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The Soviet-type Economy as a Generator
of Economic Disturbances

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THE SOVIET-TYPE ECONOMY AS A GENERATOR OF ECONOMIC DISTURBANCES

Colin Lawson and Peter Wiles

1. Introduction

1.1 Some missing questions

This paper tries to provide an essential corrective to the bias implied by the title of the conference. How stable _is_ the Soviet-type economy (CPE)? Especially, how stable is it, not in its reactions to outside events, but in itself? Does it set up shocks that affect other economies (CPEs themselves, or others)? Our general answer is tentatively favourable to the CPE in respect of I, its direct trade with developed market economies (DMEs), but this part of our paper is not statistically backed. We then put the DMEs ahead in point II, the stability of their trade with less developed countries (LDCs); and establish our conclusion statistically. Logically there should be another paper on III, the LDCs as generators of instability in world trade. The assumption that LDCs are a passive component in

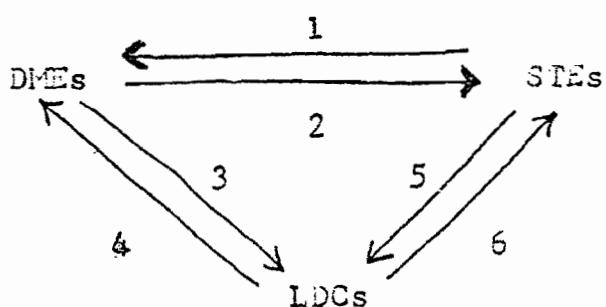(the arrows represent directions of influence, not necessarily of exportation)

Fig. 1

world trade is not the product of reasoning but of liberal white guilt. So we compare flows 1 and 2, and flows 3 and 5, and 2 + 3 with 1 + 5; but we never mention flows 4 and 6. Yet of course the single greatest disturbance to world trade in the last ten years, nay in all economic history, has been along flow 4: the quintupling of the oil price in 1973. If the Russians cannot sell their machinery to DMEs, or pay off their debts, they have fundamentally OPEC to blame.

1.2 Basic macro-theory

What institutions ought to be most disturbing and disturbed? The answer is of course market economies, at whatever stage of development. For in the CPE (i) speculative money cannot cross frontiers, since it is extremely strictly forbidden; (ii) the Preisausgleich isolates the general domestic from the general world price level - though it cannot cushion the country from shifts in its terms of trade; (iii) in a balance of payments crisis it has effective means of cutting consumer-good imports before producer-good, especially raw material, imports; (iv) since inter-enterprise money is passive no movements of liquidity preference and speculation are possible in this sector - while household movements of this kind are of trivial magnitude; (v) there is no Stock Exchange, money market or second tier - or third tier! - of independent banks.

The CPE should therefore have - and indeed has - no economic "cycles". We use here that much abused word in its proper sense, as a largely endogenous fluctuation, repeating itself with a decently constant periodicity. We do not prejudge the question whether there was ever such a thing under capitalism. We only assert that both high theory and low observation reveal nothing of the sort in CPEs. What they may still have - and indeed have - is fluctuations of political origin. These are of course neither politically nor economically endogenous, nor have they a decently constant periodicity. Like all political events they are unique. But CPEs are subject to them, and they are very much part of our remit.

It is difficult to explain the persistent belief, on both sides of the Iron Curtain, in Soviet-type trade cycles. No two, continuously successive, regular cycles have ever been detected in

the time-series of any CPE (one, of course, is no evidence for anything). The Western predilection for such talk may be partly intellectual imperialism: all that time we spent learning the Keynesian economics must not go to waste surplus human capital causes exports. It must surely also be an attempt to negate a very clear advantage of the CPE over capitalism. In Communist circles we note that cycle-talk is confined to revisionists: people open to Western ideas, who also have sunk a good deal of human capital in the same kind of economics. Also the claim that there is a cycle is anti-Stalinist, self-critical. But all such work can be seen under scrutiny not to be based on an honest examination of time-series. Therefore it is worthless.

We therefore expect CPEs (a) to absorb and dampen foreign disturbances more effectually than DMEs, (b) to create disturbances only as a result of political action. And knowing in a general political-economic way how much importance they attach to East-West trade, we would expect (b) to be rather small, and surely much smaller than the disturbances wrought by macro-movements in the economies of DMEs. However our own data in the tables below do not tell us which trading partner has what causal role.

1.3 Basic micro-theory

But since the micro-economic decision in the CPE is arbitrary, "irrational" in the sense of Western allocation theory, and almost purely administrative, we would expect greater instability than in DMEs on these grounds alone. Changes in price and quantity should be fewer and sharper, simply because markets adjust themselves all

the time, and far the most often in the right direction (perverse movements being rare). Thus floating exchange rates have proved themselves more stable than the "crawling peg," on any sensible definition of the word "stable".

However this "sensible definition" is not easy to arrive at. In sec. 3 we use an ex post definition, which is good enough for its purpose. But here we risk an ex ante one, which will allow for the actual worry, expense and damage caused by expectations of instability. We call such expectations uncertainty.

The cost of uncertainty and actual instability is a strongly disputed issue, but almost the whole of the literature concentrates on costs to LDCs. It is possible to argue that costs may be imposed on any type of trader, but that the effect of a given degree of instability may be greater for an LDC. In general terms the costs of unforeseen fluctuations in a market economy can be divided initially into three types[1]. First there are those, such as ex post changes

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[1]For an extensive analysis see Brainard and Cooper (1968).

_____

in producer incomes, which are a direct result of the changes in export earnings. Second are the ex post multiplier repercussions which result from the reactions of the directly affected groups. Finally there are the ex ante effects of the defensive attempts of agents to avoid or mitigate uncertainty: interest and warehousing on stocks; interest and employment forgone by holding larger gold reserves; increased costs of construction when investment projects are accelerated or delayed; reluctance to take risks, etc. etc.

Partly overlapping with these categories, one can distinguish a

further set of problems associated with the government sector. Thus

in an economy where a significant proportion of government revenue

originates in taxes on the foreign sector, export instability and

consequent import reductions can have a severe effect on ex post

expenditure and ex ante expenditure policies. Compensatory action

may be necessary[1], which could entail an increase in the foreign

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[1]Typical defensive action can involve the creation of marketing
boards to deal with the sale of major crops, and to moderate the
effects of fluctuations on labour incomes. Kingston (1973, p. 381)
has noted the advocacy of regional trading blocs, while further
policies include the provision of storage facilities, buffer stocks
and international commodity agreements. In the longer run policies
of export diversification have been popular, if of unproven efficacy.

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borrowing requirement, with its attendant long-run tightening of

the balance of payments constraint. Alternatively one might try

to expand reserves for this reason too, which from the viewpoints

of both the affected country and the world economy involves a

relatively unproductive use of resources.

Weak linkages and a typically ineffective armoury of counter-

cyclical or stabilising monetary and fiscal instruments suggest

that export fluctuations will damage LDCs more than DMEs[2]. Even if

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[2]It seems plausible that inadequate reserves accounted in part for the
continued interest in the problem during the sixties amongst LDCs,
even in the face of reduced fluctuations. This possibility is
discussed in Lawson (1974a, p. 60).

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fluctuations are accurately foreseen, effective anticipatory action

is not costless.

From the viewpoint of a CPE there is normally little difficulty

in partly circumventing mild unforeseen fluctuations in demand for

exports or supply of imports. But the necessity of selling on less favourable markets imposes a real resource cost, and may delay or render unprofitable a planned investment programme involving the import of capital equipment.[1]

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[1]See Vaňous (1978) p. 2 ftn. 2, who argues that the USSR harvest-induced grain imports are accompanied by a fall in imports of raw materials.

_____

1.4 Clearly this is a most complicated issue, with both micro- and macro- aspects. We confine ourselves here to the ex ante micro-costs only; i.e. to the uncertainties introduced by free markets on the one side and by annual trade protocols on the other, for specific commodities only. We shall illustrate, but no more than illustrate, the problem.

Let the dotted lines in Fig. 2 represent the quantities purchased by competitive enterprises in a foreign DME, and the continuous line be the successive annual import targets of a CPE, both expressed in monthly terms. Both purchase about the same quantity on average, and since both pay much the same prices the price factor may be neglected. There is great uncertainty about the CPE's purchases every year (the peg must crawl on 1 January without fail, so to speak). There is of course no forward market in respect of such large quantities.

In the free market let uncertainty be governed by the three months'
moving average of past changes without regard to sign (hence the
prolongation of the dotted lines beyond zero); and in the case of
the annual protocol let the mean expectation be of a 25% change on
each 1st January. But owing to the shortness of human horizons let
this expectation weigh only for 3 months before the new protocol
is signed. So the whole of this big uncertainty falls on one
quarter, while in the other three there is no uncertainty at all.
But this still makes the whole procedure costly, since the various
subjective and objective costs of uncertainty rise as uncertainty
increases - a point the importance of which has been neglected. We
assume that when the rate of change of purchases is 0-1% per month
the costs are zero, since this change is below the threshold of
perception. Thereafter $\frac{dC}{d^2P} = \frac{1}{2}$, where C is the costs generated by
uncertainty, P the volume of purchases.

On these assumptions the cost, measured in whatever unit we
please, of our $_\wedge$ free-market time series is I/0.95 and II/2.3, and of
our annual protocol series 2.00, both on an average monthly basis.[1]

two

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[1] Workings available on request.

There is of course no empirical warrant for such a function, and we
could have constructed it so as to favour the CPE. But this would not
be so very easy. For (i) if the levels of uncertainty are more or
less as described, and the uncertainty cost function is linear,
the actual value of $\frac{dC}{d^2P}$ is irrelevant: so long as the intercept
is constant the ratio of uncertainty costs remains 0.95 : 2.30 : 2.00.
(ii) If the function is not linear and increasing, we should expect
it to be exponential and increasing. The existence of an intercept,

i.e. a threshold of imperceptibility of changes in monthly purchases, would be very hard to deny, but it works strongly in favour of the lower monthly changes the market provides.

Clearly the comparison of the two systems depends crucially upon the amplitude or rapidity of the fluctuations in each. Thus in free-market series II the peak is double the trough, in series I 63%, and the uncertainty cost of the annual protocol system is intermediate.

However between such a crude guess and a positive conclusion there lies the necessity of much more work!

1.5 A similar analysis helps us to understand something about the alleged destabilizing micro-effects of medium- and long-term contracts (which have, as we saw, no necessary connexion with bilateralism). In the left hand panel of Fig. 3 a large part Oa of a perfectly competitive commodity market is stabilized by an annual-trade-protocol type of agreement.

FIGURE 2

% change on A

20
10
I
12.5
II

A

B
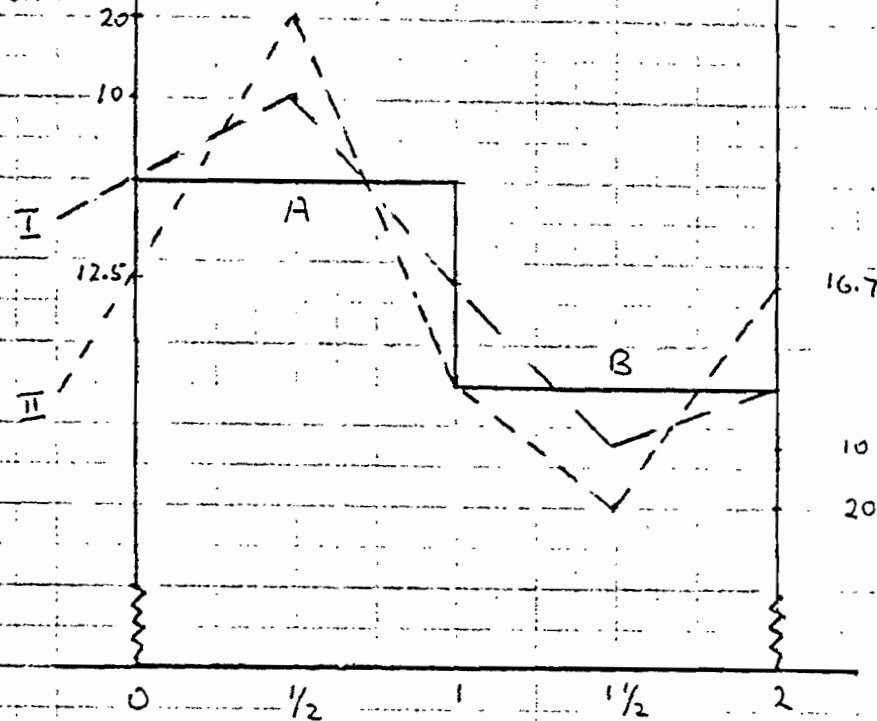
- - - free market

——— crawling peg or annual protocol

% change on B

16.7
10
20

Time (years)

0   ½   1   1½   2

FIGURE 3

Price

I   II   III   IV

O   a   b   a   b   a   b   a   b   Quantity

Characteristically, the price is not the equilibrium price, but never mind. Now exactly who is left in the free market?

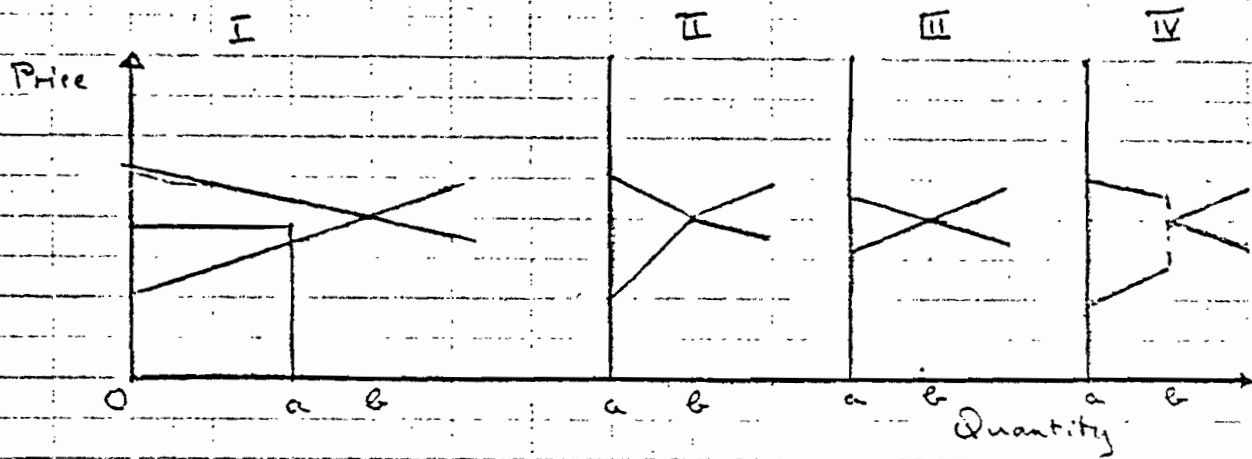(i) The unthinking view appears to be II: a random part of the suppliers and demanders is left, and since the market is narrower but the fluctuations in supply or demand no smaller the free price and quantity will be very unstable. But the old supply and demand curves continue to exist outside the original free market turnover ab, so that if total supply or demand expands by a given absolute amount the effect is as it always was. A given absolute fall on the other hand, of say total demand, will lower the free price more than in the absence of the contract.[1]

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[1]Up to the point b, the supply and demand curves in II are iso-elastic with those in I, but their slopes are steeper, so that a given absolute drop in the demand curve produces a larger absolute change in price.

(ii) But then perhaps III only the intra-marginal suppliers and demanders joined in the contract? Then the free market resembles Fig.3/ III, which is just as stable as I. Furthermore it is politically very probable that the excluded agents will be the marginal ones.

(iii) Or if, far less likely, IV only the marginal agents joined? Then, so long as there is no expansion, we have instability indeed, even without any change in total supply or demand.

(iv) Another pair of possibilities cannot be shown on our simple diagram: only the stable, or only the unstable, agents join in the contract. In the latter case the free price is more stable than before - so long as the contract (which would have to have a buffer stock) does not break down.

When all this, and no doubt more, analysis has been performed, we see that the remaining market is probably less stable than the

original whole market. But we must now "cost" the whole situation
as in 1.4. We must add the unarguable extra cost of this new uncertainty
to the very doubtful cost-saving of the contract itself, with its
highly costly "crawling-peg" procedure. Thus the blow we have struck
against Soviet-type annual contracts is a heavy one. But it scarcely
touches buffer stocks, STABEX, etc. These schemes do not involve
sudden discrete movements, and since they do not split up the market
they stabilize it all. Of course they have to be well administered!

2. Actual behaviour

2.1 Moreover these micro-decisions are highly politicized. Countries
(and sometimes, because of their export specialization, commodities)
rise and fall in Soviet favour. If the country is competitive in
the Soviet market it may be knocked out altogether (Australia 1954[1],

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[1] The Petrov crisis suspended wool purchases for several years
(Wiles 1968, p. 501).

UK 1972[2]). If the offence is very great the same thing happens

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[2] The expulsion of the 100 spies froze machinery purchases for several
years (Hanson 1979).

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even at quite a cost to USSR (Yugoslavia 1948 and 1958[3], China 1962[3]:

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[3] These crises are better known, but cf. Wiles 1968, pp. 499, 507.

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note that great offence is usually given by other Communist countries).

The Third World is not spared (Egypt 1973).[1] It is our strong but

[1]In particular the switch in payments from non-convertible to convertible currencies for arms deliveries after mid 1972, in the wake of President Sadat's demand for the termination of the Soviet military mission in July 1972, is worth nothing.

unsubstantiated impression that DMEs react to political offence less often and less sharply. It is certainly to be expected, since the capitalist state has far less control over its enterprises.

2.2 Then there is bilateralism. We have already seen in 1.4 reason to doubt whether annual protocols reduce micro-uncertainty. Such protocols might be multilateral in intent, but they never are. But the fact that they are always part of a larger bilateral framework seems neither to add to nor to subtract from micro-uncertainty. Bilateralism is an ex ante concept: it allows substantial annual swings in balances, and so can hardly constrain micro-behaviour if totals are large and commodities numerous (cf. 2.6).

2.3 But there is a growing practice of micro-bilateralism, i.e. the various buy-back arrangements. In these the capitalist investor takes payment in some product of the CPE, most often the product of the factory he is putting up. But sometimes payment is in any product, and goes to, say, the capitalist construction firm. The latter being no expert mishandles the sales he is compelled to make, and this is highly destabilizing in the domestic market for the product concerned. Thus a French building contractor in about 1975 took a large number of Bulgarian forklift trucks in payment, and broke the French market.

For some reason enormously much is made of this practice, both in the trade literature and at conferences like this. We cannot but

cry "caveat emptor". The French contractor must also have lost money by his clumsiness (why didn't he sell some of the trucks in Munich?). He is more of an object lesson than an argument. Such imports are subject to the same state controls in DMEs as all others. The multinationals, buying back products very similar to their own, cannot but sign such contracts with care.

"Buy-back" is inconvenient, and probably threatens micro-instability. If capitalists cannot look after their own interests the threat will materialize. But precisely its high transaction costs must surely prevent it from spreading. It can only supplant "classical" or "arm's-length" trade to the small extent that it is acceptable. Even on the Soviet side it is less an aggressive plot against free markets than the result of Soviet international illiquidity. For it worsens the CPE's terms of trade if the capitalist makes adequate discount for the transaction costs of the deal, and if the CPE does not pay for the discount they should lose the deal. Moreover if they wish to penetrate the capitalist world they need to set up their own sales organisations.[1]

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[1] It is of particular interest that the CPE most dedicated to economic rationality and smooth economic functioning, Hungary, prefers joint ventures to buy-back agreements (Geuellette 1979).

"Buy-back" is a particularly strong instance of the general point that bilateralism destabilizes prices, since it forces pre-ordained quantities onto narrow markets. This has been said against bilateralism for many decades. It has no connexion with the quantity-instability that may or may not result from annual trade protocols (sec. 1.4), since such protocols are entirely compatible with bilateralism.

2.4 Macro-bilateralism itself is of course a macro-stabilizer, a contribution the CPE makes to the world economic order, by putting

a floor under the volume of trade with a DME or LDC, and not passing

on the deflationary impulses that hit it. When trade is multilateral

no country can make a specific commitment to any other, against a

reliable quid pro quo. We are all asked to cast our bread upon the

waters, and pray that it will return to us in many days. The situation

among DMEs as this is written is clear enough proof of the difficul-

ties of multilateral reflation. But no doubt this - and the costs

in allocational efficiency of sacrificing multilateralism - is the

subject of other papers at this conference.

2.5 On a very different plane is the harvest failure. Primitive

and inefficient agricultures, like those of CPEs, are marked not

only by low productivity but also by instability vis-à-vis the climate.

More technical progress would correct both faults. The point is

simple and unintellectual, but for all the few words we have spent

on it it is as important as any other.

2.6 All in all we should not expect the CPEs to be comfortable

trade partners at micro-level. It may well be that their surprising

instability at macro-level vis-à-vis LDCs is due precisely to the

small size of their trade with them. Such small total sums, whatever

the macro-stability of CPEs, reflect the instability of their micro-

components.

3   Soviet-type economies (CPEs) and economic instability in the LDCs

3.1 This particular transmission (no. 6 in our Fig. 1) has been

relatively neglected.   In

some ways it is easy to see why. CPE-LDC trade has never accounted for
more than three per cent of world trade, generally much less. Moreover
it has normally been of only marginal interest to the participants
themselves, and that sometimes merely an excuse for some windy
rhetoric on mutual cooperation.

Buried in the rather unpromising mixture of different
aspects of economics which it is necessary to use to understand this
area are several interesting questions which this paper will examine.
In particular it will provide evidence on the relative stability of
CPE and DME (developed market economy) markets for LDC exports; on
the possible countercyclical purchasing behaviour of CPEs
and the
comparative experience of bloc and market LDCs in their trade with
the more developed CPEs.

Although there is no evidence of an imminent and dramatic
increase in CPE-LDC trade, the generally unsettled and depressed
economic conditions of the seventies have added a new interest to
such questions. It has been argued by Portes (1978) that the long-
run economic interests of CPEs lie more with DMEs than with LDCs,
and if this is true then it lends increased urgency to the assess-
ment of their potential market for LDC goods. Moreover the DMEs, or
subgroups of them, have in recent years established a series of
schemes to mitigate the effect of export fluctuations on LDCs. In
a sense even if such schemes as STABEX or the IMF compensatory
facility are inadequate, even if the Yaounde and now the Lome
conventions are perceived as inadequate by LDCs, they do provide
a standard of behaviour by which to measure alternative trading
patterns. By such standards CPEs, and some DMEs, do not perform well,
and it can be predicted that if such schemes survive, Comecon will
have to try to match or surpass them if current ideological stands
are not to be compromised.

With these general considerations in mind the remainder

of this section is divided thus.　　　　Section 3.2

surveys the relevant literature on
defines instability and 3.4
relative instability. Section 3.3 includes new results on the relative
instability of world trade flows, while Section 3.5 examines the possib-
ilities for and evidence of countercyclical purchasing by CPEs from
LDCs.

3.2　　　The type of instability which will be considered in this
and the following sections refers to fluctuations over time in the
money value of exports or total trade. Clearly the phrase 'fluctuations'
is somewhat vague and is given precision only when related to a
particular measurement system. The bulk of such devices separate out
trend from variations about trend, and interest focuses on the latter.
There is a short discussion about such devices in III below.

Widespread interest in the phenomenon extends over the
whole post-war period, although generally as a problem its serious
effects have been thought to be confined to LDCs. Investigations
covering CPEs have been fewer and fairly restricted in coverage.
The motivation for the interest comes from two sources. First,
from the viewpoint of comparative systems analysis it is interesting
to investigate the influence of planned or partly planned relations
on stability and compare such results with the outcomes of largely
market relations. Second　is the desire to examine claims by Soviet
and Eastern European writers that economic relations with CPEs offer
the stability which is necessary for economic development, but lacking
in LDC-DME trade [1] Instability is clearly costly (sec. 1.4) So

export fluctuations are of legitimate concern to
planners and policy makers alike. Thus the relative stability of
flows between different types of economic system is of practical
interest to both CPEs and LDCs. The results which are available in
this area fall into two groups : those derived from aggregate data
on bloc flows, or built up from country-country results, and a rather
smaller number of specific micro analyses of specific markets or
particular countries.

The most important market studies are those by Neuberger
and by Hanson. In an investigation covering the trade in primary
commodities between LDCs, the West and the Soviet Union, from

1955-1961, Neuberger (1963) concluded that LDC trade with capitalist

TABLE 4 (CONTINUED)

24

COUNTRY	EXPORTS TO	SHARE OF GROUP IN TOTAL EXPORTS	SHARE OF GROUP IN INSTABILITY WI_1	SHARE OF GROUP IN INSTABILITY WI_2
GHANA 1967-73	DME	.87	.59	.62
	LDC	.04	.07	.12
	CPE	.09	.34	.26
ALGERIA 1967-72	DME	.85	.79	.90
	LDC	.06	.05	.05
	CPE	.09	.16	.05
KENYA 1962-67	DME	.75	.69	.77
	LDC	.22	.16	.13
	CPE	.03	.15	.10
KENYA 1967-73	DME	.72	.65	.68
	LDC	.24	.26	.27
	CPE	.04	.09	.05
INDIA 1962-7	DME	.63	.52	.53
	LDC	.21	.23	.24
	CPE	.16	.25	.23
INDIA 1967-73	DME	.58	.68	.69
	LDC	.21	.20	.16
	CPE	.21	.12	.15
PAKISTAN 1962-67	DME	.56	.39	.50
	LDC	.33	.25	.29
	CPE	.11	.36	.21
PAKISTAN 1967-73	DME	.51	.33	.30
	LDC	.37	.44	.50
	CPE	.12	.23	.20
INDONESIA 1967-73	DME	.63	.81	.73
	LDC	.35	.18	.25
	CPE	.02	.01	.02
IRAQ 1962-67	DME	.87	.68	.72
	LDC	.12	.30	.26
	CPE	.01	.02	.02
IRAQ 1967-72	DME	.78	.83	.88
	LDC	.20	.15	.10
	CPE	.02	.02	.02
IRAN 1962-67	DME	.74	.84	.86
	LDC	.24	.14	.11
	CPE	.03	.02	.03
IRAN 1967-72	DME	.44	.51	.77
	LDC	.51	.48	.22
	CPE	.05	.01	.01

DATA SOURCE: SEE TABLE 1.

3.5   Even if we accept the evidence presented above, we might still argue that, although apparently unstable as export markets, CPEs' demand for LDC goods can be used to offset changes in sales to DMEs or to other LDCs. Thus, although unstable in themselves, such sales could have a countercyclical [6], stabilising effect on LDCs. In this section we provide a little evidence on the unlikely nature of the possibility, a short discussion of CPE responses to LDC instability worries, and to DME or international stabilisation or trade generating schemes.

        The method used to investigate the possibility of counter-cyclical purchases was straightforward. If such stabilising effects occurred, then a rise or fall in sales to DMEs or to other LDCs should be met by opposite movements in sales to CPEs (all groups considered as blocs and not differentiated by precise destination). The raw data used for Tables 4 and 4a were inspected for this poss-ibility and the results are displayed in Table 5. Thus in fifty-three cases (i.e. country-years), out of a possible 151 [7], a change in sales to DMEs was matched by an opposite change in sales to CPEs. Such (partly) offsetting movements occurred 50 times between other LDC and CPE markets, and 43 times between DME and other LDC markets. This last figure indicates that compensatory movements are practically as frequent in LDC-DME trade as in trade with CPEs. As in the former case there is little intention to make explicitly compensatory purchases, so in the latter it is possible to deduce that some lack of intention, or to argue that such promises are not fulfilled. In both cases such movements are not particularly frequent.

        It could be argued that an LDC will not wish to offset a rise in exports to DMEs, but only to mitigate the effects of a fall. The evidence of such possibilities is presented in column three of Table 5. Thus for the sample of fifteen LDCs, for the period 1962-73 there were thirty country-years when their exports to DMEs fell, and on twenty-seven occasions these were (partly) offset by a rise in exports to CPEs. On the other hand, noting the data in column two, there were twenty-six occasions when the reverse happened. The key fact is, however, the relatively unimportant role of CPE trade in LDC exports. In practically all cases there was no reasonable possibility of a significant fall in exports to DMEs being fully

offset by an increase in trade with CPEs.

The conclusion is that there is little prima facie evidence of deliberate, or even unintentional stabilising behaviour in relation to CPE imports from LDCs. [3]

Before passing on to more general considerations of CPE-LDC trade, several important limitations of the above analysis should be noted. The phrasing of the questions suggests that export instability is demand determined. The role and importance of supply shifts has been neglected. Thus if LDCs desire stable export earnings then a countercyclical buyer will have to be prepared to take a wider range of quantities if significant supply instability is to be added to demand instability. Second, there are undoubted cases where CPEs have followed sustained countercyclical purchasing policies. Cuban sugar, Egyptian cotton, Burmese rice and Brasilian coffee purchases have all been made for this purpose. And there are so me cases of destabilising behaviour, of which Sino-Soviet trade is perhaps only the best known.

Third, the analysis has been over-simple in ignoring the fact that not only may destabilising behaviour in one market affect the remainder, by a multiplier-like process but also stabilising behaviour can also produce the same result (which is more a matter of microeconomics - see sec. 1.5).

Finally, a full assessment of CPE-LDC economic relations would also include investigations into aid and into the effects of irregular fluctuations in CPE economies on their demand for LDC exports. CPE aid is small in relation to DME aid, but highly con-centrated [9] in certain countries. Moreover there have been several occasions when CPEs have been able to respond to Western withdrawal of facilities or refusal to undertake projects, and so could be said to be responding in a stabilising fashion [10]. But in general there are no formal compensatory agreements available to non-bloc members, and stabilisation inside the bloc is ordinarily only an emergency measure.

The direct transmission of CPE fluctuations is a less straightforward problem. Irregular fluctuations in CPE growth rates, due to investment cycles, harvest problems or foreign trade difficulties

TABLE 3 WEIGHTED GROUP INSTABILITY INDICIES OF INTER AND INTRA-BLOC TRADE 1967-1973

TRADE FLOW	WEIGHTED INDEX WI_1	R	WEIGHTED INDEX WI_2	R
DME-DME	503	2	1047	2
CPE-CPE	461	1	856	1
LDC-LDC	3134	6	4243	6
CPE-DME	1236	4	2282	4
DME-LDC	1233	3	1970	3
CPE-LDC	1847	5	2332	5

DATA SOURCE: SEE TABLE 1.

TABLE 4a OVERALL ASSESSMENT OF THE STABILITY OF EXPORT MARKETS FOR SELECTED LDCs

EXPORT MARKET	1962-1967		1967-1973	
	PROPORTION EXPORTS	PROPORTION INSTABILITY	PROPORTION EXPORTS	PROPORTION INSTABILITY
DME	·77	·60	·72	·69
LDC	·16	·20	·19	·19
CPE	·07	·20	·09	·12

DATA SOURCE: SEE TABLE 1

TABLE 5 COUNTERACTING FLUCTUATIONS IN LDC EXPORT MARKETS 1962-1973

EXPORT MARKET PAIRS EXHIBITING COUNTERACTING FLUCTUATIONS FOR LDCs	NUMBER OF COUNTERACTING MOVEMENTS MAX = 151	NUMBER OF OCCASIONS WHEN A FALL IN SALES TO THE FIRST NAMED MARKET WAS OFFSET BY A RISE IN SALES TO THE SECOND
DME & CPE	53	27 (39)
LDC & CPE	50	19 (34)
DME & LDC	43	19 (39)

DATA SOURCE: SEE TABLE 1

NOTE: THE FIGURES IN PARENTHESES INDICATE THE

TABLE 4: THE CONTRIBUTION OF DIFFERENT EXPORT MARKETS TO LDC EXPORT INSTABILITY

COUNTRY	EXPORTS TO	SHARE OF GROUP IN TOTAL EXPORTS	SHARE OF GROUP IN INSTABILITY WI_1	SHARE OF GROUP IN INSTABILITY WI_2
MEXICO 1962-1967	DME	·88	·43	·40
	LDC	·10	·25	·23
	CPE	·02	·32	·37
MEXICO 1967-1973	DME	·88	·88	·88
	LDC	·12	·12	·12
	CPE	·00	—	—
COLOMBIA 1962-1967	DME	·87	·69	·76
	LDC	·11	·21	·21
	CPE	·02	·10	·03
COLOMBIA 1967-73	DME	·82	·79	·79
	LDC	·15	·15	·16
	CPE	·03	·06	·05
PERU 1962-1967	DME	·88	·61	·67
	LDC	·10	·24	·26
	CPE	·02	·15	·07
PERU 1967-1972	DME	·87	·82	·82
	LDC	·08	·07	·05
	CPE	·05	·11	·13
BRASIL 1962-1967	DME	·81	·54	·53
	LDC	·13	·38	·38
	CPE	·06	·08	·09
BRASIL 1967-73	DME	·77	·74	·72
	LDC	·17	·12	·18
	CPE	·06	·14	·10
CHILE 1962-1967	DME	·91	·92	·92
	LDC	·09	·08	·08
	CPE	—	—	—
CHILE 1967-1973	DME	·95	·84	·79
	LDC	·14	·12	·16
	CPE	·01	·04	·05
EGYPT 1962-1967	DME	·34	·25	·25
	LDC	·16	·15	·16
	CPE	·50	·60	·59
EGYPT 1967-1973	DME	·26	·50	·58
	LDC	·19	·18	·16
	CPE	·55	·32	·26
NIGERIA 1962-67	DME	·92	·81	·81
	LDC	·08	·19	·19
	CPE	—	—	—
NIGERIA 1967-73	DME	·90	·80	·75
	LDC	·07	·17	·23
	CPE	·03	·03	·02
GHANA 1962-67	DME	·84	·70	·68
	LDC	·03	·04	·04
	CPE	·13	·26	·28

effect of these phenomena on LDC exports is not. In principle some influences ought to be observable, for a standard CPE response is to restrict imports of manufactures and raw materials from outside the bloc. Corroborating this Vañous (loc. cit) has recently claimed that (for the USSR) during the year in which a harvest failure occurs, and in the following year imports of raw materials are 'sharply reduced.' .

While recessions in either DMEs or CPEs, even if only in rates of growth, reduce import demand, CPEs may obviously react rather differently to such pressures. The control of the foreign trade sector implies that the cut in imports, for a given degree of recession, may be severer than by DMEs. But against this, unlike DMEs, if a decision is made to maintain trade with LDCs, then by reductions in trade with other partners it can be enforced. However, there is virtually no evidence, outside the cases already noted, that this has happened.

The general tenor of CPE-LDC trade is such that deliberately stabilising elements are likely to be rare. While bilateral trade agreements sometimes undoubtedly have certain limited advantages for LDCs, not least of which are savings in convertible currency, and buy-back clauses, the general desire of CPEs to run surpluses with LDCs partly to offset their chronic deficits with DMEs, rather attenuates such gains. Moreover CPEs do not present rapidly expanding markets for the manufactured goods which LDCs are increasingly able to offer. While the proportion of LDC manufactured exports going to CPEs rose from 2.4% in 1960 to 3.9% in 1970, by 1974 it had fallen back to 3.2% [11]. The equivalent proportions of LDC exports of primary products are 4.8, 6.1, and 3.5 per cent.

In general the CPEs record on allowing LDCs access to their markets has been no better and perhaps is somewhat worse than DMEs. For example the Soviet position on the GATT non-reciprocity initiative is unequivocally negative. GATT Article XXXVI para.8 states that ' the developed contracting parties do not expect reciprocity for commit ments made by them in trade negotiations to reduce or remove tariffs and other barriers to the trade of less developed contracting parties.' Bogomolov has replied that 'The Soviet Union and many other socialist countries...cannot accept ...the demand that the socialist countries should accord to the Third World countries unilateral advantages on the non-reciprocity principle.'[12] And even though Czechoslovakia, Poland, Romania and Hungary are nominally members of GATT, it is quite unlikely that any

such non-reciprocal concessions mean very much in the context of centralised trade decisions.

Similarly membership and activities in international commodity agreements designed to assist LDC producers have been limited. Hungary, Romania and the USSR were, or rather would have been, participants in the non-operative 1973-1976 International Cocoa Agreement. They, along with the remaining European members of CMEA except the DDR, also belong to International Tin Agreement, which is active. However, the onus of operating the agreement falls on the producers, and no CPE has ever contributed to the buffer stock-fund. It is only fair to add that France and the Netherlands are the only consumer countries to have paid this voluntary contribution. In addition the USSR has membership of some international study groups, and the International Sugar Agreement is of interest to several CMEA members.

It is however, in relation to trading preferences and explicit stabilisation schemes that DMEs offer some decided advantages to LDCs. Three types of institutional innovations are worth noting : generalised preference schemes, regional trade groupings and explicit income stabilisation plans. Under the first group come such institutions as the Generalised System of Preferences (GSP) schemes which are operated by all DMEs[13]. Such schemes generally provide some limited assistance to LDCs in exporting manufactures, semi-finished products and certain processed agricultural goods to developed countries. Although under discussion since the early sixties, the first scheme was not introduced until 1971 by the EEC. But such concessions are fairly limited, for example, generally excluding major LDC exports such as textiles, petroleum products and leather.

As an example of a regional trade grouping offering concessions to LDC exports one might take the Yaounde Convention between Francophone African states and the EEC, or the more elaborate Lomé Convention between the EEC and forty-six African Caribbean and Pacific LDCs. Under the latter convention, LDCs get duty free access for most of their exports, and certain further aid and trade concessions, while in return according EEC exports only Mfn status. The complex set of agreements includes a separate sugar agreement which will cover about half of the world's traded surplus, and iron-ically make 'world prices' thereby more volatile; a twenty per cent import duty on bananas from non-convention states, although with

countries. This result is not confirmed by Hanson's study of the comparative market conditions for sugar, raw cotton, jute, wool and rubber, in the US, UK and USSR. He suggests that 'product by product Soviet imports were often intermediate in stability between US and UK imports'[2]. His earlier (1971) paper on the cocoa market had suggested that fluctuations in the volume of cocoa imports into the Soviet Union could be explained chiefly by purchase and inventory policies of a distinctly Western variety. The periods of the commodity market study, 1960-1968, and of the cocoa case-study, 1960-67, suggest that economic relations between LDCs and CPEs had in some areas been normalised. Certainly Neuberger's results for the earlier period were quite consistent with the individual country studies of Goodman (1966;1967) for Ghana (1955-64) and for Kenya, Uganda, Tanganyika and the Federation of Rhodesia and Nyasaland (1954-63).

The results from studies using aggregate data can be summarised under five headings: (1) Intra-Comecon trade is the most stable of all trade patterns (Staller (1967) for 1950-63; Lawson (1974b) for 1960-68). During these periods it was marginally more stable than intra-DME trade. (2) Intra-LDC trade is amongst the most unstable of all trade flows, (Erb and Schiavo-Campo (1969) for 1946-66; Leith (1970) for 1948-67; Lawson (1974a) for 1950-69). (3) LDC-DME trade is more stable than LDC-CPE trade (Staller, 1950-63 ; Lawson, 1960-68). (4) Trade between the developed and developing blocs is less stable than trade within the developed blocs (Staller, 1950-63 ; Lawson,1960-68). (5) For DMEs and LDCs there has been a decline in instability during the post-war period, (Erb and Schiavo-Campo,1946-66 ; Leith, 1948-67 and for LDCs only, Lawson, 1950-59).

Taking a superficial view of these results suggests that CPEs may provide no less stable markets than DMEs for some primary products, but over the whole range of traded goods their performance is less satisfactory[3]. But it is possible that the net effect of trade with CPEs may be stabilising, that is it may partly offset instability in trade with DMEs. A limited amount of evidence on this question is provided in 3.5 below, following a re-examination of the already identified regularities.

3.3   Instability was defined in the previous section as the
fluctuations over time in the monetary value of exports, imports or
total trade. In this section two indices of instability are used,
both of which measure deviations from trend in the relevant time
series. The first, labelled I_1, is the standard deviation of
observed deviations from an exponential time trend. The second,
I_2, is the normalised standard error of deviations from an estimated
linear time trend. As both indices remove the trend, growth over
the period as a whole can be separated from annual deviations from
that path. As the construction of the two indices differs, and as they
are based on different assumptions about the growth path of the
variable, their values cannot legitimately be compared, and so
throughout this paper their results are analysed separately.

        The choice of trend is arbitrary, and obviously determines
the definition of instability. Thus the extent to which a series
of observations exhibits the implicitly assumed quality may depend
crucially on the type of index used. Happily the reported results
suggest that in practice this problem may not be too serious. The
use of two (or more) measures is normal in this field, and generally
it reflects on unwillingness amongst researchers to commit themselves
to a specific mainatained hypothesis about the relevant trend, a
reluctance to compare different indices, and perhaps a general
uncertainty about how best to measure the characteristic 'instability'.

        In most previous studies empirical generalisations about
relative stability have been derived from inspection of the mean
instability indices for groups of countries. On occasion this has
caused difficulties when a relatively unimportant country, recording
an extreme value, has exerted an undue effect on the group mean. There
are two methods of avoiding this problem: the first involves weighting
the individual indices by a factor which reflects the country's
importance in group trend totals, and so producing a new summary
statistic, a group weighted mean instability index (labelled
WI_1 and WI_2)[4].

        The second method, which also avoids any criticism of
the legitimacy of measures of central tendency treats each country/
period index as a separate entity, and builds up statements about

the group from a consideration of each group member. This method
will work for comparisons within a group between two time periods,
for then each country will provide a pair of matched indices.
However, it will not work for comparisons between groups, for there
are then no adequate criteria for deciding how to match indices.

The relative incidence of instability in the various
export markets which are available to a country, given its degree
of supply instability, clearly determines the degree of instability
of that country's trade. But the apportionment of responsibility
for overall instability is less obvious. The method used in this section
is primitive and generally gives only qualitatively reliable
results. First a weighted index is constructed from data on the
share of DMEs, LDCs and CPEs in a state's exports, and the individual
instability indices for that country's trade with those markets. The
index is a non-normalised version of the weighted index described
above (thus now $WI = \sum W_i I_i$, i = 1...3). The proportion of this
index which is due to any one market is then calculated (i.e.
$W_j I_j / \sum W_i I_i$) and compared to the weight attached to this market
(W_j). Thus the reported results indicate that a certain market
is responsible for x per cent of exports but y per cent of
instability.

The data used to calculate the indices and market shares
were for merchandise exports, in millions of current US dollars. The
choice of such data was dictated partly by availability, but more
significantly by the fact that almost all propositions in the field
are derived from this type of data.

3.4   The empirical findings for this section are summarised in
Tables one to three. Table one reports the instability indices for
aggregate trade within and between the three groups of countries. The
period is split in two for comparative purposes, and the two indices
are calculated in all cases. From Table one five major results arise :

(i) Intra-bloc trade is more stable than inter-bloc trade.
    This is unequivocally true for 1960-68, but is weakened
    for 1967-73 by the relative increase in the instability
    of intra-LDC trade.

(ii) Inter-bloc trade flows involving CPEs are the least

stable of all flows. Again this is true for 1960-68
but for the reasons noted in (i) is somewhat weakened
for 1967-73.

(iii) Generally the agreement in ranking the flows by the
two indices is good, although slightly better in the
second period.

(iv) Intra   trade is the most stable of all trade flows.
This is true of the period 1967-73, although not of
the earlier period.

(v) CPE-DME trade is relatively unstable in both periods.
Availability of finance, changing controls and shifting
preferences may in part account for this.

A possible problem which can be encountered in this type
of experiment is that the results may be sensitive to the level of
aggregation. To at least partly   such fears, the procedure was
allay
repeated using a sample of country/country trade flows. Twenty-nine
                                5
countries were chosen . The developed market economies were selected
for their importance in world trade, the LDCs on several grounds.
Five countries were chosen from Africa,Asia and Latin America to
give a representative sample from the three less developed continents.
Within these areas the countries chosen are generally the more popul-
ous and contribute significantly to world trade.

Twenty-nine countries imply that there were a possible
406 separate trade flows to consider. However, as some countries
have no.significant trade with others, and as those trade series
with five or fewer observations were discarded, for with fewer than
six observations it seems unsafe to draw any firm conclusions on
stability, the number of flows was reduced to 327 (1960-68) and 314
(1967-73). The indices reported in Table 2 are the group mean indices,
which are used as indicators of the relative stability of the particular
trade patterns.

The results of this procedure are generally in line with
those produced by the aggregate flows. From Table 2 it is clear
that the relative incidence of instability does not change between
periods, the agreement between the two indices being complete.
                                   less-developed bloc
The relatively great instability of intra \   trade now appears
in both periods. In general there is an impressive regularity about
the results.

Finally, it is possible to construct statements about

bloc trade instability in a third way. Rather than consider aggregate flows (Table 1), or samples of group mean indices (Table 2), we can weight the individual trade flow indices by their importance in group trade, and produce weighted group indices. The results of this exercise for the period 1967-73 are shown in Table 3. This table indicates that the rankings are identical to those in Table 2. Thus no further modifications are needed to the original propositions. The robustness of those results, under alternative methods of experiment, is proven.

Turning from total trade to a specific examination of exports, Table 4 tackles the problem of assessing the various exports markets open to less developed countries. Thus for each LDC data were collected on its exports to other LDCs, DMEs and CPEs, and instability indices calculated for the relevant flows. The apportionment of total instability between those markets was made according to the method described in the previous sub-section. As there were no serious disagreements between I_1 and I_2 the summary Table 4a for all LDCs was calculated using I_1.

From the summary Table 4a, where the entries are averages of the data in Table 4, it is clear that in the period 1962-67, CPE export markets accounted for a disproportionately high percentage of instability. However, in the second period the distribution of responsibility is broadly in line with the relative importance of the various markets.

An examination of the detailed results in Table 4 discloses two further pieces of evidence: First, in the cases of India and Egypt, where CPE markets are of primary importance during the period 1962-73, the distribution of exports and of responsibility for instability are similar in both sub-periods. This suggests that the discrepancy between market significance and instability responsibility for CPEs is reduced as their significance as market outlets increases. Second however, even in the period 1967-73, the proportion of exports accounted for by CPE markets is greater than their imputed proportion of instability in only four cases (India, Egypt, Indonesia and Iran). Thus the conclusion that CPE markets offer the least stable outlet for LDC exports, although relatively weakened recently, is inescapable.

TABLE 1 INSTABILITY INDICES AND RANKS FOR INTER AND INTRA-BLOC TRADE, 1960-68, AND 1967-73 AGGREGATE FLOWS

TRADE FLOW	1960-1968 I_1	R	I_2	R	1967-73 I	R	I_2	R
DME-DME	173	1	374	3	488	2	1217	2
CPE-CPE	246	3	334	2	475	1	929	1
LDC-LDC	183	2	224	1	781	5	1544	5
CPE-DME	404	5	558	5	1109	6	2114	6
DME-LDC	287	4	400	4	741	3	1510	4
CPE-LDC	867	6	675	6	766	4	1367	3

DATA SOURCE: UNITED NATIONS YEARBOOK OF INTERNATIONAL TRADE STATISTICS, N.Y. VARIOUS ISSUES.
NOTE: INDICES ARE SHOWN $\times 10^4$. R = RANK.

TABLE 2 INSTABILITY INDICES FOR INTER AND INTRA-BLOC TRADE, 1960-68, AND 1967-73, COUNTRY/COUNTRY FLOWS

TRADE FLOW	1960-1968 FLOWS IN GROUP	MEAN I_1	R	MEAN I_2	R	1967-1973 FLOWS IN GROUP	MEAN I_1	R	MEAN I_2	R
DME-DME	21	714	2	1001	2	21	709	2	1344	2
CPE-CPE	21	673	1	779	1	21	685	1	1189	1
LDC-LDC	51	6703	6	5362	6	36	3505	6	4350	6
CPE-DME	49	2913	4	2796	4	49	1600	4	2380	4
DME-LDC	105	1812	3	2019	3	100	1538	3	2151	3
CPE-LDC	80	4849	5	4580	5	87	2881	5	3485	5

DATA SOURCE: SEE TABLE 1

and duty free entry for vegetable oils (bypassing the normal twenty per cent tariff). Although Lomé is a five year agreement due to expire at the end of 1979, the sugar agreement is in principle indefinite but due to be reviewed after seven years in 1981. It commits exporting states to providing annually negotiated volumes at prices linked to the EEC support price. One slightly disturbing feature for LDCs is the provision for resale by EEC members on third markets, thus potentially driving down the world price. Such a result was produced by reselling meat in 1975. The phenomenon of destabilising 'tourist' products is thus not confined to LDC sales to CPEs, although it is difficult to find evidence of its importance.

The examples of explicit stabilisation schemes are perhaps more impressive on paper than in action. The IMF compensatory financing provisions provide for sums of up to only a quarter of the LDCs' IMF quota to be made available in addition to the ordinary quota. Given the level of LDC quotas the protection is minimal, and moreover is attached to the normal IMF policy strings. The STABEX scheme, which is part of the Lomé Convention, is equally marginal in the level of its potential support. It is intended to stabilise the export earnings from thirteen commodity groups[14], when export earnings from the EEC market fall beneath a four year moving average. But the funds available under this redistributional scheme amount to no more than a few per cent of eligible exports.

In summary it can be argued that the results of this and the previous section indicate two key points about CPE-LDC trade. First, that for most LDCs its relative insignificance renders it of little use as a potential stabilising instrument. Second, that despite claims to the contrary, there is little or no evidence that in practice it is particularly stable, or has any important counter-cyclical properties. If the schemes to foster increased and stable DME-LDC trade which has just been reviewed became only a little more generous in their scope, then it would seem that CPEs would have to offer something more than the present rather limited bilateral agreements, if they are not to appear less accommodating than their political rivals.

FOOTNOTES TO SECTION 3

1. See for example Zevin (1971).

2. Hanson (1972) p. 295.

3. It is important to note that supply induced instability may well be as important as the demand induced instability which appears in this conclusion. The implicit assumption behind the neglect of supply induced instability in such studies is that fluctuations in supply conditions do not differ between export markets, whereas clearly conditions on those markets do change at different rates for any given potential seller. Also, even assuming that instability is solely supply induced, the elasticities of demand on the different markets will determine the relative instability performance of the outlets. Provided the LDC has only a limited range of exports which are sold in most parts of the world market, a more detailed analysis of supply induced instability is not needed.

4. The formal derivation of the group mean weighted index as follows: If there are n countries in the sample (j = 1....n), and m years in the period then X_{it} represents the value of exports of country i in year t. The weight wi for this country is its percentage of group exports during the period. To compare weighted to unweighted means, the normalised weighted mean is written as WI = Σ WiIi /100.

5. The countries were : CPE - Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, Romania, Soviet Union ; DME - United Kingdom, Japan, Canada, United States, France, West Germany, Italy; LDC - as listed in Table 4. The trading blocs analysed in Table 1 follow the United Nations classification of countries, whereby Yugoslavia is included with DMEs and Cuba with LDCs. Such slightly eccentric labelling should not significantly affect the results.

6. This term is used in a rather wider than normal sense to mean contrary movements in year to year export flows, by direction of trade.

7. i.e. 1962-73 gives 11 possible counter movements per country, but suitable data was only available for Algeria during 1967-1972 and for Indonesia 1967-1973, and until 1972 for Iraq, Iran and Peru.

8. It would clearly be possible to construct a more elaborate test of this 'compensation' hypothesis. For example, deviations from exponential or linear time trends could be used as test data, rather than absolute changes in the level of sales. Preliminary results indicate that substantial 'compensation' occurs (as might be expected) only where CPEs account for a substantial proportion of trade. Extending the test period to 1976, subject to data availability, produces the following assessment. Taking falls in exports to the combined DME and LDC markets of the sample countries, CPEs would have had to pick up a $6205m shortfall (current prices) to compensate the sample countries for this loss of earnings. In fact, during the years when these short falls occurred, exports to CPEs rose by $682m, giving an 11% 'protection ratio'. But for Egypt this ratio was 90%, for Peru 30% , India 27% and Pakistan 22%. Placing the problem in perspective, short-falls in sales

to combined DME and LDC markets accounted for only 2% of total sales to these markets while falls to CPE markets, at $891m represented 4% of sales to CPEs. A more comprehensive assessment is being prepared and details will be available on request.

9. Over half of Soviet and East European aid committments in the period 1954-72 were made to only five countries : Egypt, India, Iran, Iraq and Pakistan. The geographical concentration of aid is equally clear. See Holzman (1976) p.191.

10. Most notable in the case of the Aswan dam (1964), the Bhilai (1955) and Bokharo (1964) steelworks, and the US boycott of Cuba.

11. GATT International Trade, the picture for bloc LDCs is of course different. Im the period 1970-72 Asian developing CPE exports to CMEA comprised more than fifty per cent manufactures, non CPE developing country exports only 18.6%. (Morton and Tulloch, 1977, pp. 163-165, discuss this discrepancy).

12. O. Bogomolov (1978), quoted in Portes (1978) p.54.

13. Bulgaria, Czechoslovakia and Hungary operate GSP schemes, and Poland and the USSR formally have similar arrangements, but as we have argued above, in the presence of detailed central control of foreign trade, it is not clear that the mere existence of such a scheme confers any advantages on LDCs. The protocols for the accession of Poland and Romania to GATT (in 1967 and 1971 respectively) are interesting in that they both specified percentage increases in imports from GATT members as a condition of entry. Hungary argued that as its tariffs had market effects the normal tariff reduction bargaining process was appropriate. Although only partly convincing the argument was accepted and Hungary was admitted in 1973. See Rouland (1975) for further details. It ought to be added that the imposition of various types of tariff quotas, and strict rules of origin by DMEs has severely restricted the scope of GSP concessions (Morton and Tulloch 1977, pp. 169-75).

14. Bananas, coffee, cocoa, cotton, coconut oil, copra, groundnuts, hides, palm products, sisal, tea, timber and iron ore. At its inception 375m UA were earmarked for this programme during the five year period covered by the convention.

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