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Stabilization and growth of export earnings of African countries

Note by the ECA secretariat

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Note: This paper has been written without detailed knowledge of previous discussions on this subject in the negotiations.

STABILIZATION AND GROWTH OF EXPORT EARNINGS OF AFRICAN COUNTRIES

I. Introduction

1. The case for measures designed to stabilize and increase the export earnings of developing countries is now widely understood. External trade permits developing countries to exchange goods with low development potential (such as agricultural products) for goods with high development potential (such as investment goods). Export earnings therefore play a crucial role in determining the feasible pace of the development efforts of developing countries, and measures designed to ensure that such earnings are high and growing at a rapid rate are an essential part of international co-operation for development.

2. It is also now widely recognised that fluctuations in export earnings are detrimental to the development process, even when these fluctuations occur around growth trends which, in themselves, might be judged adequate. The reasons for this, having to do principally with disruptions in development programmes and public expenditures, are well known. International measures designed to reduce the variability of export earnings thus also have a key role to play in promoting development.

3. It has been proposed that a scheme be established by EEC to stabilize and increase the export earnings of African countries. The following paragraphs set out three broad principles that would characterise a satisfactory scheme designed to that end:

Purpose

4. The purpose of a scheme to enhance export proceeds should be to increase prospects for the growth and development of African countries by making available to them a higher and steadily-growing stream of foreign exchange availabilities, the amounts of which are predictable within a reasonable time-frame. This implies in the first instance the establishment of arrangements designed to increase the access of the exports of African countries in EEC markets. In the second instance, it requires the establishment of a norm identifying fluctuations in export proceeds that takes fully into account the trend in the exporting countries' export earnings, and procedures for compensation and repayment that take fully into account changes in these countries' terms of trade. Given the purpose of the system, any "safeguard" measures should fully protect the ability of African countries to expand total export proceeds by increasing their exports to third markets.

Coverage

5. Given the fact that any scheme with EEC will presumably have to be limited to trade with EEC, the coverage of the scheme should in all other respects be as broad as possible; i.e. it should encompass the totality of the export trade of African countries with EEC.

The terms and conditions of compensation

6. Compensation for shortfalls from the norm should be prompt, should occur automatically, and should be equal in value to the amount of the shortfall. The purpose of the system would dictate that the allocation of resources made available through the workings of the system should be decided by the exporting countries, in the context of their own development programmes and priorities. Reimbursement of funds previously made available to compensate shortfalls from the norm would occur only when actual export proceeds were above the norm; the extent of the reimbursement would be governed by the magnitude of the "excess" of export earnings over the norm, by the evolution of the terms of trade of the recipient country on its trade with EEC, and by the role of compensation in supporting the development efforts of the recipient countries.

II. The scheme proposed by the EEC Commission

7. The EEC Commission has put forward a concrete proposal for stabilizing the export earnings of African countries from trade with EEC 1/. The following paragraphs review the principal features of this scheme in the light of the general characteristics set out in the preceding section.

Levels of export receipts

8. The scheme of the EEC Commission makes no provision for systematically increasing African exports to EEC markets. The scheme would have no effect on the medium or longer term receipts from exporting to EEC, except insofar as compensation for shortfalls was not repaid 2/. From the standpoint of enhancing the level of export receipts, the Commission's proposal has little to offer. This must be considered one of the major shortcomings of the proposal in its present form.

Stabilizing export receipts

9. The proposal put forward by the Commission does not address the question of the purchasing power of export receipts, but purports only to smooth earnings from exports of eight commodities to EEC around a market trend.

Product coverage of the scheme

10. The Commission proposes that its scheme cover eight commodities exported by African countries to EEC. These commodities are groundnuts (seeds), groundnuts (oil), bananas, cocoa, coffee (distinguishing between the varieties "arabicas" and "robusta"), cotton (raw), copper, and sugar.

11. The principal consequence of the limited product coverage of the Commission's scheme is to create wide variances among African countries as regards the potential benefit of the scheme. Thus, for 28 African countries examined, the eight commodities in question accounted in 1970 for over 50 per cent of total exports to EEC in

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1/ See Commission of the European Communities, "Regional Agreements on the Basic products", (SEC (73) 2043), Brussels, 5 June 1973.

2/ See paragraph 21, below.

only 12 cases, and for 75 per cent or more of such exports in only 4 cases. For 10 other countries, exports of the eight commodities accounted for less than one quarter of total trade with EEC. If the list of commodities exported by these countries to EEC is expanded to include 25 major commodities, 1/ 50 per cent of export earnings of 27 out of the 28 countries examined would be accounted for by such an expanded list.

12. In the case of tea, wood, tin and diamonds, the Commission argues that they should be excluded "because of price trends". An examination of a commodity price index for tea reveals the trend since 1963 as shown in the footnote 2/. It would appear to be the case that <u>because</u> of price trends in tea, it would, <u>a priori</u>, be an example <u>par excellence</u> for inclusion in the scheme. A case could also be made for the other commodities that are excluded because of price trends.

13. A number of other commodities such as groundnutoil cakes, diamonds, bauxite, aluminium, iron ores, rubber, tobacco, are also excluded. These commodities are stated to have "special features" which "differ from product to product". It could be assumed that the Commission was concerned about the problems of heterogeneity in identifying these commodities. While the problem is an important one, it is not insurmountable; moreover, many of the excluded products are not significantly different from the eight commodities included by the Commission. The effect of broadening the coverage of commodities is to expand the number of countries likely to benefit from the scheme since many of the products excluded figure prominently in earnings of some of the countries.

14. In order to cover as large a group of countries as possible that would benefit from the scheme, two alternatives may be considered. The first alternative would be to expand the list of commodities which would become eligible for compensatory assistance. The scheme will obtain a wider acceptance if interests of as many countries as possible are reflected in the potential benefits conferred by it. Another alternative is to include all exports destined to EEC for coverage by the scheme. This alternative possesses a number of advantages, including that a simplicity of administration and comprehensiveness. It also meets the criterion of a satisfactory scheme as regards coverage 3/.

1/ The eight commodities proposed by the EEC Commission plus tobacco, fish, wood, rubber, diamonds, petroleum and petroleum products, aluminium, bauxite, iron ore, tin, oil-seed cake, coconut, copra oil, fruits, vegetables, cereal preparations, tea.

2/ 1963: 100; 1964: 101; 1965: 101; 1966: 104; 1967: 104; 1968: 91; 1969: 88; 1970: 83.7; 1971: 83.4; 1972: 82.4. (Price Movements of Basic Commodities in International Trade, 1950-1970; ST/STAT/SER.M/129/Rev.1/Add.1, United Nations, New York, 1971).

3/ See paragraph 5, above.

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Major commodities exported from African countries to EEC in 1970[a]. Per cent

Country	Share of exports of 8 commodities in total exports to EEC b)	Share of exports of 25 commodities in total exports to EEC c)
Burundi	55.3	61.4
Cameroon	22.9	35.6
Central African Republic	28.3	55.2
Chad	93.5	93.8
Congo	6.8	11.6
Dahomey	45.8	55.7
Gabon	2.9	70.8
Gambia	29.0	50.2
Ghana	43.7	58.6
Ivory Coast	54.1	87.8
Kenya	28.6	69.0
Madagascar	47.0	52.9
Malawi	21.9	95.6
Mali	79.9	80.7
Mauritania	0.1	96.8
Mauritius	93.5	95.2
Niger	95.2	95.4
Nigeria	16.3	82.1
Rwanda	32.2	79.5
Senegal	53.1	71.3
Sierra Leone	14.7	90.2
Somalia	73.6	76.2
Swaziland	54.7	62.7
Tanzania	6.5	39.9
Uganda	60.4	86.6
Upper Volta	57.4	57.7
Zaire	8.9	59.7
Zambia	72.5	72.7

Source: UNCTAD secretariat, based on OECD's "Trade by Commodities, Market Summaries Imports", January-December 1970, and IMF's "Direction of World Trade", 1968 - 1972.

a) Includes the United Kingdom, Ireland and Denmark.

b) Includes bananas, sugar, coffee, cocoa, groundnuts, cotton, copper and groundnut oil.

c) See footnote 1, paragraph 11.

Price norms

15. The Commission's proposal calls for the establishment for each year of a reference price defined as the average value of price quotations for the product under consideration on the main commodity markets in EEC during a reference period, which, as a rule, would be the preceding five years. The use of a moving five-year average to establish the reference price has serious drawbacks when there is a secular rise in prices because, for example, of inflationary tendencies in the consuming countries. In fact, it can be shown that if the underlying upward trend in prices is of the order of 5 per cent per annum or more, the procedure of establishing a reference price by means of a five-year moving average is unlikely to generate compensation for shortfalls in earnings resulting from deviations of actual prices from their longer term trend. On the other hand, when price trends are moving downward, the use of five-year moving averages is advantageous, from the standpoint of the amounts of compensation generated 1/.

Quantity norms

16. The proposals of the Commission as regards reference quantities are not entirely clear. One possible interpretation is that a reference quantity be established at the beginning of the operation of the scheme, and remain unchanged throughout. Such a proposal would make no allowance for growth in the volume of exports to EEC, and any growth that did occur would by definition put the exporting countries above the reference quantity, thereby greatly reducing and perhaps eliminating any possibility for compensation when fluctuations in earnings occur because of changes in volume. Such a definition of the reference quantity is thus entirely unsatisfactory.

17. A second possible interpretation is that reference quantities for each commodity are to be established by a moving five-year average. This procedure would then be the same as that used to establish reference prices, and is subject to the same criticism; i.e. when the trend value for the quantity of exports shows a rate of growth of about 5 per cent per annum, or more, fluctuations in actual volumes of exports around this trend are unlikely to result in compensation under the method proposed by the Commission for establishing reference volumes. Again, however, when the trend of quantities exported moves downward, the method proposed by the Commission is clearly superior.

Simulated application of the scheme

18. The consequences of employing the Commission's method of determining reference quantities and prices may be examined by calculating for each of the eight commodities the amounts of compensation and repayment that would have been generated during a period in the immediate past, and then comparing the variability of actual export receipts during that period with the variability of the stream of export receipts and net compensation that would have occurred if the scheme had been in operation. Such an exercise was performed for a small sample of African countries for which the necessary data were readily available. As may be seen in Table 2, in only four of the eleven cases examined was the Commission's method a powerful technique for reducing the variability of export receipts. In three of those four countries (Madagascar Senegal and Togo) quantities exported to EEC of one or more of the eight commodities showed a downward trend over the period examined.

1/ However, if the trend of prices on the world market is downward, the reference price will also go down because it is based on a moving average of past performance

TABLE 2

Coefficient of variation[a] of receipts
from exports of eight commodities[b] to EEC

Country	Unsmoothed	Smoothed by the Commission's procedures
Cameroon	8.9	7.8
Central African Republic	7.8	6.6
Chad	20.1	14.6
Congo	4.4	4.4
Dahomey	7.7	11.0
Gabon	9.0	9.0
Ivory Coast	5.8	5.6
Madagascar	11.9	5.0
Senegal	17.8	2.4
Togo	4.1	2.8
Upper Volta	15.8	16.8

a/ The coefficient of variation measures the average size of the fluctuations around the trend, calculated as a percentage of the mean value of the trend.

b/ Groundnuts (seeds), groundnuts (oil), bananas, cocoa, coffee, cotton, copper and sugar.

The terms of compensation

19. The proposal made by the Commission calls for automatic compensation of shortfalls equal in magnitude to the amount of the shortfall. Provisions regarding the timing of compensatory payments are vague, but the Commission states that "in order to avoid a time lag between the fall of receipts and the compensatory transfer payments the Community will take appropriate measures".

20. The compensatory payments are to be repaid only if export earnings rise above their reference level. The amount of the repayment is determined by the difference between the actual and the reference price multiplied by the reference quantity. Increased export earnings resulting solely from a rise in the volume of exports (rather than from an increase in price) would therefore not trigger repayment. No interest is to be charged on the credits outstanding.

21. Under some circumstances it would appear likely that no reimbursement of compensatory payments would take place. This would be the case, for example, if the price of a commodity had a steady long-term trend, or tended to drift downward. In addition, the Commission envisages that "in certain exceptional cases, transfers could be made which were totally or partially non-repayable. These cases would have to be considered separately in the light of criteria such as the level of development and geographical constraints in the country concerned, criteria which will be subject to the outcome of the negotiations".

Conditions attached to the use of compensatory payments

22. The proposal made by the Commission envisages specific controls over the end-use of the financial resources made available through the scheme. Resources are to be used, in the first instance, to help stabilize the internal prices to producers of the commodities in question. In the view of the Commission, resources could also be used to improve productivity and competitiveness in the product sector in question, by financing activities related to marketing, stock piling, applied research, and so forth. Finally, the Commission foresees the possibility of using part of the resources to diversify the economy and to enable "the continued realization of certain projects for the general good".

23. The rationale for the imposition of such conditions on the use of compensatory funds is not clear. If the shortfall in export earnings had not occurred, the foreign exchange equivalent of the shortfall would have been available to the exporting country without restrictions on end-use. The principle of compensation would appear to require that compensatory funds be made available under the same conditions. Moreover, the main significance of foreign exchange availabilities lies in their role in underpinning a country's development programme. This suggests that the allocation of funds made available through compensation should be in accordance with the country's own development priorities. This criterion could, of course, in some instances lead countries to employ compensatory funds in the ways envisaged by the Commission.

Safeguard provisions

24. The proposal put forward by the Commission contains certain provisions for protecting EEC against "misuse" of the scheme by exporting countries. The principal "dangers" in this regard that concern the Commission are that: a) an exporting country would re-direct a portion of total exports from EEC markets to third markets, thereby making itself eligible for compensatory payments from EEC; b) an exporting

country would increase substantially its production for export, and direct this additional production toward third markets thereby provoking a general fall in prices and making it eligible for compensation from EEC.

25. To protect EEC against this "misuse", the Commission proposes to limit full compensation for shortfalls to those cases in which the ratio of the quantity exported to the EEC in the year in question to the reference quantity is equal to or greater than the ratio of the country's total exports in the year in question to its total exports during the reference period 1/. In the event this condition were not met, compensation from EEC would be reduced from the levels that would normally be obtained. This formulation, however, fails to allow for any differential in the rates of growth of demand as between EEC markets and third markets. Thus, an exporting country participating in the EEC scheme could simultaneously be supplying a third market that was growing more rapidly than EEC markets. Under these circumstances rapid increases in its exports to the third market would not have a depressive effect on world market prices. If, however, a reduction in prices occurred at some time for whatever reason, the country would find its ability to obtain compensation from EEC reduced, and would, in effect, be penalised for having diversified its export markets and having exploited opportunities for increasing its total exports.

III. The main elements of a satisfactory scheme to stabilise and increase African exports to EEC

26. The following paragraphs provide a set of recommendations regarding the principal features of a satisfactory scheme for stabilising and increasing the export earnings of African countries, and some discussion of the more general context in which those features must be considered. The recommendations include a provision regarding access to markets, an element not contained in the Commission's proposal. In all other respects, however, the recommendations entail modifications of the Commission's own proposals designed to increase the benefits to African countries.

A. Access to markets

27. A substantial number of individual commodities would be selected for special examination and treatment. It would be agreed that for each of these commodities measures would be taken to increase, over a period of several years, the proportion of total apparent consumption in EEC met by imports from African countries to an agreed target level. The choice of the commodities to be included would be determined after further technical studies by the EEC Commission and the secretariat of African countries.

1/ The precise formulation proposed by the Commission is: $\dfrac{PE \times QE}{PR \times QR} - \dfrac{PE \times QTE}{PR \times QGR} \quad 0$

where PE is the price of the commodity in question in EEC markets for the year being considered; QE is the quantity imported by EEC in the year in question; PR is the reference price; QR is the reference quantity; QTE is the total exports of the commodity by the country during the year in question; and QGR is the total exports of the commodity by the country during the reference period.

28. Such a recommendation is consistent with proposals put forward by the Panel of Experts which met under ECA auspices in Accra in February 1973. These experts called for future arrangements to "assure African countries the opportunity of filling agreed shares of present and future consumption requirements of the EEC market at fair, stable and remunerative prices for their export commodities" 1/.

29. In selecting commodities to be accorded better access to EEC markets, it should be borne in mind that under some circumstances measures to increase African exports to EEC may not lead to an equivalent rise in African export earnings. In the case of export commodities such as tropical foodstuffs that do not compete with production in the EEC, better access to EEC markets for African commodities would most likely result in the displacement of EEC imports from other sources. This displacement would affect the total export earnings of African countries in one of two ways: a) If African countries maintain the volume of their exports directed toward non-EEC markets (i.e. increase their production to meet the higher proportion of demand of EEC) the diversion of third-country supplies from EEC to non-EEC markets will tend to depress the prices received in non-EEC markets below what they would otherwise be. The importance of this effect will vary from commodity to commodity, and in some instances may be negligeable. To the extent that it occurs, however, the diminution in earnings from third markets would have to be set against the increased earnings on exports to EEC; b) If African countries redirect exports from third markets to EEC, the tendency for better access to EEC markets to depress prices in third markets would be eliminated, but the total volume of African exports would not rise. In this case a net gain to the African countries would occur only to the extent that the prices received in EEC markets were higher (because of tariff preferences, etc.) than those available in other markets.

30. On the other hand, in the case of export commodities that compete with domestic production in the EEC countries, better access to EEC markets would clearly raise the total export earnings of African countries by an equivalent amount, provided that the increased imports of EEC countries displaced domestic production, and the rise in EEC imports was matched by an increase in the production by African countries of the export commodities in question, rather than by a diversion of existing production from third markets. However, the comments made above with respect to commodities that do not compete with domestic production in EEC also apply to commodities produced in EEC, if increased access to markets for African exports were to occur at the expense of third-country exporters, rather than at the expense of EEC producers.

31. Such considerations suggest that care must be taken in the process of selecting commodities to be accorded better access to EEC markets. Attention should be focussed on commodities competing with production in EEC, and for each commodity examined due account should be taken of the likely effect of such arrangements on third markets of interest to African countries. The final choice of commodities would also have to take account of the feasibility of the machinery that would need to be put in place in the Community to give effect to this provision.

1/ Report of the Panel of Experts on intra-African economic co-operation and Africa's relations with the European Economic Community". (E/CN.14/584).

B. Stabilising export earnings

32. As a further part of the system, EEC would put in place machinery for smoothing the export earnings of African countries.

Product coverage

33. The machinery for smoothing export earnings would cover the totality of the imports of EEC from African countries.

Reference prices and quantities 1/

34. A moving five-year average does not provide an adequate basis for establishing reference prices and quantities when one or both of these variables is subject to an upward trend. As regards quantities, further expansion of EEC markets, together with the improved access to these markets resulting from the provisions outlined in paragraph 27 above, could be expected to generate upward trends in quantities exported to EEC. It may therefore be desirable to replace the formula for determining reference prices and quantities proposed by the Commission with other procedures designed to give more satisfactory results.

35. Two such procedures have been examined, using actual data on the exports of a sample of African countries to EEC in the recent past. In the first procedure (the "moving regression"), reference prices and quantities for each year were established by projecting the trend values of the preceding seven years. In the second procedure (the "trend adjustment"), the reference quantity was obtained by projecting forward a trend derived from two figures: the first of these was the average quantity exported during the immediately preceding five years; the second was the average quantity exported during a five-year period commencing seven years before the year in question. The reference price was obtained by projecting the average annual rate of price increase from the preceding five years.

36. The results of this exercise appear in Table 3, which also shows the results of applying the Commission's procedure (five-year "moving average" for both prices and quantities) to the data 2/. The Commission's proposal regarding repayment was used throughout. As may be seen from the table, in the case of 10 of the 25 countries examined 3/ both the "moving regression" and the "trend adjustment" procedures were superior to the "moving average" technique, in the sense that the coefficient of variation of total receipts (export earnings plus net compensation) was lower under the two former procedures than under the latter. In all of these cases, prices or quantities exported to the EEC or both, showed a decided upward trend. For seven

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1/ Prices and quantities may be distinguished in the case of total exports to EEC by constructing a price index covering exports to EEC and using the index to derive from the data available on the value of exports to EEC a concept of the aggregate quantity of such exports. This procedure has been used in the present exercise.

2/ The exercise is thus carried out on the assumption that the Commission's proposal is to establish reference quantities on the basis of a five-year moving average.

3/ Central African Republic, Cameroon, Chad, Ethiopia, Gabon, Gambia, Ivory Coast, Niger, Nigeria and Upper Volta.

other countries 1/ the "moving average" proved to be superior to both of the other methods. In all of these instances the quantity of exports to the EEC, the prices of such exports, or both, showed a downward trend during the period examined. In four other cases, 2/the "moving regression" technique was superior to the "moving average" method, but the "trend adjustment" was inferior, and in two cases 3/ there was no significant difference between the performance of the first two techniques, but the "trend adjustment" was again inferior.

37. The results of this exercise confirm that an alternative method of establishing reference prices and quantities is superior when quantities of exports to EEC are trending upward. However, it also illustrates the fact that in the past upward trends have not always characterised the export trade of African countries with EEC. This emphasises the need for measures on both the demand and supply side to raise the levels of exports of these countries. In particular, products of special interest to countries whose export volume has not advanced should be favourably considered in determining those commodities to be subject to special provisions as regards access to markets.

38. In evaluating the merits of various techniques for smoothing receipts from exports to EEC, it should be borne in mind that a principal aim of African countries is to dampen fluctuations in their total export earnings. Since earnings from export to EEC form only a part of total export earnings, a question for consideration is the extent to which a scheme designed to smooth export receipts from EEC, even if it were entirely successful, would dampen receipts in total export earnings.

39. As a first approximation, the extent to which a smoothing of export receipts from trade with EEC would stabilise total export earnings would depend on the proportion of exports of African countries directed toward EEC. Another important consideration, however, would be the relationship between the direction at any point in time of fluctuations in earnings on trade with third markets and fluctuations in earnings on trade with EEC. Thus, if export earnings from third markets rise above their trend value at the same time that earnings from the EEC exceed their trend value, and vice-versa, the smoothing of export receipts from trade with EEC would result in greater stability in total export earnings. If, on the other hand, export receipts from third markets fall below their trend values when receipts from EEC exceed their trend values, and vice versa, the smoothing of export receipts from EEC would have a much smaller positive impact on the fluctuations in total export earnings; indeed, in this case the stabilization of receipts from EEC could have a de-stabilising influence on total export earnings, in the sense that total export earnings vary around their trend values by larger amounts when receipts from EEC are smoothed than they would if receipts from EEC were not stabilized.

1/ Congo, Ghana, Mauritania, Mauritius, Senegal, Somalia and Tanzania.

2/ Liberia, Sierra Leone, Togo and Uganda.

3/ Madagascar and Sudan.

TABLE 3

Country	Coefficient of variation of receipts from EEC	Total amount drawn during 1966-70	Total amount repaid during 1966-70	Net drawings
		(millions of US dollars)		
	(1)	(2)	(3)	(4)
CENTRAL AFRICAN REPUBLIC				
P.C.[a] 1966-70				
C.V.[b] 13.1				
Moving average	13.1	0.0	0.0	0.0
Moving regression	7.6	5.6	0.0	5.6
Trend adjustment	9.1	4.0	3.1	0.9
CAMEROON				
P.C. 1962-71				
C.V. 16.1				
Moving average	15.4	6.0	6.0	0.0
Moving regression	11.2	20.3	16.9	3.4
Trend adjustment	10.5	30.5	44.8	-14.3
CHAD				
P.C. 1966-71				
C.V. 19.0				
Moving average	14.2	4.5	1.9	2.6
Moving regression	11.1	11.6	3.5	8.1
Trend adjustment	9.0	15.3	0.8	14.5
CONGO				
P.C. 1966-70				
C.V. 15.3				
Moving average	3.6	25.5	0.0	25.5
Moving regression	5.6	59.4	0.0	59.4
Trend adjustment	4.3	78.7	0.0	78.7
DAHOMEY				
P.C. 1966-70				
C.V. 5.0				
Moving average	12.0	4.0	2.2	1.8
Moving regression	12.6	4.3	1.8	2.5
Trend adjustment	11.7	3.5	1.5	2.0
ETHIOPIA				
P.C. 1962-70				
C.V. 10.5				
Moving average	8.3	3.4	0.1	3.3
Moving regression	5.6	14.0	0.0	14.0
Trend adjustment	5.1	14.8	1.2	13.6

Country	(1)	(2)	(3)	(4)
GABON				
P.C. 1966-70 C.V. 5.9				
Moving average	5.9	0.0	0.0	0.0
Moving regression	1.3	27.3	0.0	27.3
Trend adjustment	2.3	53.0	0.0	53.0
GAMBIA				
P.C. 1962-70 C.V. 6.5				
Moving average	6.5	0.0	0.0	0.0
Moving regression	5.6	3.9	0.0	3.9
Trend adjustment	5.7	7.2	0.0	7.2
GHANA				
P.C. 1962-70 C.V. 18.1				
Moving average	15.1	67.0	106.5	- 39.5[c/]
Moving regression	24.4	17.0	71.0	- 54.0
Trend adjustment	16.4	62.8	76.1	- 13.3
IVORY COAST				
P.C. 1964-71 C.V. 16.5				
Moving average	12.7	37.8	0.0	37.8
Moving regression	8.6	130.7	9.3	121.4
Trend adjustment	5.5	146.1	53.4	92.7
KENYA				
P.C. 1962-71 C.V. 6.4				
Moving average	4.9	4.4	4.4	0.0
Moving regression	5.0	13.3	12.8	0.5
Trend adjustment	4.7	23.3	0.4	22.9
LIBERIA				
P.C. 1962-70 C.V. 13.5				
Moving average	13.5	0.0	0.0	0.0
Moving regression	4.6	26.9	3.7	23.2
Trend adjustment	18.6	284.3	0.0	284.3
MADAGASCAR				
P.C. 1962-71 C.V. 10.2				
Moving average	4.2	11.3	5.8	5.5
Moving regression	4.4	12.6	6.2	6.4
Trend adjustment	5.4	19.1	2.9	16.2

Country	(1)	(2)	(3)	(4)
MAURITANIA[d/]				
P.C. 1968-71				
C.V. 1.7				
Moving average	1.7	0.0	0.0	0.0
Moving regression	2.3	54.0	0.0	54.0
Trend adjustment	3.6	193.9	0.0	193.9
MAURITIUS				
P.C. 1962-71				
C.V. 8.5				
Moving average	4.5	24.7	0.0	24.7
Moving regression	12.9	32.2	7.8	24.4
Trend adjustment	11.3	70.9	0.0	70.9
NIGER				
P.C. 1964-70				
C.V. 17.0				
Moving average	16.2	1.8	1.8	0.0
Moving regression	14.4	15.0	0.0	15.0
Trend adjustment	15.1	21.0	0.0	21.0
NIGERIA				
P.C. 1962-71				
C.V. 25.7				
Moving average	25.4	96.6	96.6	0.0
Moving regression	20.2	317.1	67.1	250.0
Trend adjustment	20.0	355.3	160.3	195.0
SENEGAL				
P.C. 1966-71				
C.V. 8.3				
Moving average	1.8	39.5	0.0	39.5
Moving regression	4.8	50.2	0.0	50.2
Trend adjustment	3.5	54.2	0.0	54.2
SIERRA LEONE				
P.C. 1962-71				
C.V. 14.3				
Moving average	9.1	10.3	10.3	0.0
Moving regression	6.1	36.4	1.7	34.7
Trend adjustment	11.0	31.0	4.5	26.5
SOMALIA[e/]				
P.C. 1967-71				
C.V. 3.6				
Moving average	2.4	9.2	0.0	9.2
Moving regression	3.7	1.3	0.2	1.1
Trend adjustment	9.2	4.5	0.0	4.5

Country	(1)	(2)	(3)	(4)
SUDAN				
P.C. 1962-71				
C.V. 5.6				
Moving average	5.9	6.4	14.6	- 8.2 e/
Moving regression	5.7	8.2	7.2	1.0
Trend adjustment	12.4	4.8	27.4	- 22.6
TANZANIA				
P.C. 1966-71				
C.V. 6.0				
Moving average	3.4	23.6	0.0	23.6
Moving regression	3.8	28.8	8.5	20.3
Trend adjustment	4.4	36.8	2.6	34.2
TOGO				
P.C. 1962-71				
C.V. 10.3				
Moving average	10.3	0.0	0.8	- 0.8 c/
Moving regression	7.2	3.0	0.0	3.0
Trend adjustment	13.4	2.9	11.0	- 8.1
UGANDA				
P.C. 1962-71				
C.V. 12.0				
Moving average	11.0	1.8	1.8	0.0
Moving regression	9.5	29.1	6.5	22.6
Trend adjustment	11.9	16.7	13.8	2.9
UPPER VOLTA				
P.C. 1966-72				
C.V. 10.7				
Moving average	10.7	0.0	0.0	0.0
Moving regression	6.0	1.6	0.6	1.6
Trend adjustment	6.4	5.3	0.2	5.1
TOTAL Moving average		377.8	252.8	125.0
" Moving regression		923.8	224.2	699.6
" Trend adjustment		1,529.9	404.0	1,125.9

a/ P.C. = time period over which the variability of receipts was composed.

b/ C.V. = coefficient of variations of unadjusted export earnings for the time period in question.

c/ Negative net drawings indicate that a country would have received compensation prior to 1966, repayments of which during the period 1966-70 would have exceeded compensation for which it would have been eligible in 1966-70.

d/ Calculations of compensation and repayment cover the period 1968 to 1971.

e/ Calculations of compensation and repayment cover the period 1967 to 1971.

40. In Table 4 the relationships described above are explored for a sample of African countries for a number of years during the 1960s. The table shows the percentage of total exports of each of the 25 countries directed toward EEC, and the coefficient of variation of each country's total export earnings and of export earnings from trade with EEC. A hypothetical coefficient of variation for total export earnings is then calculated on the assumption that during the period in question export receipts from the EEC were completely smoothed to their trend value. As may be seen from the table, in the case of 17 of the 25 countries examined, 1/ smoothing export receipts from EEC would result either in an increase in the variability of total export receipts (in 7 of the 17 cases) 2/, no change in the variability of total export receipts, or a reduction in such variability of 25 per cent or less. In the case of 4 countries 3/, on the other hand, the smoothing of export receipts from EEC results in a reduction in the variability of total export earnings by one half or more 4/.

41. The considerations enumerated above suggest that in considering alternative formulations of reference periods in the context of a stabilization scheme with EEC, attention should be focussed more on the amounts of compensations and in particular net compensation, generated by the various alternatives than on the efficiency of the various alternatives in dampening fluctuations in earnings from EEC. The amount of net compensations generated will be a function not only of the techniques used to define reference periods, but also of the provisions regarding repayment.

Repayment provisions

42. Repayment of compensation should occur when a country's capacity to repay has exceeded certain norms. The amount of the repayment should be related to the magnitude of the increase in real purchasing power implied by the rise in exports above the reference value. Thus, repayment should be proportional to the change in the ratio of export prices to import prices 5/.

1/ Central African Republic, Chad, Dahomey, Ethiopia, Gabon, Gambia, Ivory Coast, Kenya, Liberia, Mauritania, Niger, Somalia, Sudan, Tanzania, Togo, Uganda, Upper Volta.

2/ Central African Republic, Chad, Dahomey, Ivory Coast, Liberia, Mauritania, Somalia.

3/ Cameroon, Nigeria, Senegal, Sierra Leone.

4/ These conclusions implicitly assume that any correlation between fluctuations in earnings from the EEC and third markets that existed when receipts from EEC are not smoothed would also exist when smoothing takes place.

5/ The Commission has proposed that repayment be equal to: $(P_c^X - P_r^X)\,Q_r$.

The proposal made here is that repayment be made equal to: $$\frac{(P_c^X - P_r^X)}{(P_c^M - P_r^M)}\,Q_R$$

where P_c^X and P_r^X are respectively the current and reference prices of exports, P_c^M and P_r^M are the current and reference prices of imports and Q_R is the reference quantity of exports.

TABLE 4

Country (1)	Exports to EEC as per cent of total exports (average of 1969-71 or 1968-70) (2)	Coefficient of variation of exports to: EEC (3)	World (4)	Coefficient of variation of total exports when exports to EEC are smoothed (5)	(5) : (4) (6)
CAMEROON	72.0	16.1	9.5	4.7	.49
CENTRAL AFRICAN REPUBLIC	61.1	13.1	9.2	10.5	1.14
CHAD	70.4	19.0	7.3	10.8	1.48
CONGO	68.8	15.3	13.1	6.9	.53
DAHOMEY	61.7	5.0	2.9	3.7	1.27
ETHIOPIA	22.8	10.5	7.7	7.3	.95
GABON	55.8	5.9	8.8	8.0	.91
GAMBIA	79.6	6.5	12.4	11.2	.90
GHANA	49.9	18.1	14.3	10.2	.71
IVORY COAST	58.5	16.5	8.0	13.2	1.65
KENYA	38.0	6.4	4.8	4.0	.83
LIBERIA	58.9	13.5	6.4	10.4	1.62
MADAGASCAR	44.3	10.2	8.9	5.7	.64
MAURITANIA	80.0	1.7	2.9	3.0	1.03
MAURITIUS	65.4	8.5	10.6	7.9	.74
NIGER	59.9	17.0	18.7	14.1	.75
NIGERIA	63.8	25.7	28.7	13.9	.48
SENEGAL	66.8	8.3	8.0	3.5	.44
SIERRA LEONE	87.0	14.3	12.4	5.2	.42
SOMALIA	27.3	3.6	3.3	3.5	1.06
SUDAN	33.0	5.6	12.1	10.5	.87
TANZANIA	37.4	6.0	3.7	3.7	1.00
TOGO	87.9	10.3	10.8	9.0	.83
UGANDA	31.5	12.0	8.8	6.8	.77
UPPER VOLTA	32.4	10.7	12.3	11.2	.91

Cost of the system

43. That part of the scheme relating to better access to markets for exports from African participants does not give rise to direct financial transfers from EEC to the African participants. Insofar as these measures would be at the expense of domestic producers in EEC, however, some adjustment assistance to the affected sectors might be in order, and would have budgetary implications for the Community. The magnitudes of such costs, however, are difficult to evaluate *a priori*.

44. That part of the system relating to the stabilization of export receipts gives rise to financial transfers from EEC to participating African countries. The magnitudes of such transfers would depend on the future evolution of trade. The exercise reported above nonetheless allows a rough evaluation of the magnitudes that would have been involved, had such a scheme been in operation during the period 1966 - 1970. As may be seen in Table 3, the magnitudes of compensatory transfers and repayments varies according to the method used to calculate reference prices and quantities, when the "moving average" technique is used, drawings totalled $ 378 million, and repayments $ 253 million; when the "moving regression" technique was used, drawings totalled $ 924 million and repayments 224 million dollars; when the "trend adjustment" technique was employed, drawings totalled $ 1,530 million and repayments $ 404 million.

45. During the period examined, average import prices rose only marginally for most of the countries examined. The estimates of the transfers reported above have therefore not captured the effect of incorporating rules on import prices into the repayment provisions. Import prices have risen more rapidly since 1970, however, and the magnitude of net drawings in a scheme operating in the 1970s would, other things being equal, accordingly be higher.

Conditionality

46. Compensatory drawings should be made available without conditions, it being understood that such funds would be utilized as a matter of first priority to finance elements in the development programme affected by the shortfall in export earnings.

Safeguards

47. Safeguard measures should be instituted to prevent fortuitous changes in the volume of exports directed to EEC. These measures should be designed to protect against any redirection of existing output designed to generate compensation, but should not hinder an orderly growth of exports to third markets. The Community would be adequately protected against "misuse" of the system if, when compensation is in order because of a reduction in quantities exported to the Community, the amount of the compensation were diminished by the ratio of the reduction of total quantities exported to the reduction of quantities exported to EEC. When the ratio is equal to or greater than one, the country would receive full compensation, and when it is zero or less, the country would receive no compensation.

48. The safeguard mechanism described above would function only so long as EEC commercial policies toward imports from participating African countries remained at least as favourable as at the onset of the scheme, and when domestic policy measures affecting the competitiveness of competing domestic production are no more unfavourable than at the onset of the scheme. In the event that policy changes in either of these areas impinge on the exports of participating African countries, the safeguard mechanism would be declared null and exporting countries would receive full compensation for export shortfalls.