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ECONOMIC INTEGRATION AND POSSIBLE SAVINGS IN SUGAR TRANSPORT
COSTS IN EAST AFRICA.

I. Introduction.

The three East African countries of Kenya, Uganda, and Tanganyika have reached independence¹ with a legacy of economic co-operation. There is a customs union, a common currency, a common income tax structure, and an East African Common Services Organization which provides joint services such as tax collection, management of postal and telecommunications facilities, and the running of the East African Railways and Harbours. On attaining independence, each of the East African countries in pursuing its separate economic objectives is limited in the number of policy tools which it has at its disposal because of the high degree of co-operation which requires frequent co-ordination of policy. This conflict puts continued East African economic co-operation in jeopardy².

Co-operation with regard to sugar production and distribution is a case in point. All three countries have a common ex-factory price, fixed by law; they impose the same sugar excise tax; and sugar may move within East Africa duty free and without restriction. The continuation of this policy is problematical for several reasons. At present the world market price of sugar is much higher than the fixed internal price. Imports are expensive and export now seems attractive. Kenya and Tanganyika, who are now not self-sufficient in sugar production, would like to substantially increase sugar production. New producers in Kenya and Tanganyika, however, are fearful of a decline in the export price in a few years and thus would like guarantees of a certain proportion of the internal market. In addition, Kenya and Tanganyika would like to maintain a high internal price to encourage production while Uganda is more anxious for a lower internal price to encourage consumption. In order to permit different prices and to provide guarantees it would require either import duties on or a restriction of the movement of Uganda sugar into Kenya and Tanganyika.

Import restrictions within East Africa would have two disadvantages. First, transport costs might be higher. For example, Uganda sugar for export might have to move some 700 miles through Kenya to the port of Mombasa while Kenya sugar produced near the coast would be moving in the opposite direction to supply the Kenya highlands. Secondly, of course, production costs might be higher as production would not necessarily be encouraged wherever costs are the lowest. The purpose of this paper is to estimate the possible savings in transport costs with a policy of complete integration as opposed to a policy of national autarky.

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1. Tanganyika in 1961, Uganda in 1962, and Kenya in 1963 achieved independence from British rule.
 2. On the instability of the present co-operative arrangements see Joseph S. Nye, Jr. (7).

II The Model.

The total cost of transporting sugar within a given area can be written as follows :-

$$(1) \quad C = \sum_{i=1}^n \sum_{j=1}^m c_{ij} \cdot x_{ij}$$

The variable x_{ij} represents the number of tons of sugar delivered from the i^{th} point of supply to the j^{th} point of demand. The constant c_{ij} is the transport cost per ton between the points i and j . There are n points of supply in the area and m points of demand. If the number of tons of sugar available at the i^{th} point of supply is given at a_i and the number of tons demanded at the j^{th} point of demand is given at b_j , then the equations

$$(2) \quad \sum_{j=1}^m x_{ij} = a_i, \quad \text{for } i = 1, \dots, n$$

$$\sum_{i=1}^n x_{ij} = b_j, \quad \text{for } j = 1, \dots, m.$$

must hold. The conditions

$$(3) \quad \sum_{i=1}^n a_i = \sum_{j=1}^m b_j$$

$$x_{ij} \geq 0, \quad \text{for } i = 1, \dots, n; \quad j = 1, \dots, m$$

specify that total demand equals total supply and that the amount transported between any two points cannot be negative.

Let C_T , C_K , and C_U be the minimum total transport costs for the countries of Tanganyika, Kenya, and Uganda, respectively, assuming that no one country will import from the other two. Let C_{EA} be the minimum total transport cost for East Africa as a whole where free movement of sugar across all boundaries is permitted. The value of C_K is obtained by letting m and n represent the number of points of demand and supply, respectively, in Kenya alone, letting c_{ij} equal the transport cost per ton between all points i and j in Kenya, and letting b_j and a_i be the amounts demanded and supplied at points j and i in Kenya. Then the expression (1) is minimized subject to the restrictions in (2) and (3). The values of C_T , C_U , and C_{EA} are determined similarly. Then

$$(4) \quad G_1 = (C_T + C_K + C_U) - C_{EA}$$

is the savings in transport costs which can be obtained by a policy of complete integration (free movement across all borders) as opposed to a policy of national autarky (no one country imports from the other two), assuming that the amounts demanded at each point and the amounts supplied at each point are given as b_j and a_i , respectively. Now let us assume that the amounts demanded b_j and the total supply $S = \sum_{i=1}^n a_i$ are given, but

II. Stages of Development and Trade Dependence

The policy objective of this paper is an analysis of the main issues of international trade and aid policies expected to arise at the UN Conference on Trade and Development, to judge whether on any of the issues it would be desirable to recognize distinctions among developing countries on the basis of differences in their stage of development. In order to fulfill this objective it is necessary to determine what differences among developing countries exist, how these differences should be measured, and how these differences relate in general to the trade of developing countries.

A. Measures of Stage of Development

The most common measure of the stage of development is gross domestic product (GDP) per capita, converted at the official exchange rate into a common currency, for example, gross domestic product per capita in terms of U.S. dollars. This measure of the level of development among less developed countries may be misleading for several reasons.

Much of the economic activity in less developed economies takes place in the subsistence sector. Subsistence production is not exchanged on any market at any price and is never recorded as a money transaction. Estimating the volume of such production is largely a matter of guesswork, and there is a great deal of arbitrariness in determining its unit value. Current procedures for estimating the volume and unit value of subsistence production can give rise to obvious absurdities. For example, the output of some commodities is estimated by taking agricultural estimates of acreage and multiplying by some assumed yield per acre. The unit value of production may be assumed to be some average of retail prices in various localities during the year. A possible result of this procedure is that during bad crop years, when retail prices are high because of shortages, the estimated value of such subsistence output rises, and during good years, the prevailing low retail prices result in a drop in estimated subsistence output. Although the output of the monetary sector of the economy is more often recorded, in many cases cash transactions are missed in the official statistics, and for some types of commodities and especially services no information on actual transactions is available and magnitudes must be estimated. For example, in Tanganyika vehicle sale and retail trade is estimated by multiplying the number of licenses in each category by an assumed income for that category. In Uganda manufacturing value added is estimated by adding estimates of the manufacturing wage bill to estimates of profits derived from tax returns. The difficulties and inadequacies in these procedures are apparent.¹

1. For a fuller discussion of these and other problems see Brian Van Arkadie, "Social Accounting and the Study of Economic Structure", Economic Development Research Paper No. 2, East African Institute of Social Research, Sept. 2, 1963.

Another difficulty in comparing national income estimates occurs because of differences in definition as to what constitutes a part of national income. For example, housebuilding in the subsistence sector is included in national income estimates in Tanganyika but not in Uganda or Kenya. Still another difficulty arises because of the extent to which certain activities which are generally excluded from estimates of gross domestic product take place in various countries. The pervasiveness of the extended family structure can affect income estimates since many services are performed within the extended family structure which otherwise might be recorded as cash transactions. Thus for various reasons income tends to be understated in countries where statistical services are limited and where a large part of economic activity occurs at the subsistence level.

Finally, the most important source of error in international comparison of gross domestic product is the method of conversion into a common currency. The usual procedure is to use the prevailing official exchange rate and multiply the income of every country in terms of its own currency by the rate of exchange with a common currency. For example, the gross domestic product of Kenya in East African shillings is multiplied by the rate at which the shilling exchanges for the U.S. dollar. Official rates of exchange presumably tend to reflect the relative purchasing powers of two currencies, but only very crudely. In some instances, however, official rates of exchange are maintained at non-equilibrium levels by various direct controls, or by the level of import duties. To the extent that exchange rates adjust they do so discontinuously. For example, if a country devalues its currency by 50%, its gross domestic product in terms of other currencies also drops 50% overnight. Most important of all, exchange rates tend to reflect the relative purchasing power of two currencies over internationally traded goods rather than over all goods produced in both economies. In less developed countries the prices of goods traded internationally are usually higher relative to commodities produced domestically for internal consumption alone (such as housing, fresh fruits, meat, vegetables, and all kinds of services) than is the case in more developed countries. Since the bulk of consumers in less developed countries tend to spend most of their incomes on these relatively low-priced goods, the use of official exchange rates tends to understate the income of less developed countries.

2. For a more extensive discussion of the difficulties involved in international comparisons of gross domestic product see Peter T. Bauer and Basil S. Yamey, The Economics of Underdeveloped Countries, Chicago, University of Chicago Press, 1957, pp. 16-24.

Given the plethora of difficulties involved in comparing estimates of gross domestic product per capita, one might suggest the following statistics as supplementary measures of the level of development: (1) agricultural production as a proportion of gross domestic product, (2) per cent of economically active population in agriculture, (3) energy consumption per capita, (4) adult literacy, (5) infant mortality, and (6) expectation of life at birth.

Using a set of several statistical indicators has the fundamental advantage that the concept of a country's stage of development is a concept with multiple dimensions. As a country develops, we expect it not only to attain higher levels of per capita income, but also to increase the share of its economic activity in non-agricultural pursuits, to raise the amount of capital employed per member of the labor force, to multiply the use of fuel and energy in capitalized methods of production, to raise the level of skill and educational attainment in the population, and to enjoy improved living standards in such fields as health and other social services. In comparing two countries, one with a lower per capita income but higher achievement in these other dimensions would properly be considered at a higher level of development. Of course the particular set of measures used to represent level of development is to some degree arbitrary, and each single measure has its own advantages and drawbacks. But a set of measures reflecting the multiple dimensions of economic development seems clearly more satisfactory than any one measure, such as per capita income.

The first two of the measures suggested above derive their rationale from the proposition that as economic development proceeds, agricultural productivity increases and more productive effort is devoted to manufactured goods and services, for which the demand is relatively elastic as incomes rise. Even though some developed countries such as Denmark may continue a high degree of agricultural specialization in trade, exporting their agricultural products and importing many manufactured goods, such countries still reach a relatively low proportion of agricultural production in total domestic product (16% for Denmark in 1958). Estimates of agricultural production as a percent of total GDP are subject to the same difficulties and shortcomings as estimates of gross domestic product, although the problem of conversion to a common currency is eliminated. The percentage of the economically active population in agriculture may be determined through sample surveys or through projections of census data. Neither of these methods is extremely accurate, and the figures are less reliable for international comparisons because of differing definitions.

Energy consumption per capita usually can be measured fairly accurately. As an indicator of the stage of economic development, however, it has its weaknesses. In those countries where the emphasis of government activity is on expanding power, roads, and other forms of social overhead capital, energy consumption will rise ahead of improvements in directly productive sectors of the economy. Furthermore, energy consumption tends to increase in discontinuous jumps, especially in small countries where the building of a hydroelectric power station may double or triple energy consumption within a short period of time.

Adult literacy rates are only crude estimates. There are several difficulties involved in attempts at international comparisons. Standards of literacy vary from country to country, and "only 9 countries give a proper definition of literacy to be used during the enumeration."³

3. Quotations in this paragraph are from Handbook of Population Census Methods, Volume III, New York, United Nations, 1959, p.25 and p.32, which discusses many problems in interpreting literacy estimates.

Responses to enumerators are often biased by the fact that "literacy is generally considered a desirable trait", and "there may be a tendency for illiterate persons to report themselves literate." In addition, if one is considering adult literacy rates, there are differences in the minimum age at which a person is considered an adult. A major advantage of the use of literacy rates as an indicator of stage of economic development, on the other hand, is that literacy is an important prerequisite for enjoying many types of activities. Thus literacy rates may reflect general welfare levels in a way which is not adequately shown in gross domestic product figures.

Infant mortality rates might be one of the more sensitive indicators of general economic welfare among less developed countries if statistics were better. Infant mortality rates are not only affected by the availability of medical care, but are probably even more influenced by the general health conditions, housing and sanitation facilities, and nutrition levels which prevail among the masses of the population. Increases in economic welfare in the earlier stages of development often take the form of improvements in these factors. The available estimates, however, are probably grossly understated in most cases, as they derive from data on vital statistics which are often incomplete. The births which are unrecorded tend to be the very ones in which death takes place during the first six months. Estimates of infant mortality taken from sample surveys are likely to be more accurate, and are often two or three times greater than rates calculated on the basis of vital statistics.⁴

4. For infant mortality statistics see Demographic Yearbook, 1961, New York, United Nations, 1961, pp.222-262.

Expectation of life at birth also depends on nutrition levels, housing and sanitation facilities, and general health conditions, but it is more sensitive than infant mortality rates to improvements in disease control. For example, the spraying of swamps with DDT to eliminate malaria may have spectacular consequences for death rates in the middle age range, resulting in a large increase in life expectancy. Estimates of expectation of life at birth are however even less reliable than those on infant mortality, since life expectation requires accurate estimates of death rates at every age, including death rates for the first year (infant mortality rates).

B. A Composite Index of Stage of Development

In view of the shortcomings of any single measure of the stage of development, we decided to construct a composite index based on a set of these measures. We hope that the statistical deficiencies in the various measures tend to cancel out, and that the composite index is both conceptually and statistically a better measure of the stage of development than any single indicator. Unfortunately the data on per cent of economically active population in agriculture, infant mortality, and expectation of life at birth proved to be too sketchy to use. Therefore the composite index of stage of development was constructed using the following procedure:

- (1) Each country in the sample was ranked on the basis of
 - (a) gross domestic product per capita in U.S. dollars,
 - (b) agricultural production as a percentage of gross domestic product,
 - (c) energy consumption per capita, and
 - (d) adult illiteracy rates.
- (2) For each country the average rank over the four ranks in each of the above categories was calculated. This is the stage of development index.

Note that the stage of development index provides simply an ordinal ranking of the countries in the sample. That is, the numerical value of the stage of development index has no cardinal significance. If the index of country A is higher than that of country B, then country A is described as having reached a higher stage of development, but the difference in the value of the two indices does not tell us how much more developed country A is than country B. For cardinal comparisons we must refer back to the four component indicators.

For the purpose of our study, we started with information on gross domestic product at factor cost and population.⁵ We initially selected 56 countries with per capita GDP less than \$ 600 (plus Venezuela), population greater than 2 million, and available data on all four indicators and two measures of export trade. The stage of development index was computed for all these countries.

5. See Table I for the sources of these and other series.

Although one normally thinks of only the countries of Latin America, Asia and Africa when speaking of developing countries, six European countries and Japan and South Africa fell into our sample on these criteria. Even when other measures were included in our stage of development index, these countries still ranked from 3 to 14 in our list. Greece and Portugal were 13 and 14 respectively, and Israel, Argentina, Venezuela, Chile, Mexico, and Cuba ranked above them. Thus the generally accepted list of developing countries overlaps at the top with the poorest countries generally considered developed.

Of the 56 countries ranked, 25 had a rank on the basis of the stage of development index which differed by at least 5 from their rank on the basis of GDP per capita. For example, the Ivory Coast fell from a rank of 20 on the basis of GDP per capita to a rank of 42 on the basis of the stage of development index, because of low ranks in agricultural product as a share of GDP, energy consumption per capita, and adult literacy. Other countries which fell substantially were Mali, Senegal, Ghana, and Haiti. In the other direction Burma rose from a rank of 54 on the basis of GDP per capita to a rank of 37 on the basis of the stage of development index, due to a relatively favorable literacy rate and share of agricultural production in GDP. Other countries which rose substantially were Taiwan, Peru, Yugoslavia, and Bolivia. Thus the stage of development index gave quite different results from GDP per capita in some cases.

Of course one must make qualifications about the significance of these rankings. As discussed before, none of the components is in itself an ideal indicator of the level of development, and the index is simply an average of the four components. It is conceivable that in some instances errors might be cumulative due to downward or upward bias in all the components. Furthermore, the data used to calculate the index refer to the year 1958 in the case of per capita GDP and agricultural production as a percentage of GDP, to the year 1960 in the case of per capita energy consumption, and to about the year 1950 in the case of adult illiteracy. Some of the countries have recorded a fast rate of economic growth since 1958, and the data may also be affected by special climatic conditions or cyclical swings in economic activity in 1958. Despite these qualifications, we believe that in general the composite index of stage of development provides a more meaningful ranking of developing countries than any single indicator.

Since our terms of reference emphasized the relative stages of development of developing countries in Africa, Asia, and Latin America, we then eliminated from our list all the European countries except Yugoslavia, as well as South Africa and Japan. The data for the remaining 49 developing countries are presented in Table I, with the countries ranked by the composite index of stage of development in column 5.

There are large differences in stage of development among the 49 developing countries listed in Table I. Though the composite index itself provides only an ordinal ranking, an indication of the cardinal differences can be obtained by comparing the median values of the four component measures for those developing countries in the upper quarter of the list and those in the lower quarter. Countries in the upper quarter have a median per capita GDP of about \$ 300, share of agriculture in GDP of about 20%, energy consumption per capita of 850-900 kilograms of bituminous coal equivalent, and adult literacy of 60-65%. By contrast, countries in the lower quarter have a median per capita GDP of about \$ 70, share of agriculture in GDP of about 60%, energy consumption per capita of about 50 kilos, and adult literacy of 5-10%.

C. Stages of Development and Dependence on Trade

Assuming that the rank of each country on the basis of the stage of development index is meaningful and assuming that internationally - agreed trade and aid policies might use the stage of development as one criterion, three important questions come into mind. First, is there justification for granting concessions on a continental basis? For example, is there justification for granting special preferences to African countries which are not extended to Latin American countries? The answer to this question depends partly on whether there are objective differences in the average level of development for countries in Africa, Asia and the Middle East, and Latin America, and on the dispersion of levels of development among the countries in any one area. Second, will non-preferential concessions granted in general trading arrangements have a differential impact on developing countries at a relatively lower stage of development? This depends on whether exports as a proportion of GDP tend to be greater or less for countries at a lower stage. Finally, it is generally recognized that developing countries are heavily dependent on exports of primary products for their earnings of foreign exchange. Will non-preferential concessions for primary exports have a differential impact on countries at a lower stage? We wish to examine this proposition by establishing the degree of correlation between the stage of development and the proportion of exports which are primary products. If there is a high correlation, then trade policies aimed at improving the lot of all primary exporters will at the same time tend to favor countries at a lower stage of development.

A cursory glance at the rankings in column 5 of Table I shows that the African countries tend to be grouped in the lower half of the list. In fact, of the first 24 countries only 3 are African. Of the last 25 countries, 18 are African. In the case of African countries south of the Sahara, the pervasiveness of low rankings is even more striking. All African countries south of the Sahara, except for Rhodesia and Nyasaland, have a rank of 25 or below. Latin American countries are mostly found in the upper half of the list; they comprise 11 of the first 24 countries. Of the last 25, only one, Haiti, is Latin American. Asian and Middle Eastern countries tend to be scattered throughout the rankings. Of the first 24 countries 8 are Asian, and Middle Eastern, and of the last 25 countries 6 are Asian and Middle Eastern.

This conclusion can be stated more sharply by obtaining median rankings for each area, and applying certain statistical tests. The median ranking for Latin America is 9, for Asia is 25 $\frac{1}{2}$, and for Africa is 35. Using a statistical test, one can conclude that there is a very definite difference in the levels of development of Latin America and Africa. The difference between Latin America and Asia is less significant, and there is almost no significant difference between Asia and Africa.⁶

6. Using the Median Test, there is a difference in the medians of Africa and Latin America which is significant at the 1% level. See Sidney Siegel, Nonparametric Statistics, New York, McGraw-Hill, 1956, pp.111-116 for a discussion of the Median Test. On the basis of the same test, there is a difference in the medians of Latin America and Asia which is significant at about the 15% level. In the case of Asia and Africa, the difference is clearly not statistically significant. Using the Median Test on all three areas at the same time, one obtains a significant difference among all three medians at the 1% level.

Trade policies dealing similarly with all the countries in each of the three geographical areas would be directed at fairly homogenous groups of countries, with respect to level of development, in the case of Latin America and Africa, and even more so in the case of Africa south of the Sahara. A policy dealing with Asian and Middle Eastern countries, however, would aid countries at a relatively high as well as at a relatively low level of development. There is strong justification for making a distinction between Africa and Latin America with respect to stage of development, and somewhat less justification for a distinction between Asia and Latin America. There is no systematic statistical basis for a distinction between Asia and Africa.

The ratio of exports to gross domestic product for the 49 countries is shown in column 7 of Table I, and the ranking is given in column 7a. One must be careful in interpreting these ratios both because of difficulties in measuring GDP, as discussed above, and because of difficulties in measurement of exports. The basis for measuring exports varies to some extent from country to country. Some countries exclude re-exports while others include them. Where there are differences in valuation practices, all figures have been adjusted to the value f.o.b. at the point of exit, but the estimates of transport costs may not always be accurate.

The Kendall coefficient of rank correlation⁷ of stage of development (column 5) and export dependence (column 7a), is $-.15$. The negative sign means, perhaps surprisingly, that the lower the stage of development, the smaller is the proportion of exports in GDP. This relationship is not strong, as the correlation coefficient is significantly different from zero only at a 6% level of significance. There is also a relationship between exports as a proportion of GDP and size of country, where size is measured either in terms of GDP or in terms of population. That is the smaller the population or gross domestic product, the larger the ratio of exports to GDP. One would expect this relationship since the larger the economy, the easier it is to become self sufficient. If one eliminates the effects of size, then there is a stronger negative correlation between the level of development and export dependence. The Kendall partial rank correlation coefficient is $-.18$ if the measure of size is population and $-.19$ if the measure of size is GDP. There is no test for the significance of a Kendall partial rank correlation coefficient, but one suspects that elimination of the effects of size, which results in a higher partial correlation coefficient, produces a significant relationship.

7. For a discussion of the Kendall rank correlation coefficient see Sidney Siegel, *op. cit.*, pp. 215 - 229. Note that the absolute value of this coefficient cannot be interpreted on the same scale as the value of a conventional correlation coefficient.

The conclusion that one may draw from these correlations is that internationally agreed policies to promote all kinds of exports from developing countries would tend if anything to favor countries at a higher stage of development relative to those at a lower stage. While the relationship is not strong, and all developing countries would benefit to some extent, such policies would not at the same time tend to narrow present disparities among the developing countries.

Finally, let us examine the relationship between stage of development and dependence on primary exports. The proportion of primary products in total exports is given in column 9 of Table I, and the ranking according to dependence on primary exports for foreign exchange earnings is given in column 9a. It turns out that there is a very strong correlation between stage of development and dependence on primary exports. The Kendall rank correlation coefficient is .26, which is significantly different from zero at the 1% level. The positive sign means that the lower the stage of development, the larger is the proportion of primary products in total exports. Again this correlation is strengthened after adjustment for the size of country.

The implication of these correlations is that policies aimed at helping all exporters of primary products would tend to have relatively greater effects for countries at a lower stage of development. Thus such policies would work to narrow present disparities among the developing countries, as well as to stimulate generally their economic progress.

III. Current Issues of International Trade and Aid Policy.

Current issues of policy affecting developing countries, which will be discussed at the UN Conference on Trade and Development, are many and complex. For the purpose of this paper, however, it is convenient to focus on five broad groups of issues: (a) promotion of primary exports of developing countries, (b) promotion of exports of semi-manufactured and manufactured products, (c) preferential trade arrangements among developing countries, (d) special financial support for developing countries suffering from export fluctuations, and (e) amount, allocation, and terms of financial aid to developing countries.

Of course on all of these issues the general interest of developing countries is to obtain as much international assistance for their economic development as possible. However, as shown in Part II, there are substantial differences in stage of development among the developing countries. Most African countries, including Uganda, Tanganyika, and Kenya are at a relatively low stage of development. Thus it is relevant to consider, for countries at a lower stage of development, the priority to be given to progress on these various issues. What internationally-agreed policies would tend to narrow disparities among the developing countries as well as promote development in the world as a whole?

The calculations presented in Part II throw light directly on several of these issues. In addition, it will be necessary to bring in considerations drawn from our general understanding of economic development problems, and particular aspects of presently discussed arrangements for dealing with certain issues.

A. Promotion of Primary Exports.

The main issues under current discussion with respect to promotion of primary exports of developing countries can be summarized as follows. Should international commodity agreements regulating trade and prices of individual commodities be established for a number of additional primary products now subject to international study groups? Should countries with developed market economies adopt a time phased program of reducing tariffs, internal excises, and quantitative restraints on imports of all primary products, adjusting their domestic agricultural and mining policies accordingly? Should countries with centrally planned economies adopt a corresponding program to narrow the spread between internal and world prices of their primary imports, to increase planned imports, and to distribute purchases broadly among developing countries? In particular, should free entry of tropical products be accepted without delay by both developed and centrally planned economies?

Countries at a lower stage of development, such as Uganda, Tanganyika, Kenya and most other African countries, have a high priority interest in all of these measures, subject to their effectiveness in expanding the value of primary exports. As shown in Part II, there is a statistically significant correlation between stage of development and share of primary exports in total exports. Countries at a lower stage of development tend to be relatively more dependent on primary exports, and countries in the lower quarter of the list typically have percentages in the order of 95%. Thus internationally-agreed policies to raise the rate of growth of the value of primary exports would probably contribute more to the development of such countries, than any other action in the trade field.

The proposals for free entry of tropical products deserve particular attention. In addition to the general relationship between stage of development and primary exports, most of the countries at a lower stage depend largely on tropical agricultural products, while a number of the countries at a higher stage are exporters of mineral products or temperate agricultural products. Moreover, free entry of tropical products is relatively palatable politically in developed and centrally planned countries for obvious comparative-advantage reasons, and is already supported in principle in the present GATT action program. Thus this seems to be an especially attractive form of promotion of primary exports for most African countries.

Another issue running through much of the discussion on promoting primary exports is whether arrangements should be preferential or non-preferential. Note that all of the measures discussed up to this point, even though they were extended non-preferentially to all developing countries, would tend automatically to give greater assistance to countries at a lower stage of development. Thus they would work to narrow disparities among the developing countries at the same time as they stimulated development overall. It would of course be possible to go further and design systems giving explicit preference to countries at a lower stage.

However, a number of preferential arrangements are already in existence, notably the associate status of some African countries in the European Economic Community, Commonwealth preference in the United Kingdom and Commonwealth markets, the United States system of sugar quotas, and bilateral trade agreements between the Soviet Union and some developing countries. Though it would take an elaborate study to reach a definitive conclusion, it is reasonable to believe that on balance these preferential arrangements are unfavorable to Uganda, Tanganyika, Kenya, and the other African countries not associated with the EEC. These countries would probably benefit on balance from eliminating such preferences. Thus it appears to be in the interest of these countries to support international-agreed measures promoting exports, particularly tropical products, on a non-preferential basis, and to press for elimination of present trade distinctions among African countries.

B. Semi-Manufactured and Manufactured Products.

The central issue with respect to exports of semi-manufactured and manufactured products is whether developed countries should have systematically easier access to developed and centrally planned markets than other suppliers.

This principle of discrimination in favor of developing countries would of course be an explicit departure from the most-favored-nation principle underlying presently accepted GATT procedures. Another issue is whether the tariff structure of developed countries should be adjusted, without departing from the most-favored-nation principle, to provide easier access for semi-manufactured and manufactured products which developing countries can supply.

A good general case can be made for internationally-agreed action on both these issues. Developing countries would clearly be helped in expanding their economies more rapidly than their primary exports can grow, if they could increase their secondary exports at a rapid rate. Moreover, as developing countries industrialize they tend to attain a comparative advantage in semi-manufactured and light manufactured products, while

developed countries tend to retain a comparative advantage in complex and heavy manufactured products. Discrimination in favor of manufactured products from developing countries would both accelerate their rate of growth and facilitate attainment of their comparative advantage.

However, in the immediate future countries at a lower stage of development, such as Uganda, Tanganyika, and Kenya, could not expect to benefit much from such international measures to open up markets for manufactured exports. The implication of the correlation discussed above between stage of development and proportion of primary exports is that countries at a higher stage already tend to have more secondary exports. The competitive advantages inherent in being at a higher stage mean that most of the benefits would accrue to these countries. Of course countries at a lower stage of development would still tend to gain something, either directly from a few secondary exports or indirectly from expanding trade with higher-stage developing countries. But international measures to open markets for semi-manufactured and manufactured products would still be of relatively low priority for most African countries.

What then of preferential measures favoring developing countries at a lower stage relative to those at a higher stage of development? It would be possible to design a three-tier system, in which developed and centrally planned countries could export manufactured products subject to "normal" tariffs and other conditions, higher-stage developing countries would have a certain preference, and lower-stage countries would have still greater preference. The administrative problems of handling certificates of origin and other customs procedures would be severe, however, particularly as importing countries would almost surely wish to make many distinctions among classes of semi-manufactured and manufactured products. Moreover, a complicated system would open the door to preferences on political grounds, which most developing countries wish to avoid. Finally, even preferential measures might not be sufficiently powerful to overcome the competitive disadvantages of countries at a lower stage of development. Tariffs and other barriers to imports of manufactured products are now generally lower for developed economies than those needed simply to protect domestic markets in lower-stage developing countries, and are likely to be reduced further in the future. There may not be room to introduce a three-tier system which would be significantly different in effect from a simpler system discriminating in favor of all developing countries.

C. Preferential Trade Arrangements among Developing Countries

High priority for trade issues affecting primary products and low priority for trade issues affecting secondary products do not of course imply neglect of industrialization. However, for countries at a lower stage of development, such as Uganda, Tanganyika, and Kenya, greater progress in the near future is likely to be attainable by a combination of (a) import substitution in the domestic market, and (b) preferential trade arrangements to enlarge markets by agreement with other developing countries. Import substitution behind unilaterally established protective tariffs are already part of the international rules of the game, provided the most-favored-nation principle is respected. Preferential trade arrangements in the form of reasonably full customs union are also quite acceptable. The central issue under current discussion, however, is whether developing countries should be permitted to enter into preferential trade arrangements which depart from the customs-union and most-favored-nation principles by covering only selected products exchanged with a limited number of other developing countries.

A good case can be made for such partial preferential arrangements in appropriate circumstances. Preference on selected products could enable a group of developing countries to embark on cooperatively-planned development of several large-scale industries, without running into the problem of uneven development in a full customs union. Preference extended to only a limited number of politically congenial countries could be more readily negotiated than a more inclusive scheme. The relevance of this general case to Uganda, Tanganyika, and Kenya will be considered in another paper.⁸ Here we may conclude simply that internationally recognized freedom of action to negotiate partial preferential arrangements, supplementary to the East African Common Market, may be of considerable practical value in the future.

D. Financial Support for Export Fluctuations.

Several different proposals have been suggested for international arrangements to alleviate the short-run foreign-exchange problem of developing countries experiencing export fluctuations. They include easier access to IMF credits in such circumstances (already in effect to some degree), the Development Insurance Fund proposed by a group of UN experts, a plan of the Organization of American States, and a proposal of the Tunisian government combining elements from all the others. The proposals differ in the degree to which such financial support is automatic, in whether full repayment or a net flow of funds to developing countries is envisaged, in financing by annual or initial contributions, and in computational provisions defining the amount and timing of financial support.

The attractiveness of various elements of these proposals to Uganda, Tanganyika, and Kenya will be considered in another paper.⁹ For the present we can simply note two general points. Schemes which focus on fluctuations in earnings from primary exports, rather than total exports, would presumably be more favorable to countries at a lower stage of development, and more closely attuned to fluctuations in commodity prices over which a particular country has little control. Schemes which calculate contributions taking into account per capita GDP as well as value of export would be more redistributive among countries at different levels of development.

E. Financial Aid for Development.

Turning from trade to aid, there are a multitude of specific issues about amount, allocation, and terms of financial aid in which the interests of countries at a lower stage of development, such as Uganda, Tanganyika, and Kenya, are apparent. Of course African countries should support any specific steps to expand the total amount of aid, or to increase the share flowing to countries at a lower stage of development, or to ease the terms on which aid is provided. The practical scope for any sweeping change designed to give greater systematic recognition to differences in stage of development, however, is limited.

8. See Philip Ndegwa, "Preferential Trade Arrangements among Developing Countries", East African Institute of Social Research, 19th February, 1964.

9. See Yoeri Kyesimira, "International Financial Support for Exports Fluctuations", East African Institute of Social Research, forthcoming.

In arriving at decisions on the amount and allocation of aid, the various developed countries, the centrally planned countries, and the international agencies clearly employ a variety of criteria, implicitly perhaps more often than explicitly. The criterion of stage of development must jostle with such other criteria as project productivity, existence of a coherent development plan, absorptive capacity of the economy, balance-of-payments viability, congeniality of foreign policy, and publicity effects. It is difficult to discern any internationally-agreed means by which the weight accorded to stage of development in these day-to-day decisions of aid-administering organizations could be systematically increased.

There may be more room for international agreement with respect to the terms of aid, however. Countries at a lower stage of development, as in Africa, clearly have grounds for special consideration. The limits of servicing capacity in their balance of payments for foreign loans are relatively low, and the time when development may become self-sustaining is much further in the future. The loan-servicing problems of such countries are already being recognized on an ad hoc basis, and the overall trend is irregularly toward easier financial terms. International agreement to raise the proportion of grants and local-currency loans in total aid, to extend grace periods, and to lower interest charges (perhaps with maximum rates and considerable refunding) might now be feasible, with systematic preference for countries at a lower stage of development. This is a direction of policy of particular concern to most African countries.
