The RMRDC Factor in Nigerian Industrial Development

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Every country that has attained its developmental objectives has done so by effectively making use of three main independent but interactive capabilities. These are equipment/facilities, technical manpower and raw materials capabilities. Of these three, Nigeria can be said to be self-sufficient in the last one - raw materials capability. However the exploitation of it depends heavily on the first two. There has to be appropriate technical infrastructural facilities and a reasonably developed technical manpower to harness fully our abundant raw materials.

Again in a hierarchical placement of this two, Nigeria has a fair share of skilled technical manpower, but there is a virtual absence of equipment capability. For this reason, our raw materials are either shipped abroad unprocessed at very unprofitable rates or a few process lines available in the country for their transformation depend heavily on imported technologies. This dependence is quite expensive and a source of capital flight. Also associated with this is the twin problems of non-availability of spare parts and lack of maintenance ability.

As a radical measure to check this unfortunate trend, the Federal Government by decree 39 of 1987 established the Raw Materials Research and Development Council with the mandate "To support and expedite industrial development and national self-reliance through the optimal utilisation of local raw materials as inputs for Nigerian industries". Thus, RMRDC has since inception

Dr. (Mrs.) Remi Arribisala
Former Director-General, RMRDC
directed its activities at improving Nigeria's capability to process agricultural and mineral raw materials into industrial inputs. Processed inputs exert great influence on industrial growth, and as observed by Dr. (Mrs. Remi Arribisala, former Director-General of the Council), it will for long time influence and determine the level of inter-dependence between developing nations and the developed ones.

The Council has continued to Promote raw materials development through a number of programmes aimed at bringing the resources of the entire scientific and technical community both in government and in the private sector R & D laboratories to bear on the national problem of local raw materials utilisation. Fundamental to these activities is the techno-economic survey conducted by the council. The techno-economic surveys achieved the following:
- identification of natural resources available in Nigeria and their industrial application
- determination of raw materials being exported which is detrimental to the Nigerian economy
- compilation of specifications for industrial raw materials, machinery and equipment
- auditing of indigenous and emerging technologies/machinery for the processing of agro-based raw materials

Through the auditing exercise, the council fully appraised the country's dependence on imported technologies and machinery for industrial scale processing. Also it established available resources in the country and reached other deductive and fruitful conclusions on the country's R & D needs.

From the understanding that nations tend to make a rapid economic growth when they begin their industrial quest on those industries where they have comparative advantage, the council directed its attention to the identification and development of such industries where Nigeria has comparative advantage. Such comparative advantage take unto consideration raw materials and market availability, indigenous capabilities and simplicity of process technology. Export prospects are also duly considered in determining those industries. Some strategic industries that meet these conditions are Refractive Brick Production, Gulema processing, multi-purpose mineral beneficiating and Titanium dioxide, phosphoric acid and formed coke production.

The task of realising these ventures has not been easy. Unlike the agro-allied sector where the council has recorded remarkable achievements, the harnessing of solid minerals used as inputs in these industries, though available, remain largely inaccessible or of "scientific curiosity" as Mrs. Arribisala once

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Soda Ash is a Crucial Raw Material to the Glass Industry. A potential investor admires a model soda ash production from Trona.

described the situation. Exploitation, and processing of inputs for optimal industrial applications is quite involving. In Nigeria, lack of adequate data on proven reserves, cost of exploration, the capital intensive nature of mining and processing, mining lease structure difficult and expensive access to technology and appropriate processing machinery and lack of adequate R & D facilities are the numerous factors that impede the harnessing of solid minerals for use in such industries.

Innumerable as these factors appear especially in the Nigerian environment, the RMRC has been able to undertake some projects. Available information shows that about N=5 million had been expended in the execution of these projects.

Projects

The Council had been able to upgrade and simplify indigenous technology to facilitate efficient and rapid production of goods and services. Projects already realised are the Refractory Bricks production based on locally available minerals such as clay, kaolin, kyanite, magnesite and feldspar. In addition, the RMRC has carried out pilot production of high alumina, bauxite and high magnesite refractory bricks fired up to 1,700°C. To boost the local production of protein sweeteners from Local Raw materials the Council is supporting R & D works on its extraction from a plant called Thaumatococcus Daniel commonly used in wrapping 'agidi'. Encouraging results have been achieved. The Council is also collaborating with the National Horticultural Research Institute and the University of Agriculture, Abeokuta for the extraction of fruit juice and cola concentrates respectively.

Kenaf Seeds Multiplication

The Council also collaborated with the Institute for Agricultural Research and Training (IART), Moore Plantation, Ibadan and Kenaf Association of Nigeria (KEAN) to embark on kenaf seed multiplication. Kenaf is used in the paper making industry. Commercial production of the plant has been planned for

...the RMRC is funding projects in the extraction of dyestuff/auxiliary vegetable sources, Development and production of foundry crucibles and associated products, local development of antisera against Neisseria meningitis and development of carbon resistors using 100% local raw materials.

As explained by Dr. Alhaji M. Alhaji, Director of Finance and Administration of the Council and presently acting Chief Executive, RMRC has embarked on the establishment of Catalytic Model Factories in some states. The Council is doing this as a way of demonstrating the viability of investments in the processing of available, raw materials and thus facilitating the proliferation of such industries. This is also aimed at promoting the use of indigenous engineering effort in design, fabrication and installation of complete plants for the processing of our local raw materials.

One thing very evident in the sited location of these factories is the consideration of the basic economic factor of availability of raw materials and the need to build on the on-going expertise of the local people in these processes. Hence, coconut processing is situated in Ibadan, Ondo State; Talc processing plant in Kagara, Niger State and others.

Risk Guarantee Programmes

Commercialisation of basic R & D results, the Council has been able to sizable down the risk in the country. This is partly because the factories are not given enough raw materials and is not able to cover the costs of the projects. Alhaji said this necessitated the setting up a National Risk Fund to encourage investors with limited resources but design to set up new production lines or expand existing ones and wholly or partially on indigenous technology.

Looking at what the RMRC has been able to achieve in a few years of its operations, it requires to remain a viable factor in Nigerian industrial development. In continued support from the Government and cooperation from the industrialists. More importantly, RMRC should intensify efforts seeking out and using competent researchers that abound in the country in the execution of its projects.