DEVELOPING A SUSTAINABLE AGRICULTURAL, INDUSTRIAL, INFRASTRUCTURAL THRIVING NIGERIA: A LOGIC MODEL APPROACH FOR DEVELOPMENT

Obuks Augustine Ejohwomu¹ and Banake Elisha Sambo²

¹Department of Management Technology, Bells University of Technology, Ota, Ogun State, Nigeria.
²Department of Crop Science, Federal University Dutse, P.M.B. 7156, Jigawa State, Nigeria.

ABSTRACT: Nigeria is currently the largest economy in Africa with a per capita GDP that ranks 121st in the world. The impact of this sudden change on the different sectors of the Nigerian economy needs to be well understood for the benefit of sectorial sustainability. Drawing on a review of developmental policies and programmes since post-independence era, the programme logic model is accepted as a framework for addressing the research aim, which is to develop a framework for the developmental future of Nigeria. A 6-way heuristic evaluation is carried out based on problems/issues, stakeholders’ needs/assets, desired results, influential factors, strategies, and assumptions. This approach provides a schematic play-out of the feasibility of the evaluated programmes. Analysis shows that, while there has been policy mismatch and poor implementation of programmes by governments, the various proposed programmes were well intended towards developing a thriving Nigeria. The suggested short-term strategy is to incentivise cash crops farming. In the medium-term, the strategy should be aimed at hastening the implementation of the infrastructure master plan and public-private partnerships with successful short-term stakeholders. For the long-term, the prescribed strategies for achieving the technology development are core implementation of science and technology policies and adequate innovation and management of technologies. The implication, therefore, is that there is urgent need to encourage ‘productive’ infrastructural development, which will jump start a knowledge based economy in the medium-term, and a serviced based economy in the long-term.

KEYWORDS: Logic Model Approach, Short, Medium, Long Term Economy, Infrastructural, Developmental, Programmes, Policies

INTRODUCTION

Nigeria is a country richly endowed with both diverse human and natural resources. The country had been viewed “internationally” as an underdeveloped nation with an unpredictable political system. The advent of the current democratic governance structure is expected to put Nigeria in the world knowledge economy index chart were Nigeria is currently not featured. More so, the quest for good leadership by the populace has been enhanced via the democratic process which started sixteen years ago. Succeeding administrations at the three tiers of government, Federal, State and Local, have been portraying their predecessors as regimes with gross policy mismatch. This conflict of interests has resulted into abandonment of policies and programmes established over time. And the resulting impact has been significant increase in cost of projects because they are either abandoned or negotiated at exorbitant contract sums [6].
Nation building is a task bestowed on every person of honour, whether in the corridor-of-power or while practising his/her profession; as a nation is a dynamic “entity”. It either grows or decreases in standards. The perceived building blocks of our country are usually represented in sectors. These are mainly, primary, secondary and tertiary in nature, with regards to their impact on the stability of the country economically. Figure 1 is a schematic representation of Nigerian economic Sectors.

![Figure 1: Schematic representation of Nigerian Sectors](image)

The primary sectors (resource-based) of any economy serve as its building block. The primary sectors of the Nigeria economy are basically Oil and Gas and Agriculture. The former has been experiencing industrial booms while the latter has not benefitted significantly [8]. Ideally, a boom in one primary sector should be divested and re-invested in the other. The secondary sector is industry-based and it comprises manufacturing, power generation, banking, entertainment, and non-oil extractive industry. The tertiary sector is the service-based sector, which includes transportation, security, education, telecommunication, power distribution and construction. For transition to occur between the primary and secondary sectors, adequate productive infrastructures must be put in place. Similarly, adaptable technology is going to be very critical for transition from secondary to tertiary. The questions therefore are: what is the transitional status of the phenomenon called Nigeria? What are the problems stifling a thriving Nigeria? And is it possible to develop sustainable strategies moving forward?

**Nigeria’s Economic Developmental Efforts: Success and Failure Stories**

The pre-independence era was characterised by agrarian activities, absence of industrial activities and production of primary raw materials for foreign industries and importation of manufactured goods. The post-independence era commenced with the First National Plan (1962-1968), having objectives ranging from discouraging importation of finished products to encouraging locally manufactured products through import substitution strategy. In spite
of this, local industries are still heavily dependent on imported raw materials and capital goods.

In order to address the obvious foreign domination of the Nigerian industrial landscape, the Indigenization Policy was promulgated in Decrees in 1972 and 1977. However, the slump in oil price in the early 1980s resulted into a doomsday for the high import dependent industries. Policies of import licensing, interest and exchange rates control resulted in acute shortages of industrial inputs with adverse consequences on industrial production and capacity utilisation. During this era, Structural Adjustment Programme (SAP) was adopted in 1986. These reform measures were to, amongst other things, reverse the downward trend in the economy, widen the Nation’s industry base, and enable trade liberalization in order to make the industrial sector competitive. Due to the absence of conducive business environment, the SAP policies had adverse effects on the industrial sector. The third era was the post SAP era. The cancerous impacts of the policy mismatch during SAP era were vividly evident during this period with attendant collapse of so many industries and resultant liquidation of financial institutions. Also, the Secondary sector of the Nation’s building blocks was practically in a comatose state until the dawn of the new millennium [10]. The newly ushered-in democratic system of governance was bedevilled with this sickening sector which led to the administration’s quest for economic re-positioning of the country, through the adoption of policies such as Millennium Development Goal (MDGs), National Economic Empowerment and Development Strategy (NEEDS) amongst others.

[13] in highlighting the performance of the oil sector in Nigeria noted that the downstream sector has been the problematic sector over the years. This sector was deregulated by the government in the year 2003. Although [13] argued that the manner of implementation of the deregulation was controversial, the action of government then reduced the perennial problem of fuel scarcity experienced in the country at that point in time. The long-time effect of the policy would have been experienced but the poor state of the refineries and pipeline networks were inhibiting factors to this. The dominance of primary production activities in the Nigerian economy compared with secondary production activities has classified the nation as a resource based economy; and the unequal contributions of the two components of this primary sector to the earnings of the nation has positioned her as a mono-component economy, which is very susceptible to external shocks.

The National Bureau of Statistics [11] posited that the structure of agricultural production in Nigeria shows a dominance of crops production which, as at 2009, accounted for 89.1 per cent of the total agricultural output, while livestock, forestry and fishing sub-sectors that hold tremendous potential for growth and development of the economy - being a principal source of inputs for industrial production - contributed just 19.9 per cent. This can be attributed to the fact that fishing and livestock production have high level of investment risk while forestry production’s payback period is considered long - more than five years. The First National Plan that was developed between 1962 and 1968 emphasised the introduction of more modern agricultural methods of production; through farm settlements and supply of improved farm implements. After the civil war, in 1972, some specialised development, such as, National Accelerated Food Production (NAFP) and farm settlement schemes were initiated. Notably, agricultural development interventions namely Operation Feed the Nation (OFN) and River Basin and Rural Development Authorities, Green Revolution Programme were launched in 1976, and 1980 respectively. The World Bank-funded Agricultural Development Projects (ADB), which was running concurrently, was an experimental integrated approach to
agricultural development in Nigeria. The shortfall of these interventions was that they sought to improve food crop production only at the expense of cash crop production.

More recently, The Agricultural Transformation Agenda (ATA) was introduced and is aimed at making agriculture work for Nigerians especially farmers. A study carried out in South-eastern Nigeria revealed that the on-going Agricultural Transformation Agenda in Nigeria would not be able to transform the agricultural sector from being just a resource-based sector to a service-based sector due to weak capacities of the technology transfer sub-systems’ stakeholders with regards to the level of staff trainings, human resource and workforce capabilities [12].

Typical examples of the secondary sector (Industry-based) are the Manufacturing and the Banking sector. Presently, the manufacturing company in Nigeria comprises of cement, oil refining and other manufacturing activities. This sector can be x-rayed through three eras namely: Pre-independence, Post-independence and Post-Structural Adjustment Programme [10]. Similarly, the Indigenization Policy (Decrees) of 1972 and 1977 as amended, were promulgated to address the obvious foreign domination of the Nigeria industry landscape.

Comparing the contributions of the various sectors of the Nigerian Economy

Figure 2 is a trend analysis of the various sectors of the Nigerian economy. The smoothening of the plots comes from the use of interval data sets. Interval scales are numeric scales in which we know both the order and exact differences between the values [15].

![Figure 2: A fifty-two year (1960 - 2012) internal time series data of Sectional GDP](Image)

*Source: Central Bank of Nigeria*
Between 2005 and 2009, the agricultural and industrial sectors made modest contributions to the total GDP. A close look at the graph will reveal that the Agricultural sector and the Industrial sector are relatively doing well in terms of their contributions to the GDP. One may be quick to conclude then that the various policies of governments aimed at developing a diversified economy and, hence, thriving nation are proving to be effective. While these conclusions may not be far from the truth, it should, however, be noted that, had these policies and programs been effectively and efficiently implemented, the contributions of these sectors to the GDP would have been far more pronounced than is the case presently. The contributions of the service-based sectors to the GDP is also improving, albeit slowly, for the same reasons.

Interestingly, there is a very poor showing from the building and construction sectors (industry-based sector). This poor contribution to the GDP may not be unconnected to the poor state of infrastructure in Nigeria. This realization shows how important it is to develop ‘productive’ infrastructures in Nigeria in a bid to developing a thriving nation. Where productive infrastructure is one, which besides aligning with the Infrastructure Master Plan, draws on divestment of revenue from the resource base; but embedded on logic model approach. Additionally, the technology agents of transition between primary and secondary sectors (see Figure 1) requires holistic redress, else, the gap between agricultural and industry sectors will remain disadvantageously apart. The wholesale and retail trade based sectors are hinged on importation. This unit of the industry sector is likely to stay redundant except the agents of transition are awakened and put to work.

Theoretical Framework

Frameworks are fundamental to solving complex problems or phenomenon [7]. Guided by the logic model approach, the Programme Logic Model (PLM) is accepted as a framework for answering the research questions posed in Section 1. In particular, the PLM is a holistic framework for planning, monitoring and evaluating programmes and policies [4, 5]. The PLM provides the researcher with a road map that describes the sequence of related events connecting the need for the planned policy with the policy’s desired results. Mapping a proposed policy helps in the visualization and understanding of how human and financial investments can contribute to achieving intended goals and how it can lead to policy improvements through strategic monitoring and evaluation. The visual representation of the process in a logic model is flexible. It points out areas of strength and/or weakness, and allows the investigator to run through many possible scenarios to find the best fit for the model. The logic model approach helps in creating common understanding of and focus on program goals and methodology, relating activities to intended outcomes; and since effective evaluation and program success rely on the fundamentals of clear stakeholders’ understanding and expectations about how and why a program will solve a particular problem, generate new possibilities, and optimize the use of valuable assets, the LM is an ideal evaluation framework [9].The basic logic model is as depicted in Figure 3 below.

Theoretical Brief on Logic Model (LM)

Sample studies of how the Logic Model can help in formulating, implementing and evaluating government programs and policies effectively were carried out. The LM is a framework and a way of thinking that helps in simulating planning and monitoring program evaluations [4, 5, 9]. A LM links outcomes (both short-term and long-term) with program activities/processes and the theoretical assumptions/principles of the program. The LM is
defined as a picture of how an organization does its work – the theory and assumptions’ underlying the program. The purpose of the logic model is to provide stakeholders with a road map describing the sequence of related events connecting the need for the planned program with the program’s desired results. Mapping a proposed program helps in the visualization and understanding of how human and financial investments can contribute to achieving intended program goals and how it can lead to program improvements through strategic monitoring and evaluation.

Indeed project monitoring and evaluation within a social context has been defined as the continuous assessment both of the functioning of the project activities in the context of design expectations as an internal project activity and an integral part of the day-to-day management; while evaluation and/or measuring is the periodic assessment of the relevance, performance, efficiency and impact of the project in the context of its stated objectives. The process usually involves comparisons requiring information from outside the project – in time, area or population. Distinctively, people centered projects are more difficult to manage, monitor, evaluate and/or measure because of the less tangible goals and the less precisely specified means of attaining these goals [2]. Without doubt, project – agricultural monitoring, evaluation and/or measuring performance is the responsibility of all those who have a stake in the polity [14].

In this regard, the logic model approach helps in creating common understanding of and focus on program goals and methodology, relating activities to intended outcomes and, since effective evaluation and program success rely on the fundamentals of clear stakeholders’ understanding and expectations about how and why a program will solve a particular problem, generate new possibilities, and optimize the use of valuable assets. Therefore, the LM is an ideal evaluation framework. The basic logic model is as depicted in Figure 3.

![Figure 3: A Basic Logic Model](image)

The human capital, organisational and community resources invested on a program in order to carry on with the processes which serve as input. The actions carried on the inputs are the program activities. These include the processes, tools, events, technology, and actions that are fundamental to the implementation of the program. The direct results of the processes or activities related to a program stakeholder’s behaviour, knowledge, skills, status and level of functioning, as a consequence of the program outputs are the outcomes. The fundamental change either intended or unintended happening in the systems, organisations, communities or nations as a result of the program make up the impact.
RESEARCH STRATEGY - METHODOLOGY

Drawing on the accepted theoretical framework (Logic Model) an action research approach was used in addressing the identified research gap – policy mismatch that is devoid of a whole systems framework – and questions posed in Section 1. Action research supports gathering, analysis and interpretation of information [1]. A one day colloquium was organised to discuss the research aim and questions. A total of 99 participants from different sectors were in attendance. Feedback from the discussion informed the honing of the design of the instrument of survey, which was administered using purposive sampling technique. A total of 35 questionnaires were returned representing a 70 per cent response rate. Additionally, the inputs to various programmes and their associated activities were x-rayed and the stipulated outputs and expected impacts on the sector were quantified. A 6-way heuristic evaluation was carried out based on problem/issue, stakeholders’ need/assets, desired results, influential factors, strategies and assumptions. This evaluation provided a schematic play-out of the feasibility of the evaluated programme.

DISCUSSIONS

Primary Sector: Analysis of the Agricultural Transformation Agenda (ATA)

In deriving Table 1, sustainable strategy for bridging the gap in the agricultural sector (a primary sector of the economy), the PLM was used to analyze the current Agricultural Transformation Agenda of government. This is done by defining the inputs, processes, outputs, outcomes and expected impacts parameters for the agricultural sector in Nigeria under the ATA.

Table 1: Analysis of the Agricultural Transformation Agenda Using the Logic Model

<table>
<thead>
<tr>
<th>Programmes</th>
<th>Inputs</th>
<th>Activities/Process</th>
<th>Outputs</th>
<th>Outcomes</th>
<th>Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Nigeria Incentive-Based Risk-Sharing System for Agricultural lending (NISRAL)</td>
<td>Time</td>
<td>De-risk lending to the agricultural sector</td>
<td>Improved agricultural lending and development</td>
<td>Increase production and processing of large quantity of agricultural produce</td>
<td>Developed agricultural industrialization process.</td>
</tr>
<tr>
<td></td>
<td>CBN: Agricultural financing value chain</td>
<td></td>
<td></td>
<td></td>
<td>Improved economic earnings across the agricultural value chain</td>
</tr>
</tbody>
</table>
### 2. Marketing Corporations

<table>
<thead>
<tr>
<th>Time</th>
<th>Government established commodity marketing corporations around every agricultural commodity. Government set up/run enabled/support institutions to empower farmers and the value chain actors to generate value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manpower</td>
<td>Developed private-sector driven-marketing organizations. Farmers and value chain actors become empowered.</td>
</tr>
<tr>
<td>Government supports</td>
<td>Strengthened markets for agricultural commodities. Coordinated production and export of target commodities. Secured investments for research and development, infrastructure developments and processing. Stimulated development of tailored financial services to grow the agricultural sector.</td>
</tr>
</tbody>
</table>

### 3. Growth Enhancement Support (GES)

<table>
<thead>
<tr>
<th>Time</th>
<th>Provision of series of incentives to critical actors in the fertilizer value chain. Provision of GES 20 million farmers with S in four years. Provision of direct support to farmers to procure agricultural inputs at affordable prices, at the right time and place. Government roles changed from direct procurement and distribution of fertilizer to a facilitator of procurement, regulator of fertilizer quality and catalyst of active private sector participation in the fertilizer value chain.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial investments</td>
<td>Encouraged critical actors in the fertilizer value chain to work together for improved productivity.</td>
</tr>
<tr>
<td>Manpower</td>
<td>Increased use of fertilizers by farmers from 13Kg/ha to 50Kg/ha.</td>
</tr>
<tr>
<td>Farmland</td>
<td>Improved productivity, household food security and income of the farmers.</td>
</tr>
<tr>
<td>Stakeholders meetings</td>
<td>Growth in the agricultural sector.</td>
</tr>
</tbody>
</table>
The short-term model (see Figure 4) is a derivative of Table 1. Here, the primary problem or issue is the need to bridge Nigeria’s resource base gaps - between Oil and Gas and Agriculture – with particular emphasis in enhancing the primary sector’s contribution to total GDP. The adopted framework allows the model to assume that agricultural policies are adequate and productive over a 5 year period; then the strategies listed in Figure 4 will lead to a modest increase in total GDP. This is however subject to the influential factors identified and the resultant stakeholder needs. The importance of the sign posted farmland ownership structure and diversification of Nigeria’s current resource base cannot be over emphasized. The success of some of today’s leading economies is dependent on the theory of property rights land use model [3]. The results of operationalising the short-term model showed that the funding ratio for the prescribed strategies is 3:4:3. Where the ratio is determined using decision analysis formulae shown in equation (1).

\[ EOL(j) = \sum_{i=0}^{N} LiPi \]

Equation 1.

The strategies of the model developed for short, medium and long terms were weighed based on their contributions towards the resolution of the perceived problems/issues by experts. This weighting was collated and formed the probability of occurrence for such strategies. The
present contribution and envisaged modest growth of the sector under reference accounts for the opportunity loss that may occur when the strategies proposed were not deployed.

Model Development for Short-Term: Agriculture

The developed strategies for a modest growth in the agricultural sector are provision of incentives for cash crops farming (S\text{A}1), institutionalizing of agricultural practices (S\text{A}2) and re-introduction of agricultural insurance schemes (S\text{A}3). The current contribution of agriculture to the total GDP is approximately 37.02%. A modest and steady increase can be experienced if the proposed three strategies (S\text{A}1, 2 and 3) are implemented on a 3:4:3 funding rational basis. The derived ratio was as a result of weights allocated to each strategy by some experts consulted during the pilot survey carried out.

Secondary Sector: Analysis of the Nigeria Industrial Revolution Plan (NIRP)

The Nigeria Industrial Revolution Plan (NIRP) is designed as a 5 year plan to accelerate the build-up of industrial capacity within Nigeria. The plan aims to increase manufacturing’s contribution to GDP from 4 percent to 6 percent by the end of 2015, and finally above 10 percent by 2017. This plan has been analyzed by defining the inputs, processes, outputs, outcomes and expected impacts parameters for the NIRP as shown in Table 2.
Table 2: Analysis of the Nigeria Industrial Revolution Plan (NIRP) Using the Logic Model

<table>
<thead>
<tr>
<th>Programmes</th>
<th>Inputs</th>
<th>Activities/Process</th>
<th>Outputs</th>
<th>Outcomes</th>
<th>Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Agribusiness and Agro Allied</strong></td>
<td>Agricultural transformation Agenda (ATA)</td>
<td>Mid-stream and downstream processing and market activities</td>
<td>Increased agro-output to feed industry and the NIRP</td>
<td>An end-to-end integrated agro value chain is built</td>
<td>Maximize the benefits from Nigeria’s agricultural resources</td>
</tr>
<tr>
<td></td>
<td>Adequate Infrastructure</td>
<td>Integrate ATA into NIRP</td>
<td></td>
<td>Boosted local production to meet local Demand</td>
<td>Reduction in Nigeria’s reliance on Imports of processed food products.</td>
</tr>
<tr>
<td></td>
<td>Manpower</td>
<td>Manpower development</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2. Solid minerals and Metals</strong></td>
<td>Raw material reserves</td>
<td>NIRP will create a strong industry that can tap into the mining sector (with initial focusing on the iron ore value-chain)</td>
<td>A competitive advantage around high value high-volume products further down the value-chain (e.g. Automotive) is created.</td>
<td>Institutionalization of large scale production standard in Nigeria</td>
<td>Enhanced industrial output</td>
</tr>
<tr>
<td></td>
<td>Adequate Infrastructure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Manpower</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3. Oil and Gas related Industry</strong></td>
<td>Hydrocarbon reserves</td>
<td>Use cheap and abundant gas to revitalize industries.</td>
<td>Encourage high value-adding downstream investments</td>
<td>Competitive oil and gas-driven industries</td>
<td>Institutional industrial strengths within the country built</td>
</tr>
<tr>
<td></td>
<td>Adequate Infrastructure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Manpower</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>4. Construction, Light Manufacturing, and Services</strong></td>
<td>Time</td>
<td>Manpower development</td>
<td>Nigeria’s infrastructural needs met</td>
<td>Nigeria’s business need for infrastructures and housing met</td>
<td>An industrialized economy</td>
</tr>
<tr>
<td></td>
<td>Manpower</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The medium-term model (see Figure 5) is a derivative of Table 2. Here, the problem or issue is the need to create an enabling environment for industrialization. The adopted framework allows the model to assume that there is consistency in policy during the short-term phase.
The two strategies listed in Figure 5 (to hasten the development of the infrastructure master plan and PPP with successful primary sector players) will lead to a modest increase in the contribution of the secondary sector to the total GDP; if the strategies suggested for their growth are implemented on 4:6 funding rational bases. This is however subject to the influential factors identified and the resultant stakeholder needs.

**Model Development for Medium-Term: Manufacturing**

1. Hasten the development of the infrastructure master plan.
2. Public private partnership with successful primary sector players.

### Assumptions

### Influential Factors
1. Sabotage by vested interest.
2. Manpower.
3. Local source of materials.
4. Consumer Psyche

### Problem or Issue
1. Creating a sustainable environment for industrialisation.

### Stakeholders Need/Assets
1. Enabling environment.
2. Manpower development.

### Desired Results (output, outcomes, and impact)
1. Accelerate the development of industrial capacity in Nigeria.
2. Job creation.

**Figure 5: Medium-term developmental model**

**Tertiary Sector: Analysis of the Nigeria Education Sector using the Logic Model**

As a sample study in deriving the sustainable strategies for developing the tertiary (service-based sector) of the Nigerian economy, the Logic Model framework was applied to the Nigeria 9-3-4 system of Education. This is done by defining the inputs, processes, outputs, outcomes and expected impacts parameters for the education sector as shown in Table 3.
<table>
<thead>
<tr>
<th>Programmes</th>
<th>Inputs</th>
<th>Activities/Process</th>
<th>Outputs</th>
<th>Outcomes</th>
<th>Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Universal Basic Education (UBE)</td>
<td>Free and compulsory education Government funds Adult and non-formal educational programmes at primary and junior secondary school levels for both adults and out-of-school youths</td>
<td>Mobilize the nation’s creative energies to ensure that education for all becomes the responsibilities of all. Provision of free and universal basic education for every Nigerian child of school-going age. Improve the relevance, quality and efficiency and ensure the acquisition of appropriate levels of literacy, numeracy, manipulative, communicative and life skills, as well as the ethical, moral and civic values needed for laying a solid foundation for lifelong learning. All parents will ensure that their children or wards attend and complete their primary education and junior secondary school.</td>
<td>Children have a continuous, uninterrupted stretch of education for 9 years from primary school to the 3rd year of the junior secondary school Adults who have been out of school before acquire the basic skills needed for lifelong.</td>
<td>Equal education opportunities for all Drastic reduction in the incidence of drop out from the formal school system A solid foundation for lifelong learning</td>
<td>Eradicate illiteracy Everyone is prepared for the acquisition of any knowledge</td>
</tr>
<tr>
<td>2. Senior Secondary Education</td>
<td>Senior secondary school curriculum Admissions</td>
<td>Government regulations Offering diversified curriculum to cater for differences in talents, opportunities, and future roles</td>
<td>Trained manpower in applied Science, Technology, art and Commerce Provision technical knowledge and vocational skills for students</td>
<td>Broadened knowledge and skills of students beyond the basic level Development and promotion of Nigerian languages, arts and culture Inspired students with a desire for self-improvement and achievement of excellence</td>
<td>Developed generation of people who can think for themselves, respect the views and feelings of others, respect the dignity of labour, appreciate national values, and live as good citizens. Fostered national unity</td>
</tr>
</tbody>
</table>
3. Tertiary Education

| Subsidy on tertiary education by the FG |
| Provision of affordable tertiary education to individuals |
| Admission of students |
| Curriculum |
| Development of proper value orientation |
| Training of individuals in different disciplines |
| Acquisition of both physical and intellectual skills |
| Acquisition of specialized skills |
| Individuals developed intellectual capacities to understand and appreciate their environment |
| Development of professionals |
| Objective, productive, self-fulfilling and self-reliant individuals. Useful members of the society developed Sustainable society. |

Model Development for Long-Term: Education

**Strategies**

1. Core implementation of science and technology-based educational policy.
2. Innovation and management.

**Assumptions**


**Influential Factors**

1. Ownership structure of educational institutions.
2. Inconsistent reformation.

**Problem or Issue**

1. Technology Development.

**Stakeholders Need/Assets**

1. Strengthening of capacity.
2. Manpower.
3. Facilities/tools.

**Desired Results (output, outcomes, and impact)**

1. Service-based Economy.
2. Employment creation.

**Figure 6: Model development for Long-Term Strategy**

The manufacturing arm of the industry sector as well as the educational arm of the service sector can experience a modest and continuous increase in their contributions to the total GDP if the two strategies (core implementation of science and technology based educational policy and innovation management) suggested for their growth are implemented on 4:6 funding rational basis.
CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The correlation between Nigeria’s status as the largest economy in Africa and her developmental strides is not clear; this research effort is therefore aimed at developing a sustainable framework for the developmental future of a thriving Nigeria. Drawing on a review of developments in major sectors - an analysis of success and failure stories - the logic model is accepted as a framework for bridging identified research gap that is stifling a thriving Nigeria as one of policy mismatch devoid of a sustainable framework like the Program Logic Model - PLM. The transitional status is that Nigeria is a country that is dependent on a stunted resource-based economic growth. Indeed, Nigeria’s economic problem is not the absence of good intentions by her leaders in policy/program making and formulations; rather it is the absence of sustainable model(s) or strategies for formulating and implementing programs and policies. It is viewed that with the appropriate strategy for policy formulations and implementations, and with her vast human and capital resources, Nigeria’s economy will thrive significantly. However, there is need to retrospectively validate the assumptions used when operationalizing the prescribed short, medium and long term models.

Recommendations

In view of the aforementioned, the following recommendations were made:

- The Logic Model (PLM) should be adopted in the development, management, monitoring and evaluation of all government programs. It is further suggested that government practitioners should be trained on how to use the Logic Model in implementing their programs;
- An integrated national master plan that will integrate all the sectors of the economy should be developed using the Whole System Thinking approach;
- For the short term, incentives should be provided for cash crops farming; agricultural practices should be institutionalized and agric-insurance scheme should be fully re-invented;
- For the medium term, actions on infrastructure master plan development should be expedited; successful players in the primary sector should partner with government in the provision of infrastructure;
- For the long term, core implementation of science and technology based educational policy; introduction of innovative and management techniques to the educational sector should be of topmost priority.

References


