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NEEDS AND REQUIREMENTS OF INDUSTRY <sup>1/</sup>

by

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### THE NEEDS AND REQUIREMENTS OF INDUSTRY

The need for scientific and industrial research in our developing countries cannot be over-emphasised; because if Africa would become truly independent, there is need to use scientific technology to foster industrialisation of the whole continent within the shortest possible time. We are happy to note that through the help of some United Nations Agencies, quite a number of scientific and industrial research institutes have been established in many developing countries with the view of fulfilling this need. This accounts for the reason why activities of UNIDO are so much welcome by these countries.

Talking in the African context the UNIDO programme is God sent, because this is the sort of programme which could help Africa to gain economic independence through industrialisation and realise her true freedom; because it is now very clear that despite the fact that many African countries have gained political independence yet the majority of them are still dependent on developed countries for their economic survival. In the anxiety to overcome this disaster, many of these countries have rushed and are still rushing into all kinds of industries without proper technical or economic data as to the viability of these industries. Typical examples could be found in my own country where two canneries were built without finding out first whether the mangoes and the tomatoes grown in those areas are the right type for processing; and if not, whether the soil in the areas is good for growing the right types.

I have made the above observation to give you some idea of some of the industrial requirements of our African countries, the level of their knowledge about the setting up of industries, how our research workers could help and what would be expected of them.

To help promote industrial development in developing countries like those of Africa, therefore, the research workers will have to do a lot more than their counterparts in developed countries; because in the first place there are some of the countries which have not got the qualified people to put up the realistic industrial plans on which research workers should gear their work. Quite often some of these countries invite foreign experts to help set up industries. Many a time some of these experts do not take the trouble to study prevailing conditions properly before deciding on the type of industry to set up. In some cases the people are not even asked what they want. The experts decide for them, and as the result of this they just set up industries which will depend wholly on the importation of raw materials from their countries to feed the plant all the time.

This goes to point out the need for research workers to get involved in their Government's industrial planning exercise, because failure to get Government's industrialization plans right will result in fruitless research work.

Although this idea might sound good yet there might be some fear that Government officials might not welcome the research workers. But if a way could be found by which research workers, especially those in industry would be involved in economic and industrial planning at policy making levels, it might save unrealistic industrial planning which has been the cause of the drain on our scarce foreign exchanges.

The need and requirements of industry in any country whether developed or undeveloped is always a serious one and in setting out plans for this, priority must first and foremost be given to industries which provide for the bare necessities of man, namely, FOOD, SHELTER AND CLOTHING. The second group of industries must be the type which will be mainly for export, and the third should be those which will provide for luxury. Apart from the utility aspect, industries are required to enable mankind to use its creative talents, and this is how science and art birth to scientific research. There is an instinct in man which urges him all the time to improve his living conditions and this instinct has grown through education. While in the beginning of the world people ate raw leaves, vegetables and fruits, a time came when fire was introduced and vegetables were cooked. Huts which were built by leaves and sticks gave way to houses built by swish and improved leaves or grasses for roofing and leaves and furs to hides in clothing. With the development of this instinct through education, we now marvel at the way the food we eat is preserved, the sky-scrapers we see in our cities and the clothing materials produced in our factories, all these are the result of the use of this creative instinct or what I will term science.

As I have said earlier, industries play a very vital role in a country's economy and I dare say that it is the life blood of every country and it is the pursuit of this which is one of the causes of colonisation and present international unrest, typical example of this is the political unrest in Southern Africa. Industries are needed to provide the requirements of the people, they are needed to provide work for the people and they are the source of money both for Governments and individuals.

There are three main things you have to find out when one thinks of setting up an industry. The first one is Market. What are the needs of the people and in what quantities. Secondly, how will these needs be provided and what does one need to satisfy those needs. You must get an answer to all these on paper before you set out, and this is an exercise the scientists call a feasibility study. This does not work out right always but it helps to guide the operation. It sets out already the size of your market, the investment it requires in terms of fixed assets and working capital, the number of people you need for the operation and the level of their education and availability of raw materials etc. If it happens to be a food industry of the type of industry which gives out pollution or other terrible noise then the question of site is also given a serious attention. Good industries are usually sited in areas readily accessible to the main roads.

As I have said earlier on, the Governments and individuals set up industries in the past without proper procedure, but the question is, how easy is it to have this done now? Due to the fact that the preparation of these feasibility studies takes too long a time and it costs a lot of money many African countries find it difficult to apply this method. At times, the time taken as long as six months to prepare these feasibility studies and the cost might be as high as five cedis per hour. This is so frustrating and it kind of people's interest in the projects because after such long periods the prices of machines go up and they are seldom utilized for other things. I was happy to read in the report of the recent meeting in Accra that feasibility studies are included in the business research activities which could be combined with other research. Apart from feasibility studies and the requirements for establishing an industry are varied and complex. For efficient, effective and smooth running you require three main departments under three main heads. These are Administration, Accounts and Production. For big companies these three departments are headed by technical personnel with sound academic qualification and practical experience; and every department is again sub-divided with technical heads; e.g. under Administration you may have marketing, Public Relations and Advertising; under Production, you may have a technical department for mechanics or engineering, production and product development, sometimes a laboratory for titrations and research and the testing of finished products etc. I am sure most of you are aware of the set up of industries and its complex requirements. Nowadays science has become so advanced and is continuing to advance so fast that industrialists are kept on their toes all the time. This is the reason why the indigenous manufacturers are finding it difficult to make a head-way. Industrial and scientific research is required to back manufacturing operations and this need is so vital that many big industries have well equipped research departments attached to the industries. In some cases, industries producing similar products come together to put up research stations.

During my recent visit to Japan, China, America, Britain, Europe and India, I felt highly convinced that Africa is one of the next continent which will soon grow into an economic giant. Then you think of Japan with its scanty natural raw material source of supply, coupled with its heavy population why should Africa remain in this kind of poverty. How long is Africa going to remain a dumping ground for goods produced in developed countries. This question will be best answered by you African scientists, African Governments and industrialists of Africa. The African Governments have realized the need for industries, they are calling to the indigenous citizens to take up the reins or catch the commanding heights of their countries' economies by taking up to industrialisation.

But do they truly know the kinds of tools these citizens require to do this? I can say that they are aware because so much money has been invested in setting up research institutes in many of these countries. From the type of economic and industrial plans put up by them too one could see that they are trying to gear their policies towards industrialization of their respective countries. Most of them realising their limitations invite experts from developed countries to help them. In reading the report of the consultative meeting on Industrial Research held in January 1975, I found that the purpose and the scope of industrial research programs as set by UNIDO and other similar agencies covered almost all the areas of industry which needed attention. But the question is whether they are working steadily towards the set goal. Many a time research workers set their own goals and work for products or products which will gain them academic recognitions or put them in the limelight but I believe that for a research program to give the required support to industry and yield the necessary results, efforts should be made first to help existing industries to perform efficiently and to produce first class products. This requires understanding and co-operation on the part of the two parties. (Research workers and industrialists). At the moment such a relationship does not exist. The two parties work in isolation.

After a research worker is satisfied with the performance of an existing industry then the next step is to carry out research with the view to developing new products, but until the results of his work are tested on a large scale with an existing industry with the required equipment, and cost of production is worked out; and it shows a favourable margin, he cannot declare his work as successful for industrial use. Many a time research institutes publish the results of their work as if it could be used for profitable operation, so many governments accuse manufacturers for not using the results of the institutes. From this one could see that there is need for cordial relationship between research fellows and industrialists; they need each other for successful and effective operation.

At this point, I would like to draw the attention of the development of special products for export. Quite a number of our industries base their processes upon those of industries in developed countries, yet many a time the quality of the finished products fails to compare favourably to those of developed countries. This is caused by the composition of the raw material. This goes to prove that if Africa is to be accepted on the world market with her products then she has to develop special indigenous products which if accepted will meet no competition. As in handling food products, in the traditional fashion, we require our engineers to build suitable machinery for preparation and processing. From experience, I can safely say that most of our soups e.g. groundnut or peanut soup, palm soup and stew could sell as well as those produced in India and other Eastern countries. Many a time I deplore the rate at which our scientists are working. In the manufacturing industry, special care products some like soya beans, etc. are not being produced and a better method should be used for the production of these products. The Government should invest funds in this area.

... From the plight of the indigenous citizens in industry one can easily see that if conditions are allowed to stay the way they are, then the indigenous people in industries can never reach the commanding heights and never will be rescued from poverty. The indigenous citizens of Africa require capital funds and technical know-how as basic tools to work with in order to reach the commanding heights of our countries. The picture as it is in the present day indigenous industries is disappointing and discouraging. In order to see the working structure of these countries on the heads of all the departments as well. In short they play the part of production managers, plant site managers, research workers, messengers, procuring managers, sales managers, etc. On top of this heavy schedule, the government departments, departments of property administration keep sending in heavy packs of forms to fill in for production and requirements.

... Despite all the efforts to develop industry but due to poor planning and lack of technical assistance, it has come out not as an economic giant, it is only the economic and industrial policy of India, you would see that India is following the footsteps of Japan. These governments, and so are most governments in the world, have taken industrial problems as "National Problems". These governments do not only put plans on paper but their plans are supported by the necessary incentives. These governments lay special emphasis in their budgets in research institutes, training centres specifically designed to cater for special industries and common services centres to provide common services needed in support of indigenous industries. In India, any citizen with the know-how in a particular industry could walk into a special office where he could obtain feasibility studies based on the natural resource of the country. Upon deciding to go into industry, he fills the necessary documents and he is directed to Industrial Bank for the required funds with government as his guarantor. After this, he goes to a department of India National Trading Company to place an order for the required machinery, and then he is allocated an industrial estate with all the necessary infrastructure. This is not the end of the help. His performance is closely followed up by extension workers who are professional engineers, designers, economists etc. Everything possible is done by the government to see to it that the help given is utilized properly and profitably and the money is not misused.

To enable indigenous citizens to survive the present economic struggle the African governments must discriminate. For several years in Ghana due to the lack of funds indigenous Ghanaian manufacturers could not utilize their licences to bring in raw materials for their operations. The matter was taken up by Ghana Manufacturers Association and barely over a year ago a special guarantee scheme has been set up whereby any indigenous manufacturer presenting his import licence, tax clearance certificate, balance sheet and a letter from the office of GMA saying that he is a paid up member of the association to his bank, gets his letter of credit opened without paying anything.



When the goods arrive he is expected to pay down 25% of the total cost including duty, and the balance is paid in six months at 10% interest. This is a typical example of the type of discrimination I am referring to. In India, no textile factory is allowed by law to print or weave material which is woven by hand loom or printed by hand. On the other hand foreign textile factories in Africa are weaving and printing materials whose patterns have been developed by our great grand parents and passed down to us.

Discrimination and protection have to be used by our African governments as incentive to indigenous industrialists. Before I conclude this paper, I would like to appeal for the formation of Manufacturers Association in other African countries. A lot has been achieved by the Association in Ghana in advisory capacity to help the members and the Government. I suggest UNIDO look into this request and find a way to bring African industrialists together. This will also help to plan together to avoid duplication, because if duplication is allowed to continue, the way it has started, it will affect our inter African Trade.

In conclusion, I would like to stress the point that it is the turn of the entire African continent in the economic race. The race must be run by the indigenous people themselves. The team for this economic race should be composed of the African Governments, scientists, engineers, industrialists, businessmen and last but not least the United Nation Agencies. Each of these groups has a vital role to play. And each individual in any of the groups is equally important and we must treat each other as such. We must accept this truth that for any of these groups to render the required contribution effectively, and make the right impact, we need each other. In this race the governments will be playing the role of the captains and the United Nation Agencies will be the co-ordinators. Efforts should be made by these co-ordinating agencies to bring the members of the team together as often as possible to begin with until we find our feet. With this plan of action and if every member of the team will play his part sincerely, devotedly and aggressively with tenacity of purpose in the face of all adversities, it will not take Africa any length of time to score the economic goal through industry.



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