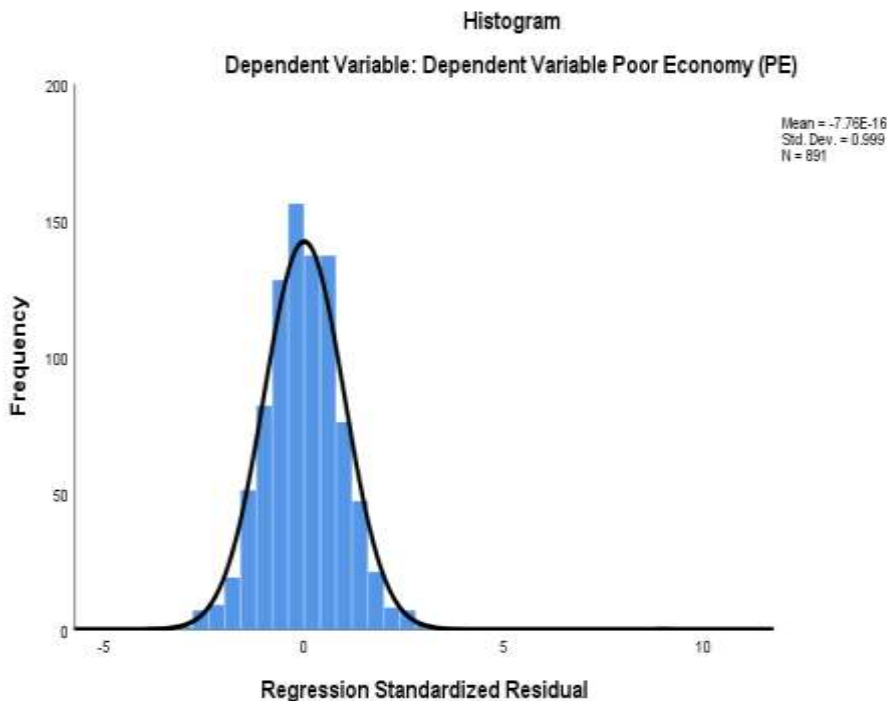


Figure 7.1 Source: Normality Test, 2022

P-P Plot of a Dependent variable, Poor Economy Regressed of Dependent Variable Underdevelopment

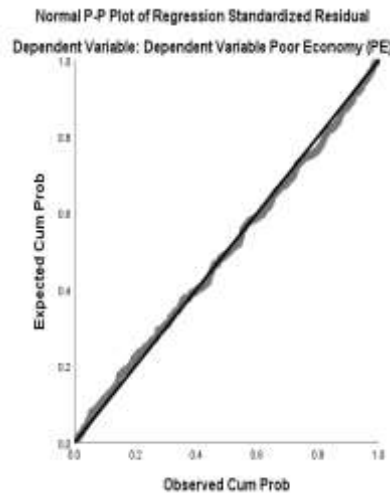


Figure 7.2 showing how correlated is Poor economy (PE) to Underdevelopment (UD)

Source: P-P Plot, 2022

Scatterplot or Homoscedasticity of Poor Economy (PE) and Underdevelopment (UD) showing how clustered are the two dependent variables

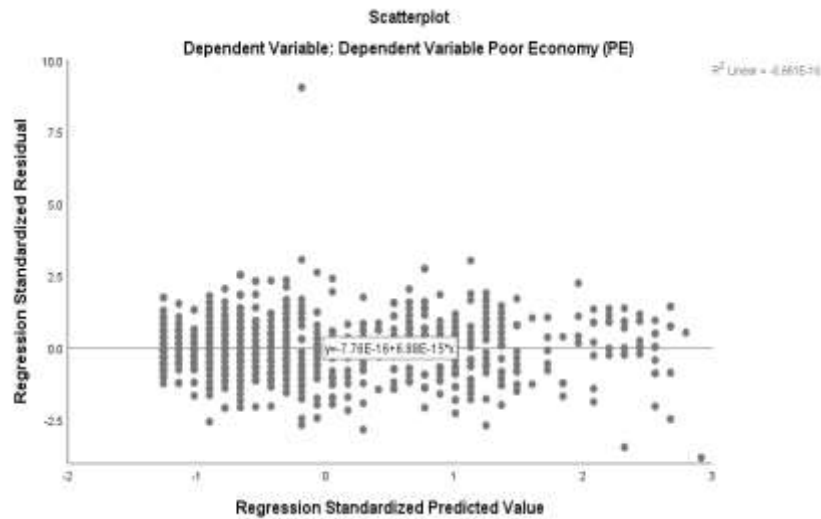


Figure 7.3 Source: Scatterplot, 2022

Normal Distribution of the Dependent Variable, Underdevelopment (UD)

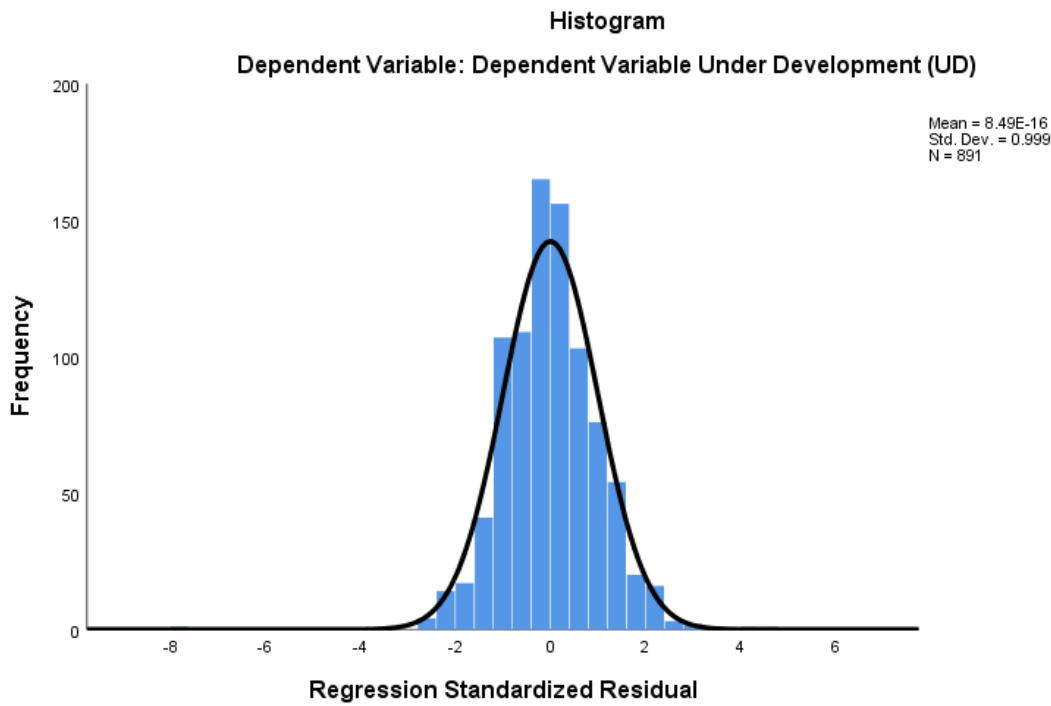


Figure 7.4
Source: Normality Test, 2022

P-P Plot of a Dependent variable, Poor Economy Regressed of Dependent Variable Underdevelopment

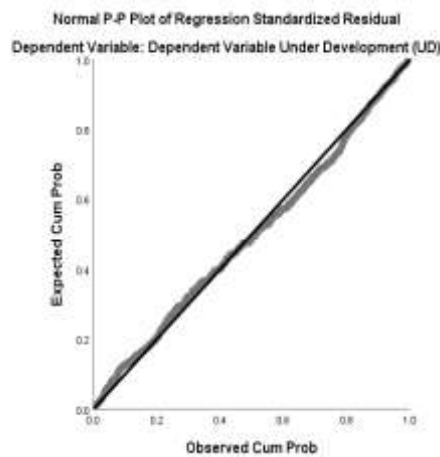


Figure 7.5 showing how correlated is Underdevelopment (UD) to Poor economy (PE)
Source: P-P Plot, 2022

Scatterplot or Homoscedasticity of Underdevelopment (UD) and Poor Economy (PE) showing how clustered are the two dependent variables.

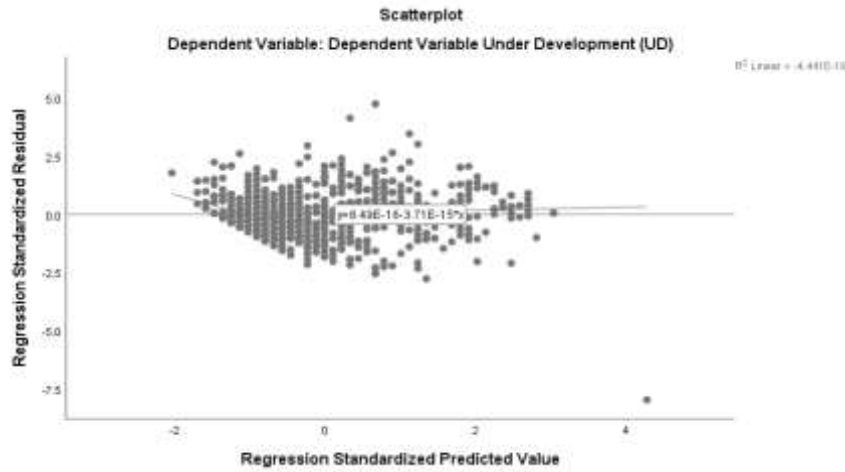


Figure 7.6

Source: Scatterplot, 2022

Table 7.8 Test for Serial Correlation of the Poor Economy as the Dependent Variable and Boat-Jacking, Kidnapping, Pipe Vandalisation and Small Arms and Lightweapon Trafficking as Regressors

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	609.7176	Prob. F(2,882)	0.0000
Obs*R-squared	516.4553	Prob. Chi-Square(2)	0.0000

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 03/12/22 Time: 09:56

Sample: 1 897

Included observations: 890

Presample and interior missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.173427	0.514156	0.337304	0.7360
BOAT_JACKING	-0.085565	0.104360	-0.819899	0.4125
KIDNAP_FOR_RANSOM	0.008266	0.029998	0.275549	0.7830
SMALL_ARMS_AND_LIGHTWEAPON_TRAFFICKING	0.025481	0.025550	0.997292	0.3189
PIPELINE_VANDALISATION	0.065677	0.075637	0.868317	0.3855
UNDER_DEVELOPMENT	-0.044516	0.032296	-1.378366	0.1684
RESID(-1)	0.677394	0.033398	20.28231	0.0000
RESID(-2)	0.110844	0.033563	3.302531	0.0010
R-squared	0.580287	Mean dependent var	-1.38E-15	
Adjusted R-squared	0.576956	S.D. dependent var	3.137479	
S.E. of regression	2.040675	Akaike info criterion	4.273386	
Sum squared resid	3672.959	Schwarz criterion	4.316453	
Log likelihood	-1893.657	Hannan-Quinn criter.	4.289847	
F-statistic	174.2050	Durbin-Watson stat	1.969945	
Prob(F-statistic)	0.000000			

Figure 7.8 Shows that there is no serial correlation in the equation with Poor Economy as the independent variable

Source: Serial Correlation Test, 2022

Table 7.9 Test for Autocorrelation Test of the Under Development as the Dependent Variable and Boat-Jacking, Kidnapping, Pipe Vandalisation and Small Arms and Lightweapon Trafficking as Regressors

Dependent Variable: UNDER_DEVELOPMENT
 Method: ARDL
 Date: 03/12/22 Time: 10:36
 Sample (adjusted): 3 897
 Included observations: 874 after adjustments
 Maximum dependent lags: 2 (Automatic selection)
 Model selection method: Akaike info criterion (AIC)
 Dynamic regressors (4 lags, automatic): BOAT_JACKING
 KIDNAP_FOR_RANSOM PIPELINE_VANDALISATION
 SMALL_ARMS_AND_
 LIGHTWEAPON_TRAFFICKING
 Fixed regressors: C
 Number of models evaluated: 1250
 Selected Model: ARDL(2, 1, 2, 1, 1)
 Note: final equation sample is larger than selection sample

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
UNDER_DEVELOPMENT(-1)	0.660571	0.031386	21.04700	0.0000
UNDER_DEVELOPMENT(-2)	0.116148	0.029668	3.914968	0.0001
BOAT_JACKING	-0.776747	0.103554	-7.500875	0.0000
BOAT_JACKING(-1)	0.697035	0.104290	6.683648	0.0000
KIDNAP_FOR_RANSOM	0.853614	0.019042	44.82776	0.0000
KIDNAP_FOR_RANSOM(-1)	-0.588107	0.033782	-17.40868	0.0000
KIDNAP_FOR_RANSOM(-2)	-0.113422	0.029445	-3.852041	0.0001
PIPELINE_VANDALISATION	0.404871	0.072344	5.596476	0.0000
PIPELINE_VANDALISATION (-1)	-0.377303	0.072597	-5.197242	0.0000
SMALL_ARMS_AND_ LIGHTWEAPON_TRAFFICKI NG	0.280924	0.021121	13.30075	0.0000
SMALL_ARMS_AND_ LIGHTWEAPON_TRAFFICKI NG(-1)	-0.205003	0.022289	-9.197589	0.0000
C	-2.255777	0.371313	-6.075131	0.0000
R-squared	0.972498	Mean dependent var		26.61670
Adjusted R-squared	0.972147	S.D. dependent var		8.338115
S.E. of regression	1.391570	Akaike info criterion		3.512377
Sum squared resid	1669.235	Schwarz criterion		3.577912
Log likelihood	-1522.909	Hannan-Quinn criter.		3.537447
F-statistic	2770.995	Durbin-Watson stat		2.009115
Prob(F-statistic)	0.000000			

*Note: p-values and any subsequent tests do not account for model selection.

Figure 7.9 Shows that there is no Autocorrelation the equation with Under Development as thye independent variable

Source: Autocorrelation Test, 2022

Table 7.10 Test for Serial Correlation of the Under Development as the Dependent Variable and Boat-Jacking, Kidnapping, Pipe Vandalisation and Small Arms and Lightweapon Trafficking as Regressors

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	1.279382	Prob. F(2,858)	0.2787
Obs*R-squared	2.598730	Prob. Chi-Square(2)	0.2727

Test Equation:

Dependent Variable: RESID

Method: ARDL

Date: 03/12/22 Time: 11:04

Sample: 3 897

Included observations: 874

Presample and interior missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
UNDER_DEVELOPMENT(-1)	-0.009384	0.077061	-0.121777	0.9031
UNDER_DEVELOPMENT(-2)	-0.020342	0.057794	-0.351973	0.7249
BOAT_JACKING	-0.000997	0.106726	-0.009344	0.9925
BOAT_JACKING(-1)	-0.010974	0.109452	-0.100262	0.9202
KIDNAP_FOR_RANSOM	-0.000481	0.026586	-0.018109	0.9856
KIDNAP_FOR_RANSOM(-1)	0.005427	0.072857	0.074487	0.9406
KIDNAP_FOR_RANSOM(-2)	0.016318	0.055653	0.293202	0.7694
PIPELINE_VANDALISATION	-7.54E-05	0.076775	-0.000982	0.9992
PIPELINE_VANDALISATION(-1)	0.006042	0.077247	0.078213	0.9377
SMALL_ARMS_AND_LIGHTWEAPON_TRAFFICKING	0.001167	0.021082	0.055358	0.9559
SMALL_ARMS_AND_LIGHTWEAPON_TRAFFICKING(-1)	0.007934	0.025768	0.307888	0.7582
POOR_ECONOMY	0.000440	0.023869	0.018416	0.9853
POOR_ECONOMY(-1)	-0.000613	0.023729	-0.025812	0.9794
C	-0.322949	0.509962	-0.633282	0.5267
RESID(-1)	0.011652	0.084365	0.138115	0.8902
RESID(-2)	0.069674	0.043795	1.590903	0.1120
R-squared	0.002973	Mean dependent var	-8.07E-15	
Adjusted R-squared	-0.014457	S.D. dependent var	1.377184	
S.E. of regression	1.387104	Akaike info criterion	3.510450	
Sum squared resid	1650.840	Schwarz criterion	3.597829	
Log likelihood	-1518.066	Hannan-Quinn criter.	3.543876	
F-statistic	0.170584	Durbin-Watson stat	2.017292	
Prob(F-statistic)	0.999847			

Figure 7.10 Shows that there is no serial correlation in the equation with Under Development as the independent variable

Source: Serial Correlation Test, 2022

7.11 Cumulative Sum Stability Test for the Predictor Variable, Criminal Activities (CA) and the Criterion Variable Poor Economy (PE) of Error Correction Term

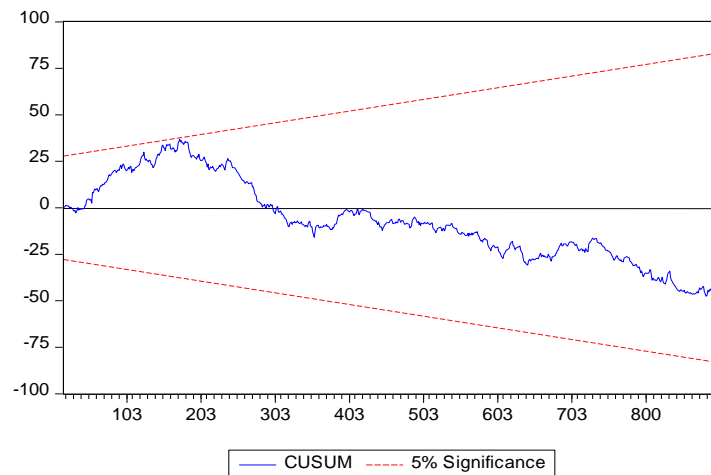


Figure 7.10 explains that the prediction of the criterion variable, PE by the predictor variable, CA in the relationship between them have a systematic stability as determined by the Error Correction Term, in that the blue line is between the two Alpha Coefficient 0.05 boundaries (two red lines). This implies that the PE has a systematic change as it relates with the CA, using the cumulative sum test approach.

Source: Cusum Test, 2022

7.11 Cumulative Square Stability Test for the Predictor Variable (PS) and the Criterion Variable (WE) of Error Correction Term

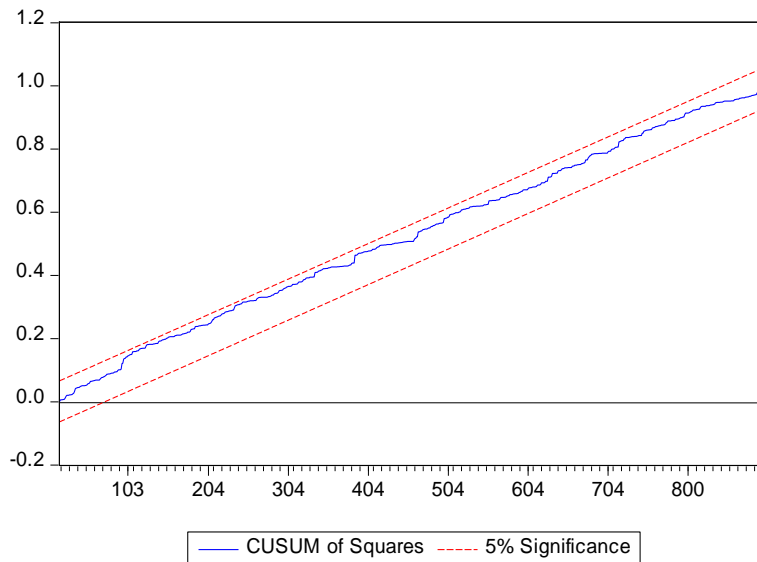


Figure 7.7 explains that the prediction of the criterion variable, PE by the predictor variable, CA the relationship between them has long term Stability and relationship as determined by the Error Correction Term, in that the blue line is between the two Alpha Coefficient 0.05 boundaries (two red lines). This implies that the PE has a long term relationship, using the cumulative sum square test approach.

Source: Cusum Square Test, 2022

7.12 Error Correction Model for the Long Term Relationship

Dependent Variable: D(POOR_ECONOMY)
 Method: Least Squares
 Date: 03/18/22 Time: 21:08
 Sample (adjusted): 3 897
 Included observations: 875 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.025746	0.157775	-0.163182	0.8704
D(BOAT_JACKING(-1))	0.387845	0.331142	1.171236	0.2418
D(KIDNAP_FOR_RANSOM(-1))	-0.012903	0.108431	-0.118992	0.9053
D(PIPELINE_VANDALISATION(-1))	-0.437360	0.224913	-1.944576	0.0521
D(SMALL_ARMS_AND_LIGHTWEAPON_TRAFFICKING(-1))	0.220795	0.070311	3.140261	0.0017
D(UNDER_DEVELOPMENT(-1))	-0.191070	0.105233	-1.815682	0.0698
ECT2(-1)	-0.142907	0.050473	-2.831347	0.0047
R-squared	0.044057	Mean dependent var		-0.026286
Adjusted R-squared	0.037449	S.D. dependent var		4.756832
S.E. of regression	4.666913	Akaike info criterion		5.926841
Sum squared resid	18905.11	Schwarz criterion		5.965034
Log likelihood	-2585.993	Hannan-Quinn criter.		5.941451
F-statistic	6.667304	Durbin-Watson stat		2.113439
Prob(F-statistic)	0.000001			

Figure 7.12 shows that the Coefficient of the Error Correction Term (ECT2) is in the negative, implying that should there be any change in the behavior of dimensions variables – BJ, KN, PV and OC, the measure PE will move towards the equilibrium with the adjustment speed of 14.29%

Source: Error Correction Term Test, 2022

8. The Univariate Analyses Based On the Research Questions

Table 8.1 The Study Data KEY: RQ = Research Question
 ROJ = Research Objectives

SRQ = Sub- Research Question ROJ = Research Objective Research Objective/Research Question/Sub-Research Question	Responses					Predetermined Mean Statistics	Actual Mean	Decision
	SA	AG	N	DA	SD			
ROJ 1 Determination of the relationship between Boat Jacking (BJ) and Economic Impact (EI)								
RQ1. What relationship that exists between Boat Jacking (BJ) and Economic Impact (EI)?	599	234	54	0	3	3	1.4	Reject

SRQ1. Does the unlawful seizing of a boat along the inland waterways lead to loss of money?								
SRQ2. Does robbing passengers on a boat along the inland waterways lead to economic losses?	483	298	51	35	23	3	1.67	Reject
SRQ3. Do you agree that forcefully taking other people's cargoes or properties on a boat along the inland waterways affects the standard of living of the people in the Niger delta?	252	240	76	17	32	3	1.64	Reject
SRQ4. Do you agree that hijacking a boat along the inland waterways have caused technical backwardness in the Niger delta?	551	225	65	24	25	3	1.59	Reject

ROJ 2. To determine the relationship between Kidnapping for Ransom (KfR) and Economic Impact (EI)

RQ2. What relationship that exists between Kidnappings for Ransom (KfR) and Economic Impact (EI)?

SRQ5. Do you agree that forcefully snatching someone along the inland waterways for the purpose of collecting ransom; have resulted in loss of job opportunity?	518	237	66	31	38	3	1.69	Reject
SRQ6. Does the illegally hiding a person as prisoner against his will lead to loss of access to public utilities like healthcare and portable water?	519	222	89	39	21	3	1.68	Reject
SRQ7. Do you agree that the taking of a victim for money do cause capital deficiency in the Niger delta?	528	218	68	21	55	3	1.72	Reject

SRQ8. Do you agree that the crime of hostage taking for money has led to low dignity of labour in the Niger delta?	501	199	56	68	66	3	1.88	Reject
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ROJ 3. To determine the relationship between Pipeline Vandalism (PV) and Economic Impact (EI)

Q3. What relationship that exists between Pipeline Vandalism (PV) and Economic Impact (EI)?

SRQ9. Does the wilful act of damaging petroleum pipelines lead to oil spillage and losses in the Niger delta?	494	182	69	80	64	3	1.92	Reject
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SRQ10. Do you agree that forcefully taking other people's cargoes or properties on a boat along the inland waterways affects the standard of living of the people in the Niger delta?	428	237	107	75	43	3	1.95	Reject
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SRQ11. Do you agree that sabotaging of pipelines in the Niger delta have great polluted the marine environment and affected the source of income of the dwellers?	462	271	90	43	24	3	1.76	Reject
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SRQ12. Do you agree that failure to properly secure pipelines along the Niger delta have resulted in repeated pipeline attacks and low capital income?	487	177	62	92	72	3	1.97	Reject
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ROJ 4. To determine the relationship between Small Arms and Light Weapon Trafficking (SALWT) and Economic Impact (EI)

RQ4. What relationship that exists between Small Arms and Light Weapon Trafficking (SALWT) and Economic Impact (EI)?

SRQ13. Does the trafficking of humans along the Niger delta waterways result in victims' malnourishment?	483	342	47	10	8	3	1.56	Reject
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SRQ14. Does the trafficking of small arms through the Niger delta waterways lead to restiveness and underdevelopment of the area?	391	194	42	169	94	3	2.30	Reject
SRQ15. Does the illegally hiding a person as prisoner against his will lead to loss of access to public utilities like healthcare and portable water?	413	340	75	35	27	3	1.79	Reject
SRQ16. Do you agree that smuggling of drugs along the inland waterways of the Niger Delta have induced reckless living and immodest behaviours?	343	466	27	50	4	3	1.77	Reject
SRQ17. Do you agree that there is collaboration between the oil pipeline vandals and the existing security stationed to guard oil facilities in the Niger delta?	2	1	70	338	479	3	4.50	Accept

ROJ 5. To determine the positive influence of Desire (DS) in the relationship Criminal Activities (CA) and Economic Impact (EI)

RQ5. What positive influence of Desire that exists in the relationship Criminal Activities (CA) and Economic Impact (EI)?	520	289	42	30	9	3	1.56	Reject
SRQ18. Do you agree that the failure to control one's penchant for something really bad has encouraged the growth of cults or underworld organisations in the Niger delta?								
SRQ19. Do you agree that inordinate affection for other people's cargo in the Niger delta waterways, have scared investors and hindered	458	559	83	68	42	3	1.85	Reject

infrastructural development?

SRQ20. Do you agree that the immediate needs have made some individuals get involved in misdemeanours, like bursting pipelines that had equally caused economic setbacks? 426 242 87 75 57 3 203 Reject

SRQ21. Do you agree that what the youths long for has made them do acts that have positively affected the economy? 461 277 54 69 28 3 1.84 Reject

ROJ 6. To determine the positive influence of Opportunity (OP) in the relationship Criminal Activities (CA) and Economic Impact (EI)

RQ 6. What positive influence of Opportunity (OP) that exists in the relationship Criminal Activities (CA) and Economic Impact (EI)?

SRQ22. Do you agree that routine activities can create opportunity for criminal minded people to attack travellers along the inland water ways, which in turn, could have an adverse effect on the economy? 432 275 50 94 38 3 1.96 Reject

SRQ23. Does the absence of a capable guardian from the government positively influence the abduction for economic gains? 425 286 60 78 40 3 1.95 Reject

SRQ24. Does the fact that stolen petroleum products are easily transported along the Niger delta waterways encourage the act of economic sabotage? 614 231 45 0 0 3 1.36 Reject

SRQ25. Does the lack of adequate security aid the activities of small arms and light weapons trafficking in 527 283 45 0 25 3 1.53 Reject

the study area?

ROJ 7. To determine the positive influence of Target (TG) in the relationship Criminal Activities (CA) and Economic Impact (EI)

RQ 7. What positive influence of Target (TG) that exists in the relationship Criminal Activities (CA) and Economic Impact (EI)?

SRQ26. What positive influence of Target (TG) that exists in the relationship Criminal Activities (CA) and Economic Impact (EI)	531	299	45	0	15	3	1.50	Reject
SRQ27. Do you agree that the actual intent of the hearts of these youths brought about these crimes that adversely affect our economy?	522	308	45	0	15	3	1.51	Reject
SRQ28. Do you agree that these youths always think of causing havoc along the water ways to cripple our economy?	526	304	45	0	15	3	1.51	Reject
SRQ29. These youths are always aiming at doing evil along the waterways to create restiveness in the Niger delta.	147	155	54	274	261	3	3.39	Accept
SRQ30. If the destabilization of the Niger delta by these youths is achieved, the troubles bedevilling the region will seize	2	1	102	404	381	3	4.30	Accept

ROJ 8. To determine the negative influence of Duty of Care (DoC) in the relationship Criminal Activities (CA) and Economic Impact (EI)

Q8. What negative influence of Duty of Care (DoC) that exists in the relationship Criminal Activities (CA) and Economic Impact (EI)?

SRQ31. Government taking care of the Niger delta indigenes will negatively influence the criminal acts along the waterways that result to poor economy	2	1	103	404	380	3	4.30	Accept
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SRQ32. Provision of good primary health care for the people in the Niger delta area will reduce the tie between criminal activities along the waterways and poor economy								
SRQ33. With the provision of basic amenities in the Niger delta criminal activities along the waterways, causing economic hardship will reduce.	2	1	62	357	468	3	4.45	Accept

ROJ 9. To determine the negative influence of Employment (EM) in the relationship Criminal Activities (CA) and Economic Impact (EI)

RQ9. What negative influence of Employment (EM) that exists in the relationship Criminal Activities (CA) and Economic Impact (EI)?

SRQ34. If government had built industries in the Niger delta, the youths would have engaged in meaningful employments that would suppressed the restiveness in the area	2	3	83	317	485	3	4.44	Accept
SRQ35. Do you agree that the neglect and poor infrastructural development of the Niger delta have positively negatively influenced and increased youth restiveness and crime?	2	2	60	294	532	3	4.52	Accept
SRQ36. Joblessness of the youths contributes to their involvement in crimes, which in turn adversely affects the economy	4	5	56	288	537	3	4.54	Accept

Source: Study Data, 2022

10. Operational Framework

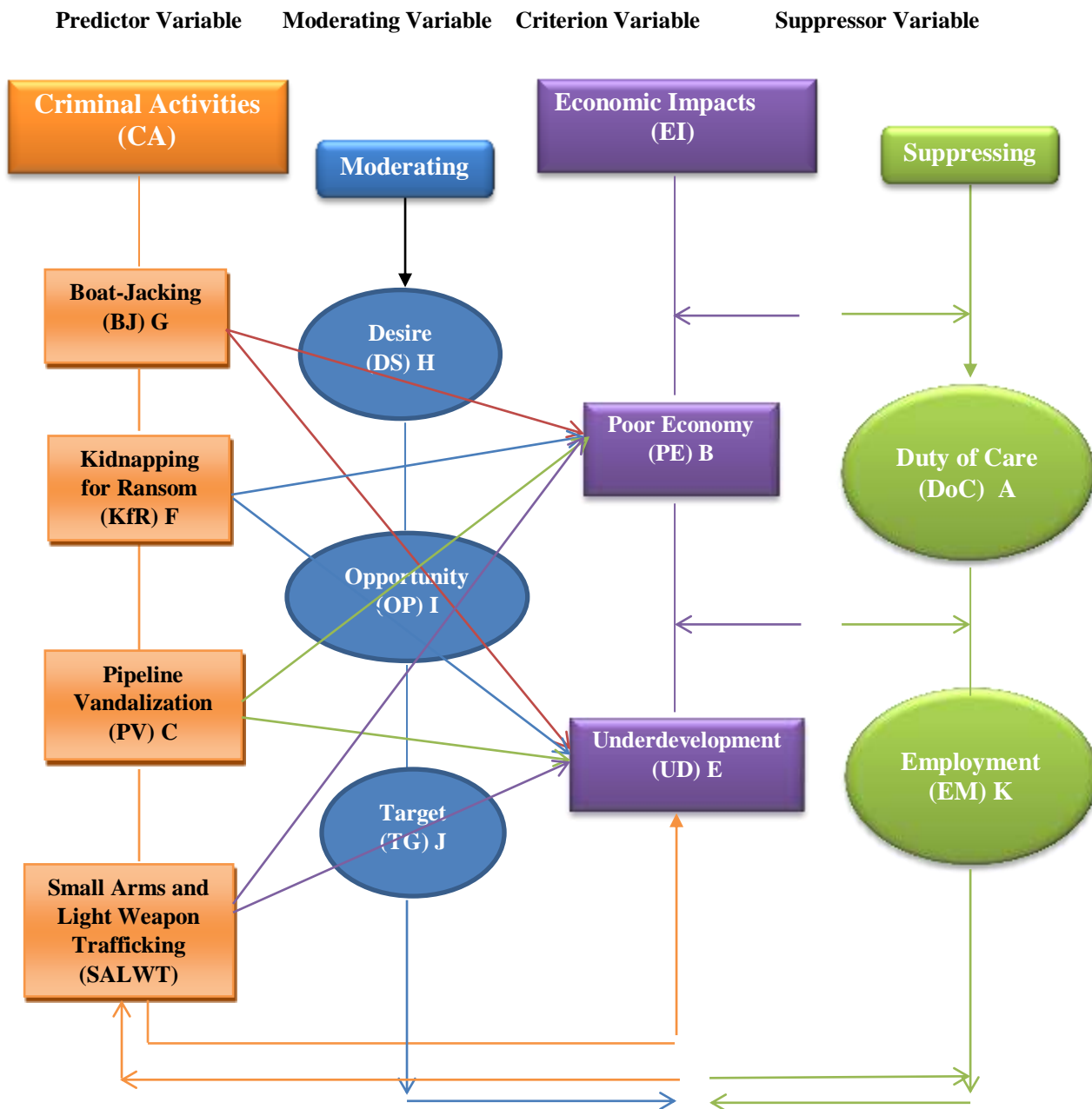


Figure 8.1

Source: Conceptualization, 2022

(9) Bivariate Analyses Based on the Null Hypotheses

In this session, the analyses of the hypotheses would be divided into 4 stages, using the Multiple Regression Analyses Model (HMRAM) approach. In stage 1, we have (Ho₁, Ho₃, Ho₅, and Ho₇). In stage 2, we have (Ho₂, Ho₄, Ho₆ and Ho₈). In stage 3, we have (Ho₉ Ho₁₀ and Ho₁₁). In stage 4, we have (Ho₁₂, Ho₁₃). The conclusion of the analyses would be based on the index formation that would be drawn three tables - the Summary Table, ANOVA Table and the Coefficient Table. However, in stage 3 and 4, we shall introduce a partial correlation tables to reveal the influences of the moderating and the suppressor variables in the relationship between Criminal Activities (CA) and Economic Impact (EM)

STAGE 1

- Ho₁ – There is no significant relationship between Boat Hijacking (BJ) and Poor Economy (PE)
- Ho₃ – There is no significant relationship between Kidnapping for Ransom (KfR) and Poor Economy (PE)
- Ho₅ – There is no significant relationship between Pipeline Vandalism (PV) and Poor Economy (PE)

Ho7 – There is no significant relationship between Small Arms and Light Weapon Trafficking (SALWT) and Poor Economy (PE)

Table 9.1 Model Summary Table for the Relationship between Boat Hijacking (BJ), Kidnapping for Ransom (KfR), Pipeline Vandalism (PV), Small Arms and Light Weapon Trafficking (SALWT) and Poor Economy (PE)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.870 ^a	.757	.756	4.378	.757	2761.631	1	888	.000
2	.920 ^b	.846	.846	3.485	.089	513.723	1	887	.000
3	.940 ^c	.883	.883	3.038	.037	281.448	1	886	.000
4	.941 ^d	.885	.885	3.012	.002	16.550	1	885	.000

a. Predictors: (Constant), Independent Variable Boat Jacking (BJ)

b. Predictors: (Constant), Independent Variable Boat Jacking (BJ), Independent Variable Kidnapping for Ransom (KfR)

c. Predictors: (Constant), Independent Variable Boat Jacking (BJ), Independent Variable Kidnapping for Ransom (KfR) , Independent Variable Pipeline Vandalisation (PV)

d. Predictors: (Constant), Independent Variable Boat Jacking (BJ), Independent Variable Kidnapping for Ransom (KfR) , Independent Variable Pipeline Vandalisation (PV), Moderating Variable Small Arms and Light Weapon Trafficking (SALWT)

Source: Model Summary Table, 2022

Table 9.2 ANOVA Table for the Relationship between Boat Hijacking (BJ), Kidnapping for Ransom (KfR), Pipeline Vandalism (PV), Small Arms and Light Weapon Trafficking (SALWT) and Poor Economy (PE)

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	52920.552	1	52920.552	2761.631	.000 ^b
	Residual	17016.554	888	19.163		
	Total	69937.106	889			
2	Regression	59161.472	2	29580.736	2434.948	.000 ^c
	Residual	10775.634	887	12.148		
	Total	69937.106	889			
3	Regression	61759.256	3	20586.419	2230.362	.000 ^d
	Residual	8177.850	886	9.230		
	Total	69937.106	889			
4	Regression	61909.381	4	15477.345	1706.268	.000 ^e
	Residual	8027.725	885	9.071		
	Total	69937.106	889			

a. Dependent Variable: Dependent Variable Poor Economy (PE)

b. Predictors: (Constant), Independent Variable Boat Jacking (BJ)

c. Predictors: (Constant), Independent Variable Boat Jacking (BJ), Independent Variable Kidnapping for Ransom (KfR)

d. Predictors: (Constant), Independent Variable Boat Jacking (BJ), Independent Variable Kidnapping for Ransom (KfR) , Independent Variable Pipeline Vandalisation (PV)

e. Predictors: (Constant), Independent Variable Boat Jacking (BJ), Independent Variable Kidnapping for Ransom (KfR) , Independent Variable Pipeline Vandalisation (PV), Moderating Variable Small Arms and Light Weapon Trafficking (SALWT)

Source: ANOVA Table, 2022

Table 9.3 Coefficient Table for the Relationship between Boat Hijacking (BJ), Kidnapping for Ransom (KfR), Pipeline Vandalism (PV), Small Arms and Light Weapon Trafficking (SALWT) and Poor Economy (PE)

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	17.774	.558		31.845	.000			
	Independent Variable Boat Jacking (BJ)	.951	.018	.870	52.551	.000	.870	.870	.870
2	(Constant)	9.472	.576		16.448	.000			
	Independent Variable Boat Jacking (BJ)	.268	.033	.245	8.007	.000	.870	.260	.106
	Independent Variable Kidnapping for Ransom (KfR)	.673	.030	.693	22.665	.000	.914	.606	.299
3	(Constant)	11.280	.513		21.970	.000			
	Independent Variable Boat Jacking (BJ)	.248	.029	.227	8.500	.000	.870	.275	.098
	Independent Variable Kidnapping for Ransom (KfR)	.529	.027	.545	19.421	.000	.914	.546	.223
	Independent Variable Pipeline Vandalisation (PV)	.287	.017	.253	16.776	.000	.742	.491	.193
4	(Constant)	10.646	.532		20.000	.000			
	Independent Variable Boat Jacking (BJ)	.236	.029	.215	8.101	.000	.870	.263	.092
	Independent Variable Kidnapping for Ransom (KfR)	.442	.035	.455	12.769	.000	.914	.394	.145
	Independent Variable Pipeline Vandalisation (PV)	.296	.017	.262	17.319	.000	.742	.503	.197
	Moderating Variable Small Arms and Light Weapon Trafficking (SALWT)	.136	.033	.106	4.068	.000	.833	.135	.046

a. Dependent Variable: Dependent Variable Poor Economy (PE)

Source: Coefficient Table, 2022

Interpretation of Summary, ANOVA and Coefficient Tables in Ho₁, Ho₃, Ho₅ and Ho₇ involving the Relationship between Boat Hijacking (BJ), Kidnapping for Ransom (KfR), Pipeline Vandalism (PV), Small Arms and Light Weapon Trafficking (SALWT) and Poor Economy (PE)

The Hierarchical Multiple Linear Regression Analysis (HMLRA) done in Ho₁, Ho₃, Ho₅ and Ho₇ revealed that Boat Hijacking (BJ), Kidnapping for Ransom (KfR), Pipeline Vandalism (PV) had a significant relationship with Poor Economy (PE). Preliminary analysis showed that there were no violations in the assumption testing for normality test, KMO, Bartlett's test, linearity, homoscedasticity, skewness, kurtosis, stationary test, causality test and outliers test. The Summary Model Table of Ho₁, Ho₃, Ho₅ and Ho₇, revealed that the R² value for BJ, KfR, PV and SALWT = .885. The prediction of BJ, KfR, PV and SALWT, associated with this Hierarchical Multiple Regression Analysis suggests that the BJ accounted for 75.7% of the variation in the PE, 8.9% in KfR, 3.7 in PV and 0.2% in SALWF. This also suggested that 11.5% of the variation in PE could not be explained by BJ, KfR, PV and SALWF. The Confidence Interval associated with this HMRA is 95%, which implies that Alpha Coefficient = .05; Beta = .212, .455, .262 and .106; t = (20.00) 8.101, 2.769, 17.319 and 4.068; F (888,887,886,885 = 2761.631, 2434.948, 2230.362 and 1706.268; B (Y- intercept = 10.646, Slope = .236, .442, .296 and .136). There are significant relationships between BJ, KfR, PV and SALWF. Therefore, the Null Hypotheses of Ho₁, Ho₃, Ho₅ and Ho₇ that stated that: Ho₁ - There are no significant relationships between BJ and PE; Ho₃ - There are no significant relationships between KfR and PE; Ho₅ - There are no significant relationships between PV and PE; There are no significant relationships between SALWF and PE were rejected and the Alternative Hypotheses H₁₁, H₁₃, H₁₅ and H₁₇ that there are significant relationships between BJ, KfR, PV, SALWF and PE were accepted.

STAGE 2

- Ho₂ – There is no significant relationship between Boat Hijacking (BJ) and Under Development (UD)
- Ho₄ – There is no significant relationship between Kidnapping for Ransom (KfR) and Under Development (UD)
- Ho₆ – There is no significant relationship between Pipeline Vandalism (PV) and Under Development (UD)
- Ho₈ – There is no significant relationship between Small Arms and Light Weapon Trafficking (SALWT) and Under Development (UD)

Table 9.4 Model Summary Table for the Relationship between Boat Hijacking (BJ), Kidnapping for Ransom (KfR), Pipeline Vandalism (PV), Small Arms and Light Weapon Trafficking (SALWT) and Under Development (UD)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.834 ^a	.696	.696	1.241	.696	2033.160	1	888	.000
2	.890 ^b	.793	.792	1.024	.097	415.265	1	887	.000
3	.892 ^c	.796	.795	1.018	.003	11.474	1	886	.001
4	.893 ^d	.797	.796	1.016	.001	5.615	1	885	.018

- a. Predictors: (Constant), Independent Variable Boat Jacking (BJ)
- b. Predictors: (Constant), Independent Variable Boat Jacking (BJ), Independent Variable Kidnapping for Ransom (KfR)
- c. Predictors: (Constant), Independent Variable Boat Jacking (BJ), Independent Variable Kidnapping for Ransom (KfR), Independent Variable Pipeline Vandalisation (PV)
- d. Predictors: (Constant), Independent Variable Boat Jacking (BJ), Independent Variable Kidnapping for Ransom (KfR), Independent Variable Pipeline Vandalisation (PV), Moderating Variable Small Arms and Light Weapon Trafficking (SALWT)

Source: Summary Table, 2022

Table 9.5 ANOVA Table for the Relationship between Boat Hijacking (BJ), Kidnapping for Ransom (KfR), Pipeline Vandalism (PV), Small Arms and Light Weapon Trafficking (SALWT) and Under Development (UD)

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3129.232	1	3129.232	2033.160	.000 ^b
	Residual	1366.719	888	1.539		
	Total	4495.951	889			
2	Regression	3565.050	2	1782.525	1698.462	.000 ^c
	Residual	930.901	887	1.049		
	Total	4495.951	889			
3	Regression	3576.951	3	1192.317	1149.504	.000 ^d
	Residual	918.999	886	1.037		
	Total	4495.951	889			
4	Regression	3582.746	4	895.686	868.022	.000 ^e
	Residual	913.205	885	1.032		
	Total	4495.951	889			

a. Dependent Variable: Variable UD

b. Predictors: (Constant), Independent Variable Boat Jacking (BJ)

c. Predictors: (Constant), Independent Variable Boat Jacking (BJ), Independent Variable Kidnapping for Ransom (KfR)

d. Predictors: (Constant), Independent Variable Boat Jacking (BJ), Independent Variable Kidnapping for Ransom (KfR) , Independent Variable Pipeline Vandalisation (PV)

e. Predictors: (Constant), Independent Variable Boat Jacking (BJ), Independent Variable Kidnapping for Ransom (KfR) , Independent Variable Pipeline Vandalisation (PV), Moderating Variable Small Arms and Light Weapon Trafficking (SALWT)

Source: ANOVA Table, 2022

Table 9.6 Coefficient Table for the Relationship between Boat Hijacking (BJ), Kidnapping for Ransom (KfR), Pipeline Vandalism (PV), Small Arms and Light Weapon Trafficking (SALWT) and Under Development (UD)

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	-1.059	.158		-6.696	.000			
	Independent Variable Boat Jacking (BJ)	.231	.005	.834	45.091	.000	.834	.834	.834
2	(Constant)	-3.253	.169		-19.218	.000			
	Independent Variable Boat Jacking (BJ)	.051	.010	.183	5.157	.000	.834	.171	.079
	Independent Variable Kidnapping for Ransom (KfR)	.178	.009	.722	20.378	.000	.887	.565	.311
3	(Constant)	-3.131	.172		-18.190	.000			
	Independent Variable Boat Jacking (BJ)	.049	.010	.178	5.046	.000	.834	.167	.077

Independent Variable Kidnapping for Ransom (KfR)	.168	.009	.683	18.398	.000	.887	.526	.279
Independent Variable Pipeline Vandalisation (PV)	.019	.006	.068	3.387	.001	.616	.113	.051
4 (Constant)	-3.255	.180		-18.132	.000			
Independent Variable Boat Jacking (BJ)	.047	.010	.169	4.783	.000	.834	.159	.072
Independent Variable Kidnapping for Ransom (KfR)	.151	.012	.613	12.934	.000	.887	.399	.196
Independent Variable Pipeline Vandalisation (PV)	.021	.006	.074	3.687	.000	.616	.123	.056
Moderating Variable Small Arms and Light Weapon Trafficking (SALWT)	.027	.011	.082	2.370	.018	.811	.079	.036

a. Dependent Variable: Variable UD

Source: Coefficient ANOVA Table, 2022

Interpretation of Summary, ANOVA and Coefficient Tables in Ho₁, Ho₃, Ho₅ and Ho₇ involving the Relationship between Boat Hijacking (BJ), Kidnapping for Ransom (KfR), Pipeline Vandalism (PV), Small Arms and Light Weapon Trafficking (SALWT) and Under Development (UD)

The Hierarchical Multiple Linear Regression Analysis (HMLRA) done in Ho₂, Ho₄, Ho₆ and Ho₈ revealed that Boat Hijacking (BJ), Kidnapping for Ransom (KfR), Pipeline Vandalism (PV), Small Arms and Light Weapon Trafficking (SALWT) had a significant relationship with Under Development (UD). Preliminary analysis showed that there were no violations in the assumption testing for normality test, KMO, Bartlett’s test, linearity, homoscedasticity, skewness, kurtosis, stationary test, causality test and outliers test. The Summary Model Table of Ho₁, Ho₃, Ho₅ and Ho₇, revealed that the R² value for BJ, KfR, PV and OC = .885. The prediction of BJ, KfR, PV and SALWT, associated with this Hierarchical Multiple Regression Analysis suggests that the BJ accounted for 75.7% of the variation in the UD, 8.9% in KfR, 3.7 in PV and 0.2% in SALWT. This also suggested that 11.5% of the variation in PE could not be explained by BJ, KfR, PV and SALWT. The Confidence Interval associated with this HMRA is 95%, which implies that Alpha Coefficient = .05; Beta = .212, .455, .262 and .106; t = (20.00) 8.101, 2.769, 17.319 and 4.068; F (888,887,886,885 = 2761.631, 2434.948, 2230.362 and 1706.268; B (Y- intercept = 10.646, Slope = .236, .442, .296 and .136). There are significant relationships between BJ, KfR, PV and SALWT. Therefore, the Null Hypotheses of Ho₁, Ho₃, Ho₅ and Ho₇ that stated that: Ho₁ - There are no significant relationships between BJ and UD; Ho₃ - There are no significant relationships between KfR and UD; Ho₅ - There are no significant relationships between PV and UD; There are no significant relationships between OC and UD were rejected and the Alternative Hypotheses H₁₂, H₁₄, H₁₆ and H₁₈ that there are significant relationships between BJ, KfR, PV, SALWT and UD were accepted.

(10) Hypotheses Testing, Using Zero Order Correlation And The Partial Correlation Assumption Test For The Ascertainment Of Influence Of Desire, Opportunity, Target, Duty Of Care And Employment In The Relationship Between Criminal Activities And Economic Impact

STAGE 3 The Moderating Variables

Ho₉ - There is no positive influence of Desire (DS) that exists in the relationship Criminal Activities (CA) and Economic Impact (EI)

Ho₁₀ - There is no positive influence of Opportunity (OP) that exists in the relationship Criminal Activities (CA) and Economic Impact (EI)

Ho₁₁ - There is no positive influence of Target (TG) that exists in the relationship Criminal Activities (CA) and Economic Impact (EI)

Ho₉

Table 10.1 The Mean and Standard Deviation Table for the Zero Correlation and Partial Correlation between Criminal Activities (CA) and Economic Impact (EI), while controlling for the Moderating Variable, Desire (DS)

<i>Descriptive Statistics</i>			
	Mean	Std. Deviation	N
Independent Variable Criminal Activities (CA)	95.38	29.791	891
Dependent Variable Economic Impact (CI)	72.63	16.691	891
Moderating Variable Desire (DS)	28.76	3.646	891

Source: Descriptive Data in Zero order and Partial Correlations, 2022

Table 10.2 Zero and Partial Correlations Table to Ascertain the positive influence of Moderating Variable, Desire (DS) in the Correlation between Criminal Activities (CA) and Economic Impact (EI)

<i>Correlations</i>			Independent Variable		
			Criminal Activities (CA)	Dependent Variable Economic Impact (CI)	Moderating Variable Desire (DS)
Control Variables -none ^a	Independent Variable	Correlation	1.000	.874	.117
	Criminal Activities (CA)	Significance (2-tailed)	.	.000	.000
		Df	0	889	889
	Dependent Variable	Correlation	.874	1.000	.268
	Economic Impact (CI)	Significance (2-tailed)	.000	.	.000
		Df	889	0	889
	Moderating Variable	Correlation	.117	.268	1.000
	Desire (DS)	Significance (2-tailed)	.000	.000	.
		Df	889	889	0
Moderating Variable Desire (DS)	Independent Variable	Correlation	1.000	.881	
	Criminal Activities (CA)	Significance (2-tailed)	.	.000	
		df	0	888	
	Dependent Variable	Correlation	.881	1.000	
	Economic Impact (CI)	Significance (2-tailed)	.000	.	
		df	888	0	

a. Cells contain zero-order (Pearson) correlations.

Source: Descriptive Data in Zero order and Partial Correlations, 2022

The Result from the Test of Zero Order Correlation (ZOC) and Partial Correlation in Relationship between Criminal Activities (CA) and Economic Impact (EI), while controlling for the Moderating Variable, Desire (DS)

There is a positive influence of DS with Mean = 28.76; Standard Deviation = 3.646 in the relationship between CA with Mean = 95.38; Standard Deviation = 29.791 and EI with Mean = 72.63; Standard Deviation = 16.691 with changes in Pearson’s Product Moment Correlation (R) from .874 to .881 in the zero order correlation and the partial correlation, while controlling for Desire (DS). There is therefore a sufficient evidence to reject the Null Hypothesis Ho₉, that stated that there is no positive influence of Desire (DS) that exist in the relationship between Criminal Activities Along the Waterways in the Niger Delta and accept the Alternative Hypothesis H1₉, that stated that there is a positive influence of Desire (DS) that exist in the relationship between Criminal Activities Along the Waterways in the Niger Delta (CA) and Poor Economy (PE).

Ho₁₀

Table 10.3 The Mean and Standard Deviation Table for the Zero Correlation and Partial Correlation between Criminal Activities (CA) and Economic Impact (EI), while controlling for the Moderating Variable, Opportunity (OP)

<i>Descriptive Statistics</i>			
	Mean	Std. Deviation	N
Independent Variable Criminal Activities (CA)	95.38	29.791	891
Dependent Variable Economic Impact (CI)	72.63	16.691	891
Moderating Variable Opportunity (OP)	53.94	6.347	891

Source: Descriptive Data in Zero order and Partial Correlations, 2022

Table 10.4 Zero and Partial Correlations Table to Ascertain the positive influence of Moderating Variable, Opportunity (OP) in the Correlation between Criminal Activities (CA) and Economic Impact (EI)

<i>Correlations</i>			Independent		
			Variable	Dependent	Moderating
			Criminal	Variable	Variable
			Activities	Economic	Opportunity
Control Variables			(CA)	Impact (CI)	(OP)
-none ^a	Independent Variable	Correlation	1.000	.874	.127
	Criminal Activities	Significance (2-tailed)	.	.000	.000
	(CA)	df	0	889	889
	Dependent Variable	Correlation	.874	1.000	.254
	Economic Impact (CI)	Significance (2-tailed)	.000	.	.000
		df	889	0	889
	Moderating Variable	Correlation	.127	.254	1.000
	Opportunity (OP)	Significance (2-tailed)	.000	.000	.
		df	889	889	0
Moderating Variable Opportunity (OP)	Independent Variable	Correlation	1.000	.878	
	Criminal Activities	Significance (2-tailed)	.	.000	
	(CA)	df	0	888	
	Dependent Variable	Correlation	.878	1.000	
	Economic Impact (CI)	Significance (2-tailed)	.000	.	
		df	888	0	

a. Cells contain zero-order (Pearson) correlations.

Source: Zero order and Partial Correlations, 2022

The Result from the Test of Zero Order Correlation (ZOC) and Partial Correlation in Relationship between Criminal Activities (CA) and Economic Impact (EI), while controlling for the Moderating Variable, Opportunity (OP)

There is a positive influence of OP with Mean = 53.94; Standard Deviation = 6.347 in the relationship between CA with Mean = 95.38; Standard Deviation = 29.791 and EI with Mean = 72.63; Standard Deviation = 16.691 with changes in Pearson’s Product Moment Correlation (R) from .874 to .878 in the zero order correlation and the partial correlation, while controlling for Opportunity (OP). There is therefore a sufficient evidence to reject the Null Hypothesis H_{010} that stated that there is no positive influence of Opportunity (OP) that exist in the relationship between Criminal Activities Along the Waterways in the Niger Delta and accept the Alternative Hypothesis H_{110} that stated that there is a positive influence of Opportunity (OP) that exist in the relationship between Criminal Activities Along the Waterways in the Niger Delta (CA) and Poor Economy (PE).

H_{011}

Table 10.5 The Mean and Standard Deviation Table for the Zero Correlation and Partial Correlation between Criminal Activities (CA) and Economic Impact (EI), while controlling for the Moderating Variable, Target (TG)

<i>Descriptive Statistics</i>			
	Mean	Std. Deviation	N
Independent Variable Criminal Activities (CA)	95.38	29.791	891
Dependent Variable Economic Impact (CI)	72.63	16.691	891
Moderating Variable Target (TG)	3.90	3.618	891

Source: Descriptive Data in Zero order and Partial Correlations, 2022

Table 10.6 Zero and Partial Correlations Table to Ascertain the positive influence of Moderating Variable, Target (TG) in the Correlation between Criminal Activities (CA) and Economic Impact (EI)

Correlations

		Independent Variable Criminal Activities (CA)			Dependent Variable Economic Impact (CI)	Moderating Variable Target (TG)
Control Variables -none ^a	Independent Variable Criminal Activities (CA)	Correlation	1.000	.874	.640	
		Significance (2-tailed)	.	.000	.000	
		Df	0	889	889	
	Dependent Variable Economic Impact (CI)	Correlation	.874	1.000	.337	
		Significance (2-tailed)	.000	.	.000	
		Df	889	0	889	
Moderating Variable Target (TG)	Moderating Variable Target (TG)	Correlation	.640	.337	1.000	
		Significance (2-tailed)	.000	.000	.	
		Df	889	889	0	
	Independent Variable Criminal Activities (CA)	Correlation	1.000	.910		
		Significance (2-tailed)	.	.000		
		df	0	888		
	Dependent Variable Economic Impact (CI)	Correlation	.910	1.000		
		Significance (2-tailed)	.000	.		
		df	888	0		

a. Cells contain zero-order (Pearson) correlations.

Source: Zero order and Partial Correlations, 2022

The Result from the Test of Zero Order Correlation (ZOC) and Partial Correlation in Relationship between Criminal Activities (CA) and Economic Impact (EI), while controlling for the Moderating Variable, Target (TG)

There is a positive influence of TG with Mean = 3.90; Standard Deviation = 3.618 in the relationship between CA with Mean = 95.38; Standard Deviation = 29.791 and EI with Mean = 72.63; Standard Deviation = 16.691 with changes in Pearson’s Product Moment Correlation (R) from .874 to .910 in the zero order correlation and the partial correlation, while controlling for Target (TG). There is therefore a sufficient evidence to reject the Null Hypothesis Ho₁₁ that stated that there is no positive influence of Target (TG) in the relationship between Criminal Activities Along the Waterways in the Niger Delta and accept the Alternative Hypothesis H1₁₁ that stated that there is a positive influence of Target (TG) that exist in the relationship between Criminal Activities Along the Waterways in the Niger Delta (CA) and Poor Economy (PE).

STAGE 4 The Suppressor Variables

Ho₁₂ - There is no negative influence of Duty of Care (DoC) that exists in the relationship Criminal Activities (CA) and Economic Impact (EI)

Ho₁₃ - There is no negative influence of Employment (EM) that exists in the relationship Criminal Activities (CA) and Economic Impact (EI)

Ho₁₂

Table 10.7 The Mean and Standard Deviation Table for the Zero Correlation and Partial Correlation between Criminal Activities (CA) and Economic Impact (EI), while controlling for the Suppressor Variable, Duty of Care (DoC)

<i>Descriptive Statistics</i>			
	Mean	Std. Deviation	N
Independent Variable Criminal Activities (CA)	95.38	29.791	891
Dependent Variable Economic Impact (CI)	72.63	16.691	891
Suppressor Variable Duty of Care (DoC)	32.31	8.816	891

Source: Descriptive Data in Zero order and Partial Correlations, 2022

Table 10.8 Zero and Partial Correlations Table to Ascertain the Negative Influence of Suppressor Variable, Duty of Care (DoC) in the Correlation between Criminal Activities (CA) and Economic Impact (EI)

Correlations

			Independent Variable Criminal Activities (CA)	Dependent Variable Economic Impact (CI)	Suppressor Variable Duty of Care (DoC)
Control Variables -none ^a	Independent Variable	Correlation	1.000	.874	.958
	Criminal Activities (CA)	Significance (2-tailed)	.	.000	.000
		Df	0	889	889
	Dependent Variable	Correlation	.874	1.000	.918
	Economic Impact (CI)	Significance (2-tailed)	.000	.	.000
		Df	889	0	889
	Suppressor Variable	Correlation	.958	.918	1.000
	Duty of Care (DoC)	Significance (2-tailed)	.000	.000	.
		Df	889	889	0
Suppressor Variable Duty of Care (DoC)	Independent Variable Criminal Activities (CA)	Correlation	1.000	-.044	
		Significance (2-tailed)	.	.190	
		Df	0	888	

Dependent Variable	Correlation	-.044	1.000
Economic Impact (CI)	Significance (2-tailed)	.190	.
	Df	888	0

a. Cells contain zero-order (Pearson) correlations.

Source: Zero order and Partial Correlations, 2022

The Result from the Test of Zero Order Correlation (ZOC) and Partial Correlation in Relationship between Criminal Activities (CA) and Economic Impact (EI), while controlling for the Suppressor Variable, Duty of Care (DoC)

There is a negative influence of DoC with Mean = 32.31; Standard Deviation = 8.816 in the relationship between CA with Mean = 95.38; Standard Deviation = 29.791 and EI with Mean = 72.63; Standard Deviation = 16.691 with changes in Pearson’s Product Moment Correlation (R) from .874 to -.044 in the zero order correlation and the partial correlation, while controlling for Duty of Care (DoC). There is therefore a sufficient evidence to reject the Null Hypothesis H_{012} that stated that there is no negative influence of Duty of Care (DoC) that exist in the relationship between Criminal Activities Along the Waterways in the Niger Delta and accept the Alternative Hypothesis H_{112} that stated that there is a positive influence of Duty of Care (DoC) that exist in the relationship between Criminal Activities Along the Waterways in the Niger Delta (CA) and Poor Economy (PE).

H_{013}

Table 10.9 The Mean and Standard Deviation Table for the Zero Correlation and Partial Correlation between Criminal Activities (CA) and Economic Impact (EI), while controlling for the Suppressor Variable, Employment (EM)

<i>Descriptive Statistics</i>			
	Mean	Std. Deviation	N
Independent Variable Criminal Activities (CA)	95.38	29.791	891
Dependent Variable Economic Impact (CI)	72.63	16.691	891
Suppressor Variable Employment (EP)	30.80	8.281	891

Source: Descriptive Data in Zero order and Partial Correlations, 2022

Table 10.10 Zero and Partial Correlations Table to Ascertain the Negative Influence of Suppressor Variable, Employment (EM) in the Correlation between Criminal Activities (CA) and Economic Impact (EI)

Correlations

			Independent Variable Criminal Activities (CA)	Dependent Variable Economic Impact (CI)	Suppressor Variable Employment (EP)
Control Variables -none ^a	Independent Variable	Correlation	1.000	.874	.954
	Criminal Activities (CA)	Significance (2-tailed)	.	.000	.000
		Df	0	889	889
	Dependent Variable	Correlation	.874	1.000	.908
	Economic Impact (CI)	Significance (2-tailed)	.000	.	.000
		Df	889	0	889
Suppressor Variable Employment (EP)	Correlation		.954	.908	1.000
	Significance (2-tailed)		.000	.000	.
	Df		889	889	0
Suppressor Variable Employment (EP)	Independent Variable Criminal Activities	Correlation	1.000	.065	
		Significance (2-tailed)	.	.053	

(CA)	Df	0	888
Dependent Variable	Correlation	.065	1.000
Economic Impact (CI)	Significance (2-tailed)	.053	.
	Df	888	0

a. Cells contain zero-order (Pearson) correlations.

Source: Zero order and Partial Correlations, 2022

The Result from the Test of Zero Order Correlation (ZOC) and Partial Correlation in Relationship between Criminal Activities (CA) and Economic Impact (EI), while controlling for the Suppressor Variable, Employment (EM)

There is a negative influence of EM with Mean = 30.80; Standard Deviation = 8.281 in the relationship between CA with Mean = 95.38; Standard Deviation = 29.791 and EI with Mean = 72.63; Standard Deviation = 16.691 with changes in Pearson’s Product Moment Correlation (R) from .874 to .065 in the zero order correlation and the partial correlation, while controlling for Employment (EM). There is therefore a sufficient evidence to reject the Null Hypothesis H_{013} that stated that there is no negative influence of Employment (EM) that exist in the relationship between Criminal Activities Along the Waterways in the Niger Delta and accept the Alternative Hypothesis H_{113} that stated that there is a positive influence of Duty of Employment (EM) that exist in the relationship between Criminal Activities Along the Waterways in the Niger Delta (CA) and Poor Economy (PE).

11 Summary of Findings

Table 11.1 The Summary of Objective Findings from the Hypotheses Analyses

S/N	Findings
1	There is a significant relationship between Boat Hijacking (BJ) and Poor Economy (PE)
2	There is a significant relationship between Boat Hijacking (BJ) and Under Development
3	There is a significant relationship between Kidnapping for Ransom (KfR) and Poor Economy (PE)
4	There is a significant relationship between Kidnapping for Ransom (KfR) and Under Development (UD)
5	There is a significant relationship between Pipeline Vandalism (PV) and Poor Economy (PE)
6	There is a significant relationship between Pipeline Vandalism (PV) and Under Development (UD)
7	There is a significant relationship between Small Arms and Light Weapon Trafficking (SALWT) and Poor Economy (PE)
8	There is a significant relationship between Small Arms and Light Weapon Trafficking (SALWT) and Under Development (UD)
9	There is a positive influence of Desire (DS) that exists in the relationship between Criminal Activities (CA) and Economic Impact (EI)

10	There is a positive influence of Opportunity (OP) that exists in the relationship between Criminal Activities (CA) and Economic Impact (EI)
11	There is a positive influence of Target (TG) that exists in the relationship Criminal Activities (CA) and Economic Impact (EI)
12	There is a negative influence of Duty of Care (DoC) that exists in the relationship between Criminal Activities (CA) and Economic Impact (EI)
13	There is a negative influence of Employment (EM) that exists in the relationship between Criminal Activities (CA) and Economic Impact (EI)

Source: Researcher’s Summary of Findings, 2022

Other Serendipitous Findings

1. When there is Duty of Care, Criminal Activities (CA) are drastically reduced
2. When there is Employment (EM), Criminal Activities (CA) are reduced
3. Duty of Care (DoC) and Employment (EM) do have negative relationship with Criminal Activities (CA) and Economic Impact (EI)
4. Duty of Care (DoC) has a greater negative impact than Employment (EM) in the relationship between Criminal Activities (CA) and Economic Impact (EI)
5. Target (TG) has the most inducer of criminal activities within the Niger Delta Waterways
6. Desire (DS) is the least inducer of criminal activities along waterways in the Niger Delta
7. Between Poor Economy (PE) and Under Development (UD), Poor Economy (PE) is the more impacted upon by the Boat Jacking (BJ), Kidnapping for Ransom (KfR), Pipeline Vandalisation (PV) and Small Arms and Light Weapon Trafficking (SALWT)
8. Kidnapping for Ransom (KfR) impacts more than Boat jacking (BJ), Pipeline Vandalisation (PV) and Small Arms and Light Weapon Trafficking (SALWT) on Poor Economy (PE) than Under Development (UD)

12 CONCLUSION

‘The Study of the Remote Causes of Restiveness in the Niger Delta Area of Southern Nigeria: Empirical Analyses of the Activities along the Water Ways’ was empirically studies. Rivers State, Bayelsa State and Delta were covered in the study, adopted from Okee¹. These three states were used to represent the criminal activities taking place in the Niger Delta area. A population of 4130 persons, comprising of boat operators, inland water ways officials and passengers was used in his the study. A sample representation of the population of 897 persons, consisting of the same boat operators, inland water ways officials and passengers was used in his study. Sequel to the secondary data from Okee¹, information extracted from the representatives of the population, referred to as the research respondents was analysed univariately and bivariately to ascertain the remote causes of restiveness along the waterways in the Niger Delta area through the study objectives, research questions, sub-research questions and the research hypotheses. It was found out from the study that criminal activities along the waterways in the Niger Delta area impacts on the economy. It was also found out from the study that, should there be a show of duty of care and provision of gainful employment, these criminal activities would not arise, ab initio. It was also found out from the study that the desire of the youths in the Niger Delta area was not to indulge in criminal activities, in the first place. It is therefore; verifiably clear from the study that government lapses in providing employment to the youths and its negligence in showing duty of care have resulted to the restiveness of the Niger Delta area.

13 RECOMMENDATIONS

1. For the fact that the desire for criminal activities along the waterways in the Niger Delta by the youths environmentally influenced and involuntary, government should provide duty of care to the citizens of the Niger Delta.
2. For the fact that employment of youths discourages criminal activities along the waterways in the Niger Delta area, government should employ the youths.
3. Government should not create the opportunity for the youths to engage in criminal activities along the waterways in the Niger Delta area.

4. For the fact that criminal activities along the waterways in the Niger Delta impacts on the economy and poor economy and under development, again causes criminality; government, should as a matter of urgency, create profitable employment and show a verifiable duty of care to the people of the Niger Delta.

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