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Editorial

This is the second issue of the Geographical Society Magazine, the first having been published at the beginning of 1971. The original aim of the Society was to publish at least two issues a year, but due to a disappointing response to the appeal for articles, this had not proved possible. However, we are glad that we have eventually managed to get the magazine into print, with some articles of a high standard. To quote the Editorial of the last issue, we hope that "in reading them you will find much that will enrich your store of geographical knowledge, and much that will challenge you into taking a keener interest in all that is around you - your micro-geography."

Compared with 1970, the Society did not have a particularly active year in 1971. A number of meetings and field trips had to be cancelled either through lack of support from the members or because of organisational difficulties. For instance, a trip to Malawi in the second term had to be cancelled because no suitable accommodation could be found. We found many of the meetings that were held during the year most enjoyable, but the attendance was at times disappointing. We therefore hope that the coming year will be a more active one for the Society, and that all the members will give their fullest support to the Society and the Committee.

Membership to the Geographical Society is not limited to students and staff of the Department of Geography. Members from other Faculties and Departments of the University are always welcome; we are confident that you will find something along your line of interests. And in case you did not know it, we sometimes give out free beer at our meetings, but we cannot tell you at which meetings. So the best way to avoid disappointment is by turning up at all meetings. Finally, your articles will always find a place in the Society's Magazine; you need not be a geographer to contribute to it. This is one of the numerous ways of sharing ideas for, after all, that is the purpose of a University. So, if you have anything to offer, please send it as soon as possible to:

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INDUSTRY: ITS BASIS IN AFRICA.

E.S. Nhandara.

A very large proportion of the population of Africa (C.70%) still owes its living to agriculture. The irony of this situation is that agriculture offers very little prospects for economic development. Any new agricultural revolution is seriously hindered by the great pressure on the land. This state of affairs has led many leading economists and geographers to think that INDUSTRIALIZATION is the only panacea to the problem of Under-development in Africa. It is with this in mind that the basis for industry in Africa will be surveyed.

Industry is normally divided into two - Primary, mainly extractive in nature and Secondary, mainly manufacturing. The extractive industry refers mostly to the removal of mineral ores from the ground and the exploitation of the continent's "natural" forests. Manufacturing is defined as the process by which a raw material is partly or completely altered to give a different end product. One essential feature of the manufacturing industry is that value is added to the product which undergoes alteration.

GENERAL BASIS.

The growth and location of modern industry depends on several factors, the most important of which are large supplies of suitable coal, oil and hydro-electric power, a labour force with developed skills, large easily accessible markets, with a high purchasing power, and an efficient transport network to serve markets and carry raw materials at economic rates. Few areas in Africa can claim these advantages. Except in the Transvaal there is no fortunate combination of coal, iron ore and useful minerals to form the basis for heavy iron and steel industries. Nigerian coal lies 2167 km. (1300 mls) from the Liberian iron ore, Moroccan ores are used in Europe, Tanzania's coal remains in the ground for want of rail transport. On the whole then, Africa lacks the iron and steel industry, the one industry which is internationally regarded as the most useful indicator of industrialization.

Because of the situation referred to before and also because Africa is a late arrival in the field of industrialization, African landscapes are still predominantly rural and her industry still largely dependent on the extractive industries. There are no smoke-blackened regions as the Black country of the U.K. or the Pittsburgh area in the U.S.A.

Africa has always played the role of a mineral supplier to the industrialized nations of the Northern Hemisphere. This situation began to change slightly during the 1960's when most African States were granted independence. But on the whole mineral ore processing is still in its infancy, the continent producing only 19% of the pig iron, 1% of the crude steel and only 3% of the lead and zinc of the world. Africa is, however, the third largest producer of processed copper (25%) and possesses some rich deposits of minerals vital to the world's economy - diamonds (96%) cobalt(66%) gold (71%) Manganese (18%) and Chromite (33%) of the world production. The minerals in which Africa is rich do not form a basis for heavy industry and Africa thus continues to supply the world with mineral ores.

FUEL.

Africa is short on coal, her economy as yet still under-developed to make full use of the tremendous volume of oil, her rocks are

In Africa coal is found in considerable amounts but most of it is in the Southern half where deposits laid down during the Permo-Carboniferous period provide the coal-yielding rocks. South Africa produces almost all the coal but the amount is small when compared to other countries of the world. She produces 49 million tons annually as compared to Britain's annual total of 200 million tons. South African coal is vital to the nation's economy. 10% is used on the railways and by secondary industries, while the iron and steel industry uses 2.5%, the rest being used for bunkering, for domestic purposes and the recent oil-from-coal plant at Sasolburg uses all the low grade coal.

Oil, another vital fuel, is unevenly distributed in Africa. The continent can be divided into the oil-rich North and the oil deficient South. Of the oil producing States Libya leads and is followed by Algeria and Nigeria in that order.

The significance of oil discoveries must be referred to since this has brought many advantages to several African States. There has been a tremendous rise in revenue. Libya for example receives over 50% of the oil royalties and these vast sums are used for many purposes. In 1965/66 R $ 300 million were spent on public services, defence and agriculture. The oil companies train workers as welders, geologists' assistants and oil plant operatives. These represent a skilled body of workers and are a future asset to the country. The development of secondary industry once hampered by lack of fuel can now proceed in the knowledge of almost unlimited oil supplies. The oil producing countries are assured of large investment sums which in turn mean capital injection in areas hitherto considered unattractive.

MINERAL ORES.

The mineral ores form some basis for industry. These, again, are unevenly distributed. Copper constitutes the Zambian-Katangan monopoly and because the area's economy is still underdeveloped most of the copper is sent out. Iron ore is one of the basic minerals for heavy industrial development. While Africa produces only 4% of the world's iron ore several finds indicate the continent could become a major producer. The deposits so far exploited lie largely in South Africa and Rhodesia near to limestone and coal. Gold forms the basis for international finance and commerce, Africa produces 71% of the world's gold and of this South Africa produces almost all the gold (30.5 million fine ounces worth R $ 768 million in 1967). Gold is not only an important earner of foreign currency for South Africa but forms a broad base for other industrial operations. Africa also leads the world in the production of diamonds.

FORESTS.

Equatorial forests represent a small natural asset in Africa. The exploitation of this asset has been greatly retarded by several factors such as the absence of pure stands of trees of one type, the local market for wood which is very small and the wood which has to be exported for it to be economical. The wood is also bulky and difficult to transport without special facilities. Thus the timber industry in Africa has become a specialized operation involving the selection of only expensive woods which can command high prices overseas. This operation is important in Ghana, Nigeria, Congo (Brazzaville) and in Gabon the whole economy revolves

The Republic of South Africa is Africa's most industrialized nation. The major factors responsible for this rapid expansion may be summarized as follows.

There is a solid base provided by coal and gold. Lacking fuel oil, South Africa's secondary industry would have hardly developed but for the large reserves of coal. The gold mining industry provided a lucrative market for secondary industries and in 1964 alone purchased R 330 million worth of stores from local industries.

There is a wide range of minerals. Besides iron ore, asbestos, chromite, platinum, manganese and copper, South Africa produces substantial quantities of tin, magnesite, silver, tungsten, vanadium, verniculite, salt, fluorspar, limestone phosphate, clay and antimony. A wide range of minerals means that a wide range of secondary industries can exist.

Foreign investors find South Africa attractive with its low-wage labour, large European market unrestricted sites andcheap coal and raw materials. The government actively encourages foreign investment to reduce exports of raw materials and to process them within the Republic. Ford, British Motor Corporation, General Motors, Dunlop (British) and Hoechsh (Germany) are some of the large foreign investors.

Agricultural raw materials such as wool, fruits, sugar, fish, grapes, tobacco, hides and skins provide some basis for many secondary industries.

Government policy encourages home production by limiting certain imports and financing large basic industries such as iron and steel, electricity supply, the Sasolburg oil-from-coal plant, cellulose and phosphate production.

In contrast Ghana is not a heavily industrialized country and her economy relies heavily on the returns from exports of agricultural produce and minerals. All coal is imported for use on the railways and timber is a major source of fuel outside the large towns. The oil refinery at Lema imports all its crude oil. In fact the lack of fuel was one of the major reasons for the construction of the Volta River Dam. Lack of capital and skilled manpower have also retarded the expansion of secondary industry. While the diversion of capital into such prestige schemes as the Volta River Project and State Farms is not the solution to Ghana's economic problems, the small industrial plants do not provide adequate and efficient training to the manpower needed for Secondary industry.

CONCLUSION.

Modern industry (Manufacturing) in Africa depends on several factors. In Africa as in most countries these factors are the appropriate infra structure, skilled labour, trained engineers and technicians, a large market and increasing investment. In the continent, areas where a combination of these factors exist are incredibly unevenly distributed. Apart from the Republic of South Africa and Rhodesia and to a lesser extent the United Arab Republic, manufacturing elsewhere consists primarily of the processing of the natural raw materials. Such processes are mostly flour milling, cotton ginning and spinning, fruit and fish canning, saw milling, and similar industries. Except in South Africa most manufacturing elsewhere in Africa is managed by very small concerns which suit the developing countries but are unable to compete with big companies like the Ford in America where there is such integration that one may watch a piece of iron undergoing all the processes until a car is produced at the end.

<u>REFERENCES:</u>

1. Development in Africa - L.P. Green and T.J.D. Fair.
2. Africa - A Study Geography for Advanced Students - J.M. Pritchard.
3. The Geography of Modern Africa - W.A. Hance.