STABEX

On the Economic Evaluation of the Stabex System

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The discussion on the significance for development policy of the Stabex system, which gained additional impetus as a result of the financing problems observed for the first time in 1981, has up to now suffered from a lack of empirical analysis of the scheme's effects. The following article attempts to quantitatively determine some of these effects for the period 1975-79 and to evaluate the scheme according to aspects of stabilisation, distribution and allocation.

n export earnings stabilisation scheme (Stabex Asystem) ist laid down in the Lomé Convention, drawn up between (at present) 10 EC countries and 61 ACP states. The basic principle behind the Stabex system is to compensate for shortfalls in the ACP states' export revenue in trade with the EC and with the aid of the European Development Fund. Product-linked compensation is granted for 43 agricultural products and one non-agricultural product (iron ore). The Stabex system has been in force since 1975 (Lomé I) and was contemporaneously extended with the renewal of the Lomé Convention in 1979 (Lomé II)¹. Although a renegotiation of the Lomé Convention is not planned for the immediate future, the present point in time would seem suited for an appraisal of Stabex's performance for two reasons:

 \Box In 1981 financing problems cropped up within the Stabex system for the first time, necessitating a reduction in the compensatory transfer payments². This led to increased discussion on the evaluation of Stabex's role in development policy³.

□ Individual parts of the Stabex scheme are seen as setting an example for a global system of revenue stabilisation, envisaged by the UNCTAD within the framework of the Common Fund⁴. Stabex serves at least as a theoretical model for discussions on international revenue stabilisation policies⁵.

Discussion up to date on the significance of the Stabex scheme for development policy is marked by a lack of empirical analysis of its effects. To begin with this article endeavours to answer the question of whether Stabex payments in the 1975-79 application period have in fact stabilised export earnings in ACP countries. Subsequently, the amount of income transferred from the EC to the ACP countries by means of Stabex payments will be determined and an analysis of the distribution of the income transfers within the group of ACP countries conducted. In addition, an attempt will be made to establish whether the Stabex system creates unwanted allocation effects or whether Stabex is characterised by its "market neutrality".

Stabilisation Effects in the Stabex System

The conventional reasoning behind export earnings stabilisation policies propounds that economic growth in a developing country is lower if accompanied by "unstable" export earnings than if these earnings are

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¹ For a description and details on the development and wording of the renewed version of the Lomé Convention signed on October 31, 1979 cf. The Courier-Africa-Caribbean-Pacific-European Community, special issue, No. 58, November 1979. For a comparison of the Stabex arrangements in Lomé I and Lomé II cf. J.-C. M üller: The Stabex System in Lomé II, in: The Courier-Africa-Caribbean-Pacific-European Community, No. 62, July-August 1980, p. 30.

² Cf. "Stabex-Kassen erstmals überfordert" (Stabex funds overstrained for the first time), in: Agra-Europe, Vol. 22 (1981), No. 32, August 8, 1981, Europa-Nachrichten, p. 16 f.

³ Cf., e.g., "Pisani bezweifelt Effizienz des Stabex-Systems" (Pisani doubts Efficiency of Stabex System), in: Agra-Europe, Vol. 22, No. 34, August 24, 1981, Kurzmeldungen, p. 9.

⁴ This is particularly the case for the elements of redistribution within the Stabex scheme. Cf. UNCTAD (ed.): Compensatory Financing: Issues and Proposals for Further Action. Report by the UNCTAD Secretariat for UNCTAD V in Manila, Geneva 1979, p. 19.

⁵ Cf., for example, J. B. Donges: UNCTAD's Integrated Programme for Commodities. Economic Implications and Europe's Response, in: Resources Policy, Vol. 5, 1979, p. 13 ff.

"stable"⁶. Taking this thesis as a starting-point, the most important factor for an evaluation of the Stabex scheme is whether it generates stabilising or destabilising effects on the national export revenues of the ACP countries. The confirmation of such a stabilising or destabilising effect, however, depends on the definition of the time-period concerned; the shorter the period of revenue shortfall is defined, the more difficult stabilisation becomes. In this article, a stabilising effect of a Stabex payment will be assumed if the relative deviation of export income, including the Stabex payment, from the "normal" revenue is, in any particular year of payment, less than the hypothetical non-Stabex situation. Thus, if a compensatory payment is effected during the period of revenue shortfall then a stabilising effect upon export revenue will be regarded as attained.

So as to compensate if possible during the actual shortfall year, the Stabex programme provides for the possibility of an advance payment. The individual components of the Stabex system relevant to stabilisation in Lomé II are:

(a) The EC Commission and the ACP states agree to take all steps necessary to guarantee a speedy transfer. In particular, advance payments may be granted (Art. 40, Par. 3). Otherwise, transfer applications are only admissible if filed before March 31 of the post-shortfall year (Art. 38, Par. 1a).

(b) Stabilisation in the Stabex system is directed towards the product-linked revenue of ACP countries' exports to the EC (Art. 24) and, as a special arrangement for (at present) 13 ACP countries, towards the total of product-linked export earnings of these particular countries (Art. 46, Par. 3).

(c) The basic principle behind Stabex is the compensation of losses in export earnings.

(d) Shortfalls in export earnings are to be fully compensated if the dependency threshold and the trigger threshold have been surpassed and if the Stabex funds are sufficient for this purpose. The "normal" level of revenue corresponds to the unweighted average for the four years preceding the year for which payment is to be granted (Art. 36, Par. 2).

Component (a) is the most important factor in deciding on whether the (partial) revenue stabilisation will actually be successful. Since applications and payments are possible in the consecutive year, destabilising effects can also occur. Component (b)

further reveals that a stabilising effect on the earnings of ACP exports to the EC for one particular product does not necessarily mean a complementary stabilisation of the country's total export revenue, either for that product or as a whole. Component (c) implies that Stabex can only partially stabilise export earnings over a period of time since only the "revenue troughs" and not the "revenue peaks" are compensated for. Component (d) determines the amount of the Stabex payment and thus the degree of the stabilising or destabilising effect.

Destabilising Effects

A look at the actual dates of Stabex payments during the 1975-79 period of application reveals that hardly any use was made of the possibility of advance payments⁷. Of the 123 Stabex payments only 8 applications were filed for advances. In the majority of cases contracts were signed for Stabex payments, and the amounts paid out, in the post-shortfall year (108 cases). In the remaining cases payments were made even later and in two extreme cases four years following the actual revenue loss. This demonstrates that the stabilising

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⁶ Cf., e.g., D. L i m : Export Instability and Economic Growth: A Return to Fundamentals, in: Oxford Bulletin of Economics and Statistics, Vol. 38, 1976, p. 311 ff.

⁷ Cf. Commission of the European Communities (ed.): Zusammenfassender Bericht über das mit dem Abkommen von Lomé eingeführte System zur Stabilisierung der Ausfuhrerlöse in den Anwendungsjahren 1975 bis 1979 (Report on the Functioning of the Earnings Stabilisation Scheme introduced under the Lomé Convention during the Application Period 1975-1979), SEK (81) 1104, Brussels 1981, p. 61 ff. and Appendix I, 1.

effects of the Stabex payments could only have been coincidental.

Table 1 empirically presents the stabilisation success of "large" Stabex payments during the initial years of application for twelve exemplary cases. The question is posed there whether the deviations in the revenue to be stabilised (product-linked earnings of ACP exports to the EC) from the "normal" export revenue were greater with Stabex than without it. As shown in Table 1, the result is influenced by the definition of "normal" export revenue.

If, in line with the Stabex reference value, the average of the four export figures preceding the year of payment is taken as a measure of normal export revenue (NR₁), six cases are seen to demonstrate a stabilising effect and six a destabilising one. Excluding the advance payment to Senegal as an exception, there are predominantly destabilising effects. In individual cases these destabilising effects are considerable. The transfer to Ethiopia, for example, to cover shortfalls in export earnings in 1975 (coffee) was effectuated in 1976, a year in which Ethiopian coffee export earnings were 110 % above the reference value and those of exports to the EC 210 % above the reference value. As shown in Table 1, the deviation of the effective export earnings from NR₁ increased as a result of the Stabex payments from 210.25 % to 336.95 %, in the case of the lvory Coast (1976/timber) from 39.39 % to 51.16 % and in the case of Ghana (1976/timber) from 12.52 % to 38.44 %. A delayed payment leads, on the other hand, to a coincidental stabilisation effect if NR₁ is taken as a measure of the normal revenue and if a falling trend in export earnings is registered (e.g. Benin/cotton, Tanzania/sisal).

Even more unfavourable results are shown in Table 1 if the normal export revenue in any particular transfer year is calculated via a logarithmic trend function (NR₂). In ten out of twelve cases, Stabex payments exert a destabilising effect; according to this calculation, the payment to Tanzania for sisal in 1977 and the advance payment to Senegal were the only stabilising elements.

Table 1

Benefitting country	Relative deviation of the effective export revenue in the year of payment from the "normal" revenue (NR) for						
	NR1 ²			NR2 ²			
(Year of application/ year of transfer/product)	Without Stabex	With Stabex	Stabilisation (S) or destabilisation (D)	Without Stabex	With Stabex	Stabilisation (S) or destabilisation (D)	
Ivory Coast (1975/1976/timber)	39.39	51.16	D	16.30	26.13	D	
Ethiopia (1975/1976/coffee) (1975/1976/raw skins and hides)	210.25 -57.64	336.95 158.40	D D	25.57 32.55	76.86 708.67	D D	
PR of the Congo (1975/1976/timber)	-33.05	50.83	D	-24.44	70.25	D	
Ghana (1975/1976/timber)	12.52	38.44	D	29.61	59.47	D	
Benin (1975/1976/cotton)	-56.02	2.49	S	0.56	131.74	D	
Cameroon (1975/1976/timber)	30.22	44.74	D	-4.99	5.61	D	
Niger (1976/1977/groundnut oil) (1977/1978/groundnut oil)	-83.30 -79.30	-15.52 16.26	S S	33.97 17.03	234.14 366.00	D D	
Tanzania (1976/1977/sisal) (1977/1978/sisal)	-62.29 -48.03	-37.54 -7.49	S S	-43.80 -27.63	6.92 28.82	S D	
Senegal (1978/1978/groundnut oil and oil cake)	-42.20	-30.22	S	-47.01	-36.03	S	

Indicators of the Stabilisation Success of Selected Stabex Payments¹

¹Stabilisation success is defined for the product-linked revenue of the ACP country's exports to the EC. On the definition of stabilisation/destabilisation cf. the text. ²In line with the Stabex reference value, NR₁ is the average export revenue of the four years preceding the year of transfer. NR₂ is the "normal" export revenue in the year of payment, calculated via the logarithmic trend for the period 1971-78.

S o u r c e s: Own calculations. The time series for the revenue of the ACP exports to the EC are taken from: Statistical Office of the EC (ed.): Analytische Übersichten des Außenhandels (Analytical Surveys of Foreign Trade), Brussels, various vols., passim. The amounts and dates of the Stabex payments are taken from the Commission of the European Communities (ed.): Zusammenfassender Bericht über das mit dem Abkommen von Lomé eingeführte System zur Stabilisierung der Ausfuhrerlöse in den Anwendungsjahren 1975 bis 1979 (Report on the Functioning of the Export Earnings Stabilisation Scheme introduced under the Convention of Lomé for the Period 1975-79), SEK (81) 1104, Brussels 1981. As opposed to the Stabex reference value (NR_1), the logarithmic trend function (NR_2) does not underestimate the normal export revenue if a fall in export earnings occurs. This means that in four of the cases in Table 1 (Benin 1976, Niger 1977 and 1978, Tanzania 1978) destabilising effects are shown where under NR_1 there were stabilising ones.

To sum up, the destabilising effects of Stabex payments on the revenue to be stabilised (productlinked earnings of exports to the EC) can be assumed to be in the majority. In addition to this, further empirical calculations⁸ show that stabilising effects on the total export revenue of an ACP country are even more seldom. Apparently, the stabilising effects of the Stabex payments are purely coincidental, partially due to the lack of use made of the advance payment arrangement.

Distribution Effects

The Stabex system is not purely and simply an instrument of stabilisation, but also contains elements of redistribution. Compared to a situation without Stabex, redistributive effects are induced both between the EC countries and the ACP countries and within the group of ACP countries themselves. The UNCTAD, which is itself planning an international scheme of product-linked revenue stabilisation, emphasises the redistributive elements resulting from the varying terms of repayment as being a positive element of Stabex⁹. Those parts of the Stabex scheme which bring about redistributive effects are described below. The amount and structure of income transfers during the Stabex period 1975-79 will be determined and their target conformity assessed.

The Stabex payments implemented for the application period 1975-79 were still covered by Lomé I. The following parts of Lomé I relating to the repayment terms are the most important for the redistributive effects of the scheme:

□ Stabex transfers bear no interest (Art. 21, Par. 1);

□ ACP countries are liable for repayment within five years following the transfer of the Stabex credit if the export price is higher and the export quantity at least equal to the average figures of the preceding four years. On expiry of the five-year period, the Council of the least developed countries do not have to repay Stabex payments (Art. 21, Par. 5, Lomé I; Art. 46, Par. 1c, Lomé II).

Ministers decides on any remaining amounts to be

The repayment stipulation thus leads to two different forms of grant equivalent compared to pure market credit-lending:

 an a priori grant element of 100 % of the payment for the group of least developed ACP countries;

a grant equivalent for those countries which are in principle obliged to repay, consisting of the reduced interest-rate as compared to that charged for credits on the international capital market.

The grant equivalents in Stabex payments (GST) can be calculated according to the following basic formula¹⁰.

(1)
$$G^{ST} = L^{ST} - \sum_{j=1}^{T} \frac{C_j^{ST} + l_j^{ST}}{(1+r)^j}$$

According to formula (1), the grant equivalent in a Stabex payment corresponds to the nominal value of the Stabex payment (LST) minus the current value of future Stabex repayments (C_iST) and interest payments (I_{1}^{ST}) . T refers to the date on which repayment is due, r to the opportunity interest rate. Therefore, ceteris paribus, the greater the nominal value of the payments, the lower the capital repayments and interest payments and the greater the grant equivalent in a Stabex payment will be. So as to empirically determine the grant equivalents in Stabex payments during the 1975-79 application period, the variables in equation (1) must be defined. The LST values are the actual Stabex payments. The payment of interest does not apply in this case, hence Istis equal to zero. The opportunity interest rates will vary from country to country; therefore, for the sake of simplicity, the interest burden for ACP countries of an alternative credit will be assumed to be equal to the average costs of a credit from the World Bank in the year of Stabex payment. Since the amount and the date of repayment depend on the development of exports, the quantity C_ist for principally repayable payments cannot be determined a priori. In an ex-post assessment the grant equivalent as regards the payment year increases with every additional year in which repayment is not made.

Table 2 gives a summary of Stabex payments implemented during the 1975-79 period of application and grant elements until 1981 contained therein. The sum total of payments amounted to 389,469,347 EUA, of which the lion's share went to Senegal, Sudan and

⁸ Cf. R. Herrmann: Exportinstabilität auf agrarischen Rohstoffmärkten – Situationsanalyse und Eingriffsmöglichkeiten (Export Instability in Agricultural Raw Materials Markets – Analysis of the Situation and Intervention Possibilities), Agrarökonomische Studien, Vol. 4, Kiel 1981, p. 228 ff.

⁹ Cf. UNCTAD (ed.), op. cit., p. 19.

¹⁰ A comprehensive presentation of the following methodological approach and the empirical calculations can be found in: R. Herrmann, op. cit., Chapter 5.2.2.

Mauritania. The products which gave rise to the largest Stabex payments were groundnut products, iron ore and cotton products. 69.11 % of the total payment sum is non-repayable, i.e. grants. If the grant equivalents in the Stabex payments which are in principle repayable are taken into consideration the "grant ratio" ($g^{ST} = G^{ST}$ / L^{ST}) increases to at least 75.09 % up until 1981. This figure, however, only contains the alternative costs saved *up to date*. These increase with each additional year of non-repayment. The grant elements could already reach 80.57 % in 1981. This will be the case if the credits granted to the Ivory Coast, Ghana, Cameroon and the People's Republic of the Congo, and reviewed for the last time in 1981, are not repaid.

Arbitrary Connection

Since Stabex payments are occasioned by export revenue shortfalls, the question should be raised whether the income transfers ascertained induce distributive effects different to those which would result from a direct policy of development aid for the ACP countries. If per capita income is taken as a distribution indicator, Table 2 does indeed show that the lowest income category was the primary beneficiary of grant elements up until 1981. However, more than 11 % of all payments made in the period under review consisted of grants to the two "richest" income categories within the ACP group. This figure could increase considerably, especially if there is increasing non-repayment of Stabex credits by the "richest" group of ACP countries (Group I). After all, 22.1 % of the Stabex payments were made to countries in Group I. Broken down according to individual countries it can be observed that the transfers in income occasioned by the Stabex payments 1975-79 benefitted countries in all income categories. The highest per capita grant equivalent went to Kiribati (40.78 EUA), followed by Dominica (37.57 EUA), Swaziland (25.93 EUA) and Mauritania (24.75 EUA), i.e. to countries with very different per capita incomes. It must be stressed, however, that all these countries do not belong to the group of the "poorest" ACP countries (Group IV), in which the grant equivalent amounted to less than 2 EUA/capita in eleven countries, i. e. in some cases was considerably below the level obtained by the richer ACP countries. Countries such as Malawi and Zaire, both in Group IV, received no transfers whatsoever during the first five years of the scheme's application. Stabex payments are expected to contain greater elements of redistribution in future since Lomé II has incorporated further grant elements into its repayment arrangement as compared to Lomé I (Art. 43, Pars. 2 and 4):

following confirmation of repayment obligation a "moratorium period" of two years is granted;

□ on expiry of the deferment period the repayment is not to be made at once but in five equal yearly instalments with renewed interest concessions;

□ if export earnings lie between 100 and 106.5 % of the reference value then repayment does not have to take place;

□ if deemed necessary, repayment can be effected in the currency of the ACP country in question (joint statement by the EC/ACP).

Summing up, a relatively large element of redistribution in Stabex payments can already be registered for the application period 1975-79. This redistributive element is underestimated on account of the classification in the official statistics into repayable

Table 2

Payments and Grant Elements up until 1981 in Stabex Payments under Lomé I

Redistribution Indicators		Absolute figures (EUA)	as % of total Stabex payments	
I.	Stabex payments 1975-79	389,469,347	100	
11.	Therein : a) <i>a priori-</i> grants	269,176,254	69.11	
	 b) grant elements in Stabex credits up until 1981: 			
	Minimum	23,275,961	5.98	
	Maximum	44,616,775	11.46	
	 c) grant elements up until 1981, total (IIa + IIb): 			
	Minimum	292,452,215	75.09	
	Maximum	313,793,029	80.57	
III.	Distribution of grant elements (IIc) according to country-groups ¹			
	Group I:			
	Minimum	24,464,654	6.28	
	Maximum	39,789,764	10.22	
	Group II:			
	Minimum	20,219,342	5.19	
	Maximum	23,766,886	6.10	
	Group III:			
	Minimum	114,907,043	29.50	
	Maximum	117,375,203	30.14	
	Group IV:			
	Minimum	132,861,176	34.11	
	Maximum	132,861,176	34.11	

¹Group I refers to ACP countries with a per capita income of over 500 \$, Group II to those with a per capita income of between 350 \$ and 500 \$, Group III to those with a per capita income from 200 \$ to 350 \$ and Group IV to ACP countries with a per capita income of less than 200 \$. S o u r c e s: Own calculations. H. H errmann: Exportinstabilität auf agrarischen Rohstoffmärkten - Situationsanalyse und Eingriffsmöglichkeiten (Export Instability on Agricultural Raw Materials Markets - Analysis of the Situation and Possibilities of Intervention), Agrarökonomische Studien, Vol. IV, Kiel 1981, chap. 5.2.2. For the data sources for Stabex payments and individual countries' per capita income cf. ibidem. and non-repayable credits. Income transfers within Stabex represent a by-product of revenue stabilisation and are only arbitrarily connected to distribution indicators such as per capita income.

Uncontrolled Allocation Effects

It is often stressed that a positive effect of compensatory financing is its "market neutrality" in comparison with agreements on price stabilisation. Arguments are, however, put forward maintaining that the Stabex system could induce allocation effects due to its specific provisions. One argument, for example, asserts that Stabex could lead to an increased concentration on unstable export products in the ACP country and at the same time decrease incentives to diversify as compared to a non-Stabex situation¹¹. Furthermore, diversions in trade could occur with losses due to increasing transport costs. This is possible since as a rule only shortfalls in earnings of exports to the EC are compensated for¹². Undoubtedly, both kinds of allocation effect could in principle emerge. Their appearance depends on the degree of anticipation of Stabex payments by ACP governments in their trade policies. Hardly any empirical data for individual countries is available on this.

One further allocation effect is seldom referred to, even though it would seem a most likely one, since it does not presuppose any readjustment of ACP trade policies to future Stabex payments. Due to the relative importance of export monopoly-marketing boards on the Stabex markets it is possible that, assuming expenditure of Stabex payments in the sector in question, the marketing boards would pay the producers higher prices than in a non-Stabex situation. Producer prices would then contain a grant equivalent, which is based on a mixed calculation (world market prices plus Stabex grants)¹³. This is the more likely to be the case, the more Stabex payments contain elements of redistribution and are felt by the ACP countries to represent a long-term transfer of resources. More production factors will then be employed in the sector affected as a result of Stabex than in a situation in which this EC policy were not carried out.

All the afore-mentioned allocation effects could ensue and yet they need not always have a negative effect on the economy as a whole. Since we are dealing with a problem of second-best, the distortion of production induced by Stabex can in individual cases lead towards a production optimum for the economy as a whole. Just like the stabilisation and distribution effects, however, these allocation effects are coincidental and uncontrolled.

Conclusions

Treydte made the following statement concerning the primary effects of the Stabex system in 1977: "Stabex has contributed to the stabilisation of export earnings of the ACP countries, its function to improve the income situation of the countries has been pursued without disturbing the market mechanism"¹⁴. The present analysis proves that such a positive evaluation cannot be supported.

The majority of the exemplary cases listed in Table 1 showed destabilising effects of the Stabex payments. With the exception of individual advance payments, the few stabilising effects were purely coincidental. Increased stipulations concerning the use of the advance payments arrangements would be appropriate policy measures to help avoid destabilisation effects.

It is true that Stabex transfers contained relatively large elements of redistribution, however, (a) these are not a primary objective of Stabex, and (b) the structure of the redistribution effects is purely coincidental. Nonconformity with the objectives of distribution policy is enhanced by soft repayment terms and a high divergence between opportunity and repayment interest rates for the "rich" ACP countries. A greater distinction between the redistribution elements and the stabilisation elements in a future Stabex policy could help to reduce this effect, particularly by aligning the repayment interest rate of the "rich" ACP countries to their opportunity interest rate.

If allocation effects are defined as a disturbance of the market mechanism then it has not been proven that Stabex did not disturb the market mechanism. The high percentage of redistribution elements makes it possible for higher producer prices to be paid via the marketing boards' mixed calculation than in a non-Stabex situation. A reduction in the coincidental redistribution elements in Stabex would therefore at the same time help reduce uncontrolled allocation effects.

¹¹ Cf., e. g., R. H a s s e , R. W e i t z : Das Abkommen von Lomé – Übergang oder Alternative zu einer neuen Weltwirtschaftsordnung? (The Lomé Convention – Transition or Alternative to a New International Economic Order?), Report No. 43 by the Cologne University Institute for Economic Policy, Cologne 1978, p. 104.

¹² Cf. ibid., p. 100.

¹³ This type of mixed calculation was proven to exist in the case of Mauritius in connection with the EC-ACP Sugar Agreement. Cf. P. M. S c h m it z, U. K o e st e r : Der Einfluß der EG-Zuckerpolitik auf die Entwicklungsländer (The Impact of the EC Sugar Policy on the Developing Countries), Discussion Articles No. 42, Institut für Agrarpolitik und Marktlehre der Christian-Albrechts-Universität Kiel, Kiel 1981, p. 42.

¹⁴ K. P. T r e y d t e : The Stabilisation of Export Earnings. Two Years' Experience in Stabex, in: INTERECONOMICS, Vol. 12, 1977, p. 305.