

# Impact of Government Revenue and Expenditure on Employment and Poverty Reduction in Plateau State

Eneji Mathias Agri<sup>1</sup>, Eneji Angela Iyaji<sup>2</sup>, Odey Francis Acha<sup>3</sup>, Haruna Habilla<sup>4</sup> and  
Adikaba Azara Innocent<sup>5</sup>

<sup>1</sup> University of Jos

*Received: 12 November 2020 Accepted: 1 December 2020 Published: 15 December 2020*

---

## Abstract

This study examined the impact of government revenue and expenditure on employment and poverty reduction in Plateau State for the period of 1999 to 2019. The main objective of this study is to analysis the impact of government revenue and expenditure on employment and poverty reduction in Plateau State. The major findings shows that government expenditure on education have a positive significant effect on employment and a unit increase will increase employment and reduced poverty level. While that of agriculture and health have positive relationship on employment and insignificant a unit increase will reduced employment and increase poverty level. The major recommendations are that government should channel its revenue and expenditure to productive projects in all sectors of the economy. Priority should be given to education, health care, tourism, agriculture and industry. These will provide employment and reduce poverty level in Plateau State

---

*Index terms*— government revenue, government expenditure, poverty, employment, chain theory

## 1 Introduction

The Nigerian economy over the years has witnessed several macroeconomic imbalances which had greatly affected the poverty level of its citizens. The economy depends heavily on crude oil exports, which contributes about 90% of government revenue, which is usually collected at the federal level and allocated to the 36 states based on Federal Character. With its large reserve of human and natural resources, Nigeria has the potential to build a prosperous economy, reduce poverty significantly, and provide the needed employment, healthcare, education and infrastructural services. Despite the country's relative oil wealth, poverty is a wide spread and majority of the population in Nigeria still live in abject poverty. (Oghojafor, Olayemi, Okonji and Olayiwola, 2011).

Plateau State is one of the 36 states in Nigeria. It has over 50 indigenous ethnic groups, approximately 16,000 square miles in area; plateau state was created in 1976, but its present boundaries revisited in 1996, with a population of 3,383,027 million makes up about 2.3% of Nigeria's 180 million people. Its estimated population for year 2015 was 4,131,870, based on an annual growth rate of 2.83% (NPC, 2006). Its estimated annual primary school enrolment is 775,601. It has 17 Local Government Area councils and is located in the North Central Zone of Nigeria. Similar to the rest of the country, the predominant occupation of its population is agriculture, although a significant proportion of the population is involved in mining. Its internally generated revenue is low both at state and LGA levels, as most other states, while its revenue comes mainly from federal government allocation.

Abundant agricultural and mineral resources provide the state with solid base for industrialization creating opportunities in activities such as food processing, and production of beer and beverages and milk products. The Jos Plateau abounds in natural scenic vistas which present opportunities for tourism and recreation. Among the most famous tourist attraction points in the State are Wase Rock, Shere Hills, Kerang volcanic mountains, Ampang Crater Lake, Kura, Assop. Kahwang. Sha Burukut and Farin Ruwa Falls, Wase Grazing Reserve, Jos Museum and Zoological Garden. Plateau State has a number of sport stadia and golf courses in the metropolitan

## 4 OBJECTIVES OF THE STUDY

---

44 city of Jos, Mining in Nigeria started as far back as the eighteenth century. Over 500 occurrences and deposits  
45 of different minerals are known so far to exist within the country with the exploration of some of them being on  
46 a small scale (Adegbulugbe, 2017). One of the major cases of mineral exploration and exploitation that boomed  
47 within the nation has been that of tin in Jos.

48 A careful observation of the budgets of plateau state over the past three decades, from 1980 to 2019, shows that  
49 Plateau State Government has tilted its budgetary policies toward deficit budgeting, with the exception of two  
50 years, 1995 and 1996, when surplus budgets were prepared ??Dang, Bako and Lahu, 2015). Deficit comes with  
51 the attendant consequence of deficit financing, which may come from local sources or foreign sources (Kosimbei,  
52 2009).

53 Nigeria's budget has been in deficits over time, coupled with economic crisis which comes in a cycle. The Gross  
54 Domestic Product (GDP), investment and consumption spending, savings rate, imports and exports, capacity  
55 utilization, household income, trade, capital flows, business profits and inflation rates have been the multiple  
56 transmission mechanisms, while indebtedness, illiquidity, bankruptcies and the unemployment rate rise. Nigeria  
57 is faced with the twin problems of mono product volume of exports and volatile price of crude, resulting to  
58 reduced revenue. The implications are that the federal and state budgets cannot be funded adequately, resulting  
59 to external borrowing and debt financing. These have negative implications on foreign exchange and imports of  
60 raw materials, low absorptive capacity, job losses, increased tax evasion and avoidance, low purchasing power,  
61 low standard of living caused by economic recession ?? Eneji, et.al 2017). Fayemi (1991), defines revenue as all  
62 tools of income to government such as taxes, rates, fees, fines, duties, penalties, rents, dues, proceeds and other  
63 receipt of government to which the legislature has the power of appropriation.

64 Government revenue and expenditure are considered as fiscal instruments which the government can apply  
65 to solve macroeconomic problems such as poverty, reduction in inequality, inflation, exchange rate fluctuation,  
66 unemployment, dwindling oil price and the desire to restore the economy on the part of full employment, price  
67 stability, balance of payment equilibrium and above all, achieve consistent economic growth. State governments  
68 as the second tier of government in Nigeria derive its revenue from various sources. However, it should be noted  
69 that sources of revenue are by no means uniform among the states. States derive their revenue depending on the  
70 resources available to them (Adam, 2006;Dang, 2013).

## 71 2 II.

### 72 3 Statement of the Problem

73 Poverty and unemployment are major problems in developing countries, Nigeria inclusive. The level of poverty  
74 in Nigeria has been on the increase for the past three decades. Unemployment is surging, poverty is increasing,  
75 while confidence in governance is falling. This problem of high incidence of poverty at national level mirrors the  
76 situation at the states, local and community levels. Plateau state, though rich in natural and human resources,  
77 is also faced with poverty and under utilization of capacity, where the absolute poor can hardly meet their  
78 basic needs of subsistence. Thus, poverty is generating multiple problems such as high level of illiteracy, low  
79 life-expectancy, unemployment, high crime rate, insecurity, inadequate infrastructure, low GDP, and tragic waste  
80 of human resources. There is need to investigate whether government revenue and expenditure has had any  
81 significant relationship with unemployment and poverty over the years 1980-2019. Given the current realities  
82 and challenges, it is incumbent on the government to use its fiscal instruments to turn around the economic  
83 fortunes of Plateau State for sustainable development. Besides, , there seems to be challenges of mismanagement  
84 of government revenue and misappropriation of public expenditure in the economy. This is manifested in inability  
85 to maximize the benefits associated with economic booms.

86 Thus, the quantity and quality of government expenditure has not translated to sustainable development or  
87 improvement in the welfare of the citizens. The standard of living of majority of plateau state is low; many  
88 wallow in abject poverty, while more than 50 percent live on less than US\$1 per day. Plateau state is among the  
89 poorest states in Nigeria, despite the natural endowments and the amount of public spending claimed to have  
90 been made by the government. This study focuses on public expenditure on healthcare, agriculture, education  
91 and infrastructures for the provision of employment which leads to economic growth and poverty reduction.

92 In line with the stated problems and scope, this study will attempt to answer the following questions: i.

93 To what extent has government revenue and expenditure in plateau state significantly contributed to  
94 employment? ii.

95 What is the significant relationship between government revenue and expenditure and poverty reduction in  
96 plateau state? iii.

97 What are the factors significantly responsible for limited of government revenue and expenditure in plateau  
98 state?

99 III.

## 100 4 Objectives of the Study

101 This study aims at examining the impact of government revenue and expenditure on employment and poverty  
102 reduction in plateau state. The major objectives of this study are: i.

---

103 To examine the impact of government revenue and expenditure on employment and poverty reduction in  
104 plateau state. ii.

105 To determine the direction of relationship between government revenue and expenditure on employment and  
106 poverty reduction in plateau state. iii.

107 To Identify the factors responsible for the ineffectiveness of government revenue and expenditure in reducing  
108 poverty and provide employment in plateau state.

109 IV.

## 110 5 Significance of the Study

111 The significance of this research lies in the problem of study stated above and the need to provide solutions.  
112 Plateau state government has been embarking on revenue mobilization and expenditure; however, unemployment  
113 and poverty persist in plateau

## 114 6 Global Journal of Management and Business Research

115 Volume XX Issue IV Version I Year 2020 ( ) state, government after government. Governments in successive years  
116 have talked about poverty reduction, outlining beautiful programs, spending billions of dollars in various relevant  
117 programs. Development partners including private bodies, NGOs, and donor countries are also incorporated to  
118 those pro-poor activities of the government. However, millions of people still live abject poverty. This indicates  
119 that government efforts and spending are not appropriate and/or inefficient in attaining the targeted goals. It is  
120 significantly important to look at trends, levels and composition of public expenditures, and to assess the causes  
121 of changes in the poverty and unemployment rates over time. This study therefore has significance in finding out  
122 the effectiveness of government intervention, the result of which will be useful to the government, policy makers,  
123 the poor, donor countries, NGOs, other researchers, students and the general public. Reliable information is  
124 crucial in designing effective policy for the field of public finance and State intervention.

125 V.

## 126 7 Literature Review

127 Available statistics show that total government spending in Nigeria has continued to rise steadily all through the  
128 years observed. The total government recurrent expenditure has consistently been on the increase, with about  
129 18 percent rise from 1985-1995, and about 10 percent increases from 1995-2010. In the same manner, the capital  
130 expenditure has maintained similar upward trend. Whether this continuous increase has provided employment,  
131 reduced poverty and has accentuated the level of growth of the Nigerian economy, has generated a lot of debate,  
132 which is of interest to more researchers. The size of government spending and its effect on poverty reduction,  
133 and vice versa, has been an issue of sustained interest for decades.

134 Scholars such as Abdullah, (2000), Ranjan, (2000), Al-Yousif, (2000), Abdullah, (2000) Sharma, (2008) and  
135 Cooray, (2009) all concluded that expansion of government expenditure induce economic growth positively. Their  
136 studies simply suggest that government expenditure on health and education raises the productivity of labour and  
137 increases the growth of national output. Similarly, expenditure on infrastructure such as roads, communications,  
138 power, etc, reduces production costs, increases private sector investment and profitability of firms, thus fostering  
139 economic growth.

140 Generally, the main government revenues in Nigeria are categorized into oil revenue, non-oil revenue and  
141 federal government independent revenue. These sources of revenue in Nigeria are:

142 Oil Revenue; Oil revenue is the most important source of revenue to the federation account. It is made up of  
143 Crude oil and Gas sale and Oil Taxes. This includes, Royalties, Petroleum profit taxes, Rent and others.

144 Non-Oil Revenue; this is the second category of revenue to the federation account.

145 This category refers to revenue that are not derived from or associated with oil. They include; companies'  
146 income tax (CIT), Custom and Excise Duties (CED), Valued Added tax (VAT), Levies and Others. The third  
147 source of revenue to federal government is the independent sources which accrue to federal government directly  
148 without passing through the federation account. The federal government also maintained an account called the  
149 VAT POOL outside the federation account. Government also sources for funds when expenditure outstrips its  
150 current revenue. This calls for another option of revenue using the instruments of monetary and fiscal policy.  
151 Such options include deficit financing which include money creation, domestic and external borrowing. These  
152 sources of revenue together with government domestic revenue are collectively called government revenue. Black  
153 (2003) emphasized that it is spending by government at any level. "Government expenditure consists of spending  
154 on real goods and services purchased from outside suppliers; spending on employment in state services such  
155 as administration, defense and education; spending on transfer payments to pensioners, the unemployed and  
156 disabled; spending on subsidies and grants to industries; and payment of debt interest". In Nigeria, government  
157 expenditure is shared among the three tiers of government; the federal government deposits tax receipts and  
158 revenues from the sale of oil into the federation account which is then shared among Federal, State and Local  
159 Governments according to a sharing formula (World Bank, 2007;. Jhingan (2004), stated that public expenditure,  
160 by increasing social welfare, helps in reducing inequalities of income and wealth and as well can be used to create

## 12 PEACOCK AND WISEMAN THEORY OF GOVERNMENT EXPENDITURE

---

161 trade as well as to correct externalities and regional disparities if employed judiciously, thereby fastening economic  
162 growth.

163 Olaniyan and Bankole (2005) conducted a research on Human capital, Capabilities and poverty reduction in  
164 rural Nigeria. They found out that health and education have significant effect on poverty reduction in Nigeria.  
165 Their findings suggested a conscious effort at the policy level to reduce poverty by increasing public

## 166 8 Global Journal of Management and Business Research

167 Volume XX Issue IV Version I Year 2020

## 168 9 ( ) B

169 © 2020 Global Journals expenditure on health and education so as to improve the human capital of individuals  
170 and consequently reduce poverty. Adegoke (2009) carried out an econometric study on the role of education in  
171 alleviating poverty in Nigeria. She found out that there was a bidirectional relationship between expenditure on  
172 education and poverty reduction in Nigeria. She concluded that expenditure on education which has gone very low  
173 in Nigeria contributed to worsening situation of poverty, whether measured in income term or non-income terms.  
174 Ayeni (2005) carried out an empirical research on the impact of government expenditure on poverty reduction in  
175 Ekiti State, Nigeria using multiple regression analysis. He found out that education as an investment has positive  
176 relationship with job creation which consequently can help to reduce poverty.

177 Asghar, Hussain and Rehman (2012) studied the long run impact of government spending in various sectors on  
178 poverty reduction in Pakistan for the period of 1972-2008 applying co-integration and Error Correction Mechanism  
179 (ECM). Poverty as the dependent variable was measured using headcount index while the independent variables  
180 were: government spending on health government spending on education; government spending on law; order  
181 and government spending on economic and community service and budget deficit. The study found that the  
182 coefficient for government spending on health was insignificant.

183 Seetanah, Ramessur and Rojid (2009) conducted a study to answer whether transport and communication  
184 infrastructure alleviated urban poverty in developing countries. The study covers twenty developing countries and  
185 uses panel data for years 1980-2005. From running a cross section regression, length of paved road was found to be  
186 statistically significant and negatively related to poverty head count ratio. Fixed telephone line per 1000 people  
187 is used as a measure of communication infrastructure and is found to negatively relate to poverty headcount ratio  
188 but not significantly. Thus, infrastructure is seen to increase participation by the poor in economic activities and  
189 increase access for the poor to more economic activities.

190 In the earlier study by Awe (2013), public spending on infrastructure had a wide scope to include road network,  
191 access to electricity and water and public utilities. The study found that public expenditure on infrastructure  
192 played a significant role in reducing poverty in Ekiti State. Khan (2005) finds a correlation between public  
193 expenditure, growth, and poverty in developing countries.

194 The oil industry, though a major contributor to foreign exchange earnings, employs less than one percent of the  
195 labour force in Nigeria, hence, the need to diversify the economy,(Sodiye and Ogunrinola, 2011; ??badan,1996;  
196 ??orld Bank,1996). This present study focuses on the impact of government revenue and expenditure on  
197 employment and poverty reduction in Plateau State.

198 A review of available literature has shown that there is no general consensus on the definition of poverty.  
199 Since poverty affects many aspects of human condition such as physical, moral and psychological, a concise  
200 and acceptable definition of poverty is elusive as it cannot be captured only by income and consumption based  
201 measures (Abimiku, 2006;Khan 2001;. Despite these views, different experts have defined poverty based on their  
202 individual perspective. Dike (1997) defines poverty as the inability of an individual or population to meet the  
203 basic need of food, education, housing, health and clothing. According to Okumandewa (1997), poverty is a multi-  
204 faced deprivation, characterized by lack of purchasing power, exposure to risk, insufficient access to social and  
205 economic services and limited access to opportunities for income generation. Poverty condition is dehumanizing  
206 since by its very nature, it deprives individuals' right to basic needs and to exploit their full potentials, hence,  
207 the need for poverty reduction, (UN,2015). In ordinary usage, poverty is applied to three distinct conditions,  
208 economic inequality, economic dependence and economic insufficiency.

209 The World Bank (2011 Bank ( , 1999)), defines poverty as "pronounced deprivation in well-being". Hanghton,  
210 and Khandker (2009), maintain that poverty describes a state of 'lack of key capabilities which may be income  
211 or education, or poor health, or insecurity or low selfconfidence or a sense of powerlessness, or the absence of  
212 rights such as freedom of speech'.

## 213 10 VI.

## 214 11 Theoretical Framework

## 215 12 Peacock and Wiseman Theory of Government Expenditure

216 Alan T. Peacock and Jack Wiseman's study is probably one of the best known analyses of the time pattern of  
217 public expenditures. They founded their analyses upon a political theory of public expenditure determination,

---

218 namely, that governments like to spend more money and citizens do not like to pay taxes, and that government  
219 needed to pay some attention to the wishes of their citizens. Wiseman and Peacock in their study (1961), of  
220 public expenditure in the United Kingdom for the period 1890-1955, revealed that public expenditure does not  
221 increase in a smooth and continuous manner, but in jerks or step like fashion. In other words, government fiscal  
222 activities rise step by step to successive new plateau, sometimes, some social or other disturbance like war takes  
223 place creating a need for increased public expenditure which the existing public revenue cannot meet (Anyanwu,  
224 1993; Peacock and Wiseman have considered the role of emergency such as war, in raising the level of public

## 225 **13 Global Journal of Management and Business Research**

226 Volume XX Issue IV Version I Year 2020 ( ) expenditure. In normal times, size of public expenditure is limited  
227 broadly by the level of taxation which the general public is prepared to tolerate.

## 228 **14 Theory of Social Exclusion and Social Capital**

229 Social sciences have identified poverty to be exacerbated due to social exclusion and lack of social capital inherent  
230 in the structural characteristics of society. Social exclusion occurs when an individual or a community is wholly  
231 or partially excluded from full participation in the society in which they live. ??orazes and Pintak (2007) note  
232 that regarding poverty, consensus on exclusion as non-participation in consumption, production and political  
233 engagement. Socially excluded individuals and communities fail to access opportunities and resources that  
234 are necessary to improve their economic welfare. One form of social exclusion may lead to another form of  
235 exclusion resulting to multiple permanent disadvantages (Sameti, Esfahani, and Haghghi, 2012; Kure 2002).  
236 Social exclusion is defined in terms of relative disadvantaged position to the rest of the society and generally applies  
237 to underdeveloped countries unlike in developed countries where most people are excluded in one dimension or  
238 another (Davis and Sanchez-Martinez, 2014). Social exclusion has been seen to be determined by social capital  
239 held whereby social capital relates to one's social position and connections. Sirovatka and Mares (2008) summarize  
240 various definition of social capital 'as a quality, as a social resource or a social glue that is the property of a  
241 group, a community or a society, and as such it is available to its members.' Low levels of social capital worsen  
242 the possibility that one can climb out of poverty and reinforces unemployment and economic distress among low  
243 income earners. Policy interventions based on theories of social exclusion and social capitals have been derailed  
244 due the difficulty in measuring the two aspects. However, studies that have been done on social exclusion have  
245 used a proxy of median income in which falling below a population income median; one is regarded as poor and  
246 excluded. Intervention through expansion of public expenditure and provision of public goods would be expected  
247 to provide a form of bridging to poor in the society particularly investment in social welfare.

## 248 **15 Chain Theory of Macroeconomics**

249 The Keynesian theory emphasizes the role of government in raising the level of aggregate demand, employment,  
250 interest rate and money supply. The chain theory of macroeconomics, (Eneji 2020) draws inspiration from both  
251 Keynesian and neoclassical postulations (historical materialism) to explain the behavior of modern economies.  
252 Certain factors (internal and external) could impact on the role of government in macroeconomic stabilization in  
253 a chain relationship or reaction. The theory tries to explain the cause and effect of economic decisions. The entire  
254 economy operates as a chain system and any disturbances or dislocation in the chain affects the whole system  
255 in the form of leakages or injections. This explains the principles that govern the macro economy. Everything  
256 is related to something, and something is related to everything. The actual level of output in the economy  
257 (products market) depends largely on the level of money supply in the economy (the money market), which in  
258 turn, determines the aggregate employment (the labor market). Equilibrium conditions in the three markets  
259 jointly determine the equilibrium levels of output, employment, the general price level and interest rates. What  
260 happens in one market affects all the markets in general equilibrium framework. Economic theory and policy are  
261 interrelated or interdependent. Thus, it is almost impossible to talk about economic theory without implying  
262 possibilities for economic policy, and the best way to approach policy is probably by studying macroeconomic  
263 theory and its empirical implications.

264 A good example is the corona virus that started in Wuhan, China in 2020. The pandemic has rapid chain  
265 reaction on domestic and international trade, the global stock markets, sports, travel ban, causing economic  
266 slowdown. It has consequences as trading slowed down at the NYSE and other major stock markets around  
267 the world. Corona virus has chain reaction on the financial market volatility. Economic recession and global  
268 financial crisis was caused by oil price volatility and variations in oil outputs. Equally, Boko Haram and ethnic  
269 conflicts are worst than corona virus in Africa, impacting on government revenue and expenditure, and its efforts  
270 to reduce poverty and unemployment.

271 Plateau State: Internally Generated Revenue, Federally Allocated Revenue, NBillion (1999-2016).

## 16 Year Internally generated Revenue Federally Allocated Revenue

As the price of crude oil in the global market moved from about \$115 per barrel in June 2014 to less than \$30 per barrel in February 2016, government across the three tiers are experiencing fiscal crunch. Revenue accruing to federal government and consequently amounts of grant to states has significantly reduced due to fall in oil prices as a result of the fact that Nigeria is a mono-economy. The situation is particularly acute in states where internally generated revenue is low. Stella (1993) opined that ineffective tax administration is a chronic problem in many developing countries.

The past few years have witnessed greater emphasis than ever before on the need to improve or accelerate the internally generated revenue by the three tiers of government in Nigeria (Federal, State and local Governments). The poor revenue accruing to government has created serious financial stress for all tiers of governments. The inflationary effects on the general price index have further increased the cost of service and infrastructure provided by the state government against dwindling revenue. The aggregate effect of all this development have been the near bankruptcy of most state governments which leaves most of them living in abject poverty, every month after meeting salary payment marginally. The challenge of initiating any meaningful capital project or even keeping the existing infrastructure properly maintained has virtually become history. Some of the state and local governments hardly pay their staff salaries regularly or even resolve to pay half salary, (Abudullahi, et.al, 2017). The internally generated revenue declined from 13.38% in 2002 to 11.1% in 2006 (CBN, 2006).

The reality is that in recent times the revenue mobilized from the federation account is hardly enough to meet the immediate needs of the states. It is the responsibility of the state governments to look inwards for ways to mobilize more IGR. When these revenues are mobilized, they are expected to be utilized to provide social services to the citizens.

Plateau State is richly endowed in agriculture and tourism, hence it is expected that government expenditure on agriculture and infrastructure could boost employment and poverty reduction.

## 17 a) Government Revenue and Expenditure in the Agriculture Sector

The contribution of agricultural sector to the economy cannot be overemphasized when considering its building roles for sustainable development, in terms of employment potentials, export and financial impacts on the economy. Figure 1 below shows the percentages of revenue utilization in the agriculture sector for the period 1999 to 2016. It shows that an average rate of 6 % as the PLSG revenue expenditure in the agriculture sector with the highest in 2011 at 9%. This shows a low investment of revenue by PLSG in providing public services in the agriculture sector of Plateau State. Although, the general view is that public expenditure either recurrent or capital expenditure, notably on social and economic infrastructure can be growth-enhancing although the financing of such expenditure to provide essential infrastructural facilities including transport, electricity, telecommunications, water and sanitation can be growth-retarding (for example, the negative effect associated with taxation and excessive debt). The size and structure of government revenue and expenditure will determine the pattern and form of growth in output of the economy. The econometrics technique of multiple regression analysis is adopted, combined with descriptive statistics. The multiple regression model is specified thus: The econometrics form of the structural equation in (1) above is given as:

## 18 Global Journal of Management and Business Research

EMPR = f(GEXA, GEXEDU, GEXH) (1) POVR = f(AGEX) (2) AGEX = f(AGREV) - (3) EMPR = ? 0 + ? 1 GEXA + ? 2 GEXEDU + ? 3 GEXH + ? 4 t + ? 5 t<sup>2</sup> + ? 6 t<sup>3</sup> + ? 7 t<sup>4</sup> + ? 8 t<sup>5</sup> + ? 9 t<sup>6</sup> + ? 10 t<sup>7</sup> + ? 11 t<sup>8</sup> + ? 12 t<sup>9</sup> + ? 13 t<sup>10</sup> + ? 14 t<sup>11</sup> + ? 15 t<sup>12</sup> + ? 16 t<sup>13</sup> + ? 17 t<sup>14</sup> + ? 18 t<sup>15</sup> + ? 19 t<sup>16</sup> + ? 20 t<sup>17</sup> + ? 21 t<sup>18</sup> + ? 22 t<sup>19</sup> + ? 23 t<sup>20</sup> + ? 24 t<sup>21</sup> + ? 25 t<sup>22</sup> + ? 26 t<sup>23</sup> + ? 27 t<sup>24</sup> + ? 28 t<sup>25</sup> + ? 29 t<sup>26</sup> + ? 30 t<sup>27</sup> + ? 31 t<sup>28</sup> + ? 32 t<sup>29</sup> + ? 33 t<sup>30</sup> + ? 34 t<sup>31</sup> + ? 35 t<sup>32</sup> + ? 36 t<sup>33</sup> + ? 37 t<sup>34</sup> + ? 38 t<sup>35</sup> + ? 39 t<sup>36</sup> + ? 40 t<sup>37</sup> + ? 41 t<sup>38</sup> + ? 42 t<sup>39</sup> + ? 43 t<sup>40</sup> + ? 44 t<sup>41</sup> + ? 45 t<sup>42</sup> + ? 46 t<sup>43</sup> + ? 47 t<sup>44</sup> + ? 48 t<sup>45</sup> + ? 49 t<sup>46</sup> + ? 50 t<sup>47</sup> + ? 51 t<sup>48</sup> + ? 52 t<sup>49</sup> + ? 53 t<sup>50</sup> + ? 54 t<sup>51</sup> + ? 55 t<sup>52</sup> + ? 56 t<sup>53</sup> + ? 57 t<sup>54</sup> + ? 58 t<sup>55</sup> + ? 59 t<sup>56</sup> + ? 60 t<sup>57</sup> + ? 61 t<sup>58</sup> + ? 62 t<sup>59</sup> + ? 63 t<sup>60</sup> + ? 64 t<sup>61</sup> + ? 65 t<sup>62</sup> + ? 66 t<sup>63</sup> + ? 67 t<sup>64</sup> + ? 68 t<sup>65</sup> + ? 69 t<sup>66</sup> + ? 70 t<sup>67</sup> + ? 71 t<sup>68</sup> + ? 72 t<sup>69</sup> + ? 73 t<sup>70</sup> + ? 74 t<sup>71</sup> + ? 75 t<sup>72</sup> + ? 76 t<sup>73</sup> + ? 77 t<sup>74</sup> + ? 78 t<sup>75</sup> + ? 79 t<sup>76</sup> + ? 80 t<sup>77</sup> + ? 81 t<sup>78</sup> + ? 82 t<sup>79</sup> + ? 83 t<sup>80</sup> + ? 84 t<sup>81</sup> + ? 85 t<sup>82</sup> + ? 86 t<sup>83</sup> + ? 87 t<sup>84</sup> + ? 88 t<sup>85</sup> + ? 89 t<sup>86</sup> + ? 90 t<sup>87</sup> + ? 91 t<sup>88</sup> + ? 92 t<sup>89</sup> + ? 93 t<sup>90</sup> + ? 94 t<sup>91</sup> + ? 95 t<sup>92</sup> + ? 96 t<sup>93</sup> + ? 97 t<sup>94</sup> + ? 98 t<sup>95</sup> + ? 99 t<sup>96</sup> + ? 100 t<sup>97</sup> + ? 101 t<sup>98</sup> + ? 102 t<sup>99</sup> + ? 103 t<sup>100</sup> + ? 104 t<sup>101</sup> + ? 105 t<sup>102</sup> + ? 106 t<sup>103</sup> + ? 107 t<sup>104</sup> + ? 108 t<sup>105</sup> + ? 109 t<sup>106</sup> + ? 110 t<sup>107</sup> + ? 111 t<sup>108</sup> + ? 112 t<sup>109</sup> + ? 113 t<sup>110</sup> + ? 114 t<sup>111</sup> + ? 115 t<sup>112</sup> + ? 116 t<sup>113</sup> + ? 117 t<sup>114</sup> + ? 118 t<sup>115</sup> + ? 119 t<sup>116</sup> + ? 120 t<sup>117</sup> + ? 121 t<sup>118</sup> + ? 122 t<sup>119</sup> + ? 123 t<sup>120</sup> + ? 124 t<sup>121</sup> + ? 125 t<sup>122</sup> + ? 126 t<sup>123</sup> + ? 127 t<sup>124</sup> + ? 128 t<sup>125</sup> + ? 129 t<sup>126</sup> + ? 130 t<sup>127</sup> + ? 131 t<sup>128</sup> + ? 132 t<sup>129</sup> + ? 133 t<sup>130</sup> + ? 134 t<sup>131</sup> + ? 135 t<sup>132</sup> + ? 136 t<sup>133</sup> + ? 137 t<sup>134</sup> + ? 138 t<sup>135</sup> + ? 139 t<sup>136</sup> + ? 140 t<sup>137</sup> + ? 141 t<sup>138</sup> + ? 142 t<sup>139</sup> + ? 143 t<sup>140</sup> + ? 144 t<sup>141</sup> + ? 145 t<sup>142</sup> + ? 146 t<sup>143</sup> + ? 147 t<sup>144</sup> + ? 148 t<sup>145</sup> + ? 149 t<sup>146</sup> + ? 150 t<sup>147</sup> + ? 151 t<sup>148</sup> + ? 152 t<sup>149</sup> + ? 153 t<sup>150</sup> + ? 154 t<sup>151</sup> + ? 155 t<sup>152</sup> + ? 156 t<sup>153</sup> + ? 157 t<sup>154</sup> + ? 158 t<sup>155</sup> + ? 159 t<sup>156</sup> + ? 160 t<sup>157</sup> + ? 161 t<sup>158</sup> + ? 162 t<sup>159</sup> + ? 163 t<sup>160</sup> + ? 164 t<sup>161</sup> + ? 165 t<sup>162</sup> + ? 166 t<sup>163</sup> + ? 167 t<sup>164</sup> + ? 168 t<sup>165</sup> + ? 169 t<sup>166</sup> + ? 170 t<sup>167</sup> + ? 171 t<sup>168</sup> + ? 172 t<sup>169</sup> + ? 173 t<sup>170</sup> + ? 174 t<sup>171</sup> + ? 175 t<sup>172</sup> + ? 176 t<sup>173</sup> + ? 177 t<sup>174</sup> + ? 178 t<sup>175</sup> + ? 179 t<sup>176</sup> + ? 180 t<sup>177</sup> + ? 181 t<sup>178</sup> + ? 182 t<sup>179</sup> + ? 183 t<sup>180</sup> + ? 184 t<sup>181</sup> + ? 185 t<sup>182</sup> + ? 186 t<sup>183</sup> + ? 187 t<sup>184</sup> + ? 188 t<sup>185</sup> + ? 189 t<sup>186</sup> + ? 190 t<sup>187</sup> + ? 191 t<sup>188</sup> + ? 192 t<sup>189</sup> + ? 193 t<sup>190</sup> + ? 194 t<sup>191</sup> + ? 195 t<sup>192</sup> + ? 196 t<sup>193</sup> + ? 197 t<sup>194</sup> + ? 198 t<sup>195</sup> + ? 199 t<sup>196</sup> + ? 200 t<sup>197</sup> + ? 201 t<sup>198</sup> + ? 202 t<sup>199</sup> + ? 203 t<sup>200</sup> + ? 204 t<sup>201</sup> + ? 205 t<sup>202</sup> + ? 206 t<sup>203</sup> + ? 207 t<sup>204</sup> + ? 208 t<sup>205</sup> + ? 209 t<sup>206</sup> + ? 210 t<sup>207</sup> + ? 211 t<sup>208</sup> + ? 212 t<sup>209</sup> + ? 213 t<sup>210</sup> + ? 214 t<sup>211</sup> + ? 215 t<sup>212</sup> + ? 216 t<sup>213</sup> + ? 217 t<sup>214</sup> + ? 218 t<sup>215</sup> + ? 219 t<sup>216</sup> + ? 220 t<sup>217</sup> + ? 221 t<sup>218</sup> + ? 222 t<sup>219</sup> + ? 223 t<sup>220</sup> + ? 224 t<sup>221</sup> + ? 225 t<sup>222</sup> + ? 226 t<sup>223</sup> + ? 227 t<sup>224</sup> + ? 228 t<sup>225</sup> + ? 229 t<sup>226</sup> + ? 230 t<sup>227</sup> + ? 231 t<sup>228</sup> + ? 232 t<sup>229</sup> + ? 233 t<sup>230</sup> + ? 234 t<sup>231</sup> + ? 235 t<sup>232</sup> + ? 236 t<sup>233</sup> + ? 237 t<sup>234</sup> + ? 238 t<sup>235</sup> + ? 239 t<sup>236</sup> + ? 240 t<sup>237</sup> + ? 241 t<sup>238</sup> + ? 242 t<sup>239</sup> + ? 243 t<sup>240</sup> + ? 244 t<sup>241</sup> + ? 245 t<sup>242</sup> + ? 246 t<sup>243</sup> + ? 247 t<sup>244</sup> + ? 248 t<sup>245</sup> + ? 249 t<sup>246</sup> + ? 250 t<sup>247</sup> + ? 251 t<sup>248</sup> + ? 252 t<sup>249</sup> + ? 253 t<sup>250</sup> + ? 254 t<sup>251</sup> + ? 255 t<sup>252</sup> + ? 256 t<sup>253</sup> + ? 257 t<sup>254</sup> + ? 258 t<sup>255</sup> + ? 259 t<sup>256</sup> + ? 260 t<sup>257</sup> + ? 261 t<sup>258</sup> + ? 262 t<sup>259</sup> + ? 263 t<sup>260</sup> + ? 264 t<sup>261</sup> + ? 265 t<sup>262</sup> + ? 266 t<sup>263</sup> + ? 267 t<sup>264</sup> + ? 268 t<sup>265</sup> + ? 269 t<sup>266</sup> + ? 270 t<sup>267</sup> + ? 271 t<sup>268</sup> + ? 272 t<sup>269</sup> + ? 273 t<sup>270</sup> + ? 274 t<sup>271</sup> + ? 275 t<sup>272</sup> + ? 276 t<sup>273</sup> + ? 277 t<sup>274</sup> + ? 278 t<sup>275</sup> + ? 279 t<sup>276</sup> + ? 280 t<sup>277</sup> + ? 281 t<sup>278</sup> + ? 282 t<sup>279</sup> + ? 283 t<sup>280</sup> + ? 284 t<sup>281</sup> + ? 285 t<sup>282</sup> + ? 286 t<sup>283</sup> + ? 287 t<sup>284</sup> + ? 288 t<sup>285</sup> + ? 289 t<sup>286</sup> + ? 290 t<sup>287</sup> + ? 291 t<sup>288</sup> + ? 292 t<sup>289</sup> + ? 293 t<sup>290</sup> + ? 294 t<sup>291</sup> + ? 295 t<sup>292</sup> + ? 296 t<sup>293</sup> + ? 297 t<sup>294</sup> + ? 298 t<sup>295</sup> + ? 299 t<sup>296</sup> + ? 300 t<sup>297</sup> + ? 301 t<sup>298</sup> + ? 302 t<sup>299</sup> + ? 303 t<sup>300</sup> + ? 304 t<sup>301</sup> + ? 305 t<sup>302</sup> + ? 306 t<sup>303</sup> + ? 307 t<sup>304</sup> + ? 308 t<sup>305</sup> + ? 309 t<sup>306</sup> + ? 310 t<sup>307</sup> + ? 311 t<sup>308</sup> + ? 312 t<sup>309</sup> + ? 313 t<sup>310</sup> + ? 314 t<sup>311</sup> + ? 315 t<sup>312</sup> + ? 316 t<sup>313</sup> + ? 317 t<sup>314</sup> + ? 318 t<sup>315</sup> + ? 319 t<sup>316</sup> + ? 320 t<sup>317</sup> + ? 321 t<sup>318</sup> + ? 322 t<sup>319</sup> + ? 323 t<sup>320</sup> + ? 324 t<sup>321</sup> + ? 325 t<sup>322</sup> + ? 326 t<sup>323</sup> + ? 327 t<sup>324</sup> + ? 328 t<sup>325</sup> + ? 329 t<sup>326</sup> + ? 330 t<sup>327</sup> + ? 331 t<sup>328</sup> + ? 332 t<sup>329</sup> + ? 333 t<sup>330</sup> + ? 334 t<sup>331</sup> + ? 335 t<sup>332</sup> + ? 336 t<sup>333</sup> + ? 337 t<sup>334</sup> + ? 338 t<sup>335</sup> + ? 339 t<sup>336</sup> + ? 340 t<sup>337</sup> + ? 341 t<sup>338</sup> + ? 342 t<sup>339</sup> + ? 343 t<sup>340</sup> + ? 344 t<sup>341</sup> + ? 345 t<sup>342</sup> + ? 346 t<sup>343</sup> + ? 347 t<sup>344</sup> + ? 348 t<sup>345</sup> + ? 349 t<sup>346</sup> + ? 350 t<sup>347</sup> + ? 351 t<sup>348</sup> + ? 352 t<sup>349</sup> + ? 353 t<sup>350</sup> + ? 354 t<sup>351</sup> + ? 355 t<sup>352</sup> + ? 356 t<sup>353</sup> + ? 357 t<sup>354</sup> + ? 358 t<sup>355</sup> + ? 359 t<sup>356</sup> + ? 360 t<sup>357</sup> + ? 361 t<sup>358</sup> + ? 362 t<sup>359</sup> + ? 363 t<sup>360</sup> + ? 364 t<sup>361</sup> + ? 365 t<sup>362</sup> + ? 366 t<sup>363</sup> + ? 367 t<sup>364</sup> + ? 368 t<sup>365</sup> + ? 369 t<sup>366</sup> + ? 370 t<sup>367</sup> + ? 371 t<sup>368</sup> + ? 372 t<sup>369</sup> + ? 373 t<sup>370</sup> + ? 374 t<sup>371</sup> + ? 375 t<sup>372</sup> + ? 376 t<sup>373</sup> + ? 377 t<sup>374</sup> + ? 378 t<sup>375</sup> + ? 379 t<sup>376</sup> + ? 380 t<sup>377</sup> + ? 381 t<sup>378</sup> + ? 382 t<sup>379</sup> + ? 383 t<sup>380</sup> + ? 384 t<sup>381</sup> + ? 385 t<sup>382</sup> + ? 386 t<sup>383</sup> + ? 387 t<sup>384</sup> + ? 388 t<sup>385</sup> + ? 389 t<sup>386</sup> + ? 390 t<sup>387</sup> + ? 391 t<sup>388</sup> + ? 392 t<sup>389</sup> + ? 393 t<sup>390</sup> + ? 394 t<sup>391</sup> + ? 395 t<sup>392</sup> + ? 396 t<sup>393</sup> + ? 397 t<sup>394</sup> + ? 398 t<sup>395</sup> + ? 399 t<sup>396</sup> + ? 400 t<sup>397</sup> + ? 401 t<sup>398</sup> + ? 402 t<sup>399</sup> + ? 403 t<sup>400</sup> + ? 404 t<sup>401</sup> + ? 405 t<sup>402</sup> + ? 406 t<sup>403</sup> + ? 407 t<sup>404</sup> + ? 408 t<sup>405</sup> + ? 409 t<sup>406</sup> + ? 410 t<sup>407</sup> + ? 411 t<sup>408</sup> + ? 412 t<sup>409</sup> + ? 413 t<sup>410</sup> + ? 414 t<sup>411</sup> + ? 415 t<sup>412</sup> + ? 416 t<sup>413</sup> + ? 417 t<sup>414</sup> + ? 418 t<sup>415</sup> + ? 419 t<sup>416</sup> + ? 420 t<sup>417</sup> + ? 421 t<sup>418</sup> + ? 422 t<sup>419</sup> + ? 423 t<sup>420</sup> + ? 424 t<sup>421</sup> + ? 425 t<sup>422</sup> + ? 426 t<sup>423</sup> + ? 427 t<sup>424</sup> + ? 428 t<sup>425</sup> + ? 429 t<sup>426</sup> + ? 430 t<sup>427</sup> + ? 431 t<sup>428</sup> + ? 432 t<sup>429</sup> + ? 433 t<sup>430</sup> + ? 434 t<sup>431</sup> + ? 435 t<sup>432</sup> + ? 436 t<sup>433</sup> + ? 437 t<sup>434</sup> + ? 438 t<sup>435</sup> + ? 439 t<sup>436</sup> + ? 440 t<sup>437</sup> + ? 441 t<sup>438</sup> + ? 442 t<sup>439</sup> + ? 443 t<sup>440</sup> + ? 444 t<sup>441</sup> + ? 445 t<sup>442</sup> + ? 446 t<sup>443</sup> + ? 447 t<sup>444</sup> + ? 448 t<sup>445</sup> + ? 449 t<sup>446</sup> + ? 450 t<sup>447</sup> + ? 451 t<sup>448</sup> + ? 452 t<sup>449</sup> + ? 453 t<sup>450</sup> + ? 454 t<sup>451</sup> + ? 455 t<sup>452</sup> + ? 456 t<sup>453</sup> + ? 457 t<sup>454</sup> + ? 458 t<sup>455</sup> + ? 459 t<sup>456</sup> + ? 460 t<sup>457</sup> + ? 461 t<sup>458</sup> + ? 462 t<sup>459</sup> + ? 463 t<sup>460</sup> + ? 464 t<sup>461</sup> + ? 465 t<sup>462</sup> + ? 466 t<sup>463</sup> + ? 467 t<sup>464</sup> + ? 468 t<sup>465</sup> + ? 469 t<sup>466</sup> + ? 470 t<sup>467</sup> + ? 471 t<sup>468</sup> + ? 472 t<sup>469</sup> + ? 473 t<sup>470</sup> + ? 474 t<sup>471</sup> + ? 475 t<sup>472</sup> + ? 476 t<sup>473</sup> + ? 477 t<sup>474</sup> + ? 478 t<sup>475</sup> + ? 479 t<sup>476</sup> + ? 480 t<sup>477</sup> + ? 481 t<sup>478</sup> + ? 482 t<sup>479</sup> + ? 483 t<sup>480</sup> + ? 484 t<sup>481</sup> + ? 485 t<sup>482</sup> + ? 486 t<sup>483</sup> + ? 487 t<sup>484</sup> + ? 488 t<sup>485</sup> + ? 489 t<sup>486</sup> + ? 490 t<sup>487</sup> + ? 491 t<sup>488</sup> + ? 492 t<sup>489</sup> + ? 493 t<sup>490</sup> + ? 494 t<sup>491</sup> + ? 495 t<sup>492</sup> + ? 496 t<sup>493</sup> + ? 497 t<sup>494</sup> + ? 498 t<sup>495</sup> + ? 499 t<sup>496</sup> + ? 500 t<sup>497</sup> + ? 501 t<sup>498</sup> + ? 502 t<sup>499</sup> + ? 503 t<sup>500</sup> + ? 504 t<sup>501</sup> + ? 505 t<sup>502</sup> + ? 506 t<sup>503</sup> + ? 507 t<sup>504</sup> + ? 508 t<sup>505</sup> + ? 509 t<sup>506</sup> + ? 510 t<sup>507</sup> + ? 511 t<sup>508</sup> + ? 512 t<sup>509</sup> + ? 513 t<sup>510</sup> + ? 514 t<sup>511</sup> + ? 515 t<sup>512</sup> + ? 516 t<sup>513</sup> + ? 517 t<sup>514</sup> + ? 518 t<sup>515</sup> + ? 519 t<sup>516</sup> + ? 520 t<sup>517</sup> + ? 521 t<sup>518</sup> + ? 522 t<sup>519</sup> + ? 523 t<sup>520</sup> + ? 524 t<sup>521</sup> + ? 525 t<sup>522</sup> + ? 526 t<sup>523</sup> + ? 527 t<sup>524</sup> + ? 528 t<sup>525</sup> + ? 529 t<sup>526</sup> + ? 530 t<sup>527</sup> + ? 531 t<sup>528</sup> + ? 532 t<sup>529</sup> + ? 533 t<sup>530</sup> + ? 534 t<sup>531</sup> + ? 535 t<sup>532</sup> + ? 536 t<sup>533</sup> + ? 537 t<sup>534</sup> + ? 538 t<sup>535</sup> + ? 539 t<sup>536</sup> + ? 540 t<sup>537</sup> + ? 541 t<sup>538</sup> + ? 542 t<sup>539</sup> + ? 543 t<sup>540</sup> + ? 544 t<sup>541</sup> + ? 545 t<sup>542</sup> + ? 546 t<sup>543</sup> + ? 547 t<sup>544</sup> + ? 548 t<sup>545</sup> + ? 549 t<sup>546</sup> + ? 550 t<sup>547</sup> + ? 551 t<sup>548</sup> + ? 552 t<sup>549</sup> + ? 553 t<sup>550</sup> + ? 554 t<sup>551</sup> + ? 555 t<sup>552</sup> + ? 556 t<sup>553</sup> + ? 557 t<sup>554</sup> + ? 558 t<sup>555</sup> + ? 559 t<sup>556</sup> + ? 560 t<sup>557</sup> + ? 561 t<sup>558</sup> + ? 562 t<sup>559</sup> + ? 563 t<sup>560</sup> + ? 564 t<sup>561</sup> + ? 565 t<sup>562</sup> + ? 566 t<sup>563</sup> + ? 567 t<sup>564</sup> + ? 568 t<sup>565</sup> + ? 569 t<sup>566</sup> + ? 570 t<sup>567</sup> + ? 571 t<sup>568</sup> + ? 572 t<sup>569</sup> + ? 573 t<sup>570</sup> + ? 574 t<sup>571</sup> + ? 575 t<sup>572</sup> + ? 576 t<sup>573</sup> + ? 577 t<sup>574</sup> + ? 578 t<sup>575</sup> + ? 579 t<sup>576</sup> + ? 580 t<sup>577</sup> + ? 581 t<sup>578</sup> + ? 582 t<sup>579</sup> + ? 583 t<sup>580</sup> + ? 584 t<sup>581</sup> + ? 585 t<sup>582</sup> + ? 586 t<sup>583</sup> + ? 587 t<sup>584</sup> + ? 588 t<sup>585</sup> + ? 589 t<sup>586</sup> + ? 590 t<sup>587</sup> + ? 591 t<sup>588</sup> + ? 592 t<sup>589</sup> + ? 593 t<sup>590</sup> + ? 594 t<sup>591</sup> + ? 595 t<sup>592</sup> + ? 596 t<sup>593</sup> + ? 597 t<sup>594</sup> + ? 598 t<sup>595</sup> + ? 599 t<sup>596</sup> + ? 600 t<sup>597</sup> + ? 601 t<sup>598</sup> + ? 602 t<sup>599</sup> + ? 603 t<sup>600</sup> + ? 604 t<sup>601</sup> + ? 605 t<sup>602</sup> + ? 606 t<sup>603</sup> + ? 607 t<sup>604</sup> + ? 608 t<sup>605</sup> + ? 609 t<sup>606</sup> + ? 610 t<sup>607</sup> + ? 611 t<sup>608</sup> + ? 612 t<sup>609</sup> + ? 613 t<sup>610</sup> + ? 614 t<sup>611</sup> + ? 615 t<sup>612</sup> + ? 616 t<sup>613</sup> + ? 617 t<sup>614</sup> + ? 618 t<sup>615</sup> + ? 619 t<sup>616</sup> + ? 620 t<sup>617</sup> + ? 621 t<sup>618</sup> + ? 622 t<sup>619</sup> + ? 623 t<sup>620</sup> + ? 624 t<sup>621</sup> + ? 625 t<sup>622</sup> + ? 626 t<sup>623</sup> + ? 627 t<sup>624</sup> + ? 628 t<sup>625</sup> + ? 629 t<sup>626</sup> + ? 630 t<sup>627</sup> + ? 631 t<sup>628</sup> + ? 632 t<sup>629</sup> + ? 633 t<sup>630</sup> + ? 634 t<sup>631</sup> + ? 635 t<sup>632</sup> + ? 636 t<sup>633</sup> + ? 637 t<sup>634</sup> + ? 638 t<sup>635</sup> + ? 639 t<sup>636</sup> + ? 640 t<sup>637</sup> + ? 641 t<sup>638</sup> + ? 642 t<sup>639</sup> + ? 643 t<sup>640</sup> + ? 644 t<sup>641</sup> + ? 645 t<sup>642</sup> + ? 646 t<sup>643</sup> + ? 647 t<sup>644</sup> + ? 648 t<sup>645</sup> + ? 649 t<sup>646</sup> + ? 650 t<sup>647</sup> + ? 651 t<sup>648</sup> + ? 652 t<sup>649</sup> + ? 653 t<sup>650</sup> + ? 654 t<sup>651</sup> + ? 655 t<sup>652</sup> + ? 656 t<sup>653</sup> + ? 657 t<sup>654</sup> + ? 658 t<sup>655</sup> + ? 659 t<sup>656</sup> + ? 660 t<sup>657</sup> + ? 661 t<sup>658</sup> + ? 662 t<sup>659</sup> + ? 663 t<sup>660</sup> + ? 664 t<sup>661</sup> + ? 665 t<sup>662</sup> + ? 666 t<sup>663</sup> + ? 667 t<sup>664</sup> + ? 668 t<sup>665</sup> + ? 669 t<sup>666</sup> + ? 670 t<sup>667</sup> + ? 671 t<sup>668</sup> + ? 672 t<sup>669</sup> + ? 673 t<sup>670</sup> + ? 674 t<sup>671</sup> + ? 675 t<sup>672</sup> + ? 676 t<sup>673</sup> + ? 677 t<sup>674</sup> + ? 678 t<sup>675</sup> + ? 679 t<sup>676</sup> + ? 680 t<sup>677</sup> + ? 681 t<sup>678</sup> + ? 682 t<sup>679</sup> + ? 683 t<sup>680</sup> + ? 684 t<sup>681</sup> + ? 685 t<sup>682</sup> + ? 686 t<sup>683</sup> + ? 687 t<sup>684</sup> + ? 688 t<sup>685</sup> + ? 689 t<sup>686</sup> + ? 690 t<sup>687</sup> + ? 691 t<sup>688</sup> + ? 692 t<sup>689</sup> + ? 693 t<sup>690</sup> + ? 694 t<sup>691</sup> + ? 695 t<sup>692</sup> + ? 696 t<sup>693</sup> + ? 697 t<sup>694</sup> + ? 698 t<sup>695</sup> + ? 699 t<sup>696</sup> + ? 700 t<sup>697</sup> + ? 701 t<sup>698</sup> + ? 702 t<sup>699</sup> + ? 703 t<sup>700</sup> + ? 704 t<sup>701</sup> + ? 705 t<sup>702</sup> + ? 706 t<sup>703</sup> + ? 707 t<sup>704</sup> + ? 708 t<sup>705</sup> + ? 709 t<sup>706</sup> + ? 710 t<sup>707</sup> + ? 711 t<sup>708</sup> + ? 712 t<sup>709</sup> + ? 713 t<sup>710</sup> + ? 714 t<sup>711</sup> + ? 715 t<sup>712</sup> + ? 716 t<sup>713</sup> + ? 717 t<sup>714</sup> + ? 718 t

---

## 19 Descriptive Statistics

Government

## 20 Discussion of Findings

The mandatory attachment program (MAP) was targeted at the unemployed graduates where 3 percent of them were picked and engaged in skills acquisition for a period of 6 months with monthly stipend of N10000 (\$28.6).

The skills acquisition program extended coverage to non-graduates. Beneficiaries were trained in various skills such as tailoring, computer services, hair dressing, carpentry, electronics repairs, and automechanics. By 2004, the Promise-Keepers Program (PKP) was executed. The promise-keepers program (PKP) is a credit facility meant for religious organization such as churches and mosques, in which the leaders (Imams and Pastors) served as guarantors for their followers. A total of ten churches and two mosques benefited from the program. The pilot loan scheme of the farmers empowerment program (FEP) in 2005 was executed during which the sum of N20, 000.000.00 was disbursed to women group and farmers. In 2006, another credit facility scheme called Multi-Partner Microfinance Scheme (MP-MFS) was introduced. to-date tax payer database, massive tax revenue leakages and losses, poor information system about tax obligations, and obsolete tax laws. There were also constraints to the tax administration system, including lack of required facilities for tax administrators, low remuneration and morale, lack of skills, under assessments, arbitrary assessments and nonassessments, diversion and non-remittance of revenues, and inconsistencies in the application of enforcement standards.

There is both rural and urban poverty in Plateau State. It is a common sight to see a whole family squatting and squeezing in a room for accommodation amidst the dangers it poses to health , epidemics and diseases. There are also households where no member of the family is working for any paid job or earned income, households that have not accessed any hospital for orthodox medication, households that have not eaten any cooked food for the past 24 hours, have not seen or used electricity for the past two months, and households where no member has attained education beyond secondary school, yet they have more than eight children.

Other key findings are itemized thus: 1. Government recurrent expenditure has been given priority at the expense of capital expenditure in the face of fiscal deficits and borrowing, as well as wrong targeting of the poor. These have led to environmental degradation, neglect and decay of infrastructure, increased poverty and unemployment, corrupt practices, and huge expenditure on maintenance of government. 2. Government revenue has been increasing at a decreasing rate due to underutilization of capacities. Strategies for internal revenue mobilization should be put in place. The strength of the states lie in internally generated revenue and not allocation from the Federation account. The informal economy contributes about 80% of employment, 75% of Gross Domestic Product, yet this vital sector is not properly captured in the tax net. There should be workshops and training for tax administrators and the public on identification and mobilization of tax revenue from the informal sector in a digital economy. 3. Budget implementation has been a major challenge.

In most of the years under review, less than 60% of government budget was actually implemented. 4. There have been the challenges of mismanagement of government revenue and misappropriation of public expenditure in the Plateau State economy.

IX.

## 21 Conclusion

This study focused on analysis the impacts of government revenue and expenditure on employment and poverty reduction in Plateau State from 1999 to 2016, using the Error Correction Model and Ordinary Least Square regression analysis. Results from the empirical analysis of this study provide strong evidence indicating that government revenue and expenditure on economic sectors (agriculture, infrastructure, education and health) has not yielded the expected impact on the employment rates and poverty reduction in Plateau State. Instead, as government revenue and expenditure increased over the study period, unemployment and poverty rates also are increasing in the state. This calls for employment and poverty policies reforms in order to target the absolute poor. The findings of this study suggest that the problem of misallocation and mismanagement of government revenue and expenditure calls for a holistic approach to the allocation and management of public expenditure as it triggers different unfavorable effects on the selected macroeconomic variables in Plateau State. Greater emphasis should be placed on increasing budgetary allocation and prudent management of resources, improvement of quality education, health and agriculture, if the government revenue and expenditure on these sectors is to contribute significantly to employment and poverty reduction.

X.

## 22 Recommendations

i. Government on priority basis has to review its policy of cost sharing and increase its investment and spending on health services. Health sector expenditures must be allocated in a way that increases the provision of necessary infrastructure, services and easy access to health care services. And in order to attain the goals and objectives of the world health organization (WHO) and also to reduce high infant and maternal mortality rate, HIV/AIDS and other killers diseases. ii.

387 Government should consider investment in education sector as a priority and persistent effort to reduce poverty.  
 388 Budgetary allocation to education should be increased for the purpose of procuring educational materials,  
 389 equipments, conducive environment for both staff and students and enhance technical skills acquisition in all  
 390 schools to enhance human capital development which will also lead to self-employment. Students at primary,  
 391 secondary and tertiary levels should be taught to acquire skills and look beyond their paper qualifications for  
 392 employment and sustainable livelihoods. iii.

393 **23 The various poverty alleviation programs in Plateau**

394 State should be consistent, co-ordinated and consolidated with the development of a comprehensive framework  
 395 geared towards human capital development, entrepreneurship and poverty reduction. There should be improved  
 396 tax planning, professionalism, and staff morale which will rapidly improve tax collection and tax compliance  
 397 among large number of enterprises. Expand outreach and monitoring capacities of revenue staff who regularly  
 398 visit formal businesses and informal sector organizations to identify potential taxpayers, explain the tax payment  
 process, and check for payment certificates. <sup>1</sup>

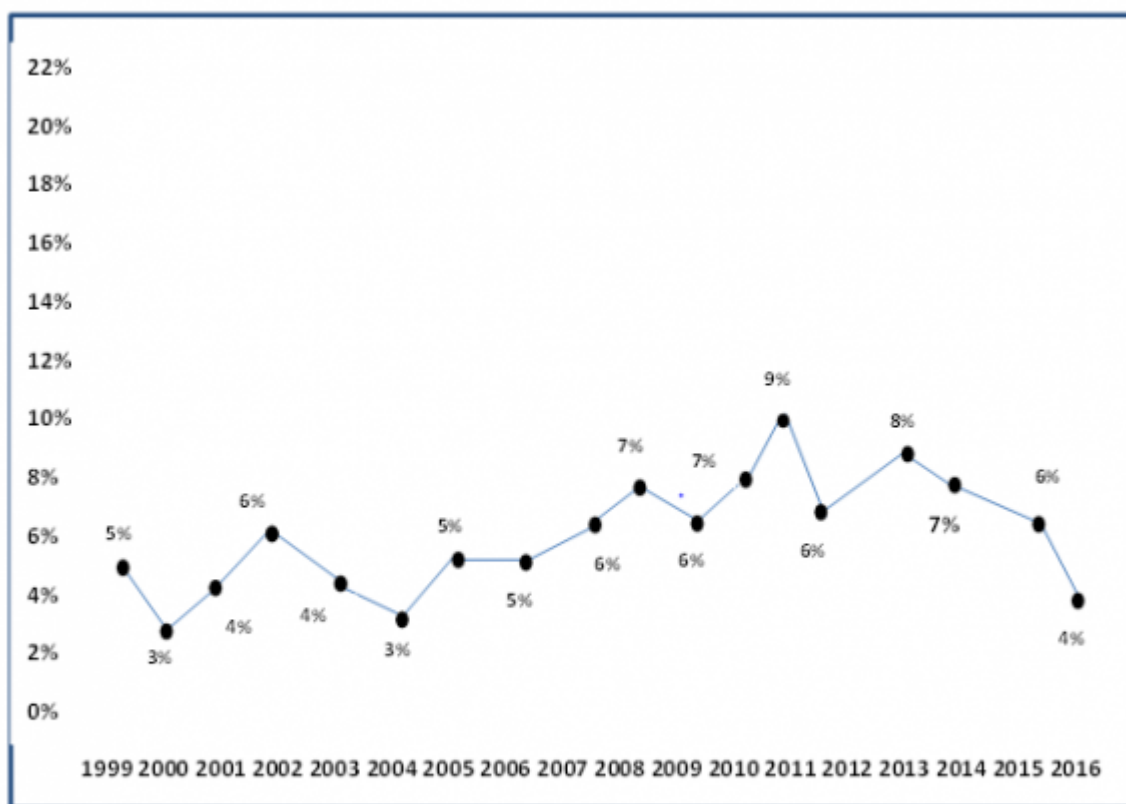


Figure 1:

399

<sup>1</sup>© 2020 Global Journals

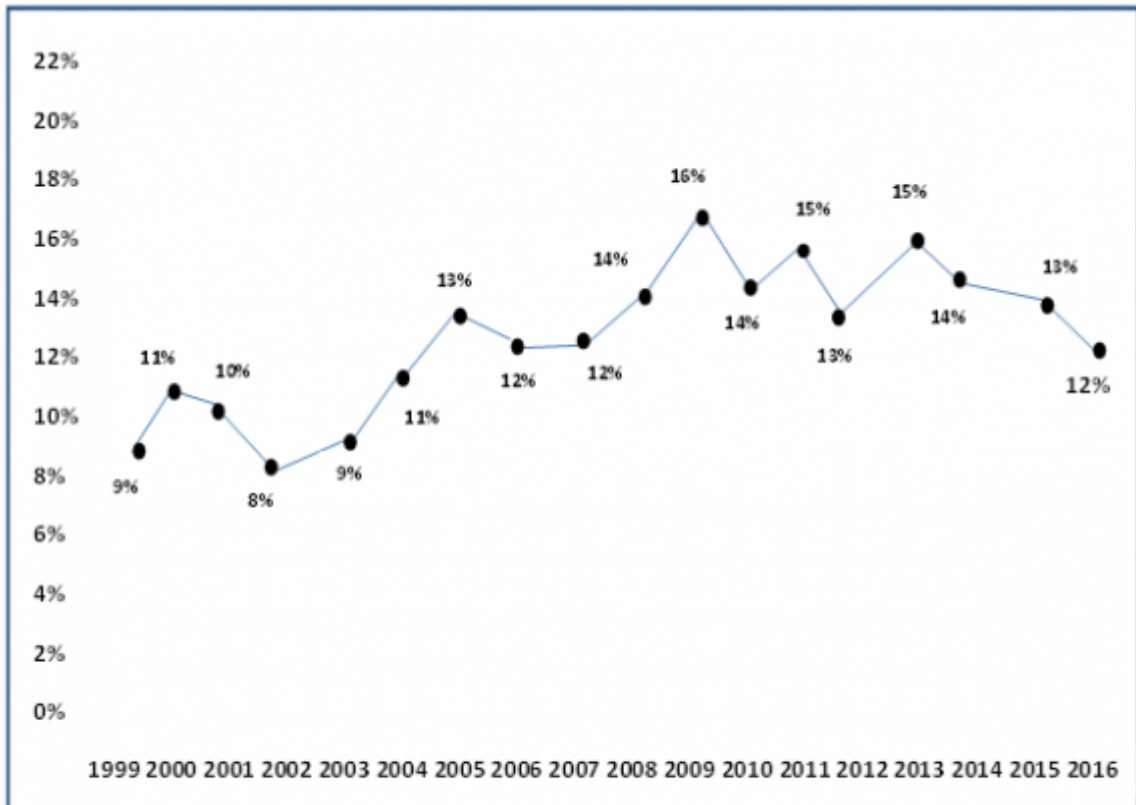


Figure 2: Volume

ECM(- 0.208160  
 1) 0.540720  
 C 0.3135397917

R-squared = 0.599615, Adjusted R<sup>2</sup> = 0.466153 F-Statistic = 4.492788,  
 Prob. (F-Statistic) = 0.018941, Durbin-Watson Stat = 1.367224  
 \*means significant at 0.05 level.

Included observations: 17 after adjustments

Source: Author's computation using E-views 9

Ordinary Least Square (OLS) Estimated Result for (model 6)

Dependent Variable: LOG(POV)

Method Least Squares

Sample: 1999 2016

Included observations: 18 Variable C LOG(AGEX) Summaries of Augmented Dickey-Fuller Unit Root Tests

Unrestricted Co-integration Rank Test (Trace) for EMPR

Hypothesized No. of CE(s) None\* At most 1 At most 2 At most 3 Trace test indicates 1 cointegratingeqn(s)

Dependent Variable

Variable Standard  
 Error

D(EMPR)

D(CG303) 1358  
 D(CG501) 2259  
 D(CG727) 2458

[Note: Notes: The test was conducted at 0.05 level of significance with a critical value of -3.09. "?" depicts differencing of the variables.]

400 [Dang] , D Dang .  
401 [ Annual Conference of the Nigeria Economic Society] , *Annual Conference of the Nigeria Economic Society*  
402 [Oghojafor and Olayimi] , B E Oghojafor , O Olayimi .  
403 [ CBN Economic and Financial Review ()] , *CBN Economic and Financial Review* 2006. 39 (4) .  
404 [ C B N ()] , C B N . *Statistical Bulletin* 2012. Central Bank of Nigeria Abuja (Published by Research  
405 Development)  
406 [Ebere and Osundina ()] , C Ebere , K C Osundina . *Government Expenditure on Agriculture and Economic*  
407 *Growth in Nigeria International Journal of Science and Research (IJSR ) ISSN* 2014. p. .  
408 [Nbs ()] , Nbs . *Nigerian Statistical Fact Sheets on Economic Social Development. NBS* 2014.  
409 [Nbs ()] , Nbs . *Nigerian Statistical Fact Sheets on Economic Social Development. NBS* 2015.  
410 [Eneji ()] , M A Eneji . *Applied Statistics and Research Methodology in Economics and Social Sciences. Universal*  
411 *Academic Services Publication* 2016. ISBN p. .  
412 [2017 Fiscal Year Approved Budget. Jos: Plateau State Government ()] *2017 Fiscal Year Approved Budget. Jos:*  
413 *Plateau State Government, 2001-2017. Plateau State of Nigeria.*  
414 [Davis and Sanchez-Martinez ()] *A Review of Economic Theories of Poverty*, E P Davis , M Sanchez-Martinez .  
415 2014. London: NIESR.  
416 [Adegbulugbe ()] A O Adegbulugbe . *Issue of Radioactive Waste Arising from Tin Mining Activities on the Jos*  
417 *Plateau” Paper Presented to the Nigeria Nuclear Regulatory Authority, 2017.*  
418 [Obadan ()] ‘Analytical Framework for poverty Reduction: Issue of Economic Growth versus Other Strategies’.  
419 M I Obadan . *Proceedings of the, (the) 1996. 1996.*  
420 [Anyanwu ()] J C Anyanwu . *Monetary Economics: Theory, Policy and Institution, (Nigeria) 1993. Hybrid*  
421 *Publishers.*  
422 [Ayeni ()] R A I Ayeni . *Fundamentals of Economics, (Onitsha) 2005. African-FEP Publishers ltd. p. 74.*  
423 [Bank ()] World Bank . *World Bank Report, (Washington DC. USA) 2007.*  
424 [Kosimbei ()] *Budget Deficit and Macroeconomic Performance in Kenya: An a. Empirical Analysis. A Doctor of*  
425 *Philosophy Degree Thesis*, G K Kosimbei . 2009. Submitted to Department of Economics, School of Humanities  
426 and Social Science Kenyatta University Kenya  
427 [Abimiku ()] ‘Causes and Effects of Poverty in Developing Countries’. A C Abimiku . *Social Science Study Group*  
428 *(SSSG), Mono Graph Series No 2006. 26 (1) p. . Benue State University*  
429 [Community Action Programme for Poverty Alleviation (CAPP) Lagos. 43. Nigeria. Federal Ministry of Finance ()]  
430 ‘Community Action Programme for Poverty Alleviation (CAPP)’. *Lagos. 43. Nigeria. Federal Ministry*  
431 *of Finance* 2006. 2000. (Nigeria: CG Poverty Reduction Paper. Background paper for Consultative Group  
432 Meeting)  
433 [Abudullahi et al. ()] ‘Comparative Analysis between Outsourcing Revenue Based and Board of Internal Revenue  
434 Collections of Internally Generated Revenue in Niger State’. D Abudullahi , M A Yusuf , L M Ibrahim . *Tax*  
435 *Academy Research Journal (TARJ) 2017. 1 (1) p. .*  
436 [Sodipe and Ogunrinola ()] ‘Employment and Economic Growth Nexus in Nigeria’. O A Sodipe , O I Ogunrinola  
437 . *International Journal of Economics* 2011.  
438 [Khan ()] *Employment Policies for Poverty Reduction*, A R Khan . 2001.  
439 [Okonji and Olayiwola (2011)] *Entrepreneurship as an Intervention Strategy to Poverty Alleviation in Developing*  
440 *Economy. Presented at the 10 th International Entrepreneurship Forum*, P S Okonji , P O Olayiwola . 2011.  
441 11 Jan. 2011. Takeen, Bahraim, 9.  
442 [Salawu ()] *Essentials of Public Finance*, R O Salawu . 2005. Nigeria: Obafemi Awolowo University Press LTD.  
443 [Shama ()] *Female Labour Force Participation and Fertility in Ghana: The Effects of Education. Forthcoming*  
444 *in the AERC Research Paper Series*, H A Shama . 2008. African Economic Research Consortium.  
445 [Dike ()] ‘Global Economic Crisis and Power of Production’. V E Dike . *Abuja 1997. Center for Social Justice*  
446 *and Human Development. 2 (3) p. 4.*  
447 [Report UNDP, U.N.D.P. ()] ‘Global Multi-Dimensional Poverty Index: Published’. *Human Development Report*  
448 *Report UNDP, U.N.D.P. (ed.) 2015. 2015. 2006. UNDP.*  
449 [Asghar et al. ()] ‘Government Expenditure and Economic Growth in Nigeria’. N Asghar , M Hussain , U Rahman  
450 . <http://astojournal.com/bej> *A Disaggregated Analysis. Business and Economic Journal* 2012. 1970-  
451 2008. 2010. (BEJ-4)  
452 [Okumandewa ()] ‘Government Expenditure and National Income: A Causality Test for Nigeria’. P Okumandewa  
453 . *European Journal of Economics and Political Studies* 1997. 2 p. .

- 454 [Awe ( )] ‘Government Expenditure and Poverty Reduction in Ekiti State’. A A Awe . *Nigeria: Research Journal*  
455 *of Finance an Accounting* 2222-2847. 2013.
- 456 [Government Policies and Programmes to Reach the Poor Nigeria. National Planning Commission (1994)]  
457 ‘Government Policies and Programmes to Reach the Poor’. *Nigeria. National Planning Commission* 1994.  
458 January. (Background paper to poverty Assessment Studies)
- 459 [Khan ( )] ‘Growth, Employment and Poverty: An Analysis of the Vital Nexus based on some Recent UNDP and  
460 ILO/SIDA Studies’. A R Khan . *International Labor Organization (ILO)*, (Geneva) 2005.
- 461 [Khan ( )] *Growth, Inequality and Poverty: A Comparative Study of China’s Experience in the Periods before and*  
462 *After the Asian Crisis*, A R Khan . 2004. Geneva: International Labor Organization. (ILO)
- 463 [Seetanah et al. ( )] *How Much Should Countries Spend on Health? World Health Organisation Discussion Paper*,  
464 W Seetanah , Y Ramessur , S Rojid . 2009. p. .
- 465 [Olaniyan and Bankonle (2005)] *Human Capital Capabilities and Poverty Reduction in Rural Nigeria: an Interim*  
466 *Research Report Submitted to the African Economic Research Consortium (AERC), Nairobi, for the Second*  
467 *Phase Collaborative Poverty Research Project*, P O Olaniyan , B A Bankonle . 2005. October, 2005.
- 468 [Adam ( )] ‘Identifying the Effect of Managerial Control on Firm Performance’. S C Adam . *Journal of Accounting*  
469 *and Economic* 2006. 41 p. .
- 470 [Eneji et al. ( )] ‘Impact of Economic Recession on Macroeconomic Stability and Sustainable Development in  
471 Nigeria’. M Eneji , D Mailafia , R I Umejiaku . 7237/sje/130. *Science Journal of Economics* 2017. 2017. 2017.  
472 (Article IDsje-130)
- 473 [Bako and Lalu ( )] ‘Impact of Revenue Generation and Utilization on Social Service Delivery in Plateau State’.  
474 E Bako , I D Lalu . *Tax Academy Research Journal (TARJ)* 2015. 2006-2015. 1 (30) .
- 475 [Yoshida et al. ( )] *Is Extreme Poverty Going to end ?: An analytical framework to evaluate progress in ending*  
476 *extreme poverty*, N Yoshida , H Uematsu , C Sobrado . 2014. Washington DC: World Bank.
- 477 [Al-Yousif ( )] ‘Measuring Poverty in Nigeria’. T Al-Yousif . *London. Oxford* 2000. p. .
- 478 [Jhingan ( )] *Money, Banking, International Trade and Public Finance, (8thedn) Vrinda Publishers*, M L Jhingan  
479 . 2004. Delhi, India.
- 480 [National Poverty Eradication Programme (NAPEP) 2001. The Policy Document NAPEP Impact/output Assessment Report ( )]  
481 ‘National Poverty Eradication Programme (NAPEP) 2001. The Policy Document’. *NAPEP Impact/output*  
482 *Assessment Report* 2010.
- 483 [Bank ( )] *Nigeria, Poverty in the Midst of Plenty: The challenge of Growth with Inclusion*, World Bank . 1996.  
484 Washington, D. C.: World Bank.
- 485 [Black and ; C B N ( )] ‘Poverty Alleviation in Nigeria: Central Bank of Nigeria, Research Department (1999)  
486 Nigeria’s Development Prospects: Poverty Assessment and Alleviation Study’. J Black , ; C B N . *CBN*,  
487 (Abuja) 2003. 1999. Oxford University Press. 23 p. 4. (Dictionary of Economics)
- 488 [Kure ( )] ‘Poverty Deeping, a Consequence of Civil Unrest in Nigeria: A Case Study of Jos Crisis’. I S Kure .  
489 *Jos Journal of Economics* 2002. 2 (1) p. .
- 490 [Anyanwu ( )] *Poverty in Nigeria: Concepts, Measurement and Determination: Nigeria Economic Society:*  
491 *Poverty Alleviation in Nigeria. Selected Papers for 1997 Annual Conference*, J C Anyanwu . 1997. p. .
- 492 [Desmond and Okoye ( )] ‘Poverty Reduction Policy and Poverty Reduction in Plateau State’. N B Desmond , C  
493 O Okoye . *International Journal of Research in Humanities and Social Studies* 2012. 2003-2009. March 2012.  
494 3 p. e3.
- 495 [Elesh ( )] *Poverty Theories and Income Maintenance: Validity and Policy Relevance*, D Elesh . 1970.
- 496 [Poverty. Retrieved from [www.dataworldbank.org/topic/poverty](http://www.dataworldbank.org/topic/poverty) World Bank report: Nigeria Economic Report ( )]  
497 ‘Poverty. Retrieved from [www.dataworldbank.org/topic/poverty](http://www.dataworldbank.org/topic/poverty)’. *World Bank report: Nigeria Economic*  
498 *Report*, 2011. 2013. p. 61.
- 499 [Fayemi ( )] *Principle of Local Government Accounting*, O A Fayemi . 1991. Yaba-Lagos: Chapter Ten Publication  
500 Ltd.
- 501 [Dang ( )] ‘Public Capital Expenditure and Employment Insecurity in Nigeria: An Empirical Study’. D Y Dang  
502 . *Humanity Jos Journal of General Studies* 2013. 6 (1) p. .
- 503 [Hanghton and Khandker ( )] *Public Expenditure, Employment and Poverty in Bangladesh: An Empirical*  
504 *Analysis. Dhaka: Centre for Policy Dialogue (CPD)*, G Hanghton , M Khandker . 2009.
- 505 [Recovery and Reconstruction Department, International Labour Organisation (ILO)] *Recovery and Recon-*  
506 *struction Department, International Labour Organisation (ILO)*, Geneva.
- 507 [Adegoke ( )] ‘Role of Education in Alleviating Poverty in Africa’. Y Adegoke . *The Nigeria Experience Journal*  
508 *of Economic and Social Studies* 2009. 6 p. . University of Ado -Ekiti

- 
- 509 [Sirovatka and Mares ()] ‘Social Exclusion and Forms of Social Capital: Czech Evidence on Mutual Links’. T  
510 Sirovatka , P Mares . *Czech Sociological Review* 2008. 44 (3) p. .
- 511 [Statistical News: Labour Force Sample Survey ()] *Statistical News: Labour Force Sample Survey*, 2010. Abuja  
512 Nigeria. National Bureau of Statistics
- 513 [Tax Academy Research Journal March ()] *Tax Academy Research Journal March*, 2017. 2017. 1. Plateau State  
514 Internal Revenue Service
- 515 [Stella ()] *Tax Farming-A Radical Solution for Developing Country Tax Problems? IMF Staff Paper*, P Stella .  
516 1993. 40 p. .
- 517 [the Abuja Declaration: Ten Years On World Health Organization ()] ‘the Abuja Declaration: Ten Years On’.  
518 *World Health Organization* 2011. Author.
- 519 [Abdullah (2000)] ‘The Effect of Internal Revenue Generation Infrastructural Development. A Study of Lagos  
520 State of Internal Revenue Services’. A A Abdullah . *Journal of Educational and Social Research* 2239-978X.  
521 2000. May 2013. 3 (2) p. .
- 522 [Nbs ()] *The Nigerian Statistical Fact Sheets on Economic Social Development*, N B O S Nbs . 2006. NBS, Abuja,  
523 Nigeria.
- 524 [Morazes and Pintak (2000)] ‘The Relation between Employment and Growth in Developing Countries: The  
525 Econometric Analysis’. M Morazes , H Pintak . *Social and Economic Studies* 2000. March.
- 526 [Cooray ()] ‘the Role of State and Fiji Council of Social Services (FCOSS) in Service Delivery in Nigeria: The  
527 Role of States and Local Government’. A Cooray . [CentralintelligenceAgency.mazon.com, www.gutenberg.org/ebook/35830](http://CentralintelligenceAgency.mazon.com, www.gutenberg.org/ebook/35830) *International NGO Journal* 2009. 2010. (8) p. 5. (CIA-World Fact Book)
- 529 [Sameti et al. (2012)] ‘Theories of Poverty: A Comparative Analysis. Kuwait Chapter’. M Sameti , R D Esfahani  
530 , H K Haghighi . *Arabian Journal of Business and Management Review* 2012. February. 1 (6) p. .
- 531 [© Plateau State Internal Revenue Service ()] © *Plateau State Internal Revenue Service*, 2017.