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GAINS AND LOSSES IN THE EAST AFRICAN COMMON MARKET

Preface

This paper was written sometime ago for publication elsewhere. It is put forward as being suggestive not definitive and it is proposed to revise it in greater detail when the Uganda Industrial Census is available.

The general problem of assessing the gains and losses of common market arrangements has long been recognised as a difficult one. This problem has special significance in the context of underdeveloped economies because of the market limit on scale of production; a particular instance of the problem has been a major political factor in the relationship between the three East African territories for nearly a decade.

It had always been recognised that the gains from the East African Common Market were unevenly distributed between the participating countries.[1] The Raisman Commission was quite clear, however, that the common market arrangements were in the long-term interest of all three territories, but that the distribution of gain was the cause of strain and instability. In the final chapter, the Commission expressed itself thus:

> "201. Inequality in the distibution of the Common Market's benefits is, however, the fundamental source of the present strains. If, as we conclude, the large increase in East Africa's production in recent years has to a substantial extent been a consequence of the common market, so also has been the fact that more than half of the increase has occurred in Kenya.
>
> 202. Within a unitary state, and to a smaller extent within a federation, disparities between regional rates of growth, and the strains consequent upon them, are reduced in some degree by the transfer of funds through the channels of public finance. East Africa is in an unstable position in that the Common Market, though it greatly assists the prosperity and growth of the area as a whole and is almost certainly in the long-run interest of each of the territories separately, intensifies internal strains, while the mitigation of these strains which would occur in a closer political union is lacking. In this situation, there is real danger that the Market may be disrupted. There might be short-term advantages to some of the territories from its disruption, though in the longer run each would almost certainly suffer.

If it were disrupted, the existence of established interests would make its restoration well-nigh impossible."

In particular, in Chapter Three, on the advantages and disadvantages of the common market, the Commission said:

"83. When the developments of recent years are examined in the light of these considerations, it seems likely that, although the extent to which Kenya's extra income has been spent in the other territories is small, it has been large enough (if they are taken together) to compensate them for their purchasing from Kenya at more than world prices - it being the case also that they have purchased only a part (probably about a quarter) of Kenya's import-replacing products."

As a result of the recommendations of the Raisman Commission, a revenue pool was established into which certain proportions of the tax revenue from company profits on manufacture and finance are now paid by all three territories; half of this is used to defray expenditure by the Common Services Organisation and the other half is distributed equally among the territories. The effect of this arrangement, on the basis of the 1961-62 figures, would have been to redistribute an amount of £675,000 from Kenya to: Tanganyika (£310,000); to Uganda (£245,000); and to the High Commission (now the Common Services Organisation) £12,000. These figures have to be thought of in relation to a total budget for the three governments taken together of £97 millions and a combined Gross Domestic Product of over £400 millions[2] These measures, which were accepted with some reluctance by Kenya, were clearly in the nature of a marginal adjustment but they succeeded in satisfying Tanganyika and Uganda under a colonial regime.

Subsequent to the publication of the Raisman Report, Professor A. J. Brown, who had been a member of the Raisman Commission, wrote two articles[3] dealing in general with the question of gains and losses from common market arrangements and in particular with the case of East Africa. These articles are undoubtedly a distinguished innovation in the literature since they represent one of the first attempts at an empirical investigation of the orders of magnitude involved in the market limit on industrial development.

In the second of these articles Professor Brown deals explicitly with the 'spread' and 'backwash' effects in a common market arrangement similar to that in East Africa. Having set out his model in terms of country A (the industrially developing country) and country B (the rest of the common market area) Professor Brown works out the implications of his model using the actual (or plausible approximations to actual) figures for East Africa, with A representing Kenya and B representing Uganda and Tanganyika combined. The conclusion is that "with these values the country in which manufacturing arises to displace imports into the free trade area experiences a rise in income equal to twice the new manufactured output, the rest of the area experiences a rise in income of about a tenth of the new manufacturing output".

The ratio of the increase in B's income to the increase in A's new output we shall call the <u>net spill-over ratio</u> which, in this case, is 1/10.

The value may be positive or negative according to the magnitude of A's marginal propensity to import from B, which Professor Brown takes as .05 as representing Kenya's marginal propensity to import from Tanganyika and Uganda combined.

This is well above the critical level (0.024) at which spill-over is zero. Although there is some ambiguity about the calculation of the propensities in these cases, it is reasonably clear that while Kenya's marginal propensity to import from Uganda is slightly higher than 0.05, that in respect of imports from Tanganyika is slightly below the critical level of 0.024. In breaking down Professor Brown's combined propensity for Uganda and Tanganyika, we shall therefore take the net spill-over ratio applying to Uganda as 0.1 and we shall put this ratio at zero for Tanganyika.

It is now necessary to clarify exactly what these figures represent. The Brown formula consists of two elements. Firstly there is the income generated in Tanganyika as a result of Kenya's expenditure on Tanganyika's products resulting from the extra income which Kenya obtains from industrialisation. Secondly there is the loss which Tanganyika suffers as a result of the higher prices which she has to pay for Kenya's goods as compared with imports from the rest of the world.

It is as between these two elements that we conclude that Tanganyika approximately breaks even on the net spill-over effect and the Uganda gains additional income equal to one-tenth of the value of new industry in Kenya.

As Professor Brown says at the conclusion of this section of his article, "these examples may suffice to show the extent and the power of the various factors affecting the spread of prosperity which is due in the first instance to the growth of industry behind protective barriers, consideration being confined so far to the short-term spread which occurs through the mechanism of the multiplier." Professor Brown then turns to consider what will happen in the longer run and says that "we are thrown back on general theoretical presumptions given substance by a knowledge of some crucial orders of magnitude". On the basis of such theoretical presumptions he concludes that "potential advantages of economic scale much outweigh the risks of back-wash". This is given as the answer to the question "whether the weaker or the later developers among underdeveloped countries in a free trade union will in fact get less development of their productivity than they would have got in isolation without membership of a union". This latter formulation of the question is crucial and it is with the intention of throwing some light on it in general and of giving some indication of the orders of magnitude in the case of East Africa that this article is written.

What then are the factors which must be taken into consideration in addition to the net spill-over effect to which Professor Brown has succeeded in giving approximate values? This question can only be approached by comparison between the actual situation and the hypothetical situation which would obtain with separate markets. For simplicity we shall make this comparison separately for Tanganyika and Uganda and we shall first assume that the situations are differentiated only in respect of the imposition of a tariff (at the level of the common market tariff) against Kenya's manufacturers and that Kenya retaliates.

Leaving aside spill-over effects, the difference between the two situations would consist of four elements:

(A) such small-scale industry at present located in Kenya and exporting to Tanganyika (or Uganda) as would be located in Tanganyika (or Uganda) if that market were protected;

(B) such single-plant industry located in Kenya and dependent upon exports to Tanganyika (or Uganda) which would not exist if that market were protected;

(C) such single-plant industries located in Tanganyika (or Uganda) and dependent on exports to Kenya, which would not exist if that market were protected;

(D) such loss of industrial exports as would be suffered by Tanganyika (or Uganda) as a result of retaliation by Kenya. We shall refer to A as <u>shiftable</u> industrial output and to B and C as <u>common market based</u> industrial output. We can now express the overall gain (G) to Tanganyika (or Uganda) from leaving the common market, including the spill-over effect (spill-over ratio = X) as follows:-

$$G_T = A - C - X(B + A) - D$$

We have now to put values on A, B, C and D.

In order to indentify the shiftable industries at present located in Kenya (A), the <u>Kenya Census of Manufacturing 1961</u> [1] has been examined and those industries selected for which the average value of output per plant was less than the value of exports to Tanganyika (listed in Table 1) and less than the value of exports to Uganda (listed in Table 2). The value of exports for each such industry is shown in Col (iii) of each table.

TABLE 1.

Increased Tanganyika Product

Under Protection.

(1) I.S.T.C. GROUP	(11) KENYA INDUSTRY	(111) EXPORTS to TANGANYIKA	(1V) RATIO OF VALUE ADDED TO GROSS PRODUCTION	(V) ADDITIONAL TANGANYIKA PRODUCT
		£,000	%	£,000
203	Canned fruit and Vegetables	239	34	81
205	Milling	216	20	43
206	Baking	99	29	23
210	Beer	546	65	349
231/2	Textiles & Clothing	657	44	300
271/2	Paper	250	33	90
280	Printing	72	56	40
311 +part of 319	Basic Chemicals	160	59	96
rest of 319	Soap	441	27	120
313	Paints	77)		21
331 to 334	Clay, concrete cement etc.	681	51	346
350	Metal Products	560	35	196
	TOTAL	£4,008	23%	£1,705

TABLE 2.

Increased Uganda Product

Under Protection

(i) I.S.T.C. GROUP	(ii) KENYA INDUSTRY	(iii) EXPORTS to UGANDA	(iv) RATIO OF VALUE ADDED TO GROSS PRODUCTION	(v) ADDITIONAL UGANDA PRODUCT
		£,000	%	£,000
202	Dairy Products	607	22	132
205	Grain Milling	517	20	106
206	Bakery	57	29	16
231 & 232	Textiles and clothing	396	44	174
241	Footwear	313	(30)	94
	Bicycle tyres	110	(30)	33
271-2	Paper and paper products	250	35	90
280	Printing	72	56	38
	Paints	148	27	40
319	Soap	474	26	123
350	Metal Products 3	480	35	168
	Total	£3,424	29%	£1,014

The assumptions behind this criterion of selection are two-fold. Firstly, it is assumed that products within an industry are homogeneous. This assumption is certainly not valid in such industries as textiles but it does not seem to the writer that it is likely to cause any significant error in the relevant cases. Given this assumption, the test of "one plant's worth" of demand in the separate markets covers the question of internal economies of scale of plant. The second assumption is that external economies of industrial concentration in Kenya can be offset by a Tanganyika (or Uganda) tariff no higher than that of the existing common market. How valid this assumption is can only be discovered by detailed research on industrial location, but in the meantime it seems plausible. Moreover, the advantage of such external economies in Kenya would diminish with industrial development in Tanganyika and Uganda and could be offset by tax remission in the short-run.

We have next to calculate the increase in national product which would result from development in Tanganyika (or Uganda) of industry in substitution for the export component of Kenya's industry. This value is arrived at by applying to the value of Kenya's exports the ratio of value added to gross product in each industry. This ratio is given in Col. (iv) and the value of additional product is shown in Col. (v); this proceedure must now be explained.

Superficially it might seem that the export values in Col. (iii) of each table are themselves a measure of the extra product which would be generated in Tanganyika and Uganda if the domestic demand for the products of these industries were to be satisfied by the domestic manufacturing sector instead of by imports from Kenya. This is not however the case. In the first place such valuation would involve double counting in respect of any input/output interdependence between manufacturing industries. In the second place (and much more importantly), such a valuation would include the value of all the inputs originating outside Kenya's manufacturing sector. The clearest example of this is the item Dairy Products in Table 2. Although Uganda buys 'manufactured' dairy products from Kenya amounting to £607,000, the manufacturing element in these is so low (22 per cent) that the transfer of this "industry" to Uganda would represent only £132,000 unless Uganda could also develop locally the agricultural sector on which this manufacture is based and from which most of the value of the product is derived. This ratio is, moreover, typical of the value added to gross product ratios involved; the average ratio being 23% in the case of Tanganyika and 29% in the case of Uganda, as shown by the ratio between the two totals in the respective tables.

The next element which has to be taken into account is the already established common-market-based industry which would not be profitable if deprived of the opportunity to supply the whole East African market from one plant.

In the case of Kenya the rather surprising fact is that in 1961 there was only one industry which consisted of a single plant, namely the East African Railways and Harbours heavy repair workshop at Nairobi with a gross output of £2½ million. The concentration of this industry is clearly determined by the integration of the railway systems and, in accordance with our assumption that no change is made in the Common Services, the separation of markets is taken to have no effect on this industry. We conclude therefore that the value of B is zero.

The attempt to identify C (common-market - based industries in Tanganyika and Uganda) is more difficult, there being no Census of Manufacturing for Uganda and the latest Census for Tanganyika being 1958. Up to 1958 it is fairly certain that there was virtually no industry in Tanganyika in this position. Between 1958 and 1961 (the year to which all our other figures apply) the Bata Shoe Company established a factory in Dar-es-Salaam specialising on the manufacture of plastic shoes; this plant is probably dependent on the East African market for profitability but it appears to be the only one. An informed guess puts the value added in 1961 at not more than £100,000.

In Uganda there is the outstanding case of Nyanza Textiles. This industry (one integrated plant) was certainly only viable, when it was established in 1956, on the basis of the whole East African market and it is doubtful whether in 1961 it could be run at a profit if it had not the Kenya market in which to sell. Although it might continue to operate at a loss (being owned by the Uganda Development Corporation), we must apply the criterion as if, in the absence of the common market, Nytil would not exist, involving Uganda in the loss of its contribution to the national product. Although the gross output is of the order of £2.3 millions the value added by the industry is only about 35 per cent of this, namely, £0.9 millions. There does not appear to be any other industry which depends on the East African common market to cover the minimum profitable scale of a single plant.

We conclude therefore that the values of C for Tanganyika and Uganda respectively are £100,000 and £900,000.

We turn now to consider D - the loss of industrial exports from Tanganyika (or Uganda) which would be occasioned by Kenya's retaliation. The effect of this is taken to be the complete exclusion of manufactured products from Tanganyika (or Uganda) and we thus start with the respective values of exports to Kenya amounting to £214,000 (from Tanganyika) and £1,084,000 (from Uganda). From this we have to deduct footwear in Tanganyika's case and cotton textiles in Uganda's case because the disappearance of these industries has already been allowed for in C. This leaves £167,000 and £246,000 for Tanganyika and Uganda respectively. Applying an approximate value-added ratio of 25 per cent., we arrive at a value for D of £42,000 for Tanganyika and £62,000 for Uganda.

The values of the several variables and for the gain from separate markets are tabulated in Table 3. On the basis of the criteria used and in respect of the 1961 figures, there would be a clear gain to Tanganyika and an insignificant loss to Uganda from leaving the common market.

TABLE 3.

1961 Gain from Separate Markets

	X Ratio	A £m	B £m	C £m	D £m	G = A - C -x(B + A) - D £m
Tanganyika	0	1,705	0	100	42	1,563
Uganda	.1	1,014	0	900	62	-49

Since then, however, the Raisman formular has had the effect of redistributing revenue in favour of Tanganyika to the extent of £310,000 and to Uganda of £245,000 on the basis of the 1961/62 revenue figures, which correspond reasonably well with our 1961 data. This factor reduces the gain to be derived by Tanganyika from protection against Kenya to about one and a quarter million pounds and increases Uganda's loss to about one third of a million pounds, without taking into account any "multiplier" effects.

In the above calculations we have assumed that either Tanganyika or Uganda is protected against Kenya and is retaliated against by Kenya, while the rest of the intra-East African trade remains unchanged. If both Uganda and Tanganyika were to protect themselves against Kenya and were both discriminated against, the A value in the term X (B + A) would be the sum of £1,705,000 and £1,014,000, namely £2,719,000 in both cases. The gain to Tanganyika would be unchanged because x = zero, but Uganda's loss would be increased by £96,700.

It remains to consider the effect on Uganda and Tanganyika when all three countries protect their own manufacturing industries against each other by the complete elimination of the common market. Apart from cotton textiles the value of the net balance of manufactured products exchanged between Tanganyika and Uganda is insignificant, so that separation of these markets would only affect textiles. However, the Tanganyika market could not support an integrated textile plant, so that the separation of the Tanganyika and Uganda markets would not alter the position represented in Table 3.

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On the basis of the above analysis of the 1961 data it looks as if Tanganyika would have been better of out of the common market; but before this conclusion is drawn we must re-examine the question we are trying to answer. There are three possible ways in which the question about the gains and losses of the common market might be framed. They are as follows:-

(i) Would Tanganyika (or Uganda) have gained by not belonging to the East African common market in the past?

(ii) Would Tanganyika (or Uganda) obtain a short-term gain by leaving the common market?

(iii) Would Tanganyika (or Uganda) obtain a long-term gain by leaving the common market?

The first question is hypothetic since it asks what would have happened had the relationship between the East African states been different during some past period. If we were to use our estimates to answer this question we should need to make an important qualification. This will be examined later, but the answer could provide no guide to policy decisions about the future.

The second question is the one which seems to be dominant in the minds of politicians when they consider the gains and losses in a common market; it is also the question which is most nearly answered by the calculations made above. It is true that, as soon as we turn from a static comparison between the actual situation and a hypothetical situation to a consideration of the dynamics of changing from one to the other the results may be quite different. Nevertheless, the figures above justify a presumption that ceteris paribus the location of industry would adjust itself gradually with the consequences indicated. These consequences would not be immediate but would result from piecemeal adjustments, some of which would be short-term, some long-term. Here the second question runs into the third question. So far the argument seems to suggest a doubtful 'yes' to question two in the case of Tanganyika, and a certain 'yes' to question three. In spite of this the present writer would follow Professor Brown in answering 'no' to question three.

This apparent contradiction together with the qualification to question one requires some explanation. This will be given in terms of a general hypothesis that statistical observations repeated through time, showing loss from a common market arrangment on the criterion used above, are not inconsistent with continuous gain from the common market over time.

This hypothesis is based on two considerations. In the first place, establishing manufacturing industry in an underdeveloped country involves great uncertainty, but once set up it is an outstanding example of the "mouse trap" situation - "once in, you stay in". Thus, there needs to be a prospective market of considerably greater size than the plant optimum to induce an industry to set up, but once established it will be willing to continue to operate with a market smaller than the optimum. We shall call these the inducement market and the retention market respectively.

In the second place, at any point in time, an analysis on the lines attempted here will show a number of industries to be viable in the separate markets which would not have been so when they were established. Cement is a case in point in East Africa - each of the three countries can now support a cement plant from its own market but the original plant, started in 1950, assumed an East African market. In other words there will always be industries which, at any point in time, appear to be independent of the common market but which owe their establishment to the common market and from which gain has been derived in the meantime. In general, given the rate of growth of market demand (g) there is a period of years (n) which will transform an industry from a common-market-based industry into a shiftable industry, the value of n depending on the ratio of the common market to the domestic market (a) and on the ratio of the retention market to the inducement market (b), thus:

$$(1 + G)^{n} = ab$$

If we put the average rate of growth at 5 per cent. per annum, a equal to 3, and b equal to 2/3, then the period during which this transformation takes place is 15 years and would be correspondingly less at higher rates of growth.

To the extent that these two factors operate, the historical and prospective gains from the common market will not be revealed by the criterion which is used here but which is likely to be used by politicians.

Moreover this assessment makes no allowance for the undoubtedly large loss which would be suffered by all members if the common services and common monetary system were abandoned as would be most likely in the event of the common market being broken up.

It seems important, therefore, to explore the use of some arrangement which will avoid the possibility of action prompted by prospects of short-term gain from operating against the long-term interests of the members of common markets.

What is required is that there should be prior agreement by the governments to agree on measures to influence industrial location within certain limits. These limits and the conditions for a feasible solution are given by the following requirements:

$$L_K \quad R \quad G_T + G_U$$

where L_K is Kenya's loss from leaving the common market; G_T and G_U are Tanganyika's and Uganda's gain; and R is the redistribution required to maintain the common market.

It is submitted that this proposition is capable of generalisation to cover any common market in which there is a clear aggregate gain combined with instability due to dissatisfaction with the distribution of the gain.

Moreover, where the magnitude of the concessions needed for stability are not great (as the above analysis suggests is so in East Africa) they could be achieved without significant cost due to distortion of the location of industries. Such arrangements, however, require the power to direct industrial location to some extent and the ability of the governments to agree on the use of such power. Such agreement is a minimum condition for the stability of a common market; it is also the first step towards supra-territorial planning.[6]

FOOTNOTES

1. I.B.R.B. Reports: Uganda Oct. 1961 and Kenya Dec. 1962; and East Africa, Report of the Economic and Fiscal Commission, 1961, Cmnd: 1279
2. In all cases East African Shillings have been converted at the current exchange rate of 20 shillings (E.A.) = £1 (stg.)
3. Brown, A. J. "Economic Separatism Versus a Common Market in Developing Countries" Yorkshire Bulletin of Economic and Social Research. May and November, 1961.
4. Kenya, Census of Manufacturing, 1961, Government Printer Nairobi.
5. A detailed study of factors affecting industrial location in East Africa is at present being undertaken by Mr. F.K. Nixson an Associate of the E.A.I.S.R.
6. I am indebted to Professor A. J. Brown for comments on my first draft but this does not imply his agreement with my conclusions.

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