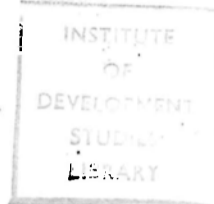


EAST AFRICAN ECONOMIC UNION - AN APPROXIMATE BALANCE SHEET



The following estimates of regional, territorial, and sectoral gains and losses resulting from East African economic union are presented as approximations indicating orders of magnitude not precise calculations. The assumptions used in obtaining them are indicated in the notes to individual tables. These estimates seek to consolidate the various partial calculations of gains and losses which have been attempted* and to escape from the balance of interterritorial trade based approach which almost inevitably results in estimating only transfer gains and losses between territories, without taking account of the net gains to East Africa as a region which are the justification for economic union. They are intended to serve five purposes:

1. To provide a picture of total regional gains and their source;
2. To provide a parallel picture of the territorial divisions of gains (losses) both overall and divided between public and private sectors;
3. To supply a quantitative basis for evaluating contentions about the results of the economic union and their relative importance;
4. To illustrate the impact of different structures of production - at least partly the result of economic union - on territorial growth rates;
5. To demonstrate the possibility and hopefully the value of more detailed calculations by an impartial, official body with fuller access to statistical data and greater resources.

With the exception of the table illustrating the differential effects of production structures on growth rates, all of the calculations concern static gains and losses. They are based on the following assumptions:

1. That the alternative to economic union in the common market field would be three protected national markets not extra-regional importation of present interterritorial imports. This assumption means that "tariff revenue loss" calculations are irrelevant;
2. That in the service field the same levels of services would be provided on a national basis with the exception of the international operations of East African Airways which would be utterly unviable as three competing national units.

The conclusion that present breakup of economic union would lead to immediate territorial gains and losses as indicated is not valid. Substantial time and capital would be required to relocate production and service facilities. In the short run the regional and territorial costs of breakup would be substantially larger than present net regional gains.

* Among the more interesting of these are - W. Newlyn, "Gains and Losses in the East African Common Market", op cit; A. Hazlewood, "Economic Integration in East Africa", International Seminar on Economic Co-operation in Africa, Nairobi, December, 1965 and "The Territorial Incidence of the East African Common Services" in Oxford University Institute of Statistics Bulletin August, 1965; D.G.R. Belshaw, "Agricultural Production and Trade in the East African Common Market", op cit; and D. Ghai "Territorial Distribution of Benefits and Costs in the East African Common Market", op cit. Professor Newlyn's paper directly stimulated the present attempt to achieve at least approximate quantitative data on the overall level and distribution of gains from East African economic union.

Several important conclusions do emerge from the data:

1. The overall East African static gain, while not negligible, is only 1.7% of regional product. The basic reason for this is the limited number of industries which are regional market dependent as opposed to shiftable.
2. Substantial large scale industrial development in East Africa would radically increase the net regional gain and could - if appropriately distributed - reduce the inequality in territorial distribution. On the other hand if the present industrial location pattern were to continue, the inequality of distribution would increase absolutely and probably relatively.
3. All three states are substantial gainers on government sector account when cost savings and tax receipts are taken together.
4. Only Kenya is a substantial gainer on private sector account, while Tanzania is a substantial loser.
5. Overall Kenya has a substantial (3-4% of GDP) net gain, Uganda a marginal (1.3% of GDP) net gain, and Tanzania a marginal (somewhat under 1% of GDP) net loss.
6. The services sector fails to redress common market gains inequalities, because transfer effects resulting from location of facilities make Kenya the largest net gainer. Tanzania is a net gainer on services, Uganda breaks even.
7. The Raisman transfer effect - while by no means insignificant - is not adequate to provide net gains to all three territories, much less an approximately equal division of net regional benefits.
8. Uganda's net gain is dependent on the sale of textiles, sugar, tobacco, cotton-seed, oil, and electric power to Kenya. Kenyan self sufficiency in sugar, textiles and power would convert the gain to a loss of at least equal magnitude.
9. Tanzania has achieved a significant stake in regional market dependent industry, although not one large enough to offset losses on shiftable industry income effects. This stake will increase when the tyre and tube and radio assembly plants scheduled under the Kampala/Nbale Agreements come into production.

All calculations have been made from national or EACSO published statistics when available and from unofficial estimates in other cases unless specifically noted to the contrary. 1964 has been used as a base year with minor adjustments in cases for which 1964 trade patterns were markedly typical.

The net gains from the industrial common market are probably underestimated. Existing industrial statistics have very broad classifications which may result in some plants dependent on regional markets appearing to be part of multi-plant shiftable industries. Corrections for this factor would appear most unlikely to alter the overall regional or territorial gains (losses) from the industrial common market by more than 10-15%.

I. <u>SERVICES</u> (2)		(All figures in £000)			
	<u>TANZANIA</u> (1)	<u>KENYA</u>	<u>UGANDA</u>	<u>EAST AFRICA</u>	
A. Railroad and Harbour					
Main Line Losses	+1000	-500	-500	-	
Diversion of Traffic from Moshi-Arusha to Mombasa and from Tanga	-500	+250	+250	-	
Operating Expense Savings (10%)	600	600	600	1800	
Workshop Expense Savings (10%)	100	100	100	300	
Income Effect of Central- ization: Headquarters	-100	+200	-100	-	
(3) Workshop	-625	+1250	-625	-	
TOTAL RAIL AND HARBOUR	+475	+1900	-275	+2100	
B. Airline					
Territorial/Interritorial (4) Losses	325	-	125	-	
Profits	125	275	50	-	
Net Effect Consolidation	+200	-275	+75	-	
Overseas Operations (5) Profit	200	200	200	600	
Income Effect	100	200	100	400	
Internal Operation (6) Expense Savings 15%	240	210	150	600	
TOTAL AIRLINE	+740	+335	+525	+1600	
C. Posts and Telegraph					
Territorial Losses	250	-200	-50	-	
Current Cost Savings (7) (10%)	280	320	200	800	
TOTAL POST AND TELEGRAPH	+530	+120	+150	+800	
D. EACSO					
Services Cost Savings (8)	350	350	350	1050	
Income Effect of Central- ization of Operations (9)	-1000	+2200	-1200	-	
TOTAL EACSO	-650	+2550	-850	+1050	
E. Hydroelectric Power					
Income Effect (10)	-	-400	+400	-	
Cost Savings (11)	-	250	-	250	
TOTAL POWER	-	-150	+400	+250	
SERVICES GAINS & LOSSES (11)	+1095	+4755	-50	+5800	
SPILLOVER EFFECT (13)	115	-345	190	-40	
TOTAL SERVICE SECTOR GAINS	1210	4410	140	5760	

	<u>TANZANIA</u>	<u>KENYA</u>	<u>UGANDA</u>	<u>EAST AFRICA</u>
GOVERNMENT COST/REVENUE EFFECTS (14)				
Cost Savings	2520	855	1175	4550
Airline Profits	200	200	200	600
Power Sales	-	-150	400	250
Effect on Tax Revenues of Income Transfers (20%) (15) and Net Additions	-305	700	-325	70
GOVERNMENT GAINS	2415	1605	1450	5470
PRIVATE SECTOR GAINS/LOSSES (16)	- 205	2805	-1310	290

NOTES

1. Tanzania with the exception of certain EACSO services, refers to Tanganyika only. Zanzibar is not a member of the Common Market nor does it participate in the self-contained services.
2. Railway and Harbour, airline and post and telegraph data represent "Educated guesses" based on regional data and unofficial statements on territorial breakdowns. No official territorial cost and revenue data are available. CF somewhat different "educated guesses" by A. Hazlewood, op cit, p. 24.
3. Additional incomes generated are estimated at 1.67 times Headquarters Expenses (perhaps £120,000) plus Workshop Value Added (25% of £3,000,000 gross output). The transfer is computed as the difference between a 33-33-33 division and the present 0-100-0 distribution.
4. Losses are sustained on intraterritorial flights in Tanzania and Uganda and on the Entebbe-Dar service. Profits are earned on the Nairobi-Mombasa, Nairobi-Dar and Nairobi-Entebbe runs. The 1964 EAA report suggests that these profits and losses approximately net out and that the overall net profit of £600,000 is totally derived from international flights.
5. The alternative to one international airline is assumed to be none. The gain from joint operation is, therefore, the net profit plus the income generated by regional component of expenditure on behalf of international services. This is very roughly set at £200,000 divided 25-50-25 with an income multiplier of 2.
6. It is assumed that roughly .5 of total costs are incurred for intra and inter territorial services three territorial airlines would continue to operate. The savings rate of 15% is divided 35% (T), 40% (K), 25% (U) on estimate of share in these flights.
7. Savings divided 35% (T), 40% (K), 25% (U) on estimate of expenditure pattern.
8. Estimated at 10% on Social and Ancillary Services, 20% on Administration, 25% on Economic Services. The cost contribution transfer effects of Union are considered in analysis of Reisman formula effects.

9. The income effect is estimated as 2 times the difference between local expenditure incurred on behalf of a state and expenditure in that state. The difference is computed from the data in A. Hazlewood, op cit, P. 22 with adjustments for expenditures outside East Africa on behalf of each state, i.e. £500,000 of services to Tanzania and £600,000 of services to Uganda are carried on in Kenya and have their income effects there.
10. The income effect is treated as equal to net sales. This assumes Uganda has insignificant additional current expenditures from generating the power and uses the revenue to meet external obligations of the UEB.
11. The UEB charges Kenya approximately 60% (per unit) of its average internal rate for power. Kenyan generation costs would appear for substitute power to be at least equal to the Ugandan internal tariffs.
12. Cost reductions are treated as additions to real domestic product throughout.
13. Spillover effect results from the propensity to spend additions to domestic income on products of the other territories. It is here computed on transfer and net income effects only, not on cost savings, airline profits, or power sales. The estimated spillover gains are:
- | | | |
|----------|--------------------------------------|--|
| Tanzania | 3% of additions to Kenyan income | Negligible re
Uganda |
| Kenya | 10% of additions to Tanzanian income | 10% of additions
to Ugandan income. |
| Uganda | 5% of additions to Kenyan income | Negligible re
Tanzania. |
14. Airline profits (but not income effects) and UEB power sales are here included in the Government Sector.
15. Average territorial tax revenue slightly exceeds 20% of Gross Monetary Product. Marginal tax revenue from additional Gross Monetary Product tends to be below the average rate. However, the Union economic sectors appear to bear a somewhat above typical tax incidence. A 20% marginal rate is, therefore, used. This rate is applied to net and transfer income effects but not to cost savings, airline profits, or UEB sales.
16. Strictly speaking this sector is Private plus Autonomous Public Corporations not specifically included in the Government Sector. For purposes of the present analysis this lumping has no serious detrimental effects and the isolation of the impact of Union on individual autonomous corporation profits would be virtually impossible.

II. COMMON MARKET		(£000)			
	TANZANIA	KENYA	UGANDA	EAST AFRICA	
Industrial					
A. Inter-territorial Trade in "Shiftable" (National Market) Industries					
Income Effect (1)					
Tanzania Exports	1000	-700	-300	-	
Kenya Exports	-6500	13500	-7000	-	
Uganda Exports	-1200	-2900	4100	-	
Cost Savings of Present Location (2)					
	770	360	730	1860	
TOTAL A	-5930	10260	-2470	1860	
B. Regional Market Industries Not Viable on National Basis					
Tanzania (3)	1200	-	-	1200	
TOTAL A AND B	-4730	10260	-2470	3060	
C. Spillover Effects (4)					
	310	-720	515	105	
TOTAL INDUSTRIAL	-4420	9540	-1955	3165	
Selected Foods, Agricultural Raw Materials (5)					
A. Inter-territorial Trade in Shiftable Production					
Income Effect (6)					
Tanzania Exports	1605	-1140	-470	-	
Kenya Exports	-1300	2290	-995	-	
Uganda Exports	-430	-4570	5005	-	
Cost Savings of Present Location (7)					
	190	635	160	990	
TOTAL A	70	-2785	3705	990	
B. Non-Shiftable Component of Interterritorial Trade					
Income Effect (8)					
Tanzania Exports	160	-85	-35	40	
Kenya Exports	-95	230	-75	60	
Uganda Exports	-30	-340	500	125	
TOTAL B	1030	-195	390	225	
TOTAL A AND B	100	-2980	4095	1215	
C. Spillover Effect (9)					
	-90	420	-150	180	
TOTAL FOODS, AGRICULTURAL RAW MATERIALS	10	-2560	3945	1395	
TOTAL COMMON MARKET GAINS/LOSSES	-4410	6980	1990	4560	
GOVERNMENT SECTOR					
Tax Revenue 20% (10)	-380	1390	400	910	
PRIVATE SECTOR (11)					
	-3530	5590	1590	3650	

NOTES

1. Shiftable industries are those in which viable plant size (typical East African plant) is below national market demand. The income effect from exports is calculated at 2 times industrial value added plus raw material production (e.g. for dairying, flour milling) dependent on industry; dairy and meat products are included in the industrial sector in these estimations. The capital employed in founding these industries is assumed to have been foreign or regionally mobile - East African in origin while expansion is believed to have come basically from re-invested profits.
2. Cost savings from present - as opposed to three separate territorial market location patterns are estimated at 20% of the adjusted value added of shiftable industry imports. This is, if there were three separate markets with tariff barriers against each other, selling prices of manufactured goods now imported from other territories would be higher because of higher costs.
3. Bata Shoe (plastic shoes), blanket factory, aluminium product plant. Income effect 2 times total value added.
4. See I - Note 13. Computed on A plus B.
5. Sugar, tobacco (unmanufactured), Maize and Millet, Wheat, Vegetable Oils, Animal Foodstuffs.
6. 80% of interterritorial trade is taken as shiftable production. The value added ratio is taken as 90%. A multiplier of 2 is used.
7. Cost savings from present location pattern are estimated at 20% of shiftable imports.
8. The non-shiftable component of 20% is taken to be the share of products physically not produceable in the importing territory (e.g. lack of land, unsuitable climate) or produceable only at 50% or more additional cost. The same 90% value added ratio and multiplier of 2 are used.

The base gain to the exporting state is, however, assumed to be the difference between territorial proceeds and world market proceeds (less transport costs) estimated at 40% of non-shiftable exports. The base cost to the importing state is taken to be the difference between the East African cost and the world cost (including additional transport) taken at 30% of non-shiftable imports.

In this case the alternative to production for the Regional market is production for the world market and the alternative to Regional imports, world market imports.

9. See I - Note 13. Computed on A plus B.
10. See I - Note 15.
11. See I - Note 16.

Rounding

In Industrial A and B income effects have been rounded to the nearest 100 because of the extreme difficulty in making precise estimates of adjusted value added. Cost savings have been rounded

to the nearest 10. Spillover effects have been rounded to the nearest 5. In Foods and Agricultural Raw Materials all figures have been rounded to the nearest 5.

Comment:

The extremely limited number of Regional Market (Non-Shiftable) industries is a priori suspicious. However, the bulk of East African interterritorial trade is, in fact, in goods produced in clearly shiftable industries. Adjustments from the Shiftable to Regional Market category resulting from a more detailed set of industrial classes would be positive but probably involving about 5% of interterritorial industrial trade as a maximum.

Nytil (Uganda) was formerly in the Regional Market category but this is no longer the case especially as a substantial portion of Nytil's cloth exports to Kenya return to Uganda as finished clothing and this clothing industry segment is clearly shiftable.

III. RAISMAN FORMULA TRANSFER EFFECTS (1) (£000)

	<u>TANZANIA</u>	<u>KENYA</u>	<u>UGANDA</u>	<u>EAST AFRICA</u>
A. Direct Fiscal Transfer Effect (2)	305	-550	245	-
B. EACSO Cost Redistribution (3)	180	-215	35	-
DIRECT TRANSFER EFFECT	485	-765	280	-
C. Multiplier Income Effect (4)	485	-765	280	-
D. Spillover Effect (On A, B, C) (5)	-45	155	-75	35
TOTAL RAISMAN FORMULA EFFECT	925	-1375	485	35
GOVERNMENT COST/REVENUE EFFECTS				
Direct Transfer Effect	485	-765	280	-
Tax Revenue Effect - Multiplier and Spillover Incomes (20%) (6)	88	-122	41	7
GOVERNMENT GAINS/LOSSES	573	-887	321	7
PRIVATE SECTOR GAINS/LOSSES (7)	352	-488	164	28

NOTES:

1. Based on 1964-65 estimates. Calculations A, B, C, D rounded to nearest 5. For alternative calculations (re B) of A. Hazlewood, op cit, pp. 18-19.
2. Difference between half payment into Distributable Pool and receipts from Pool (1/6 of DP).

3. Difference between half payment into Distributable Pool (the share paid to EACSO) and share of EACSO services benefiting territory. EACSO benefit calculation (from A Hazlewood, op cit, p.22, benefit distribution data) is 29% (T), 45% (K), 26% (U). Assumption is that in absence of pool each territory would bear full cost of its share. Alternative assumption of 33-33-33 contribution equal in total to distributable pool would make B 303 (T), -547 (K), 243 (U) but this appears an unrealistic way to compute present territorial gains from pool.
4. It is assumed that the net additions to (including subtractions and EACSO cost reductions or increases) government funds available are expended and generate an equal multiplier income in private sector.
5. See I - Note 13.
6. See I - Note 15.
7. See I - Note 16.

IV. COMBINED BALANCE SHEET - STATIC GAINS AND LOSSES FROM ECONOMIC UNION

	(£000)			
	<u>TANZANIA</u>	<u>KENYA</u>	<u>UGANDA</u>	<u>EAST AFRICA</u>
I. Services	1210	4410	140	5760
II. Common Market	-4410	6980	1990	4560
III. Raisman Formula	925	-1375	485	35
GRAND TOTAL STATIC GAINS/LOSSES	-2275	10015	2615	10355
% of GDP	- .9 (244,000)	3.6 (278,000)	1.3 (203,000)	1.4 (725,000)
GOVERNMENT SECTOR				
I. Services	2415	1605	1450	5470
II. Common Market	-880	1390	400	910
III. Raisman Formula	573	-887	321	7
TOTAL GOVERNMENT SECTOR	2108	2108	2171	6387
PRIVATE SECTOR (1)				
I. Services	-1205	2805	-1310	290
II. Common Market	-3530	5590	1590	3650
III. Raisman Formula	352	-488	164	28
TOTAL PRIVATE SECTOR	-3483	7907	444	3968

NOTES:

1. See I - Note 16.

V. IMPACT OF DIFFERENTIAL INITIAL STRUCTURES OF PRODUCTION ON TERRITORIAL GROWTH RATES

A. Initial (1964) Structures of Production (%)

	<u>TANZANIA</u>	<u>KENYA</u>	<u>UGANDA</u>	<u>EAST AFRICA</u>
Primary and Mining (1)	61.2	42.2	67.3	55.9
Manufacturing (2)	2.4	9.6	3.9	5.7
Construction	3.1	1.6	1.8	2.0
Trade-Transport-Power	16.4	23.2	13.6	18.2
Services	3.5	8.1	6.9	6.2
Rents	2.1	3.4	2.0	2.6
General Government	11.3	11.8	4.5	9.6

B. Sectoral Growth Rates Consistent with 6.5% Annual Growth of East African Output.

Primary and Mining	5%
Manufacturing	12%
Construction	15%
Trade-Transport-Power	8%
Services	5%
Rents	8%
General Government	8%
TOTAL GDP	6.5%

C. Resultant National ^{Growth} Rates if Sectoral Imbalances within Region Persist on present lines and each State sustains an equal level of Effort toward growth.

Tanzania (3)	6.4%
Kenya	6.9%
Uganda	6.1%
East Africa	6.5%

D. Annual Gain or Loss from differential growth effects of structure of Production (4)

Tanzania	Loss	£ 360,000
Kenya	Gain	£1,110,000
Uganda	Loss	£ 810,000

Over time the divergencies in growth rates and structural dynamic gains or losses of product would tend to increase with the increasing relative weight of manufacturing. (5)

NOTES

1. Includes coffee curing, cotton ginning, sisal decorticating, and (except for Kenya) sugar manufacture.
2. Excludes primary processing listed in Note 1.
3. This rate rather overstates the relative Tanzanian position. The pickup in construction in Tanzania was more advanced for 1964 than in the other two territories where it remained at semi-depressed levels.

4. The difference between total gains and losses results from rounding in calculation of A and B.
5. It is not contended that this growth pattern is probable. Present plans call for distinctly unequal levels of effort and for structural changes. The attempt is to give a rough order of magnitude to the dynamic gains and losses resulting from the present structure of production and therefore to a substantial extent from economic union.

This work is licensed under a
Creative Commons
Attribution – NonCommercial - NoDerivs 3.0 Licence.

To view a copy of the licence please see:
<http://creativecommons.org/licenses/by-nc-nd/3.0/>