

SPATIAL ASPECTS OF DEVELOPMENT IN EAST AFRICA ¹

Introduction.

The aim of this paper is twofold:

- (1) it attempts to analyse and compare the attitudes of the three East African Governments to industrialisation in general and to industrial location in particular, and
- (2) it attempts to present, an albeit incomplete, picture of the three economies in 1970 in terms of potential communication and infrastructure development. This section is based almost entirely on the three Development plans.



Strategy for Industrialisation.

Uganda.

The long run aim of development is to turn Uganda into an industrial economy and it is hoped that the current Five Year Plan projects will provide an industrial base upon which to build in the future. Basic strategy is one of import substitution in the Uganda economy with production for export to neighbouring African economies, this being based on two major assumptions:

- a. the domestic market for industrial goods will grow more than proportionately to the growth of domestic incomes
- b. markets will continue to exist elsewhere in East Africa for a substantial range of manufactured products, that is, some form of common market arrangement will continue.

Manufacturing (excluding crop processing) output is expected to increase by 12.6% p.a., compared to an expected rate of increase of 7.2% p.a. (rising to 7.6% by the end of the current planning period) in monetary output. 17,000 new jobs are expected to be created in the manufacturing sector. The growth in industrial output will result partly from a fuller utilisation of existing capacity, but the major part of the expansion will be the result of the creation of new productive capacity in all sectors of industry. Approximately £45m. will be invested in the industrial sector in the period 1966 - 1971; £31m. will be invested in miscellaneous manufacturing, £8m. in cotton ginning, coffee curing and sugar manufacturing and £6m. in the manufacture of food products.

Categories of industry planned for development are:

1. domestic mass consumption goods e.g. clothing, shoes
2. goods requiring the entire East African market e.g. fertilizers, iron and steel
3. intermediate goods critical to development e.g. cement, iron and steel.

Many factors appear to favour industrial development in Uganda. They include:

- a. substantial import substitution potential
- b. large reserves of H.E.P.
- c. a concentrated market, centred on the Lake Victoria Basin
- d. the successful record of the Uganda Development Corporation

1. This is a revised version of a paper presented at the Third Meeting of Institutes Participating in the Co-operative Research on Industrialisation Problems in Africa, Leopoldville, 2nd - 6th, May, 1966, organised by the Development Centre of the O.E.C.D.

- and the large private enterprises
- e. the isolation of Uganda from the sea which favours the development of certain industries e.g. those requiring heavy raw materials, those producing highly perishable foods and those whose products are more bulky than the raw materials used. (It should be remembered that the long distance from the coast also has important disadvantages).

There are of course the usual constraints on industrial development. For example, the limited size of the market, the lack of skills and managerial ability, the lack of domestic capital and the limited raw material resources, but it is expected that, in time, these disadvantages will be overcome.

Miscellaneous manufacturing and the processing of food are expected to constitute 7.7% of G.D.P. in 1966, rising to 9.7% by 1971. The target for 1981 is 14.8%. Although the effect of the Common Market on the distribution of industry between the three East African countries is still not exactly determined, it is certain that some of Uganda's industries have benefitted from free access to the markets of the other two countries. The planned increase in industrial output will be far easier to achieve given the continuation of these, or similar, arrangements, possibly along the lines of the now defunct "Kampala Agreement".

Kenya.

Industrial development is not stressed in the first Five Year Development Plan. The expected rate of growth of value added in manufacturing is 5.3% p.a. (this rate being highly dependent on a high level of private investment), as opposed to an annual rate of growth of 5.7% in monetary G.D.P. The expected rate of increase of employment in the manufacturing sector is 1.5% p.a. compared to an average growth rate for total employment of 2.8% p.a. Employment in manufacturing is not looked upon as being a significant tool for reducing unemployment.

The private sector is expected to play a very large part in industrial development, with the Government offering safeguards and co-operation to stimulate rapid expansion. The Government sees its role mainly in terms of providing political stability, social and economic services and infrastructure facilities, although it sees the need of co-ordinating private and public sector capital formation. The most marked characteristic of the Plan is the dependence on foreign capital inflow, and it is assumed that an extra £10 million a year will have to flow into Kenya in order to meet the private sector capital formation target of £30 million p.a.

The main categories of industry (1) earmarked for development are:

1. import substituting industries e.g. sugar, fertilizers, textiles
2. export producing industries e.g. vegetable and fruit canning, pulp and paper.

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- (1) industries are to be ranked by the degree to which they satisfy the following criteria:
- a. significant export or import substitution potential
 - b. contribution of greatest possible value added within Kenya
 - c. high labour-capital ratio
 - d. production of investment goods
 - e. contribution to diversification of Economy.

It appears that by satisfying one criteria, an industry is likely to violate others.

It is not the purpose of this paper to examine critically the different strategies for industrialisation, but in the case of Kenya, two important questions should be raised:

- a. is the plan for the industrial sector bold and imaginative enough?
- b. will the anticipated growth of the industrial sector be large enough to deal with the problems posed by the re-organisation of the agricultural sector? (1)

Given the greater emphasis placed on industry in the Revised Plan (see below), it appears that negative answers were obtained to these two questions.

Contribution to monetary gross domestic product by manufacturing is expected to rise to £34.82 million in 1970 (1962 - £23.04 million). At the same time, monetary G.D.P. is expected to rise to £280.74 million (1962 - £180.0 million). Thus the share of manufacturing in monetary G.D.P. is not expected to rise in the planning period, remaining relatively constant at approximately 12-13%.

Development Plan 1966-1970.

In the Revised Plan, agricultural development is still the principal means for creating employment opportunities and raising incomes, but the overall target rate of growth for the manufacturing sector has been raised to 8% p.a. Production by modern manufacturing units is expected to grow by 7% p.a., and with the inclusion of small scale industries and handicrafts, the growth rate drops to 8.4% p.a. An 8% growth target has been adopted to allow for unforeseen circumstances in the future.

Thus the growth rate for manufacturing is now above the expected growth rate for the economy as a whole (6.3% p.a.) and the planned real growth rate for the monetary sector (7.1% p.a.).

Employment in the manufacturing sector is expected to increase by 5% p.a., raising the number of persons employed in this sector from 61,000 to 80,000 by 1970.

The period 1954-1964 was characterised by a fairly rapid rate of growth in those industries producing consumer goods. With the exception of metals and associated industries, the rate of growth of other industries was considerably slower, and it is thus necessary to strengthen the process of industrialisation by the rapid development of more basic and investment goods industries.

The growth of manufacturing in the plan period will be strongly influenced by:

- a. the rapid growth of food processing industries
- b. the development of a large sugar industry, and,
- c. the extensive development of the textile industry.

Relatively strong emphasis is placed on the food processing industries (26.3% of total net investment will be in this industry), this emphasis reflecting both the importance of agriculture in the Kenyan economy and the opportunities which exist to increase net output by processing agricultural output. About 40% of the output expansion in manufacturing will be based on agriculture and animal husbandry, and if pulp and paper and other wood products are taken into account, more than half the expansion is based on agriculture and natural resources.

(1) For a fuller treatment of this problem see K.G.V. Krishna - "The Industrial Sector in Kenya's Plan" - Discussion Paper No. 3, Institute of Development Studies, Nairobi.

Projects in the heavy industry category include an expansion of the refinery at Mombasa, the establishment of a nitrogenous fertilizer plant at Mombasa, the development of the cement industry and the pulp and paper plant planned for Broderick Falls.

The prospects for the expansion of exports of manufactured goods outside of East Africa are good, the expected growth rate being 4% p.a., but exports of manufactured goods to the two other East African countries are expected to decline as industrialisation proceeds in these countries.

Investment in manufacturing during the period 1965/66 - 1969/70 is expected to total £61.7m. (£53.0m. being from private sources), and net investment will total £45m. This constitutes 19% of total capital formation during the current planning period. No figures are given for the expected inflow of foreign private capital into the manufacturing sector, although the bulk of such investment is expected to come from abroad.

Manufacturing constituted 10.4% of G.D.P. in 1964 and is expected to increase to 11.5% by 1970, an increase of £17.22m. (from £29.38 to £40.60m.).

Tanzania.

Emphasis is placed on industrialisation in the Tanganyikan Plan in order:

- a. to widen the industrial base of the economy and lessen the dependence on international commodity prices, and
- b. to bring about a more balanced and buoyant economy - the present poverty of Tanzania results from deficiencies structurally in the economic and social fields rather than from a lack of potential within them, and attempts will be made to modify the structural disequilibrium of the economy resulting from the past pattern of development (although it should be stressed that growth, rather than stability, is the aim of the planners).

The proposed rate of growth for processing and manufacturing is 14.8% p.a. (this includes sisal decortication, the exclusion of which would raise the growth rate to some extent), and 24% of total capital expenditure, that is, £59 million, is expected to be spent on processing, manufacturing and mining activities (three-quarters of this total coming from the private sector).

Potential industrial development was derived from domestic demand projections for 1970, modified by resource availability. The main categories of industry planned for development are:

1. import substituting industries, economically viable on a territorial basis in terms of market size (either present market or that projected for 1970)
2. intermediate goods critical to development which will be established (or are in the process of being established) irrespective of the future of the common market, e.g. oil refining, cement and cement products, steel rolling
3. export processing industries, e.g. sisal rope, meat canning
4. large scale industries requiring the whole of the East African market - these were the industries allocated to Tanzania under the "Kampala Agreement", and although optimism was expressed in the Plan concerning this Agreement, it now appears that it is a 'dead letter', and the future of these industries will remain uncertain until the future of the common market is known.

The gross output of the processing and manufacturing sector is expected to rise to £25 million by 1970 (7.5% of G.D.P.), assuming development takes place as outlined in the Plan, and the target for 1980 is £84.9 million (13.3% of G.D.P.). These targets can be compared to the 1960-62 average of £7.4 million (4% of G.D.P.).

Summary.

There appear to be real differences in strategy between Ugandan and Tanzanian policy on the one hand, and Kenyan policy as outlined in the original Five Year Plan on the other. The larger industrial base of the Kenyan economy undoubtedly accounts for the original, comparatively low target growth rate for industrial output, with emphasis placed on agricultural development, but attitudes to industrialisation appear to have changed, given the higher growth rate contained in the Revised Kenya Plan.

Common Market based industries appear to be given greater emphasis in the Tanzanian and Uganda Plans, although one gains the impression that these are not as prominent now in Tanzanian thinking as they were when the Plan was first published. It also appears that Tanzania is no longer regarded as a "safe" export market by either Kenya or Uganda, and the future of the common market will remain in balance until the deliberations of the Philip Commission are known.

Demand considerations and resource endowment appear to have been uppermost in the planners' minds when considering new industrial development, these factors being re-inforced - at least in the case of Tanzania - by conscious strategy selection.

Industrial Location - Problems and Policy.

Uganda.

There is no location policy per se in Uganda. No pressures are exerted on private firms in an attempt to influence their location, but quite a substantial development will take place outside of the already established industrial centres - Kampala, Jinja, Tororo - mainly dictated by considerations of raw material availability. Examples of this development include a meat canning plant and tannery at Soroti, a cement plant at Kasese and the possible development of a soft fibre industry based on Mbale.

The main part of industrial development will however, be located in the three major centres. The future development of Kampala as an industrial centre will mainly be based on light industry, medium industry will be based on Jinja, while Tororo is likely to become the heavy industrial centre of Uganda e.g. steel production, nitrogenous fertilizers, chemicals.

The Plan stresses the need to take into account the geographical structure of the economy, and where necessary, the geographical structure of the Plan should be altered in an attempt to reduce regional disparities in income, provided an overall loss of growth is balanced by equity considerations. It was not found necessary to deliberately alter the regional pattern of expenditure - the geographical distribution of expenditure was found to be relatively comprehensive, and thus no changes on the basis of equity considerations were found to be necessary.

Kenya.

Government attitudes as regards the future pattern of industrial location in Kenya are vague, and in some cases, contradictory.

On the one hand, (1) it is stressed that rapid economic growth is the most important policy consideration, and that other immediate problems e.g. Africanisation, unemployment, regional inequalities, must be so handled that they do not jeopardise this growth. To obtain this maximum

(1) "African Socialism and its Application to Planning in Kenya"
Government Printer, Nairobi.

rate of growth, resources should be invested in those areas yielding the largest increases in net output, that is, the already relatively well-developed areas. (2)

Elsewhere (3), it is stated that regional income inequalities must be reduced, and in the allocation of public development funds the needs of the less-developed areas will be given special consideration. The Plan further elaborates this point:

"Further, in order to increase the participation of people in the monetary economy and to encourage diversification in the geographic location of industry, organised marketing and many other basic facilities and service industries will be encouraged to develop in promising outlying areas". (my emphasis) (4)

The movement of industry away from Nairobi is welcomed by the Government, but there are no concrete plans or proposals to encourage or assist this diversification. Lack of capital for infrastructure development is the crucial constraint on wider industrial dispersion (see below for a fuller discussion of this point), and little significant industrial development is likely to occur outside the present centres of activity, namely Nairobi-Thika, Mombasa, Nakuru, Eldoret and Kisumu, although where the availability of raw materials is the dominant locational consideration, e.g. pulp and paper development at Broderick Falls, locations will be more dispersed.

Thus from the Plan itself, we only get very vague ideas concerning the distribution of industry. The widest possible dispersion of industrial activity is looked upon favourably, but there is no coherent policy, and the few statements on this subject in the Plan appear to contradict those in "African Socialism". Obviously some clear policy will have to be formulated in order to obtain rational spatial development in the future.

Revised Plan.

The Revised Plan has recognised this deficiency and a policy of industrial dispersion will be adopted.

It is Government policy to ensure the development of the people in all the areas of Kenya, irrespective of how poor and remote those areas are. Measures to be taken in implementing this policy include:

- a. developing those limited resources in the area which are economic (which would probably be done anyway, irrespective of the regional development policy adopted)
- b. investing in education and training
- c. investing in the health of the people, and,
- d. encouraging some of the population to move to better endowed areas.

The necessary level of these services will be provided in the less developed areas and grants and loans will be provided on more liberal terms than those offered to the richer areas. It is usually more efficient to process primary products near to their source of supply, and thus the development and wider distribution of processing industries will help the development of the poorer areas. Industries will be encouraged to establish themselves in the rural areas in an attempt to strengthen the "back-to-the-land" movement.

A higher priority will be assigned to a project if, other things being equal, it can be economically located outside of Nairobi or Mombasa. The Government will inform manufacturers of possible locations elsewhere in the country and will improve infrastructure facilities where necessary. Adjustments in tariffs for water, electricity and transport will be used to encourage the development of new centres, and industries seeking Government support will be encouraged to locate in those areas preferred by the Government.

(2) "African Socialism", p.46

(3) "African Socialism", p.56

(4) "Development Plan", p.33-35

"Development Plan", p.33-34.

Dispersion appears to be favoured on equity rather than economic considerations. Nairobi, for example, has plenty of room for further expansion, and diseconomies of scale will certainly not appear to any significant extent for a long time.

The policy and measures described in the Revised Plan are certainly more coherent and consistent than those outlined previously, but whether the attractions of Nairobi and Mombasa outweigh the incentives offered for locating elsewhere cannot at this stage be determined.

Tanzania.

Although the Tanganyikan Plan is relatively comprehensive, an industrial location policy is not a feature of it. There are several reasons for this omission. The indicative approach to planning adopted places reliance on market forces in determining optimum locations (although it remains to be seen whether this will be the policy of the National Development Corporation). This imposes a basic restraint on any policy formulations, and is reinforced by the small number of large new industrial projects which could be established irrespective of the future of the Common Market (the future of which was uncertain at the time of the drawing up of the Plan, and will remain undecided until a decision is reached on the conclusions of the Philip Commission, which is at present working on this problem).

Given this absence of any definite government policy, investment will concentrate around the existing 'poles' of development, at least until 1970. This is a 'natural' consequence of development (the growth of external economies of scale in the centres concerned), and is in line with the Government's policy of concentrating capital expenditure in the richer regions, where, given the right choice of projects, the earliest and highest returns are promised. (1)

The reasons for this concentration of expenditure are fairly easy to discover. Infrastructure developments require large amounts of capital, the return on which is usually distant and uncertain. Given the dependence on foreign aid and the terms on which such aid is given, new infrastructure developments cannot be used as a tool of location policy - expenditure on infrastructure has to follow demand rather than lead it.

New industry will thus be concentrated in the already developed centres - Dar-es-Salaam, Tanga, Mwanza, Moshi and Arusha, with some minor development at Iringa, Dодоана and the Mtwara-Lindi region. There are no incentives in operation to attract industry away from Dar-es-Salaam, but with the growth potential of the Moshi-Arusha area, new industry will certainly not concentrate solely in the Capital. Given the geographical position of Moshi and Arusha, industry locating there will be well placed to compete with other centres of development in East Africa and it is quite possible that this area will grow at a faster rate than the coastal regions.

The policy of concentration of resources, outlined above is also reflected in the industrial estates programme adopted by the Government (for fuller details, see section on infrastructure development).

(1) For a fuller discussion of this point see C. Karmiloff, "Regional Development and Industrial Location in East Africa" in "Problems of Economic Development in East Africa", Nairobi, 1965.

For example: (a) 52% of the capital allocated to urban water supplies (£4.7m.) is allocated to six of the wealthiest administrative regions, containing 38% of the population and almost all the industrialised urban agglomerations;

(b) only 13% of total projected expenditure on power supplies (£12m.) has been allocated to the electrification of smaller townships.

Summary.

The considerations relating to infrastructure development and their related effects on location, outlined above, are not peculiar to Tanzania, and the same shortage of capital for infrastructure development is also experienced in Uganda and Kenya. Even with a single development plan for the whole of East Africa, and the full co-ordination of industrial development, it is unlikely that this constraint could be lifted, and funds would not be available to induce private entrepreneurs to go to areas which were not already provided with infrastructure services, skilled labour and external economies.

Thus the major constraint in formulating a consistent and comprehensive policy for the location of new industry is not ignorance of the advantages of such a course of action or lack of desire for such a policy, but the lack of capital and other resources necessary to implement the required measures.

Given the severity of this constraint and the burden it imposes in all three countries on the planning of new industrial locations, one would not expect major differences in attitudes to this problem to arise. A more equitable distribution of industry will be encouraged (or at least looked upon favourably) by the three Governments although at what time in the future these good intentions will be put into practice, it is difficult to say.

It seems unlikely that new industry in any of the East African countries would be deliberately allocated uneconomic locations for political (or to a lesser extent, social) reasons. This is not to deny that political influences will not be important in deciding new locations - this aspect of industrialisation is notoriously susceptible to political intrigue -- but it is fairly certain that this factor will be more important in Uganda and Kenya - up till now, there is little evidence of this type of influence in Tanzania. Kenya appears to place greater reliance on the operation of market forces, that is, private profit considerations, in deciding on the location of new industry, this being due to the lesser degree of state participation in industrial development there than in the other two countries, but there are no a priori reasons why private decisions should be any more 'economic' or less susceptible to outside influences, than decisions taken by a public body. It is a major aim of the study to attempt to measure cost differences arising out of deviations from the optimum location, caused by such autonomous, outside influences. In the event of the continuation of the Common Market one such autonomous influence would be some form of industrial location policy, based on the allocation of specific industries to the three countries on a purely East African basis.

Infrastructure Development. (1)

Communications.

Roads.

Uganda.

Uganda has a well developed road system, including 800 miles of bituminised road. The programme outlined in the Plan (though still subject to alteration) consists of the improvement of the basic main roads, the development of feeder roads and the replacement of wooden bridges with permanent structures. It is hoped to complete 1,000 miles of main road and 800 miles of feeder roads during the current planning period.

(1) The following section is based mainly on the four Development Plans:

- 2nd Five Year Development Plan 1966-71, Uganda.
- Tanganyika Five Year Development Plan for Economic and Social Development 1964-1969, Dar-es-Salaam, 1964.
- Kenya Development Plan 1964-1970, Nairobi, 1964.
- Kenya Development Plan 1963-70, Nairobi, 1966.

The major developments outlined in the Plan are:-

- bituminised roads -
1. Kampala/Gulu
 2. Gulu/Soroti
 3. Kampala/Port Portal
 4. Mbarara/Kabale
 5. Mbarara/Katunguru
- reconstruction -
1. Pakwach/Arua/Virra
 2. Fort Portal/Hoima/Masindi.

Kenya.

Emphasis is to be placed in the planning period on a continuing development of trunk roads in Kenya. Out of 3,750 miles of trunk road at the beginning of 1963, less than 800 miles had bitumen surfaces, and in wet weather some of the more important roads are closed to lorries. Thus the trunk road system at its present state of development cannot be considered an entirely reliable means of transport.

Secondary and feeder roads for the development of agriculture will also be given priority in the planning period.

The first priority in the period is to improve the following roads:-

1. Embu/Sagana
2. Kisumu/Yala
3. Ahero/Kisii Road (gravel standard only)
4. Kiganjo/Narok
5. Mombasa/Malindi.

These projects comprise about 107 miles of re-construction and bituminisation, and except for the Mombasa/Malindi and the Embu-Sagana stretch are concentrated in the Nyanza, Rift Valley and Central Provinces.

Of greater potential importance is the programme for the period 1966-1970. The roads with highest priority after 1966 are:-

1. Athi/Namanga
2. Eldoret/Tororo
3. Malindi/Kilifi
4. Kakamega/Broderick Falls (gravel standard only)
5. Mombasa/Lunga Lungu.

These projects consist of approximately 240 miles of reconstruction and bituminisation, the most important stretches being the Eldoret/Tororo and Athi/Namanga sections, which when completed, will give a continuous bituminised link between Uganda and Tanzania.

Also by the end of the current planning period, Nairobi will be linked to Mombasa by a bituminised road.

Revised Plan.

Total capital expenditure on roads during the planning period will amount to approximately £21.5m. Emphasis is placed on the development of trunk roads but not at the expense of road building programmes aimed at developing agriculture.

International trunk roads will be improved and brought up to all weather standards as soon as possible.

Additional projects in the Revised Plan are:

- a. Kisumu - Kisii
- b. Embu - Ena
- c. Eldoret - Kapsabet.

These projects will involve 88 miles of bitumenisation.

- d. Kisii - Isebania
- e. Nanyuki - Meru.

The above two projects involve 95 miles of reconstruction and gravel surfacing.

The other major developments outlined in the Plan are:

1. the construction of either a gravel or tarmac road from Nairobi to Ethiopian border to continue to Addis Ababa. It is hoped to complete this project by 1970.
2. a feasibility study will be made for a road from Nakuru to Lodwar which, if found to be economic, will help the general development of the area and in particular, the proposed fishing industry of Lake Rudolf.

Present thinking is notable for its concentration on roads and road transport, with less emphasis being placed on new railway development.

Tanzania.

Poor communications between the different areas of Tanganyika have led to a lack of inter-regional trade and a tendency for the regions to become self-sufficient rather than specialised. It is hoped to reverse this tendency with the more comprehensive communications system outlined below.

Government policy is based on the need to construct a nation-wide 'Low Cost Road' system (1), and it is intended to establish a main network of trunk roads, with three roads running from north to south and three from east to west.

The north-south routes are:-

1. Kenya border - Tanga - Segera - Chalinze - Stieglers Gorge - Nachingwea - Nanganga - Mtwara
2. Kenya border - Arusha - Babati - Dodoma - Iringa - Mbeya - Tunduma (Rhodesian border)
3. Uganda border - Bukoba - Biharamulo - Kasulu - Mpanda - Sumbawanga - Rhodesian border.

The east-west routes are:-

1. Segera - Korogwe - Moshi - Arusha - Dodoma Corner
2. Dar-es-Salaam - Morogoro - Dodoma - Nzega - Nyakanazi
3. Nanganga - Masasi - Tunduru - Songea - Njombe - Makumbako.

Emphasis has been laid on the provision of feeder roads, giving access to developing areas, although efforts will be made to improve the existing trunk roads. For example, by the end of the present planning period, Arusha and Moshi will be connected with the sea at Tanga and Dar-es-Salaam by bituminised roads, and Mwanza will also be connected with Arusha, providing an important cross-country link.

(1) a 'low cost road' being defined as "...one which, having regard to considerations of climate and traffic, has been located and built to geometrical standards commensurate with future requirements, but has been constructed with bases and surface to meet the present traffic requirements. It is however, one which should be so designed, constructed and maintained that it allows for stage construction when traffic requires it and improvement in economic conditions permits".

Tenth International Road Congress, Istanbul, 1955. Quoted in Tanganyika Development Plan, p.53.

The other major development is the proposed rail or road link with Zambia. A road link appears to be more in favour at the moment, but either project will play an important role in opening up Southern Tanganyika, and it is too easy to overstress the political necessity of such a link. The long term economic implications are probably of greater importance.

Railways.

Uganda.

Only one stretch of new line is planned, the continuation of the line from Pakwach, running northwestwards to Obollo for 35 miles. A new bridge is to be constructed across the Nile, and the new line will play a vital part in aiding the development of the West Nile District.

A second development will be the establishment of a train ferry service between Jinja and Mwanza.

Railways will remain vital to the development of Uganda even though present plans for the construction of new lines are limited.

Kenya.

Two major rail developments are being examined. Firstly, a more direct rail link may be constructed between Nairobi and Moshi, linking Kenya more directly with Dar-es-Salaam. Secondly, it is likely that the Nairobi/Nakuru section of track will have to be replaced.

Two wagon ferries will be purchased to replace the old cargo ships on Lake Victoria, and they will be used to transfer wagons directly between rail terminals on the Lake, giving savings in transshipment costs and reducing damage to goods.

Revised Plan.

The main emphasis is on improving rolling stock capacity and improving the efficiency of goods handling.

A rail link running from the main line to Broderick Falls will be constructed, forming part of the proposed pulp and paper development scheme there. The estimated capital cost is £1.4m.

Tanzania.

Three major railway extensions are proposed:-

1. an extension of the Mikumi/Kidatu line through the Kilombero Valley towards Makumbako, which will form part of the rail link to Zambia if this is eventually agreed upon.
2. the construction of a northern link line from Moshi, running west of Kilimanjaro, to join the Nairobi/Mombasa main line.
3. a line from Arusha to Musoma, which would link Uganda with Dar-es-Salaam (via Lake Victoria), and thus reduce Uganda's reliance on Mombasa.

With the exception of the possible Tanganyika-Zambia rail link, emphasis is not placed on the development of the railway system, and the recently announced World Bank loan of \$38 million will go towards financing the modernisation and expansion programme of the East African Railways and Harbours Administration, namely, modernising the locomotive and wagon fleets, renewing and strengthening sections of main line and enlarging the capacity of Mombasa and Dar-es-Salaam harbours.

Summary.

If the communications system is developed as outlined above, the two major results will be:-

- a. the greater integration of the three countries in terms of ease of travel and the transportation of goods, and,
- b. the establishment of important links with surrounding countries, for example, the Dar-es-Salaam/Lusaka railway/road and the Nairobi/Addis Ababa road. These links could form the basis for a larger common market area than exists at present, or alternatively, if the East African Common Market does disintegrate, they could form the basis of new economic groupings.

Harbour Facilities.

Kenya.

Additional capacity will become available at Mombasa Harbour during the planning period, to meet the growing volume of traffic. There is need of a drastic re-organisation of the harbour, giving it a large degree of central organisation and making it less oriented to railways.

Some development will take place at Kisumu where dry dock facilities for the new train ferry vessels mentioned above, are being enlarged.

Tanzania.

Two new deep water berths are to be constructed at Dar-es-Salaam during the planning period, giving the harbour a total of five. It is claimed in some quarters that additional berths are not necessary and that present capacity would be adequate if the low level of efficiency in the harbour (the result of bad organisation and a lack of labour efficiency, the latter being due to low wages which give no incentives to higher productivity) could be overcome. Ships often have to wait a week before they can enter the harbour and this queuing could be overcome by a more efficient and centralised organisation of the harbour.

The development of Tanga as a major port will depend upon:-

- a. whether or not the railway link from Moshi to the main Nairobi/Mombasa line is constructed. If this line is built, Nairobi will have a more direct connection with Tanga, and it is quite possible that traffic will be diverted from Mombasa if conditions do not improve there.
- b. the continuing development of Arusha and Moshi as important industrial and commercial centres.

It is quite possible that the Tanzania/Zambia rail link (if decided upon) will run from Lusaka to Mtwara, rather than to Dar-es-Salaam (although this possibility is looked upon more favourably in Zambia than in Tanzania). This would lead to the development of Mtwara as a port of major importance and would also be a stimulus to the development of the whole of Southern Tanganyika.

Thus, out of the three Tanganyikan ports, it is quite feasible that Da-es-Salaam will be the only truly 'Tanzanian' one. Tanga may be jointly developed with Kenya and Mtwara with Zambia, but these developments are only possible given close economic and political co-operation in the future.

Industrial Estates.

Uganda.

The establishment of industrial estates will be an integral part of the small industry development programme. A number of industrial estates catering for small industry are to be set up, the first one being in Kampala. The encouragement of small industry will include the provision of easy credit, promotional and extension services, the provision of prepared sites and structures and tax benefits and special rates on utilities. Approval has not yet been received for the designed integrated programme and the main difficulty at the moment is to get the Government to accept an overall policy. The small scale industrial development programme should be separate from other aspects of industrial development, and it is desirable that a central agency should exist to direct and co-ordinate the whole programme.

United Nations Special Fund Finance has been provided for two purposes:

- a. to provide experts to create a team to investigate potential industrial opportunities, and
- b. to establish an industrial estate in Kampala having two distinct functions, namely the promotion of small scale industrial development and secondly, the development of other, larger industries.

The Uganda programme is distinctive insofar as a section of the estate will be left for the development of larger scale industries.

Kenya.

No mention was made of industrial estate development in the original version of the first Five Year Plan.

Revised Plan.

The industrial estate programme as outlined in the Revised Plan is designed to stimulate industrial growth with maximum African participation.

Five estates will be established in Nairobi, Mombasa, Eldoret, Nakuru and Kisumu with the Industrial and Commercial Development Corporation providing financial and technical assistance. The physical layout will consist of an area large enough for about fifty enterprises with room for the future expansion of successful firms and with standardised factory buildings and warehouse facilities. Land and buildings will be leased to the individual enterprises on commercial terms and revenue should cover costs, although some extension services will be provided free.

Basic investment in each estate is estimated to be £650,000. With the inclusion of I.C.D.C. advances for working capital and equipment, each estate will cost approximately £800,000, before operating at full capacity. Total investment in the estates (including investments in small and medium scale industries) will total £5m.

Tanzania.

Industrial estate development is an essential part of the programme to encourage and develop small scale business enterprises (1) through the National Small Business Corporation. An Israeli firm is

(1) a small industry is defined as one employing not more than 20 persons with power or not more than 50 persons without power, and the unit must be engaged in industry or commerce.

at present building one estate in Dar-es-Salaam, to be managed by the Corporation, and it is planned to establish two workshop industrial estates, concentrating mainly on wood and metal working, also in Dar-es-Salaam. Estates in Mwanza, Bukoba (concentrating on glass products) and Tanga are scheduled to be completed by the end of the present planning period. Although such industrial estates in rural locations would be highly desirable, there are no plans for their establishment at present.

It will be the function of the estates to concentrate scattered small firms in one area and provide them with technical information and assistance (both in the form of advice and machinery and equipment). Emphasis will also be placed on financial and marketing aid (it was found in India that over 70% of problems encountered were of a business rather than a technical, nature), and it is hoped that these estates will be the 'breeding grounds' for the larger scale entrepreneurs of the future.

Summary.

At the present time, only in Uganda do plans exist for the development of an industrial estate catering for large scale industry, but the other planned estates are of importance to large scale industry insofar as: -

- a. they will provide the entrepreneurs of the future
- b. they can supply the larger industrial establishments with intermediate goods and services, and
- c. they lead to a wider diffusion of up-to-date technical and financial practices.

Power.

Uganda.

It is estimated that the demand for electricity will grow by 12% p.a. during the planning period, and a second H.E.P. station must come into operation before 1971 in order to meet increased demand. The location of the new power station is not at present known.

The Uganda Electricity Board will, as far as possible, promote rural electrification.

Kenya.

The only proved natural source of cheap power in Kenya is the H.E.P. potential of the Tana River, and the development of the Seven Forks system will take place in three stages.

To meet demands for additional power as soon as possible, a power station is to be built at Kindaruma on the Tana River below the Seven Forks rapids. This should be completed by 1967, including the construction of transmission lines to Nairobi, and from Nairobi to Mombasa (thus completing the Uganda/Kenya network from Kampala to the coast).

The second stage of development will be a major reservoir scheme on the Tana River, and the third stage will be the Gtaru scheme, involving the construction of an additional power station.

"Amenity Schemes" are being considered by the Government to provide a certain number of centres with electricity. These centres would be a low population density with limited prospects for industrial development. Although such schemes would have to be subsidised, they would probably have a positive long-run economic effect in the form of possible external economies to the communities concerned and a wider distribution of small scale industry. They would also, of course, have important social effects which must be taken into consideration.

Tanzania.

The demand for electricity is expected to increase by over 12% p.a., and an increasing proportion of this will be supplied by H.E.P. in the future. Possible new developments include a transmission line running from the Hale/Pangani system to Moshi and Arusha, the establishment of further diesel plant in Dar-es-Salaam and another H.E.P. station on the Pangani River.

In 1970, the main pressures of demand will be concentrated on Dar-es-Salaam - Tanga - Morogoro, Arusha - Moshi and Mwanza, and investment will be concentrated on supplying these demands. As mentioned above, rural electrification is not given emphasis in the planning period.

Summary.

Given the H.E.P. potential of East Africa and the absence of any other important source of cheap power for industrial uses (except surplus heavy oil at Mombasa and Dar-es-Salaam which can be used for the generation of electricity by diesel plant), electricity will remain the main source of power for industry.

Industries with large power requirements will have to locate near to the sources of power because of high transmission costs above a certain distance, and the availability of power is thus an additional constraint on a wider dispersion of industrial activity.

Conclusion.

The developments outlined above are, of course, dependent on resources being available during the planning period, and it is quite possible that some will not be completed (or even started), while other major developments, at present not known, may be commenced (and perhaps completed).

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