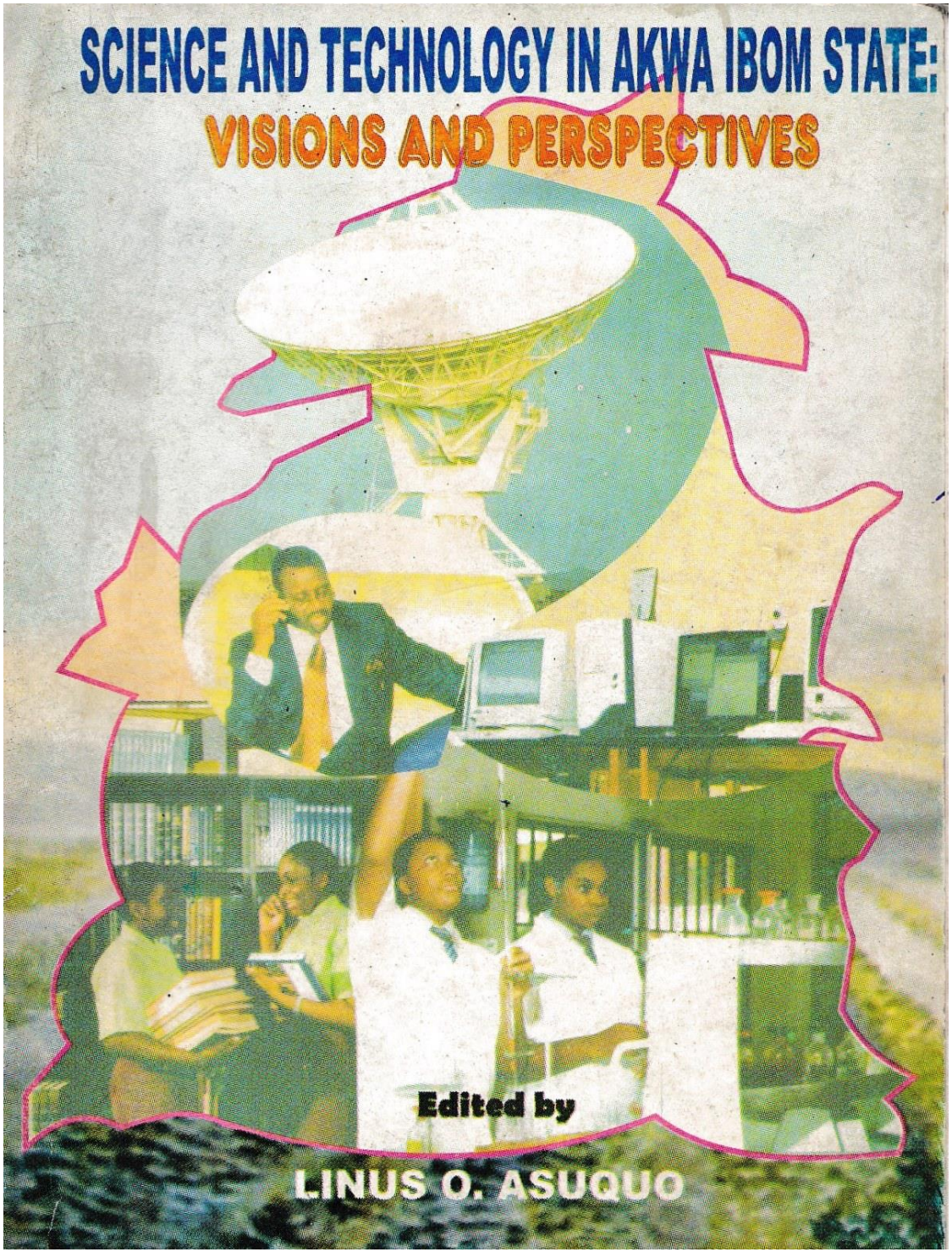
SCIENCE AND TECHNOLOGY IN AKWA IBOM STATE:

VISIONS AND PERSPECTIVES



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3

POLICY FRAMEWORK FOR RAPID EXPANSION OF SCIENCE & TECHNOLOGY IN AKWA IBOM STATE BY AKPAN H. EKPO & OKON J. UMOH

1. INTRODUCTION:

The state of technological development is a far-reaching indicator with which the states of development of nations are measured. Technology connotes technique or skill. In modern usage, such a technique or skill is more associated with gadgets than method by which man manipulates his environment for his survival, comfort and satisfaction. The modern concept of skill or technology, therefore, stresses the practical, utilitarian sophistication and the complex method of labour saving devices (Udoh 1991; Ekpo 2001[a] and Ekpo 2001[b]).

Science and Technology has, therefore, become a strategic imperative for the development, sustainable growth and wealth creation for nations and their substructures.

Building a technology knowledge-driven economy makes sense for the following reasons:

- It sets the economy on the pathway to achieving a diversification away from a particular resource e.g. oil and gas;
- It is capable of minimizing the risk of political instability associated with the race/contest for natural resource control by the federating units of the Nigerian nation;
- It is capable of increasing the productivity and ultimately,

the revenue generated from oil and gas sector, as these industries will surely evolve to reflect a higher content of knowledge in their processes;

- It will create the opportunity for the people of Akwa Ibom State to share in the global wealth creation and prosperity generated by modern technological evolution;
- It will offer our state a real opportunity to start rewarding old fashioned values such as merit, hard work and intellect;
- It will provide a smart platform for Akwa Ibom people in the Diaspora, who are technological experts to return, and create new companies, opportunities and prosperity that will help energize the Akwa Ibom State society and economy;
- It will present successive governments in Akwa Ibom State with an opportunity to redesign its poverty alleviation programmes by paying for their training as technologists, who will then organize into start-up companies to help the state government and the economy to automate its processes and activities;
- Finally, it will create a genuine opportunity for new role models to emerge, who will positively impact the thinking of the next generation on how wealth is created and the responsibilities associated with wealth. (See Uzonwanne 2001).

This paper examines the policy framework for the rapid expansion of science and technology in Akwa Ibom State.

2. SCIECNE AND TECHNOLOGY KNOWLEDGE

Ige (2001) maintains that knowledge is a utility. The knowledge of science and technology is therefore increasingly taking advantage as the most meaningful resource. The traditional factors of production – land, labour and capital have not disappeared, but are becoming more and more secondary

resources. They can be obtained easily if the knowledge of science and technology is available. These new resources are the new means of obtaining optimal social and economic results. The knowledge of science and technology has always been a source of power. It will remain so in the new emerging economy like that of Akwa Ibom State. It is estimated that over $2 million is spent world wide yearly on the development of new information and communication technologies, software and hardware alone, in a bid to exploit scientific and technological knowledge as a driving source of competitive advantage.

3. THE STATE OF EDUCATION, SCIENCE AND TECHNOLOGY IN AKWA IBOM STATE.

One of the most fundamental institutional factors, which must be at the root of scientific and technological development and expansion in Akwa Ibom State, is education. Presently there are about 200 nursery schools, over 1200 primary schools and about 280 secondary schools in the State. Moreover, there is a polytechnic, a college of education and a conventional university.

These seemingly impressive educational statistics should not tempt one to feel that Akwa Ibom State is in a good education status. The true picture of the state of affairs is that our people are not well educated.

This is evident in some obvious inadequacies including

(i) Inadequate funding of the educational sector which culminate to poor and inadequate facilities;

(ii) Poor and inefficient management of available funds and facilities which account for the dilapidated state of existing facilities; and

(iii) Poor quality of some of the teachers in our schools. This is particularly damaging since inadequate teachers are bound to produce poorly educated pupils and students.

These factors result in low level of motivation of teachers and students for greater and higher educational achievement. Specifically, Science education has continued to lag behind other fields of study at the primary and secondary levels. These are attributable to inadequate laboratory facilities, shortage of qualified science teachers as well as poor orientation to the teaching of science. Moreover, the policy focus has, in practical terms not been in the development of science and technology.

In Akwa Ibom State, we are in the process of formulating a policy framework for science and technology. This poor state of scientific and technological advancement in Akwa Ibom State in particular and Nigeria in general has antecedence in the fact that the main idea behind our original educational programme was to provide assistance to the colonial administrators. The educational policy, therefore, mainly emphasized arts subjects. There was no clear-cut national plan for science and technology advancement. Our State is therefore, on the starting block as far as science and technology is concerned.

The foregoing discussion does not in anyway suggest that Akwa Ibom people had no ways of doing things. We have always had our traditional technologies as it were. These include food technology, preservation technology, medical science and technology, communication and information technology, building technology, agricultural technology as well as brewing technology among others.

4. NECESSARY POLICIES FOR THE EXPANSION OF SCIENCE AND TECHNOLOGY IN AKWA IBOM STATE

Before looking at the specific policies that would engender the expansion of science and technology in Akwa Ibom State, it suffices to say that there has to be a research basis for informing policy decisions through the use of relevant and authentic data rather than ad-hoc whims and caprices. The significant policy issues in science and technology expansion should reflect the following:

(a) Computer education which is both available and affordable at all levels including adult education and extra-mural classes for continuous update of knowledge in this rapidly evolving science and technology intensive field;
(b) Manpower development and training biased in favor of science and technology;
(c) Technology acquisition and development;
(d) Employment creation through skills and technology acquisition and transfer;
(e) Encouragement of local manufacture;
(f) Health and safety related issues;
(g) Protection of desirable social and cultural values;
(h) Maintenance of environmental standards;
(i) Defense intelligence and security perspectives;
(j) Globalization and international relations impact;
(k) Research and development.

On the basis of the above, Akwa Ibom State could take advantage of the ongoing global revolution in software, inform ation and comm unications technology. Our science and technology policy should be geared towards making Akwa Ibom State one of the world's leading exporters of knowledge and knowledge intensive exports by 2015. According to IMF (2001), the global technology market for information services will be worth US $600 billion in 2004 from US $349 billion in 1999. Akwa Ibom State can borrow a leave from Indian companies, the developing world's most successful software and information technology services exporters.

5. POTENTIAL CHALLENGES TO THE EXPANSION OF SCIENCE AND INFORMATION TECHNOLOGY IN AKWA IBOM STATE

In the quest for the expansion of science and information technology in the State, our major challenge shall be that of appropriate and adequate human capital in this sector. This challenge can be overcome by joining the global conglomerate through heavy investment in the development of knowledge and skills on the new information technologies. This of course, is predicated on the assumption that basic infrastructures/utilities exist, which is another challenge by itself.

Given the role of firms in technological development, the dearth of Information Communication and Technology (ICT) firms in Akwa Ibom State constitutes a major drawback to the development of information technologies. Since the development of technological capabilities must be firm-based, the way out is to encourage the private sector investment in information and communication industry. Yet another drawback is the absence of research culture in our State. This is where the public sector must play a crucial role of investing in research.

Another drawback that Akwa Ibom State is likely to face in

the development of Information communication technologies will be the problem of employee mobilization and retention. Most of our indigenous technology experts prefer to operate in Europe and America. In our own case, there may be need to introduce compensation innovations in order to attract talent over time. We must establish companies that can organize and reward the best software talent locally and internationally.

6. DEVELOPING INFORMATION COMMUNICATION TECHNOLOGY POLICY IN AKWA IBOM STATE: A VISION FOR THE NEXT TWO DECADES

A comprehensive framework for organizing and executing information technology in Akwa Ibom State should be built around the notion that wealth is created at the firm level. The government should therefore, play the role of a facilitator of economic activity and not the source of economic activity.

Our vision for the next two decades should be to ensure that conditions are put in place to engender the provision of necessary inputs into the production process. These inputs include:

- specialized infrastructure,
- skilled human capital,
- technical ability and
- the institutional capacity to upgrade these resources to reflect dynamic market conditions.

Moreover, our emerging firms must be such that package sophisticated strategies and supplier networks. These will constitute the best building blocks for the success of our economy. Rivalry and competition must be instituted as a wonderful way

to encourage innovation. For instance, rivalry between ECONET, MTN and NITEL should be seen as being able to impact significantly on the future of software development in Nigeria and Akwa Ibom State. This will materialize through creation of incentives for rapid and sustained innovation among their suppliers.

Our vision must be the agglomeration of high productivity firms as well as their supporting and related industries. These will serve in pooling of ideas, resources, customers, technology and vision.

Government must aim at the reinvestment of its activities and rather create an environment that spurs innovation and competitiveness. To be able to achieve this, state bureaucracy and red tape must be reduced severely. This action has the potential of increasing productivity, revenue generation and State wealth. The reinvestment of government activities and relationships must be seen as part of innovation spurring strategy.

7. CONCLUSION

In building Akwa Ibom State into a knowledge-based economy, government must understand that the process cannot be centrally controlled. What is necessary is that multiple players, driven by multiple motives must contribute the core intelligence and creative energy needed to drive the economy's evolution. These players include the academia, Akwa Ibomites in the Diaspora, companies located in the State as well as government as the facilitator. Each player must have specific responsibilities and actions that reflect their strengths and weaknesses.

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