Effects of Government Poverty Reduction Programmes on National Poverty Level in Nigeria

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ABSTRACT

The incessant rising curve of poverty in Nigeria necessitated this study to assess the effect of government poverty reduction programmes on national poverty level. Anchoring on Liberal Reformist theory, Relative Deprivation and Equity theory theoretical framework the study did an analysis by conducting descriptive statistical and econometric methods of Ordinary Least Squared (OLS), co-integration, error correction mechanism and Granger causality estimation tests as well as robustness and stability tests. The analysis revealed that government poverty reduction programmes, measured in terms of Agricultural Credit Guarantee Scheme Fund (ACGSF), Commercial Banks Loans to Small Scale Enterprises (CBLSE), and Credit to Private Sector (CRPST), have significant effects on national poverty level in Nigeria. On this basis therefore, the study concludes that effect of government poverty reduction programmes have effect on the national poverty level in Nigeria. The study therefore recommended that government should give more attention to CBLSE as it has more potential to reduce national poverty. And the government poverty reduction programmes used in this study should be increased by 81%, as revealed by the R-squares of the ECM results, so as to be able to address the problem of national poverty in Nigeria.

INTRODUCTION

Nigeria has large reserve of solid minerals, with proven reserve of crude petroleum and natural gas. These indicate great solid base for development and great potential for greatness. Given the vastly untapped wealth, raw materials, together with her entrepreneurial and energetic people alongside great agricultural resources, the Nigerian Economic Summit (1996) Nigeria has great potential for greatness. However, the reverse seems the case as Nigeria has continued to fall behind so many other countries in an increasing global economic system. Ajakaiye, Adenikinju and Jeremiah (2018) says that despite Nigeria's great potential to achieve greatness and guaranteed improved welfare and high standard of living for the masses, she has continued to witness low growth, high poverty rates, squalor and misery in the midst of plenty.

Poverty has become endemic and is fast becoming a ravaging global scourge. The high rate of poverty, especially in the third world countries and Southeast Asia is giving the international community much

concern and they have devoted the new millennium as a period of poverty reduction and eradication (Alkire & Foster, 2011). Nigeria being a member of the international community and one of the third world countries that is badly affected by poverty scourge has been waging sustainable war against poverty increase among her citizenry (Chude, Chude, Anah & Chukwunulu, 2019). But despite the government's sustained efforts such as setting up cottage industries, giving soft loans, training through National Directorate of Employment and empowering members through workshops, seminars aimed at poverty alleviation in Nigeria at large, poverty keeps escalating (Bazroy, Madhavan & Sarkar, 2017).

Dauda (2017) noted that the Government of Nigeria has consistently implemented a range of anti-poverty programs, tailored to address the diverse socio-economic challenges faced by different segments of the population. These initiatives primarily target farmers, rural areas, women, unemployed youth, and the underprivileged. The interventions focus on modernizing the agricultural sector, rural infrastructure development, women empowerment, employment creation, and access to financial services, aiming to alleviate poverty and improve overall living conditions (Musa, Abdillah & Wahid, 2016).

The Green Revolution program, established in 1989, has continuously evolved to emphasize sustainable agricultural practices, technological advancements, and agribusiness promotion. By providing training and education to farmers and facilitating access to modern technologies and markets, the program strives to increase agricultural productivity, enhance food security, and boost the income of farmers (Taruno, 2019). Similarly, the Directorate for Food, Roads and Rural Infrastructure (DFRRI), established in 1986, has transitioned to prioritize comprehensive rural development. It emphasizes infrastructure improvements like road construction, rural electrification, and access to clean water (Manaf & Ibrahim, 2017). These enhancements aim to uplift rural communities, improve connectivity, and enhance the overall quality of life for residents.

The Family Support Programme (FSP), founded in 1994, has likely undergone updates to align with evolving societal needs and policies. Its focus remains on empowering women through skill development, education, and financial support, aiming to enhance their role in household decision-making and contribute to socioeconomic development (Ogwumike & Ezumudo, 2018; World Bank, 2018). Addressing youth unemployment, the National Directorate of Employment (NDE), established in 1986, has adapted to the changing employment landscape by offering skill development programs, vocational training, entrepreneurship initiatives, and job placements. This transformation aims to combat youth unemployment and provide sustainable livelihoods for young individuals (Sasmal & Sasmal, 2017; Tri, 2020).

The People's Bank of Nigeria (PBN), founded in 1989, has likely modernized its services to provide accessible financial services, encourage savings, and offer credit facilities to individuals and small enterprises, especially those in underserved communities. This move aims to foster financial inclusion and stimulate economic activities among the underprivileged. Likewise, the Nigeria Agriculture and Cooperative Bank (NACB), established in 1973, has likely adjusted its strategies to align with contemporary agricultural challenges and opportunities. It continues to provide credit and financial services to farmers, cooperatives, and agribusinesses, with a focus on promoting modern agricultural practices, value addition, and market linkages (Orokpo & Mutong, 2018).

Additionally, between 2015 and 2023, the National Social Investment Program (NSIP) encompasses multiple initiatives like the Conditional Cash Transfer (CCT) programme, the Government Enterprise and Empowerment Program (GEEP), the National Home-Grown School Feeding Program (NHGSFP), and the N-Power program. These programs collectively aim to reduce poverty and enhance social development by targeting the poorest households, providing interest-free loans to small business owners, boosting school enrollment through nutritious meals, and offering support to unemployed youth for entrepreneurship and economic growth at the grassroots level (Okon & Monday, 2017).

The Nigerian government's anti-poverty initiatives continue to evolve, adapting to changing needs and focusing on sustainable development and empowerment across various segments of the population with little or no perceived impact on the country's poverty level. As such, this research therefore, intends to examine the effects of government poverty reduction programmes on national poverty level in Nigeria from 1981 to 2022. Specifically, the study hypothesizes that Agricultural Credit Guarantee Scheme Fund (ACGSF), Commercial Banks Loans to Small Scale Enterprises (CBLSE), and Credit to Private Sector (CRPST) as measures of government poverty reduction programmes have not significantly affected National Poverty Level (NAPOL) in Nigeria. The rest of the paper covers sections two to five which centre on literature review, methodology, results and discussion and concluding remarks respectively.

LITERATURE REVIEW

Theoretical Literature: The Liberal Reformists Theory

This perspective deals with situational theory of poverty which is hinged on the fact that poverty results or is given rise from the experiences that individuals or groups rather than an issue of culture. This theory was made popular by Donnell in 1997. He posits that poverty results from imposed constraints such as low income, unemployment and illness. The liberal reformists theory is relevant in explain that people are poor due to the fact that they find themselves in a situation of no resources and opportunities for them to advances their welfare. However, evidences abound that the liberal reformists theory under pins the establishment of such poverty alleviation programmes as the National Director rate of Employment where school leavers who are unemployed are engaged.

Relative Deprivation and Equity Theory

Relative deprivation theory dates back to the ancient Greece that is associated to Gurr (1970) documented in Signh & Chudasama (2020). It is concerned with poverty and social segregation. Relative deprivation and equity theory are two major social psychological approaches to the study of felt distributive injustice. Both theories postulate its antecedent conditions, emotional concomitants, and behavioural consequences. Both theories assert that not having and deserving something are preconditions of felt unjust deprivation; that resentment, anger and dissatisfaction are among its emotional concomitants, and that the experience of unjust deprivation leads to behaviours aimed at eliminating it.

The social deprivation theory applies to the populace in Nigeria. There is need for equitable distribution of resources to avoid denial or rights and privileges in such area that is suffering from marginalization in a land of plenty. The social deprivation situation for many has left many in poor state. This poor state makes the Government, Non-governmental organization and Nigeria must tackle to ensure that the poor are alleviated from such anomaly. Davis (1959) cited in Taiwo (2016) asserted that a person experiencing relative deprivation experiences unfairness. It retains the merit of being value-neutral as between a feeling of envy and a perception of injustice.

The appeal to justice would distinguish those feelings of relative deprivation which can and which cannot be properly described as a sense of envy rather than the perception of an unfulfilled right. Gurr's definition of values expectations as the goods and condition of life to which people believe they are rightfully entitled. Faye and Miren (1970) as reported by Orokpo and Mutong (2018) asserted that the similarities between the two theories are so marked that a number of researcher have pointed out that relative deprivation and inequity concerning distributive injustice refer to the same phenomena.

Empirical Studies

Taruno (2019) delved into the complexity and multidimensionality of poverty, especially focusing on

Indonesia. The study examined the trend in poverty rates over the past four decades, illustrating a significant reduction from 40.10 percent in 1976 to 9.82 percent in March 2018. Despite this decline, a substantial disparity in poverty rates across provinces persists, particularly between Java Island and Eastern Indonesia. Taruno investigated the roles of economic growth and public spending, specifically in education, health, and social protection, in poverty reduction.

Utilizing panel data from 31 provinces during the 2009-2018 period and employing regression models, the study revealed that public spending on health and education had varying effects on poverty reduction in urban and rural areas. Notably, spending allocation on health and education significantly impacted reducing poverty rates in rural areas, while the decline in urban areas was more influenced by spending on health. The study also highlighted that economic growth and social protection spending did not significantly reduce poverty rates over the past decade. The findings emphasized the need for the government to prioritize investment in the health and education sectors to achieve more effective poverty reduction.

Taiwo (2016) critically assessed poverty alleviation programs in Nigeria, scrutinizing both government and non-government initiatives. The study revealed that these programs, aimed at alleviating poverty, often faced challenges leading to misuse of national resources due to parochial interests, fostering corruption and dishonesty. Taiwo highlighted the multidimensional nature of poverty, stressing that effective poverty reduction strategies must be multidimensional and encompass all sectors of the economy, focusing on the emancipation of the poor. The study emphasized the need to strengthen existing poverty alleviation strategies through improved management and accountability, suggesting a proactive approach for successful program implementation.

Singh and Chudasama (2020) explored various participatory and community-demand-driven approaches aimed at poverty alleviation in India. The study utilized fuzzy cognitive maps (FCMs) to identify critical factors responsible for poverty alleviation and evaluated the efficacy of existing poverty alleviation approaches. The findings underscored the complementarity of various approaches to poverty alleviation, suggesting the necessity of implementing them simultaneously for a comprehensive poverty alleviation drive. The study emphasized the need for an integrated and multi-dimensional approach that incorporates elements from different approaches to eradicate poverty, a multi-dimensional phenomenon. Furthermore, the study offered policy implications for designing, managing, and implementing poverty eradication programs and enriched FCM literature in terms of knowledge capture, sample adequacy, and robustness of dynamic system models.

Musa, Abdullah, and Wahid (2016) extensively examined the politics of poverty alleviation in Nigeria, particularly focusing on the impact of the structural adjustment program. The study utilized literature and power theory to analyze poverty alleviation efforts before, during, and after the implementation of various programs, including the National Poverty Eradication Program. Despite the implementation of over fifteen poverty alleviation programs, the study revealed a persistently high poverty rate in Nigeria. The reasons identified included political instability, inadequate policy continuity, corruption, mismanagement of resources, and social challenges like violence and terrorism (Ifeoma, Purity & Yusuf, 2018). Economic factors such as a decline in petroleum product prices, budget deficits, and inadequate collaboration between government tiers and sectors were also highlighted. The study recommended solutions, including agricultural policies, social amenities provision, anti-corruption measures, vocational education, and entrepreneurship innovation to effectively reduce poverty in Nigeria.

Sasmal and Sasmal (2016) explored the impact of public expenditure on economic growth and poverty alleviation in developing countries like India. The study emphasized the influence of public expenditure on per capita income and poverty levels. It noted that proper allocation towards infrastructure development, such as road, irrigation, power, transport, and communication, positively correlated with per capita income

increase and poverty reduction. The study utilized panel regression with state-level data in the Indian context to verify the propositions. The results highlighted the importance of economic growth and infrastructure development in poverty alleviation, emphasizing the significance of good governance and targeted implementation of poverty alleviation policies.

Okon and Monday (2017) explored the relationship between external debt, poverty, and economic growth in Nigeria using time series data from 1986 to 2016. Their analysis revealed a negative and significant association between external debt and economic growth. Additionally, they noted a positive but insignificant relationship between external debt service and economic growth. Exchange rate, on the other hand, exhibited a positive significant relationship with economic growth. Furthermore, the study found a positive and significant correlation between per capita income (a measure of poverty) and economic growth. However, they highlighted that despite various poverty alleviation programs in Nigeria, the intended beneficiaries often didn't benefit effectively. They recommended leveraging existing civil society groups and community-based organizations for better service delivery and advocated for improved financial markets access and bond market strength to enhance efficient debt management.

Orokpo and Mutong (2018) discussed the escalating poverty rates in Nigeria, emphasizing that despite the country's abundant resources, a significant portion of the population lives in poverty. They criticized the ineffectiveness of numerous poverty alleviation programs, including NAPEP, asserting that these programs have not achieved their intended goals. The paper stressed the importance of a focused effort to identify the root causes of poverty in Nigeria and advocated for practical and targeted solutions. Tri (2020) argued that while economic growth is essential for poverty reduction, it alone is not sufficient. In the context of Vietnam, the author highlighted the complexity of the relationship between poverty reduction and economic growth. Vietnam's progress in economic growth has contributed to poverty reduction, but challenges remain. The paper emphasized the necessity for the Vietnamese government to implement concrete and appropriate measures to balance economic growth and sustainable poverty reduction.

METHODOLOGY

This study adopted an ex-post facto research design-based quantitative research technique would be employed. This research design utilizes previously collected data on past events. According to Onwumere (2005), this design represents a realistic and feasible process of investigation. The justification for the use of this design is that, largely, relevant data employed by the study exist already in a quantitative (time series) format for previous events for which the necessary variables cannot be changed. The study would utilize time series data sourced from relevant agencies and departments within the study's defined scope. The nature of data to be used is secondary, and would be sourced on the study variables such as National Poverty Level (NAPOL) in Nigeria; as dependent variable. Also, pertaining the independent variables, data would be sourced on Agricultural Credit Guarantee Scheme Fund (ACGSF), Commercial Banks Loans to Small Scale Enterprises (CBLSE), and Credit to Private Sector (CRPST). The data would be sourced from the statistical bulletin of the Central Bank of Nigeria, National Bureau of Statistics; and any other relevant materials.

From the review of empirical literature, it is evident that there are certain studies on the subject of poverty, economic growth, economic development and government programmes. Some of those studies include the works of Ogwumike and Ejumudo (2018); Datt and Ravallion (2018); Manaf and Ibrahim, (2017) who reported mixed results on the impact of government policies on economic growth and development using this model: GOP = f(POV). Where GOP is government policies and POV is poverty reduction. This present study adopted the above model with considerable modifications by formulating its structural equation. As a result, the modified structural equation is further approximated to that of Pesaran, Shin, & Smith, (2001) – which is best suited when time series data have mixed order of stationarity.

It is important to point out that none of the studies so reviewed, though conducted in Nigeria, sought for the effects of Agricultural Credit Guarantee Scheme Fund (ACGSF), Commercial Banks Loans to Small Scale Enterprises (CBLSE), and Credit to Private Sector (CRPST) as measures of government poverty reduction programmes on National Poverty Level (NAPOL) as a dependent variable. However, their emphases were on economic growth and use of government policies – not programmes. Lastly, the study period of the above listed studies ended in 2015 – that is the latest of them all. Nevertheless, our study is extended to 2022. On this basis, the functional relationship is specifies thus:

$$NAPOL_t = \varphi_0 + \varphi_1 ACGSF_t + \varphi_2 CBLSE_t + \varphi_3 CRPST_t + \mu_t \qquad\qquad 3.1$$

Where:

φ_0 = Constant or intercept of the regression line for equation 3.1; φ_1 = Regression slope or coefficient of ACGSF in equation 3.1; φ_2 = Regression slope or coefficient of CBLSE in equation 3.1; φ_3 = Regression slope or coefficient of CRPST in equation 3.1; 't'= time series trend, and μ_t= Stochastic error term and all the variables retain their definitions and descriptions as earlier stated.

The theoretical expectation of this study goes in the direction that increases in government poverty reduction programmes would reduce national poverty level. Therefore, the expectations of the theories are specified as follows:

As method for data analysis, we make use of Ordinary Least Square (OLS). Ordinary Least Squares regression (OLS) is a common technique for estimating coefficients of linear regression equations which describe the relationship between one or more independent quantitative variables and a dependent variable (simple or multiple linear regressions). In econometrics, Ordinary Least Squares (OLS) method is widely used to estimate the parameter of a linear regression model. OLS estimators minimize the sum of the squared errors (a difference between observed values and predicted values).

In statistics, ordinary least squares is a type of linear least squares method for choosing the unknown parameters in a linear regression model by the principle of least squares: minimizing the sum of squares of the differences between the observed dependent variable (values of the variable being observed) in the input dataset and the output of the (linear) function of the independent variable. OLS is the method used to find the simple or multiple linear regression of a set of data.

Ordinary Least Squares (OLS) is the best known of the regression techniques. It is also a starting point for all spatial regression analyses. It provides a global model of the variable or process you are trying to understand or predict; it creates a single regression equation to represent that process.

Ordinary least squares (OLS) regression is a statistical method of analysis that estimates the relationship between one or more independent variables and a dependent variable; the method estimates the relationship by minimizing the sum of the squares in the difference between the observed and predicted values of the dependent variable configured as a straight line. In this entry, OLS regression would be discussed in the context of a bivariate model, that is, a model in which there is only one independent variable (*X*) predicting a dependent variable (*Y*). In this study therefore, the adoption of LOS is on the basis that the three independent variables (ACGSF, CBLSE and CRPST) would be regressed against the dependent variable (NAPOL) with an intention to empirically establishing the effect of government poverty reduction programmes on national poverty level in Nigerian.
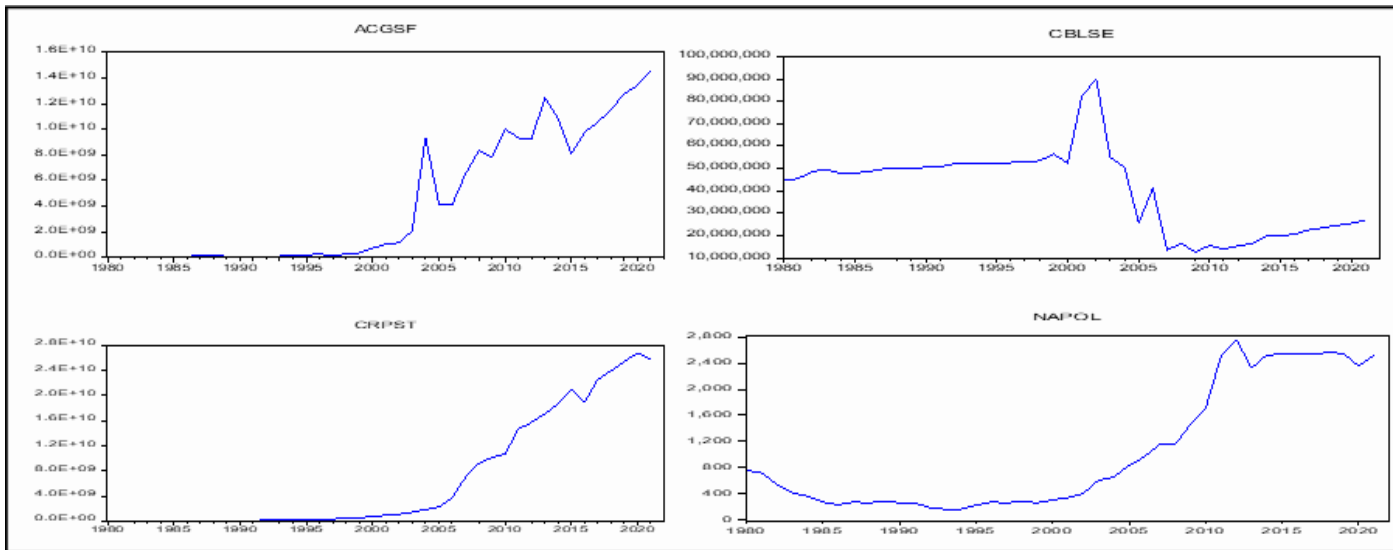
RESULTS AND DISCUSSION

Figure 4.1: Trend Analysis of Study Variables

Source: Researchers' Computation, 2024.

Figure 4.1 present the raw data used for analysis and their respective trend analysis of the study variables – which have three independent variables and five dependent variables making up the five research questions. From the presentations, the first independent variable ACGSF is measured in Naira and million. From the start year of 1980, the variable was ₦33,067,895m, it increased to ₦35,642,400 in 1981, but decreased to ₦31,763,900 in 1982. It was better off in 1983 to the value of ₦36,307,500, but lost reasonable weight to the value of ₦24,654,900m in 1984.

From 1985 to 1989, it increased from ₦44,243,600m, ₦68,417,400m, ₦102,152,500m, ₦118,611,000m and ₦129,300,300m respectively. However, it decreased from ₦98,494,500m to ₦79,107,400m in 1990 and 1991 respectively. It slightly increased to ₦91,953,100m in 1992 but decreased again to ₦80,845,800m in 1993. Its value in 1994 was ₦104,463,000m, from where it continued to increase from ₦164,133,100m, ₦225,519,500m, ₦242,028,300m between 1995 and 1997 respectively. It decreased to ₦219,144,200m in 1998, increased to ₦241,839,000m in 1999; but astronomically increased from ₦361,449,000m, ₦728,545,400m, ₦1,050,982,300m, ₦1,151,015,000m, ₦2,083,744,700m, and ₦9,366,392,900m, between 2000 and 2005.

It dramatically decrease to ₦4,195,099,680m and ₦4,087,447,940m between 2006 and 2007; afterward, it increased to ₦6,497,958,930m, ₦8,328,565,780m, ₦7,840,496,630m and ₦10,028,988,810m from 2008 to 2011 respectively. In 2012, it decreased to ₦9,332,484,230m, further decreased to ₦9,256,676,800m in 2013, but increased to ₦12,456,250,870m in 2014. In 2015, it was ₦10,857,380,830m, decreased to ₦8,104,810,630m in 2016, slightly increased to ₦9,785,569,578m in 2017, reduced again to ₦10,548,969,894m in 2018, but increased from ₦11,578,963,954m, ₦12,758,968,954m, ₦13,458,963,487m to ₦14,589,654,987 between 2019 and 2022 respectively. The trend analysis reveals that the ACGSF has inherent fluctuation cable of causing some stationarity problems; hence the need to conduct unit root test as done in the study.

Another dependent variable is CBLSE measured in naira and millions. From the start year of 1980, it was ₦42,965,458m, slightly increased to ₦44,785,654m, ₦45,463,066m, ₦48,563,065m, ₦49,645,035m from 1981 to 1984 respectively. The variable was ₦47,896,506m in 1985, slightly increased to ₦47,896,546m in

1986; afterward increased from ₦48,640,458m, ₦49,780,501m, ₦49,785,634m, ₦49,785,630, ₦50,654,896m, ₦50,785,663m, ₦52,105,896m, ₦52,365,854m, ₦52,453,963m, ₦52,604,789m, ₦52,634,456m, ₦53,005,006m, ₦53,456,896m, ₦56,468,440m between 1987 to 2000 respectively. however, in 2001, it decreased to ₦52,428,400m, but soared to ₦82,368,400m in 2002, sharply increased to ₦90,176,500m in 2003, decreased to ₦54,981,200m in 2004, and continued to decrease from ₦50,672,600m, ₦25,713,700m, ₦41,100,400m to ₦13,512,200m between 2005 and 2008 respectively. It rose a little to the value of ₦16,366,500m in 2009 and reduced to ₦12,550,300m in 2010. It was ₦15,611,700m in 2011, decreased to ₦13,863,500m in 2012, became ₦15,353,000m in 2013, increased to ₦16,486,654m, ₦19,789,566m, ₦19,975,987m, ₦20,578,964m, ₦22,548,963m, ₦23,475,895m, ₦24,578,965m, ₦25,475,954m, ₦26,785,964m from 2014 to 2022 respectively.

CRPST being the third independent variable started in 1980 at the value of ₦8,400,000m and got increased to ₦8,570,000m in 1981. Afterward, it continued to increase from ₦10,670,000m, ₦11,670,000m, ₦12,460,000m, ₦13,070,000m, ₦15,250,000m, ₦21,080,000m, ₦27,330,000m, ₦30,400,000m, ₦33,550,000m, ₦41,350,000m, ₦58,120,000m, ₦127,120,000m, ₦143,420,000m, ₦180,000,000m, ₦238,600,000m, ₦316,210,000m, ₦351,960,000m, ₦431,170,000m, ₦530,370,000m, ₦764,960,000m, ₦930,490,000m, ₦1,096,540,000m, ₦1,421,660,000m, ₦1,838,390,000m, ₦2,290,620,000m, ₦3,680,090,000m, ₦6,941,380,000m, ₦9,147,420,000m, ₦10,157,020,000m, ₦10,660,070,000m, ₦14,649,280,000m, ₦15,751,840,000m, ₦17,129,680,000m, ₦18,675,470,000m, ₦21,082,720,000m, ₦18,962,623,333m, ₦22,564,564,468m, ₦23,963,785,054m, ₦25,457,864,654m, ₦26,785,965,478m, ₦25,758,694,056m between 1982 to the end year of 2022.

On the other hand, NAPOL is the first dependent variable of the study. At the start year of 1980, the variable was ₦760m, it increased to ₦760m in 1981, decreased to ₦730m in 1982, slightly increased to ₦550m in 1983, but decreased further from ₦420m, ₦370m, ₦280m to ₦240m between 1984 and 1987 respectively. It rose a little in 1988 to ₦280m, decreased again to ₦270m in 1989, but increased to ₦290m in 1999. However, it decreased to ₦270m in 2000 and 2001. Slightly, it increased to ₦190m in 2002, became ₦170m in both 2003 and 2004, and further decreased to ₦230m in 2005, but increased to ₦280m in 2006. However, it became ₦270m in 2007, with slender increase to ₦283m in 2008, but further decrease to ₦270m in 2009. It increased with somewhat good impression to ₦310m in 2010, and continued in that manner from ₦350m, ₦410m, ₦610m, ₦660m, ₦840m, ₦970m, ₦1160m, ₦1160m, ₦1460m, ₦1710m, ₦2490m, ₦2760m, ₦2320m, ₦2523m, ₦2532m, ₦2534m, ₦2530m to ₦2560m between 2011 and 2019; with slight decrease in 2020 to the value of ₦2545m, ₦2350m in 2021 and lastly increased to ₦2525m in 2022.

Table 4.1: Results of Descriptive Statistical Test

	ACGSF	CBLSE	CRPST	NAPOL	PECTI	PYQUL	UNEMR	INFLR
Mean	4.30E+09	40313649	6.72E+09	1045.286	268.1905	70.29667	13.38405	18.94762
Median	8.90E+08	48229806	8.48E+08	580.0000	243.5000	71.14500	10.70000	12.94500
Maximum	1.46E+10	90176500	2.68E+10	2760.000	379.0000	76.32000	35.00000	72.84000
Minimum	24654900	12550300	8570000.	170.0000	162.0000	57.89000	3.850000	5.390000
Std. Dev.	5.03E+09	18594645	9.24E+09	951.5035	67.95057	4.144369	9.262747	16.45510
Skewness	0.630633	0.248702	1.030760	0.757790	0.335585	-0.933034	0.884911	1.877245
Kurtosis	1.759870	2.836726	2.465752	1.846048	1.499602	3.391965	2.817417	5.437663
Jarque-Bera	5.475253	4.479621	7.936756	6.350032	4.727911	6.362737	5.539806	35.06719
Probability	0.064724	0.786777	0.018904	0.041793	0.094047	0.041529	0.062668	0.000000
Sum	1.81E+11	1.69E+09	2.82E+11	43902.00	11264.00	2952.460	562.1300	795.8000

Sum Sq. Dev.	1.04E+21	1.42E+16	3.50E+21	37119715	189308.5	704.2077	3517.737	11101.58
Observations	42	42	42	42	42	42	42	42

Source: Researchers' Computation, 2024.

Table 4.1 presents the results of descriptive statistical test conducted on all the study variables. For ACGSF, the value of mean is 4.30E+09, median is 8.90E+08, it was maximum at the value of 1.46E+1 and minimum at 24654900, with a standard deviation value of 5.03E+09, positively skewed to the value of 0.630633, the value of kurtosis is 1.759870, Jarque-Bera is 5.475253, and a probability vale of 0.064724. Further, CBLSE has mean value of 40313649, median is 48229806, it was maximum at the value of 90176500 and minimum at 1255030, with a standard deviation value of 18594645, positively skewed to the value of 0.24870, the value of kurtosis is 2.836726; Jarque-Bera is 0.479621, and a probability vale of 0.78677.

CRPST recorded 6.72E+09 as mean value, median value is 8.48E+08, 2.68E+10 for maximum, 8570000 for minimum, standard deviation has 9.24E+09, skewness recorded this 1.030760, kurtosis is 2.465752, the Jarque-Bera has 7.936756 and the probability value of 0.018904. For NAPOL, the mean value is 1045.286, median value is 580.0000, maximum value is 2760.000, minimum value is 170.0000, the standard deviation is 951.5035, skewness is 0.757790, kurtosis is 1.846048, Jarque-Bera value is 6.350032 and the probability value is 0.041793.

Table 4.2: Result of Correlation Matrix Test

	ACGSF	CBLSE	CRPST	NAPOL	PECTI	PYQUL	UNEMR	INFLR
ACGSF	1	-0.7736	0.9314	0.9248	0.9263	-0.6380	0.8892	-0.3111
CBLSE	-0.7736	1	-0.7283	-0.7977	-0.8498	0.5528	-0.6491	0.2556
CRPST	0.9314	-0.7283	1	0.9581	0.8781	-0.4483	0.8549	-0.2603
NAPOL	0.9248	-0.7977	0.9581	1	0.9415	-0.4777	0.8352	-0.3341
PECTI	0.9263	-0.8498	0.8781	0.9415	1	-0.5812	0.8249	-0.3373
PYQUL	-0.6380	0.5528	-0.4483	-0.4777	-0.5812	1	-0.6070	0.4029
UNEMR	0.8892	-0.6491	0.8549	0.8352	0.8249	-0.6070	1	-0.3493
INFLR	-0.3111	0.2556	-0.2603	-0.3341	-0.3373	0.4029	-0.3493	1

Source: Researchers' Computation, 2024.

Table 4.2 of the study presents the result of the correlation matric test conducted on all the study variables. From the result, ACGSF is perfectly correlated with itself, has a positive correlation with NAPOL with the value of 0.9248. Further, CBLSE has negative correlation with NAPOL with the value of -0.7977 (78%); but CRPST is positively correlated with NAPOL value of 0.9581(96%).

Table 4.3: Result of ADF Unit Root Test

Variables	At Level			1st Difference			2nd Difference			OI	Remarks
	t-stat	5% Stat	Prob.	t-stat	5% Stat	Prob.	t-stat	5% Stat	Prob.		
ACGSF	-0.980569	-2.938987	0.9956	-7.155726	-2.938987	0.0000	-6.046555	-2.948404	0.0000	I[1]	Stationary at 1st differencing
CBLSE	-1.638467	-2.935001	0.4543	-7.623252	-2.936942	0.0000	-13.30444	-2.938987	0.0000	I[1]	Stationary at 1st differencing

Variables	t-stat	5% Stat	Prob.	t-stat	5% Stat	Prob.	t-stat	5% Stat	Prob.	OI	Remarks
CRPST	2.154573	-2.935001	0.9999	-5.248325	-2.936942	0.0001	-2.95075	-2.963972	0.0051	$I[1]$	Stationary at 1st differencing
NAPOL	0.414842	-2.935001	0.9813	-4.815006	-2.936942	0.0003	-7.373519	-2.941145	0.0000	$I[1]$	Stationary at 1st differencing

OI = Order of Integration

Source: Researcher's Computation, 2024.

Table 4.3 of the study presents result of unit root test conducted using augmented Dickey-Fuller estimator. Evidence from the result shows that all the study variables are stationary at first difference and integrated of order one [$I(1)$]. This is revealed by the fact that the t-stat values at level are greater than the 5% critical values; hence they are not statistically significant as shown in the probability values. This gives rise to retention of the null hypothesis that there is unit root. In furtherance of the test, it is revealed that t-stat values are less than the 5% critical values for all the variables in the first difference stage; hence the null hypothesis of the presence of unit root test is dropped, and the alternative is retained. This indicates that the variables are stationary at that point.

Table 4.4: Result of Philip-Perron (PP) Unit Root Test

Variables	At Level			1st Difference			2nd Difference			OI	Remarks
	t-stat	5% Stat	Prob.	t-stat	5% Stat	Prob.	t-stat	5% Stat	Prob.		
ACGSF	0.545198	-2.905001	0.9863	-9.218480	-2.936942	0.0000	-49.52556	-2.938987	0.0001	$I[1]$	Stationary at 1st differencing
CBLSE	-1.529343	-2.935001	0.5089	-7.568542	-2.96942	0.0000	-38.26927	-2.938987	0.0001	$I[1]$	Stationary at 1st differencing
CRPST	1.956272	-2.935001	0.9998	-5.580068	-2.936942	0.0000	-18.69893	-2.938987	0.0001	$I[1]$	Stationary at 1st differencing
NAPOL	0.116034	-2.935001	0.9632	-4.78495	-2.936942	0.0004	-24.71027	-2.938987	0.0001	$I[1]$	Stationary at 1st differencing

OI = Order of Integration

Source: Researcher's Computation, 2024.

As a confirmation to the ADF unit root test result, the PP unit root test was conducted on all the study variables. From the result, it is evident that the variables are equally stationary at first differencing and integrated of order one [$I(1)$], just like we have in the ADF unit root. With this confirmatory test, it is evident that the data are suitably reliable to use for other analyses with a view to addressing the research questions and testing the tenability of the null hypotheses as done and reported in the following tables.

Table 4.4: Result of Ordinary Least Squares (OLS) Test

Dependent Variable: NAPOL; Method = Least Squares; Included Observations: 42 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6.171825	1.869079	3.302068	0.0021
ACGSF	0.397870	0.145391	2.736555	0.0094
CBLSE	-0.748399	0.197101	-3.797040	0.0005
CRPST	-0.138169	0.109062	-1.266887	0.2129
R-squared = 0.819225; Adjusted R-Squares = 0.804953; log likelihood = 13.00629; F-statistics = 57.40185; Prob. (F-Statistics) = 0.0000; Durbin-Watson Stat = 0.394653				

Source: Researcher's Computation, 2024.

Table 4.4 presents the result of short run Ordinary Least Squares (OLS) test conducted to ascertain the effect of government poverty reduction programmes on national poverty level in Nigeria. In the analysis, national poverty level (NAPOL) serves as a dependent variable while Agricultural Credit Guarantee Scheme Fund (ACGSF), Commercial Banks Loans to Small Scale Enterprises (CBLSE), and Credit to Private Sector (CRPST) are measures of government poverty reduction programmes that serve as independent or explanatory variables.

From the result, it is evident that the coefficient values of ACGSF, CBLSE and CRPST are 0.397870, -0.748399 and -0.138169 respectively. The result implies that one unit change in ACGSF brought about approximately 0.40 unit change in NAPOL; thus it is said to have positively affected the dependent variable. Put differently, the result reveals that one hundred (100%) change in ACGSF brought about 40% increase NAPOL within the period of the study. Although ACGSF appears with a wrong sign that deviates from the theoretical expectation, the variable is confirmed to be significant at $P = 0.0094$ ($p < 0.05$) in influencing a positive change by reducing the level of national poverty in Nigeria.

As part of the government poverty reduction programmes, the study reveals that CBLSE negatively affected NAPOL. By virtue of the coefficient value of -0.748399, it is suggestive to infer that one unit change in CBLSE made NAPOL to fall by approximately 0.75 unit. In another sense, this means that as CBLSE, which appears with the right theoretical sign (negative sign as expected by apriori expectation), increased by one hundred percent (100%), NAPOL falls by seventy-five percent (75%). This is impressive, no wonder the probability value is significant at 0.0005 ($p < 0.05$) – indicating that CBLSE is significant in causing positive effect that could reduce national poverty level in Nigeria.

The result also reveals that CRPST has a negative coefficient value of -0.138169 which suggests that one unit increase in CRPST brought about 0.14 unit decrease in NAPOL. By implication, it could be discerned from the result that one hundred percent (100%) increase in CRPSL could reduce national poverty by approximately fourteen percent (14%) all things being equal. Though appearing with the right sign as apriori expected the variable, CRPST, is not significant as evidenced by the probability value of 0.2129 ($p > 0.05$).

In considering the goodness-of-fit of the NAPOL model, the result shows that the coefficient of determination, otherwise known as R-squared has a value of 0.819225 and its adjusted counterpart of 0.804953, with a positive log likelihood value of 13.00629 – supporting the fact that the model fits the dataset used in this analysis. This result points to the fact that model was would specified. More importantly, it implies that about 82 percent changes or variations found in the NAPOL are attributed to joint interaction of ACGSF, CBLSE and CRPST. The remaining 18 percent is attributed to stochastic disturbance or error term, which covers other factor (both qualitative and quantitative) that could influence or affect NAPOL but

are not captured in the model as specified in chapter 3 of the study.

Compared to a model with additional input variables, the adjusted R-squared value of 0.804953 suggests that the input variables in the model add value to the model. In other words, the variables can improve poverty by reducing its level more than would be expected by chance. This is because the basis of discussing R-squared is enshrined in the threshold of the fact that a lower adjusted R-squared indicates that the additional input variables are not adding value to the model. Compared to a model with additional input variables, a higher adjusted R-squared indicates that the additional input variables are adding value to the model.

The analysis further reveals a Durbin-Watson (DW) statistic of 0.394653 – which is below 2 and indicates a positive autocorrelation; hence the need for error correction mechanism as analyzed and reported in the table below. This decision is made based on the fact that the Durban Watson statistic would always assume a value between 0 and 4. A value of DW = 2 indicates that there is no autocorrelation. When the value is below 2, it indicates a positive autocorrelation, and a value higher than 2 indicates a negative serial correlation.

With respect to testing of the tenability of null hypothesis one which postulates that government poverty reduction programmes do not have significant effect on national poverty level in Nigeria, the value of F-ratio is used. From the same table, it could be seen that the value of F-Stat, which test the overall significance of the regression model has a value of 57.40185, while that of its probability is 0.0000. The F-stat is an implicative of the fact that the model has high level of overall significance – indicating that regression model provides a better fit than a model that contains no independent variables.

Since, the p-value of the regression result is 0.0000 which is lower than the chosen alpha level; it means that, the null hypothesis which argues that government poverty reduction programmes do not have significant effect on national poverty level in Nigeria is dropped. Its alternative is taken – meaning that government poverty reduction programmes have significant effect on national poverty level in Nigeria. In order to buttress this point, the result indicates that at least one independent variable contributes significantly to the prediction of reduction in national poverty in Nigeria; and the overall regression model is statistically significant.

Table 4.5: Result of Johansen Co-integration Test

Sample Adjusted: 1982 – 2021. Included Observations: 40 after adjustment. Trend Assumption: Linear Deterministic trend. Series: NAPOL, ACGSF, CBLSE and CRPST. Lags Intervals (in first differences): 1 to 1				
Hypothesized: No. of CE(s)	Eigenvalue	Trace (Statistic)	Critical Value (0.05)	Prob.**
None *	0.541423	68.64261	47.85613	0.0002
At most 1 *	0.461790	37.45754	29.79707	0.0054
At most 2	0.187295	12.67730	15.49471	0.1272
At most 3 *	0.103758	4.381813	3.841466	0.0363
Trace test indicates 2 co-integrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

Source: Researcher's Computation, 2024.

From table 4.5 it could be seen that the result of Johansen Co-integration test was conducted on the research question and hypothesis one. From the result it could be further be seen that there are two co-integrating equations at the 0.05 alpha level. This is established at the points of "At most 1" and "At most 3" whose trace statistics are greater than the critical values of 0.05. Also, their probability values are less than 0.05 at 0.0054 and 0.0363 respectively. This result therefore means that there is a long relationship between government poverty reduction programmes and national poverty level in Nigeria. Implying that more programmes targeted at poverty reduction by the government would be able to reduce poverty in Nigeria.

Table 4.6: Result of Parsimonious Error Correction

Dependent Variable: D(NAPOL). Method: Least Squares. Sample (adjusted): 1984 2021. Includedobservations: 38 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.030825	0.030017	-1.026926	0.3147
D(NAPOL(-1))	0.195976	0.186444	1.051125	0.3037
D(NAPOL(-2))	0.162831	0.190631	0.854172	0.4015
D(NAPOL(-3))	0.003070	0.168048	0.018269	0.9856
D(ACGSF(-1))	0.123911	0.078039	1.587795	0.1254
D(ACGSF(-2))	0.069765	0.079803	0.874206	0.3907
D(ACGSF(-3))	0.019603	0.090001	0.217811	0.8294
D(CBLSE(-1))	0.122045	0.149617	0.815716	0.4227
D(CBLSE(-2))	0.014500	0.131860	0.109966	0.9134
D(CBLSE(-3))	0.042757	0.128288	0.333286	0.7418
D(CRPST(-1))	0.022713	0.171256	0.132629	0.8956
D(CRPST(-2))	-0.078329	0.180046	-0.435051	0.6674
D(CRPST(-3))	0.405499	0.183032	2.215460	0.0365
ECM(-1)	-0.023512	0.124758	-0.188464	0.00851
Statistical Features	**OLS Results**	**ECM Result**	**Remarks**	
R-Squared	0.819225	0.505798		
Adjusted R-Squared	0.804953	0.238106		
Log Likelihood	13.00629	61.21035	Improved	
F-Statistics	57.40185	1.889475		
Prob.(F-stat)	0.0000	0.085682		
Durbin-Watson	0.39465	2.322903	Corrected	

Source: Researcher's Computation, 2024.

Table 4.6 of the study presents of results of parsimonious Error Correction Model (ECM) for NAPOL equation in order to correct the error found in the short run result of Ordinary Least Squares (OLS). The result of the ECM shows that the error is corrected as the Durbin-Watson result improved from 0.39465 (OLS result) to 2.322903 (ECM result). To this extend the study is reliable and could be sued to generalize the effect of government poverty reduction programmes on national poverty level in Nigeria.

Table 4.7: Result of Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.	Nature of Causality	Remark	Decision
NAPOL does not Granger Cause ACGSF	40	0.59632	0.5563	ACGSF ≠NAPOL	None Granger causes the other.	Retain H_0
ACGSF does not Granger Cause NAPOL		14.2152	3.E-05			
NAPOL does not Granger Cause CBLSE	40	1.34252	0.2743	CBLSE ≠ NAPOL	None Granger causes the other.	Retain H_0
CBLSE does not Granger Cause NAPOL		1.23779	0.3024			
NAPOL does not Granger Cause CRPST	40	2.21493	0.1242	CRPST ≠ NAPOL	CRPST Granger causes the NAPOL	Reject H_0
CRPST does not Granger Cause NAPOL		9.06420	0.0007			

Source: Researcher's Computation, 2024.

Table 4.7 presents the result of Granger causality test conducted on all the variables of study. The analysis is conducted in such manner that each independent variable is used against the five dependent variables. From the result it is evident that neither did NAPOL nor ACGSF Granger cause each other. On the basis of this we retain the null hypotheses that none of them Granger causes each other. The analysis further shows that both NAPOL and CBLSE did not Granger cause each other, but CRPST Granger caused NAPOL. This suggests that there is a uni-directional causality from CRPST to NAPOL – meaning that CRPST has effect on NAPOL in Nigeria.

Table 4.8: Result of Post Estimation Test

Equations / Models	Post Estimation Tests			
	Normality of Distribution.	Breusch-Godfrey Serial Correlation LM Test.	Heteroskedasticity Test: Breusch-Pagan-Godfrey.	Remark
	Jarque-Bera	Prob. F(2,36)	Prob. F(3,38)	
NAPOL	1.057087	0.0000	0.0076	Robust Estimation

Source: Researcher's Computation, 2024.

Table 4.8 of the study presents result of post estimation tests conducted on the five regression models where NAPOL served as dependent variable. The result shows that Jarque-Bera value of NAPOL model is 1.057087, which indicates a goodness-of-fit test which unravels the fact that sample data has skewness and kurtosis that are similar to a normal distribution. The Jarque-Bera test statistic is always positive, and not zero, showing that the sample data has a normal distribution.

This is confirmed by the Breusch–Godfrey test (which helps to detect serial autocorrelation) is a test for autocorrelation in the errors in a regression model. It is evident from the result that the probability F-stat value is 0.0000; which is significant. Therefore, the null hypothesis which states that there is no serial

correlation of any order in the series, distribution and model is retained. Further, the Breusch Pagan test is conducted in order to detect is there is heteroscedasticity in a regression model. The probability value of the result is 0.0076; which is significant. This therefore means that the null hypothesis of the presence of heteroscedasticity is drooped – indicating that there is no heteroscedasticity in the regression model used in the study.
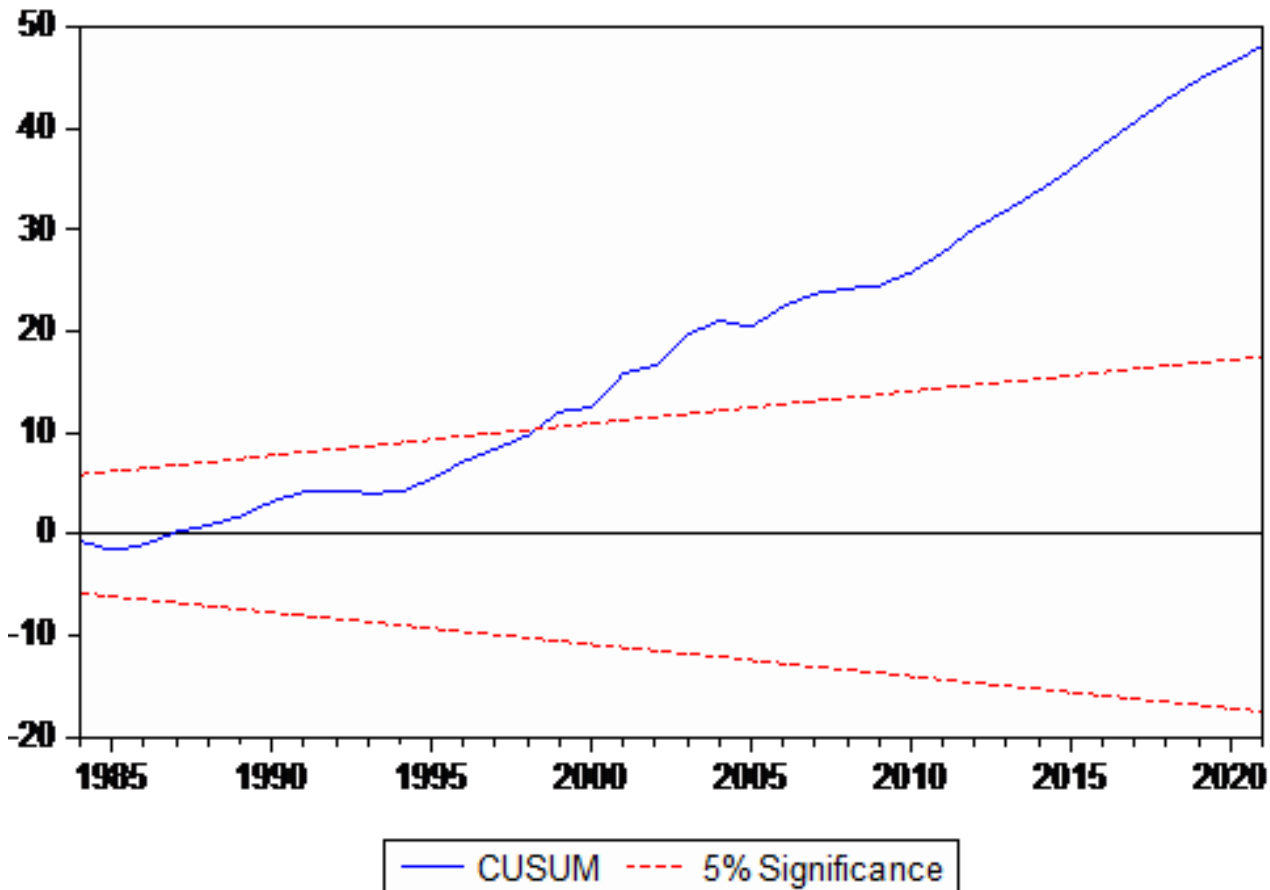

Figure 4.2: Graphs of Stability Estimation Test Conducted on the Models

Source: Researcher's Design, 2023.

Figure 4.2 of the study presents five graphs of stability estimation test conducted on the five models of the study. The test is conducted to show the upward or downward trends in the upper and lower CUSUMs. Instructively, the plotted points should fluctuate randomly around zero. If an upward or downward trend develops, the process mean has shifted and the process may be affected by special causes. It is found that NAPOL is relatively stable – suggesting that it is affected by the recurrence of repeated changes in government poverty reduction programmes in terms of ACGSF, CBLSE and CRPST.

Discussion of Results

The study sought to empirically establish the effect of government poverty reduction programmes on national poverty level in Nigeria, using ACGSF, CBLSE and CRPST as measure of government poverty reduction programme. The analysis reveals that ACGST has 40% positive effect on national poverty level, while CBLSE and CRPST respectively have 75% and 14% negative effect on national poverty level in Nigeria. But they jointly affect NAPOL to the level of 80%. More also, there is government poverty reduction programmes have significant effect on national poverty level in Nigeria. Also, government poverty reduction programmes have long run effect on national poverty level in Nigeria. It is also revealed

that ACGSF and NAPOL does not Granger cause each other. No Granger causality flows either from CBLSE to NAPOL or from NAPOL to CBLSE. But a uni-directional Granger causality flows from CRPST is found to Granger cause NAPOL. This result implies that CBLSE has more effect on NAPOL than ACGSF and CRPST.

In line with the findings of our study, Taruno (2019) who delved into the complexity and multidimensionality of poverty, especially focusing on Indonesia, reported that poverty rates over the past four decades, illustrating a significant reduction from 40.10 percent in 1976 to 9.82 percent in March 2018. Despite this decline, a substantial disparity in poverty rates across provinces persists, particularly between Java Island and Eastern Indonesia. Taruno investigated the roles of economic growth and public spending, specifically in education, health, and social protection, in poverty reduction.

The study argues that public spending on health and education had varying effects on poverty reduction in urban and rural areas. Notably, spending allocation on health and education significantly impacted reducing poverty rates in rural areas, while the decline in urban areas was more influenced by spending on health. The study also highlighted that economic growth and social protection spending did not significantly reduce poverty rates over the past decade. The findings emphasized the need for the government to prioritize investment in poverty reduction programmes.

In relation with our study, Manaf and Ibrahim (2017) provided insights into Malaysia's successful poverty reduction efforts, highlighting a substantial decrease in the poverty rate from 49.3% in 1970 to 1.7% in 2012. The authors discussed various policies and initiatives contributing to this success, emphasizing the multi-dimensional nature of poverty and the importance of inclusive, stable, and culturally sensitive strategies for poverty eradication. Similarly, Megawati, Rahaju, Mahdiannur, & Kurniawan, (2021) emphasized the challenges of poverty alleviation, noting issues like lack of coordination, inaccurate data, and slow information flow leading to inappropriate decision-making. Their research aimed to delve into the Integrated Social Welfare Database (ISWD) and its potential in poverty programs. Employing a literature study uses the ISWD offers significant benefits, aiding both central and regional governments in analyzing and planning poverty alleviation activities and identifying target beneficiaries for various social protection programs.

CONCLUDING REMARKS

The incessant rising curve of poverty in Nigeria necessitated this study to assess the effect of government poverty reduction programmes on national poverty level. Anchoring on Liberal Reformist theory, Relative Deprivation and Equity theory theoretical framework the study did an analysis by conducting descriptive statistical and econometric methods of Ordinary Least Squared (OLS), co-integration, error correction mechanism and Granger causality estimation tests as well as robustness and stability tests. The analysis revealed that government poverty reduction programmes, measured in terms of ACGSF, CBLSE and CRPST, have significant effects on national poverty level in Nigeria. On this basis therefore, the study concludes that effect of government poverty reduction programmes have effect on the national poverty level in Nigeria. The study therefore recommended that government should give more attention to Commercial Banks Loans to Small Scale Enterprises (CBLSE) as it has more potential to reduce national poverty. And the government poverty reduction programmes used in this study should be increased by 81%, as revealed by the R-squares of the ECM results, so as to be able to address the problem of national poverty in Nigeria

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