Agriculture, Trade, and Development: A Comparative Look at U.S., Canadian, and European Community Policies

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TRADE POLICY, COMMERCIAL MARKET RELATIONSHIPS, AND EFFECTS ON WORLD
PRICE STABILITY

The European Community

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These are hard times for the Common Agricultural Policy (CAP) of the European
Community (EC). Domestically the CAP is under strong pressure, originating
mainly from the heavy burden it creates for the Community budget. Part of
this burden could be relieved if ways could be found by which certain imports
of agricultural products, which add to surpluses on EC markets, could be
redressed and if the Community's agricultural exports could be made less
costly. However, there is considerable international pressure on the CAP as
well, which makes it difficult to adopt these saving measures. It is
particularly the United States which, after having treated the EC rather
leniently for two decades, seems to have lost patience and begun to zero in on
the CAP.

It is both fascinating and awkward to discuss the Community's agricultural
trade policy in such times. Much can be said about this topic, but most of it
has already been said highly competently by many observers. And, it may be
difficult to see the forest of basic problems for trees of current issues.
Why not start with a naive question: Does the European Community have an
agricultural trade policy at all? Following this appetizer (presented in
section 1) we may continue, for hors d'oeuvre, with looking a bit into the
orchestration of measures and arrangements affecting the Community's
agricultural trade (section 2). After having, then, in section 3, gotten a
taste of the effects of the CAP on international market relationships we may
still not feel satisfied and choose, for a somewhat more substantial course,
to deal with the impact of the EC's agricultural trade on world market
instability.

One warning seems in place right at the beginning. The author of the present
paper does not happen to belong to those Europeans who tend to defend the CAP
against most external (and, indeed, internal) criticism. For a meeting which
aims at a comparative view of North American and European policies it might
have proved more stimulating and rewarding to invite somebody who fully
supports the CAP. The present author would not make a good _advocatus diaboli_.

The External Face of the CAP: Trade without Policy? It may appear to be
nonsense to ask whether the Community has an agricultural trade policy at
all. On the face of it, all ingredients of an agricultural trade policy are
there in the CAP. A host of measures affecting agricultural imports and
exports is perfectly applied; in the framework of international institutions,
above all the GATT, EC officials are engaged in agricultural trade
negotiations; and the Community is party to a number of bilateral and
multilateral agreements concerning agricultural trade. What else is required
for an agricultural trade policy?

What would be required for a bundle of measures that deserved to be called a
policy would be a concept behind all this, a considered approach, a defined
strategy. This would not necessarily have to be a highly consistent approach
or a carefully directed strategy, let alone a theoretically sound concept
which an economist might dream of. It would suffice that policymakers have
some idea, however, vague, of why and how they want to influence matters.

A minimum requirement for what would constitute a policy in these terms is that central variables in the domain considered are viewed, theoretically speaking, as elements of the objective function by policymakers. Thus, the existence of an agricultural trade policy would require that those responsible for running the policy take some interest in how agricultural trade flows and international market conditions develop. It is exactly the failure of the Community's agricultural policymakers to take this interest which raises doubts as to whether the Community has an agricultural trade policy at all.

Outside observers of the CAP have often inferred that one, if not the main, objective of this policy is to make the Community self-sufficient in food. The high level of CAP price support has been attributed to this objective. If this were a true description of European reality, the Community would in fact have an agricultural trade policy, though a rather degenerate and self-defeating one. The Community would in this case take an interest in its agricultural trade, the special interest being that it does not want to have this trade. However, self-sufficiency in food has never really been an objective of the CAP, though on occasions it has been used as a pretext by those lobbying for higher price support. This is best demonstrated by the fact that the Community, which originally was a net importer of most agricultural products and then experienced a steadily growing degree of self-sufficiency, has not really switched to less generous price support, once it had become self-sufficient in individual products. The milk-market regime did not change when the EC grew into a significant net exporter of dairy products, in the sugar-market regime the maximum quota for production covered by price guarantee has been set at around 120 percent of domestic EC consumption, for grains the "production target" as proposed by the Commission, and tentatively agreed by the Council, has been pitched such that net exports from the Community are implied, to give only a few examples. The degree to which the CAP has become more cautious since the EC has emerged as a major agricultural exporter is due not to trade (or rather nontrade, that is, self-sufficiency) considerations but to the financial problems exports have caused for the Community budget.

If self-sufficiency has not really been an objective of the CAP, there may have been other strategies for agricultural trade in the Community. However, it is hard to detect any. It has been stated countless times and has to be repeated here--measures affecting agricultural trade of the Community are essentially nothing more than adjuncts of an agricultural policy which is obsessed with domestic problems. A statement of this type has a certain validity for most countries' agricultural "trade" policies. Agricultural policies in general have often been described as attempts at exporting domestic problems, in particular, adjustment pressure on farmers and agricultural market instability, to other countries. 1/ Yet, the degree to which this applies to individual countries differs. In the EC the predominance of domestic issues over trade considerations is particularly pronounced.

1/ See for example, T. Josling, "International Policies and Programs." In: E. O. Heady and L. R. Whitting (eds.), Externalities in the Transformation of Agriculture: Distribution of Benefits and Costs from Development, Ames, Iowa, 1975; and S. Tangermann, "Hindernisse und Aussichten auf dem Wege zu einer internationalen Agrarpolitik," Quarterly Journal of International Agriculture, Heft 2, 1982.

This would possibly not be too surprising if the EC were esentially an agricultural importer. Importers are often more inward looking. Moreover, though the domestic and international effects of protection do, in principle, not depend on the net trade position of the country concerned, importers are usually more easily forgiven for a certain degree of protectionism than exporters. However, though still importing agricultural products in large quantities, the EC has meanwhile become a significant agricultural exporter, in particular in many products to which market regimes apply, that is, those products which are covered by the CAP. Hence, one might expect that the Community meanwhile takes an interest in world-market developments and tries, at least on its export side, to exert a deliberate influence on trade flows. But, this is hardly the case.

There are many indications which support this view. A few examples must suffice here. In the Community there are only vague ideas about how international markets for agricultural produce operate. What one knows about them is that prices are distorted. This is taken to imply that they are meaningless for Community policies. A minister for agriculture of one of the EC member countries is known for arguing: "There is nothing like a world market price. I have never met anybody who could explain to me what a world market price is. We cannot orientate our policy by world market prices." It seems never to have occurred to this high-level politician that the world-market price is simply the price at which the Community has to import and export agricultural products and that this implies that it is a very important criterion for policy decisions.

This detachment from the international trade scene also means that there is, at least among policymakers, bureaucrats, and farmers, very little information on the actual world-market situation. Very little is done by way of providing outlook on world market developments and gaining insights into prospects for individual products. While, for example, in North America and Oceania outlook conferences are important events on the agricultural calendar and considerable research is devoted to prospects on world markets, activities like this are close to nonexistent in the Community. In discussions on agricultural policy matters it occasionally happens that a farmer springs to his feet and cries: "If only the Government would set our prices free, then our earnings could eventually increase."

The failure to understand the significance of international trade per se is particularly frustrating when it comes to dairy products where Community exports hold some 40 to 60 percent of the World market, which means that the Community should really look at the international scene very carefully. For example, the EC surplus situation is often evaluated in the press, and one feels sometimes also among policymakers, not in terms of quantities to be exported but in terms of the level of intervention stocks. When the "butter mountain" in intervention has happened to come down for a while, because of heavy export subsidization, the press reports that "the butter surplus has disappeared," and many people get the impression that the problem has been solved. Farmers' unions, noting that the Community has a high share in world exports of dairy products, have occasionally requested the Commission to use its "market power" and export at higher prices, ignoring that this would be possible only if the Community would cutback its exports and, hence, its milk production.

If trade as such is not a significant variable for agricultural policymaking in the Community, it still exerts an indirect, though highly effective,

influence on the CAP via the budget. However, this does not say that the nature of this influence is appreciated. Again, the dairy sector provides a striking example. World-market prices for dairy products have been unusually high since 1980. This has allowed major savings in export restitutions for dairy products which have relieved the pressure on the Community budget considerably in 1980, 1981, and, to a lesser degree, in 1982. In the Community, essentially only this budget effect has attracted attention. It was a very significant factor in turning away from the "prudent" price policy of the late seventies and in silencing debates about CAP reform which had become heated before, because of the danger that Community spending could hit the budget ceiling soon. 2/ However, there is little awareness of the fact that this was due mainly to a very special situation on world markets.

It would be overambitious to try and explain this lack of a proper agricultural trade policy in the Community in few words. Some of the member countries take a strong interest in agricultural trade. This is particularly true for the export-oriented countries, like France, the Netherlands, Denmark, and Ireland. For these countries, agricultural exports constitute a major item in their balance of payments. However, this statement contains already one of the major clues for explaining the Community's attitudes, vis-a-vis agricultural trade. For individual member countries their agricultural trade may be very important. But, this is in any case both intra-Community trade and trade with third countries, about which an individual member country is essentially indifferent because the system of Community financing means that what an individual member country earns from agricultural exports or pays for agricultural imports is independent of whether it trades with other member countries or with the rest of the world. In economic terms this says that the shadow price of agricultural products for an individual member country is in any case (close to) the domestic Community price 3/ rather than the world market price.

If world-market prices have so little influence on individual member countries' well-being it is no wonder that nobody takes a keen interest in them. Yet, for the Community as a whole, world markets are very decisive. Agricultural trade of the Community with third countries comes, therefore, close to what could be called a public good for the individual member country. The theory of public goods has long ago explained why governments have to supply these goods. However, in the Community there is no Government in this sense. Major decisions are essentially taken in the Council of Ministers. The Council is a meeting place of national interests, but not a supernational government. Hence, it is little wonder that the public good, "interest in the Community's agricultural trade with third countries," is scarcely supplied in the Community.

2/ See, for example, S. Tangermann, "Financial Pressure on the European Community and its Consequences for the Future of the Common Agricultural Policy," paper prepared for delivery at the 1982 Annual Conference of the Agricultural Economics Society of Ireland, Dublin, October 29, 1982 (to be published).

3/ The actual shadow price is somewhat below the Community price, the difference being the share of the member country in the Community budget for import levies or export restitutions. See, for example, U. Koester, "EG-Agrarpolitik in der Sackgasse," Divergierende nationale Interessen bei der Verwirklichung der EWG-Agrarpolitik, Baden-Baden, 1977.

After having discussed the low importance which, in the Community, has traditionally been attributed to agricultural trade we have to recognize that recently things seem to be changing. The Community considers, and has in part already concluded, agreements regarding its imports of grain substitutes, and the notion of an "active export policy" and of "long-term export contracts" start playing a role in the CAP. These sound like first steps toward the development of an agricultural trade strategy. However, it has very much to do with the orchestration of trade measures under the CAP. The matter is, therefore, best deferred to the next section.

Instruments and Noninstruments, Arrangements, and Nonarrangements

Those who would argue that the Community does have an agricultural trade policy could point at the Community's very intensive use of instruments affecting agricultural trade. It is, in particular, the variable import levy and export restitution system for which the CAP has become notorious, although there are many more countries in the world that use instruments or measures which essentially function in the same way as variable levies and restitutions. There is no doubt that these instruments and other measures, applied under the CAP, have a significant influence on the Community's agricultural trade. However, by their very nature they are domestic, rather than trade-oriented, measures and, therefore, a sign that the Community does not have a trade policy.

Consider the difference between a tariff or an import quota on the one hand and a variable levy on the other. Policymakers deciding on a tariff or a quota explicitly decide to control trade. When making this decision they are forced to think about trade flows and may, also, be led to think about how their trade partners are affected. Variable import levies, on the other hand, are not, as such, decided upon at the political level. It is the threshold price which is politically determined. The actual levy applying in any particular moment is, then, in a purely technical manner calculated as the difference between the threshold and the world-market price. This separation between the decision on the threshold price and the levy calculation tends to make policymakers forget that they effectively decide on trade measures when they fix prices. It is, therefore, little wonder that the EC Council of Ministers for Agriculture in its annual price review considers various domestic variables, above all obviously the farm-income situation and, recently, budget availability, but does not seem to reflect upon the way in which its decisions impinge on trade.

While this general aspect may be of only academic interest, the purely domestic nature of the CAP's specific instrumentation has had at least one decisive practical consequence for the Community's relations with its agricultural trade partners. In all international negotiations about possible limitations or reductions of barriers against agricultural trade, the Community's partners found it difficult, if not impossible, to extract any concessions from the Community because the EC negotiators adamantly claimed that they were not in a position to put domestic policies on the negotiating table. In a way, they were and are right. A tariff or a quota is open to negotiation. It can be bound or relaxed. And, there is at least no technical difficulty to adhere to a committment once it has been made. But, how could an EC negotiator commit the Community to, say, bind certain import levies or export restitution? This would be completely outside the basic system of the CAP.

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Imagine the EC would agree not to exceed certain maximum export restitutions for given commodities. Some countries have tried to convince the Community it should enter into such agreements. What would happen if world-market prices dropped below a level which the EC could not, at given CAP intervention prices, reach by help of the maximum export restitutions? Either intervention stocks in the Community would have to grow infinitely, which would be financially, and at some stage even physically, infeasible. Or, the Community would have to drop the idea of fixed intervention prices and let domestic prices go down in parallel with world-market prices. In this latter case, the whole concept of price fixing by the Council of Ministers during the annual price reviews would become obsolete. In European terms it would be completely unthinkable that the Council would be deprived of its right to fix agricultural support prices. Thus, it is only logical if EC representatives in international negotiations claim there is nothing to negotiate about.

Even in less basic cases the EC is in great difficulties. The Community has been accused of violating the GATT code on export subsidies according to which no country should attract more than an equitable share of the world market. In the short run, and—considering domestic, political restrictions against abrupt CAP adjustments—also in the medium run, there is basically little the Community can, within its given system, do if its exports happen to grow out of proportion with the world market. Whatever is supplied to intervention agencies has to be acquired and, at some stage, must be exported.

Looking somewhat more into the details of administering the market regimes, however, one detects more flexibility than this basic textbook analysis would appear to suggest. This is at least true as far as controlling exports in the short run is concerned. While determining import levies by calculating the difference between the threshold price and the lowest offer price for imports is relatively straightforward and does not leave much room for manipulation, setting export restitutions is very much a business of discretionary ad hoc decisions. Contrary to the case of import levies there is no formula according to which export restitutions would have to be fixed. In the regulations establishing the market regimes for individual products, a number of loose criteria for fixing restitutions is set out, like world market prices, the market situation in the Community, and market prospects. However, as there is no formal rule for computing restitutions, the management committees, which are in charge of determining restitutions, have remarkable room for maneuver. This has at least two significant consequences.

First, the amount the Community exports in any given period is rather unpredictable. If the management committee responsible for dairy products, for example, decides that the current butter surplus should, for the time being, be taken on stock rather than exported, it sets export restitutions at such a low level that selling into intervention appears more profitable for the private trade than exporting. It is difficult to find out on what sort of criteria the management committees base these decisions. They may be speculating against the world market on occasions, though not necessarily very successfully. But, they have certainly other criteria in mind as well, which may not at all have to do with the international market situation. For example, intervention buying is cheaper for the Community budget, in a given moment, than exporting because the Community budget bears only the storage cost, while national exchequers have to finance the value of the commodity on stock. As the pure storage cost is usually less than the restitution required for export, the management committees can buy time for the Community budget by intervening now and exporting later. Thus, should the budget look scarce this

year but budget prospects are better for next year, exports can be shifted to next year and vice versa.

Second, the Community can capture any third-country market at any time for its exports if it so desires because export restitutions can be fixed such that any competitor is pushed out of business in this market. This (implicit) possibility of deliberate discrimination between different destinations for EC exports is potentially highly detrimental for competing exporters as it enables the Community to destroy traditional trade relations and marketing channels which, to establish, may have required considerable efforts. Discrimination is made the easier because most products, export restitutions may officially be differentiated among a number of regions of destination, notionally because of differing transport costs.

It is in this context that the notion of an "active export policy," advanced by some export-oriented member countries, above all France, has to be seen. Though it is not completely clear what this relatively recent addition to the CAP jargon is meant to say it appears that its proponents would like to see exports being given preference over intervention buying in general. Means for achieving this could be subsidized export credits, Government support for marketing, etc. Above all, however, an "active export policy" is probably thought to entail fixing comparatively high export restitutions such that the effective market price in the Community, which for surplus commodities now tends to stick to the intervention price level, is eventually raised above this level.

It is questionable whether administering market regimes in this way would already qualify for being called a trade policy. However, closer to a real trade policy would come what currently is discussed in the Community under the heading of "long term export contracts". Here again, it is not completely clear what the commission really had in mind when it, also pushed particularly from the French side, proposed this additional instrument for the CAP. Technically, these contracts would probably be similar to those which, for example, the United States has made with the Soviet Union and China regarding U.S. grain exports to these countries. However, like in these cases, the economic significance of such contracts would remain somewhat clouded as long as their provisions with regard to quantities and prices would retain the unavoidable degree of indefiniteness and even escape clauses. Of course, it can be argued that long-term export contracts at least provide a certain guarantee of access to markets and that they establish an opportunity for better control of export flows in order to avoid undesired events like the "great grain robbery." However, in the case of the Community both aspects would not really appear to be decisive. Given its variable export restitutions the Community will always find it possible to "create" access to markets on an ad hoc basis. And, the CAP market regimes provide means of monitoring trade flows closely.

It is difficult to stifle the suspicion that those lobbying for long-term export contracts in the EC want to take pressure off the CAP. Once the Community has entered into such contracts, they may hope, export quantities covered by them will politically no longer be regarded as annoying surpluses. After all the Community is, then, obliged to supply these quantities. Moreover, it may be possible to take export restitutions related to quantities under contract out of the CAP part of the budget and hide them somewhere else in the Community budget. Similar attempts continue to be made by interested parties with regard to expenditure related to other items, like the sugar

agreement under the Lome Convention, the agreement regarding butter imports from New Zealand, etc.

In any case, long-term export contracts could become a new feature in the CAP's external face, though not necesarily a positive one. A new feature which is already there is restrictions on imports of grain substitutes. The Community and Thailand have recently ratified a "voluntary" self-restraint agreement regarding Thai manioc exports to the EC. Negotiations with Indonesia and other GATT members have led to the tariff on manioc imports from these countries for quantities above a given ceiling (tariff quota). The Commission would, also, like to enter into negotiations with the United States on a similar type of agreement regarding U.S. corn gluten feed exports to the Community. The United States, however, has so far strictly declined to even consider such negotiations.

An evaluation of the Community's actual and potential policy on grain substitutes is less easy than it might appear on the face of it. At the first glance the exporters, subject to quantitative restrictions, appear to lose. However, this is not necessarily the case. The EC import demand for grain substitutes is probably highly price inelastic at prices below those equivalent to domestic EC grain prices. The revenue from sales of grain substitutes on the EC market is, therefore likely to increase if supplies are reduced such that substitute prices approach the equivalent of the EC grain-price level. Whether or not exporters benefit from this depends on whether the quantity restrictions are administered such that exporting countries can attract the rents resulting from the restrictions. Under self-restraint on the side of the exporters it is very likely that rents remain with the exporting countries. If only individual exporters impose self-restraints, however, the size of their rents is, also, determined by supply elasticities of their competitors and by the elasticity of substitution between their export commodity and other grain substitutes. Moreover, it depends on whether or not the EC imposes restrictions on imports of grain substitutes from these competitors too. Hence, the case is not at all clear-cut.

Whether the United States would really lose from a restraint on their exports of corn gluten feed is even less sure. In addition, to the aspect discussed above, one has to consider that fewer imports of grain substitutes into the Community would mean, to a certain extent, more grain (and soybean) imports and/or less grain exports of the EC. The United States, being the dominant grain and soybean exporter, would necessarily benefit on that score.

Looked at from the Community's point of view, an evaluation of different options for policy on grain substitutes is equally difficult. The main political motivation for restrictions on imports of grain substitutes is to save budget expenditure on export restitutions for grains. In this sense, import restrictions for grain substitutes would certainly be effective. Moreover, they may have positive welfare effects as the theory of the second best teaches that distortions of the use of goods are minimized if nominal rates of protection are equalized across commodities. Hence, grain substitutes would have to be made subject to the same relative import duties as grains. 4/ However, restrictions on imports of grain substitutes which are designed such that exporters attract the rents would not have the potential

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4/ One would, however, also have to consider how this changes effective protection of the goods produced out of grain and grain substitutes.

positive welfare effects for the Community. Moreover, the theory of the second best is academic if not naive insofar as it overlooks that the adoption of a second best solution is likely to counteract forces which otherwise might lead to approaching the first best solution. In the case of the CAP this means that adoption of restrictions on substitute imports will reduce the budget pressure which otherwise could have led to a lower level of agricultural protection in general.

But, this, again, is not necessarily clear. The EC commission has tried, in appropriate proposals, to establish a link between restrictions on substitute imports and its objective of adjusting EC grain prices gradually to the level of domestic grain prices in the United States. It is difficult to imagine that it will be successful in convincing the council that it should adhere to this link. The council may agree on further restrictions on substitute imports but refuse to adjust EC grain prices to the U.S. level.

This opens up an interesting opportunity for U.S. negotiators which, it seems, should be seriously considered. The United States and the EC could agree on a quid pro quo deal. The United States could promise to impose a self-restraint on its exports of corn gluten feed if and when the EC commits itself to adjusting its grain prices to the U.S. level in a given period. Leaving the uncertain welfare effects with regard to corn gluten feed aside, the United States should have a strong long-run interest in lower prices in the Community. EC agricultural policymakers, on the other hand, will hardly be inclined to adjust domestic grain prices downward unless this solves an acutely pressing problem. Grain substitutes are a problem for the Community. Cooperation of the United States in solving this problem may be an incentive for the council to accept the commission's proposals for lower EC grain prices.

Solutions like this could potentially lead the Community along the way toward a proper agricultural trade policy. The instrumentation and the philosophy of the CAP would no longer be exclusively domestically oriented but would take relationships between the Community and international markets into account.

World Market Forces and the CAP. Listening to some CAP officials one could believe that the Community pursues one of the most liberal and open agricultural trade policies. They point out that the Community is the largest agricultural importer in the world and that its agricultural imports have grown considerably in the past. However, it is easy to show that statements of this type are essentially a misuse of statistics.

Apart from (some types of) fruits and vegetables the Community is meanwhile self-sufficient or producing surpluses in essentially all major products covered by the CAP. Remaining net imports are, first, in those commodities which could be produced in the Community only at prohibitively high cost or not at all, such as tea, coffee, cocoa, tropical fruits, etc. Second, the Community has remained a large net importer of oilseed and protein feed. Historically, these commodities, also, were too costly to produce in Europe, hence, they were viewed as agricultural inputs or noncompeting outputs, low prices for which were either beneficial or irrelevant for European farmers. EC policymakers, therefore, had few difficulties in agreeing to bind tariffs for these products to zero or low levels. Consequently, imports of these commodities kept growing at relatively high rates. Meanwhile, new production technologies, geographical expansion of the Community, and changing market conditions have tended to increase the capacity and attractiveness of producing these commodities in the Community and one needs not be a prophet to

predict that conflicts between the Community and its traditional suppliers are on the cards. However, for the time being these types of commodities are more or less the only ones where the Community can claim, with a certain justification, that it pursues a relatively liberal policy, potentially against the interests of its own producers.

Apart from these product categories in which the Community has remained a net importer there are commodities of which the Community produces a surplus, but continues to import (in gross terms) considerable amounts. Those imports, of course, add to the high agricultural import bill of the Community. Apart from cases of product differentiation resulting in "intra-industry" trade, as in the case of wheat where the Community exports low and imports high qualities, these gross imports are to a significant extent due to trade preferences which the Community has granted to third countries. Famous examples are imports of sugar and beef from African, Pacific, and Caribbean countries under the Lome Convention and butter imports from New Zealand. In all of these cases the Community has failed to adjust its domestic production to the preferential imports. It is rather, producing surpluses already on the domestic market, such that preferentially treated imports simply add to the quantities which the Community exports. In the case of sugar, for example, the Community produces around 2 million tons (about 20 percent of domestic consumption) more than it consumes, while at the same time it imports 1.3 million tons (at guaranteed domestic EC prices) from developing countries under the Lome Convention, which means that it exports around 3.3 million tons. Gross imports of this type are certainly not a valid indication of the Community's "liberal" agricultural trade policy.

The growing surplus production in the Community tends to be viewed, inside and outside the EC, as a consequence of CAP price support. There is no doubt that this is a correct interpretation in the sense that EC surpluses would be lower (or EC imports higher) if protection of agriculture in the Community would be reduced. However, as long as one is talking about a growing surplus, that is, a change of the market situation over time, one should consider to what extent a change of price support can be made responsible for a change in the surplus. In this dynamic sense the analysis is much less trivial.

In the EC, relatively little research is done regarding the quantitative effects of the CAP on the Community's agricultural trade. The present author is not aware of any study which has tried, on a commodity-by-commodity basis, taking inter-commodity relations into account, to establish time series of the trade effects of the CAP. Hence, by implication, we seem to be, also, lacking knowledge regarding the effects of the CAP on worldwide trade flows and international price levels. Thus, only a few speculations will be offered here.

The CAP could be said to have led to growing distortions of international trade if protection of EC agriculture, vis-a-vis world markets, had increased over time. A thorough analysis of this question would have to start from a time series of rates of protection, both effective and nominal, taking all domestic and trade related measures of the CAP into account. As such a time series is not easily available, a much simpler indicator has to be used here; that is, the ratio between EC entry prices (inclusive of import levies) and world market prices, costs, insurance, and freight at the EC border. There is

no doubt that this is a very inadequate measure of the degree of protection, but given that domestic subsidies are not too important under the CAP, it may indicate at least the direction of changes of the (nominal) rate of protection.

Figures 1 through 4 show the development of this indicator for four selected commodities; that is, wheat, maize, beef, and butter (as a proxy for dairy products in general) from the early times of the common-market regimes to the early eighties. There has obviously been much variability of the price gap between the EC and the world market, due mainly to fluctuations of international prices. CAP prices have been unresponsive to changing world market conditions. The consequences for international instability will be discussed below. Here we are interested in the level of protection. For the commodities included here, CAP protection does, in general, not seem to have increased since 1968. Only in the case of beef protection does it seem to have been slightly higher recently than in the late sixties. Even if one considers that the price gap between the EC and world markets has recently been increasing again, it still does, in general, for the commodities covered here not seem to be above that of the late sixties.

Constant levels of protection, however, do not necessarily indicate that the degree to which the CAP distorts world markets has not changed. As far as the distortion of trade flows is concerned, it is the difference between countries' rates of protection rather than absolute levels of protection which is decisive. It could well be that the EC has kept its rate of protection vis-a-vis the world market, while other countries have lowered their protection. In this case, the degree of distortions resulting from the CAP would have increased.
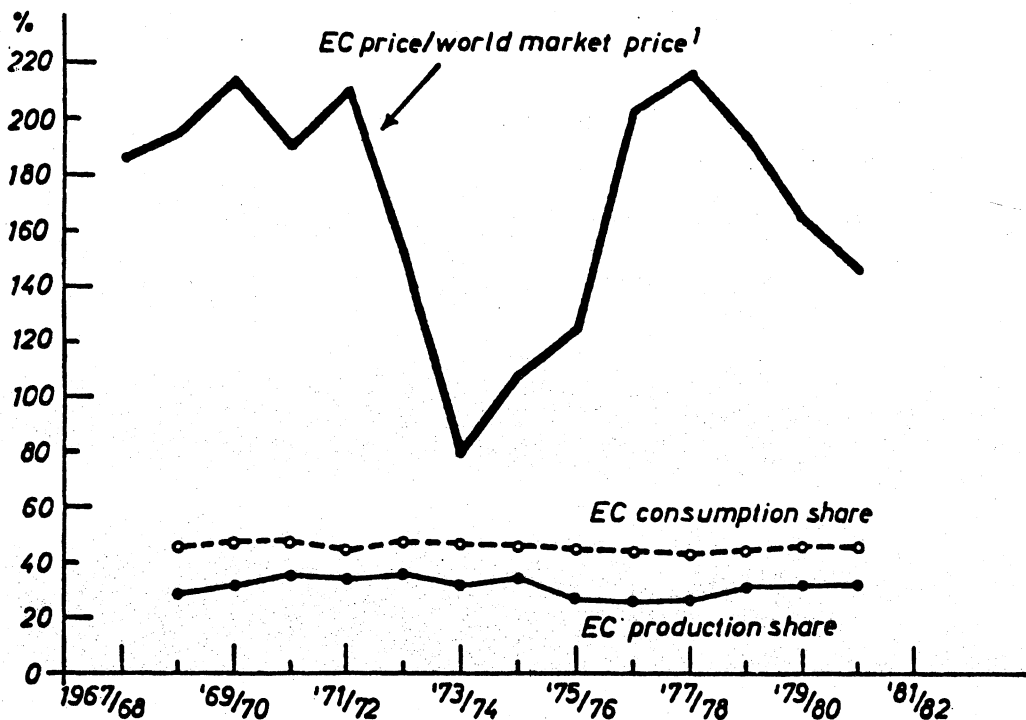
Again, it is not possible here to have recourse to available analyses, and a rough indicator will have to suffice again. Shares of the EC in aggregate developed country production and consumption of the commodities concerned may be used as such an indicator. As long as nonprice influences on production and consumption have not differed too much among countries, a growing protection in the Community, relative to protection in other developed countries, would show up in an increasing EC share of production and a decreasing EC share of consumption. However, from figures 1 to 4 5/, no discernible trend of EC shares in the developed-country aggregates emerges. Again, it is only in the case of beef that the EC's share of developed country production seems to have slightly grown in recent years. Thus, in general, one cannot say that the EC has captured a larger share of developed country production or that it has cutback its consumption in relative terms.

This would seem to be in contrast to the EC's rising surpluses. But, it only says that the EC's surpluses have roughly grown in line with the surpluses of the developed countries on aggregate. This is no excuse for the CAP and it does not at all say that the EC's dumping of agricultural products is not harmful for international trade. But, it puts the role of the Community in

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5/ For milk only the EC's share in production is given, because the wide array of dairy products means that there is no easy aggregation into total milk consumption.

Aggregate Production and Consumption of Developed Countries
—— Wheat ——

%

EC price/world market price[1]

EC consumption share

EC production share

1967/68   '69/70   '71/72   '73/74   '75/76   '77/78   '79/80   '81/82

1) Ratio of EC entry price to cif price

Source: EUROSTAT and USDA, World Agricultural Situation

Graph 2: **Ratio of EC to World Market Price and Share of EC in Aggregate Production and Consumption of Developed Countries**
—— Coarse Grains ——
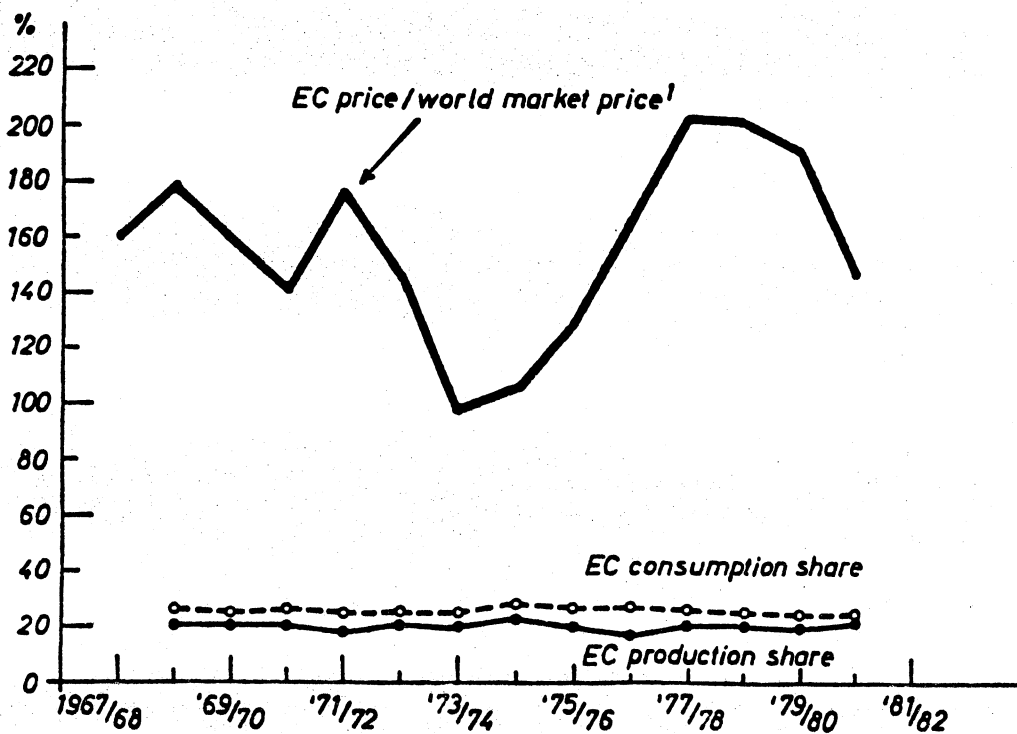
%

EC price/world market price[1]

EC consumption share

EC production share

1967/68   '69/70   '71/72   '73/74   '75/76   '77/78   '79/80   '81/82

1) Ratio of EC entry price to cif price

Source: EUROSTAT and USDA, World Agricultural Situation

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Aggregate Production and Consumption of Developed Countries
— Beef —

price ratio %

EC price / world market price [1]
(← scale)

200

150

100

50

0

production share %

50
40
30
20
10
0

EC production share
(scale →)

1968   1970   1972   1974   1976   1978   1980   1982
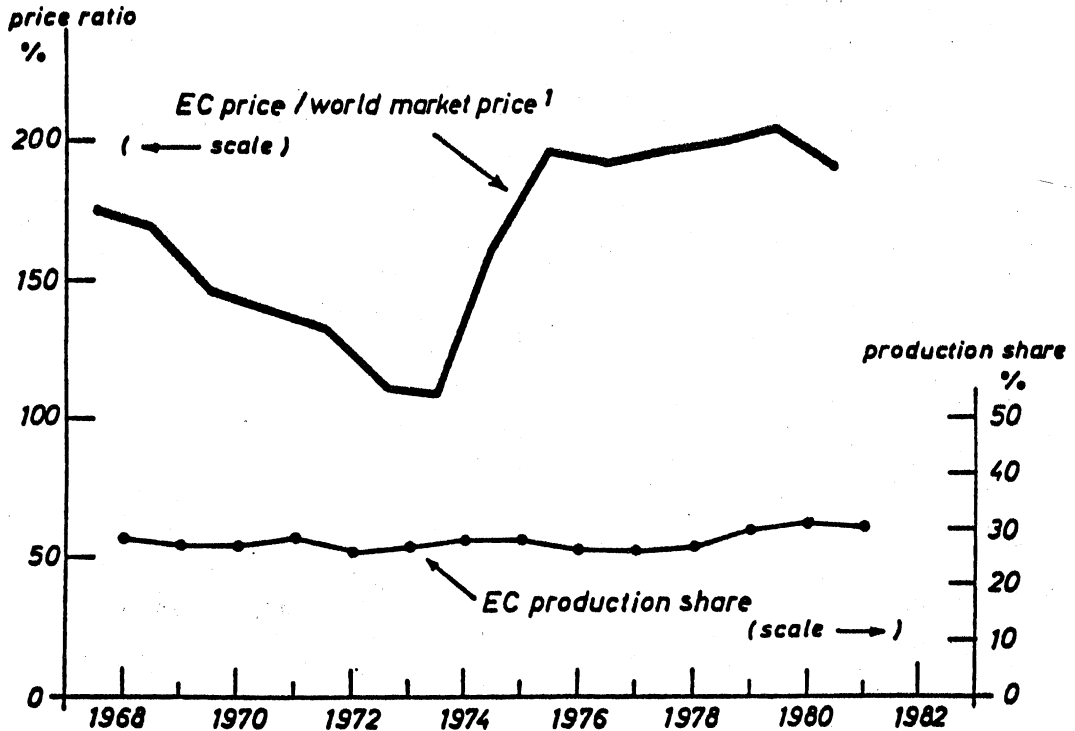
1) Ratio of EC entry price to cif price
Source: EUROSTAT and FAO

Graph 4: **Ratio of EC to World Market Price and Share of EC in Aggregate Production of Developed Countries**
— Milk and Butter —

price ratio %

600

500

400

300

200

100

0

EC price / world market price for butter [1]

(← scale)

production share %

100
80
60
40
20
0

EC share in production of raw milk
(scale →)

1968   1970   1972   1974   1976   1978   1980   1982
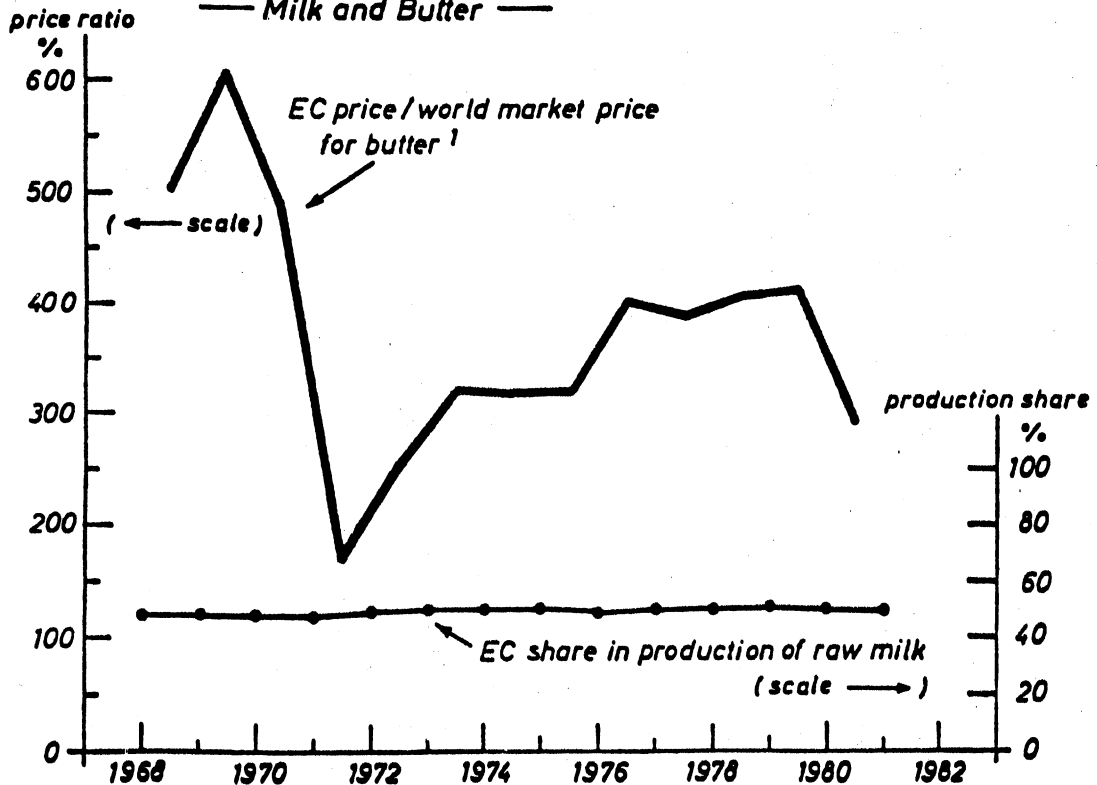
1) Ratio of EC entry price to cif price
Source: EUROSTAT and OECD

perspective. As in other developed countries, rising surpluses are not necessarily due to growing levels of protection. They may simply result from rates of technological progress in agriculture which outpace demand growth, even at declining real prices for farm products which the Community has experienced like other countries.

The CAP and World Market Instability: How Bad Is the EC? Since instability on world markets for agricultural products and its relationship with domestic stabilization policies has attracted the attention of economists it has become a conventional wisdom that a variable levy system like that of the Community tends to amplify international price instability because it takes domestic agricultural markets out of the worldwide buffer system. A number of theoretical contributions 6/ have made this point very strongly, and some empirical case studies 7/ have shown, among others, how domestic price stabilization under the CAP has added to world market instability during the crisis of the early seventies.

However, some more recent contributions 8/ have pointed out that the general argument is subject to a number of qualifications. If these assumptions are not fulfilled, the conclusion may change considerably. First, instability transmission between markets depends obviously on whether or not fluctuations on individual markets are correlated. Second, most countries' stabilization policies include storage as one of their elements, and stock changes may counteract or reinforce the instability effects of the country's trade policy measures. Third, domestic markets are not completely stabilized in most cases. The remaining scope for domestic adjustments is bound to affect the instability linkage with the rest of the world. Fourth, in markets with lagged supply response and, therefore, a tendency toward cyclical fluctuations, stabilizing domestic prices and, hence, domestic production may dampen rather than increase international instability.

6/ See for example, M. D. Bale and E. Lutz, "The Effects of Trade Intervention on International Price Instability," American Journal of Agricultural Economics, Vo. 61, 1979, pp. 512-515, and P. Lloyd, "The Effects of Trade Interventions on International Price Instability and National Welfare," mimeograph, May 1980.

7/ See for example, T. Heidhues and D. Hollstein, "Anpassungsmethoden bestimmter Lander oder Landergruppen an wechselnde Knappheitslagen auf den Weltgetreidemarkten," Agrarwirtschaft, Jg. 27 (1978), S. 144-156, and T. Josling, Developed-Country Agricultural Policies and Developing-Country Supplies: The Case of Wheat. International Food Policy Research Institute, Research Report No. 14. Washington, D.C., March 1980.

8/ J. M. DeBois. "EC Policies and Instability on World Commodity Markets," discussion paper, Institute of Agricultural Economics, Gottingen, March 1980; P. M. Schmitz and U. Koester, "The EC Sugar Market Policy and the Stability of World Market Prices for Sugar," paper presented at the Agricultural Trade Consortium Meeting, December 1981; J. V. Schrader, "Interdependenzen zwischen EG-Zuckerpolitik und Preis-oder Mengenschwankungen auf dem Weltmarkt," Agrarwirtschaft, Jg. 31 (1982), S. 6-15.

For each of these qualifications no generalization is possible. The way in which they modify the instability effects of trade policy measures may vary from case to case. Only an empirical analysis of the countries and commodities under consideration can lead to conclusions. Some results of such an analysis for the case of the EC and the commodities wheat, coarse grains, sugar, and beef will be presented here. A few other major countries are included for comparison.

The approach is rather elementary in nature. Essentially, it looks into correlations of various variables' fluctuations in order to find out whether certain instability links have or have not existed. Only quantity variables are used, not prices, because after all instability is transmitted between markets inside and outside the Community via quantities only. Fluctuations are defined as deviations from a linear trend. Observations are annual data for the period 1968/69 to 1980/81. Data are mainly from USDA published statistics.

The analysis starts from the basic identity

(1) $Q^i = C^i + dI^i + T^i$

where Q^i is production; C^i, domestic use; dI^i, stock increase; and T^i, net exports of the commodity considered for country or region i. On the assumption that production is given for a given year, we are mainly interested to see how domestic use, stock change, and trade react to production fluctuations at home and abroad.

Results are presented in tables 1 to 6. The following abbreviations are used: "dev X" is the deviation of variable X from its linear trend; "m(dev X)" is the mean of absolute deviations; "ratio" is the value of parameter b in the fitted regression; dev y = a + b dev X between dev X and dev Y; "correl" is the coefficient of correlation between dev X and dev Y; ** and * denote that the correlation is significant at the 1-percent or 5-percent level of significance, respectively. If symbols do not carry a country index they relate to the country or region given in the column head.

Tables 1 and 2 provide a survey of the magnitude and the sources of production instability for the commodities and countries covered here. Tables 3 to 6 present information concerning instability links between variables (or instability absorption).

Wheat production in the EC is slightly more stable than in the United States and considerably more stable than in the USSR, both in absolute and relative terms (table 1). In the EC, relative fluctuations of yields are 50-percent higher than those of acreage, there is no correlation between yield and acreage fluctuations, and there is no correlation between yield and acreage fluctuations (table 1). It is interesting to note that in the United States, acreage fluctuations are more pronounced than yield instability and that there is a strong negative correlation between acreage and yield fluctuations, which may be due to both natural conditions and policy influences.

Looking at the variability of the absorption variables, that is, the variables on the right-hand side of equation 1, one finds that in the EC wheat consumption is less stable than in the rest of the world (table 2). However, this is no surprise as in the rest of the world many countries' fluctuations may cancel out. More interesting is the comparison with individual third countries which shows that the EC has kept its consumption much more stable than both the United States and the USSR. Stock changes, too, have been much lower in the EC, both in absolute terms and relative to total domestic absorption (C + dI) (table 3). Moreover, the Community's net trade has exhibited comparative stability, too (table 3).

With regard to shifting or sharing the burden of instability between countries it is, firstly, interesting to analyze how countries react to changes of their domestic production. In the case of the EC, it is obvious that production fluctuations have mainly been absorbed by trade variations. Both the coefficient of correlation and the parameter of the regression on domestic production are highest for trade, lower for stock changes, and even lower for consumption in the EC (table 3). This can be taken to say that the EC has tended, to a certain extent, to export its production instability to the rest of the world. Of each ton of production above trend the EC has exported 0.41 tons (table 3). As there has been a positive, though low, correlation between production fluctuations of the EC and those in the rest of the world (table 1) this appears to mean that the EC has tended to aggravate instability in the rest of the world. This could further be indicated by the fact that there has been a relatively strong positive correlation between the EC's exports and exports of the rest of the world (table 3).

Exporting instability of domestic production to the rest of the world could be called active destabilization of world markets. In the case of wheat, the EC appears to have actively destabilized world markets to a certain degree. On the other hand, one could define passive destabilization as the lack of responsiveness of domestic absorption to fluctuations of worldwide production. Implicit in this definition is the idea that a fair sharing of the burden of worldwide instability would require that each country decreases its domestic absorption (proportionately) if world production decreases and vice versa. As far as domestic consumption is concerned, the EC has not participated in this burdensharing (table 3). However, stock changes and, therefore, total domestic absorption in the EC have exhibited a certain positive correlation with world production (table 3). Thus, one cannot say that the EC has featured passive destabilization of the rest of the world in the case of wheat.

The results for the remaining commodities will be summarized in less detail than for wheat. Domestic absorption of coarse grains in the EC was even more stable than that of wheat (see table 4). With regard to the absorption of domestic production fluctuations the EC has, in the case of coarse grains, used trade even more, and both consumption and stock changes considerably less as a buffer, than in the case of wheat. Thus, active destabilization has been clearly more pronounced for coarse grains. On the other hand, there are nearly no signs of a fair burdensharing by the EC in the case of coarse grains, such that passive destabilization has occurred.

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In the case of sugar (see table 5) both active and passive destabilization by the EC have been even more pronounced than in the case of coarse grains. Deviations of production from trend have been fully reflected in trade variations and not at all in consumption or stock adjustments. Domestic absorption in the EC has not been responsive to changing worldwide scarcities.

In the case of beef, on the other hand, active destabilization by the EC has been similar to the case of coarse grains. In terms of passive destabilization, however, the record looks even worse than for sugar as there is a negative, though not significant, correlation between domestic absorption in the EC and world production.

There is certainly the danger of over-interpretation of results, like those presented here. In particular, it has to be emphasized that regressions recorded here must not be interpreted as depicting causal relationships. Their only purpose in this case is to show whether and to what degree certain variables have moved in parallel. In a sense this is exactly what one would like to know when one is interested in instability links. However, it should be possible to draw some tentative conclusions.

The theoretical hypothesis that the Community's system of variable import levies and export restitutions tends to destabilize the rest of the world is not refuted by the empirical evidence presented here. However, there are marked differences between commodities. For wheat, the Community's record looks less bad than for coarse grains, and in both sugar and beef the Community's behavior has been more detrimental for the rest of the world than in grains. An explanation of these commodity differences would require much closer inspection than has been possible here. However, at least for the different performance of wheat and coarse grains an observation can be offered.

In wheat, the Community is a net exporter. Intervention buying in order to remove the surplus production from the domestic market therefore plays an important role in the EC wheat economy. Hence, stock changes tend to reflect domestic production fluctuations. Exporting out of stocks, on the other hand, can, at least in principle, take the market situation in the rest of the world into account. In coarse grains, however, the Community has a deficit. Intervention buying, and, therefore, stock changes play a less important role than for wheat. The volume of imports reacts immediately to domestic production changes, independently of the situation in the rest of the world. Another look at the numbers in tables 3 and 4 confirms that it is essentially the different behavior of stock changes which entails that wheat is less bad, both in terms of active and passive destabilization, than coarse grains. This seems to suggest that storage policies have to be given more prominence in analyses of the instability effects of individual countries' agricultural trade policies.

Table 1—Variability of grain and sugar production in the EC and selected countries, 1968/69 - 1980/81

	Dimension	EC	Rest of world	United States	USSR	Cuba	World total
Wheat:							
Mean deviation	Million tons	2.64	14.83	3.13	9.76	—	15.53
Mean production	Million tons	42.30	330.02	49.41	93.42	—	372.32
Mean relative deviation [1/2]	Percent	6.25	4.49	6.34	10.44	—	4.17
Correlation of deviation with EC	—	1	.22	.18	.27	—	.39
Ratio of mean relative deviations of yield and acreage	—	1.50	1.92	.48	3.45	—	1.83
Correlation yield-acreage deviation	—	.00	-.10	-.67	.12	—	-.12
Coarse grains:							
Mean deviation	Million tons	2.55	17.18	12.68	11.80	—	17.27
Mean production	Million tons	61.82	593.58	185.92	84.26	—	655.39
Mean relative deviation [1/2]	Percent	4.12	2.89	6.82	14.00	—	2.63
Correlation of deviation with EC		1	-.03	.29	-.26	—	.14
Ratio of mean relative deviations of yield and acreage		3.51	2.26	1.90	2.37	—	2.19
Correlation of yield-acreage deviation		-.13	-.31	-.76	.18	—	-.36
Sugar:							
Mean deviation	Million tons	.45	2.52	.29	.65	.65	2.56
Mean production	Million tons	10.61	69.15	5.66	8.38	6.30	79.76
Mean relative deviation [1/2]	Percent	4.24	3.65	5.08	7.70	10.27	3.21
Correlation of deviation with EC		1	-.06	-.26	.42	.13	.11
Ratio of mean relative deviations of yield and acreage		1.74	.87	.94	5.41	1.98	.75
Correlation of yield-acreage deviation		-.10	.63	-.73	-.07	-.33	33

Table 2--Variability of beef production in the EC and selected countries, 1968/69 – 1980/81

	Dimension	EC	Rest of world	United States	USSR
Mean deviation	Million tons	.23	1.24	.62	.23
Mean production	Million tons	6.32	31.76	10.60	6.00
Mean relative deviation [1/2]	Percent	3.66	3.90	5.83	3.82
Correlation of deviation:					
with EC		1	.05	.06	.15

Continued--

Table 2—Variability of beef production in the EC and selected countries, 1968/69 – 1980/81—Continued

	Dimension	Australia	Argentina	New Zealand	World total
Mean deviation	Million tons	.27	.23	.04	1.27
Mean production	Million tons	2.64	1.51	.47	38.08
Mean relative deviation [1/2]	Percent	10.20	14.92	8.79	3.33
Correlation of deviation:					
with EC		.00	-.26	-.08	.23

Table 3--Variability of grain and sugar production in the EC and selected countries, 1968/69 - 1980/81

Item	Dimension	EC	Rest of world	United States	USSR	World total
m(dev C)/m(C)	Percent	3.10	2.63	4.93	4.98	2.55
m(dev dI)	Million tons	1.89	14.33	5.06	8.80	15.15
m(dev dI)/m(C+dI)	Percent	4.54	4.33	23.15	9.09	4.06
m(dev C+dI)/m(C+dI)	Percent	4.88	4.42	22.73	9.43	4.17
m(dev T)	Million tons	1.55	1.55	3.00	3.60	1/ 3.93
m(dev T)/m(C+dT)	Percent	3.73	.46	13.72	3.72	1.05
ratio (correl) between dev Q						
and dev C		.19	.23	-.13	.20	.23
		(.43)	(.34)	(-.40)	(.40)	(.36)
and dev dI		.38	.75	1.23	.60	.75
		(.52)	(.75)	(.81)	(.76)	(.76**)
and dev T		.41	.01	-.10	.18 1/	-.10
		(.68)	(.12)	(-.11)	(.48)	(-.39)
ratio (correl) between dev Q^world						
and dev C		-.002	.24	.01	.001	.24
		(-.03)	(.38)	(.20)	(.000)	(.36)
and dev dI		.07	.63	.01	.44	.75
		(.55*)	(.72)	(.05)	(.81)	(.76**)
and dev (C+dI)		.07	.92	.03	.44	1
		(.54*)	(.99**)	(.10)	(.72**)	(1)

ratio (correl) between dev T^{EC} and dev rest of world exports :(1.90 .63*)

ratio between dev T^{EC} and dev rest of world production :(- -1.09 .12)

1/ World exports.

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Table 4—Coarse grains—Domestic and worldwide instability absorption, EC and selected countries—1968/69-1980/81

Item	Dimension	EC	Rest of world	United States	USSR	World total
m(dev C)/m(C)	Percent	2.08	2.17	6.51	9.12	2.01
m(dev dl)	Million tons	1.08	9.24	9.02	1.98	8.55
m(dev dl)/m(C+di)	Percent	1.46	1.58	6.27	2.17	1.30
m(dev C+dl)/m(C+dl)	Percent	2.49	2.90	7.55	10.05	2.63
m(dev T)	Million tons	2.32	2.32	3.12	2.55 1/	2.53
m(dev T)/m(C+dT)	Percent	3.14	.39	2.16	2.79	.38
ratio i (correl) between dev Q and dev C		.10 (.17)	.64 (.79**)	.51 (-.74**)	.67 (.96**)	.72 (.86**)
and dev dl		.20 (.49*)	.31 (.58*)	.35 (.53*)	.10 (.59*)	.27 (.54*)
and dev T		.69 (.80)	.03 (.23)	.13 (.57*)	.19 (.77**)	1/ .03 (.21)
ratio (correl) between dev Q^world and dev C		.03 (.38)	.68 (.84**)	.28 (.51*)	.26 (.55)	.72 (.86**)
and dev dl		.00 (.00)	.27 (.51*)	.24 (.47)	.02 (.23)	.27 (.54*)
and dev (C+dl)		.03 (.37)	.96 (.99**)	.53 (.76**)	.29 (.54*)	1 (1)

ratio (correl) between dev T^EC and dev rest of world exports : (.90 .69**)

ratio between dev T^EC and dev rest of world production : (- -1.504 .23)

1/ World exports.

Table 5—Sugar: Domestic and worldwide instability absorption, EC and selected countries, 1968/69 - 1980/81

Item	Dimension	EC	Rest of world	United States	USSR	Cuba	World total
m(dev C)/m(C)	Percent	2.34	2.00	3.77	1.96	11.22	1.90
m(dev dI)	Million tons	0.36	1.90	.27	.37	.32	2.10
m(dev dI)/m(C+di)	Percent	3.34	2.74	2.66	3.32	54.23	2.62
m(dev C+dI)/m(C+dI)	Percent	3.66	3.44	3.85	4.06	57.96	3.14
m(dev T)	Million tons	.70	.90	.43	.42	.62	1/ .58
m(dev T)/m(C+dT)	Percent	6.51	1.30	4.24	3.77	105.08	.72
ratio (correl) between dev Q^i							
and dev C		.07	.12	.17	.17	.04	.18
		(−.12)	(.25)	(.12)	(.52*)	(.46)	(.33)
and dev dI		.001	.75	.58	.47	.21	.75
		(.00)	(.87**)	(.65**)	(.68**)	(.51*)	(.83**)
and dev T		1.06	.12	.13	.34	.74	1/ .12
		(.77**)	(.34)	(.10)	(.56*)	(.91**)	(.39)
ratio (correl) between dev Q^W							
and dev C		−.008	.18	−.006	.01	.005	.18
		(−.08)	(.37)	(−.04)	(.22)	(.20)	(.38)
and dev dI		.002	.75	.58	.47	.02	.75
		(.000)	(.87**)	(.65**)	(.68**)	(.19)	(.83**)
and dev (C+dI)		.04	.88	.05	.12	.02	1
		(.29)	(.95**)	(.36)	(.67**)	(.22)	(1)

ratio (correl) between dev T^{EC} and dev rest of world exports :(1.43 .76**)

ratio (correl) between dev T^{EC} and dev rest of world production :(− − .964 .24)

1/ World exports.

Table 6—Beef: Domestic and worldwide instability absorption, EC and selected countries, 1968/69–1980/81

	Dimension	EC	Rest of world	United States	USSR
m(dev C)/m(C)	Percent	1.61	4.01	5.40	3.45
m(dev dI)	Million tons	.07	.05	.02	.05
m(dev dI)/m(C+dI)	Percent	1.06	.16	.17	.83
m(dev C+dI)/m(C+dI)	Percent	2.03	4.02	5.40	3.36
m(dev T)	Million tons	.16	.20	.07	08
m(dev T)/m(C+dI)	Percent	2.43	.64	.61	1.33
ratio i (correl) between dev Q and dev C			.17	.96	1.00	.71
			(−.38)	(.98**)	(.99**)	(.89**)
and dev dI			.15	−.004	.001	.04
			(.42)	(.11)	(.03)	(.18)
and dev T			.68	.04	.009	.15
			(.84**)	(.26)	(−.07)	(.43)
ratio (correl) between dev Q^W and dev C			−.01	.95	−.43	.06
			(−.22)	(.99**)	(−.87**)	(.41)
and dev dI			−.003	−.007	.001	−.01
			(.05)	(−.17)	(.08)	(.31)
and dev (C+fI)			−.02	.96	.43	.005
			(−.21)	(.98**)	(.87**)	(.03)

Table 6—Beef: Domestic and worldwide instability absorption, EC and selected countries, 1968/69–1980/81—Continued

	Dimension	Australia	Argentina	New Zealand	World total
m(dev C)/m(C)	Percent	8.86	17.78	9.21	3.14
m(dev dI)	Million tons	.02	.03	.02	.09
m(dev dI)/m(C+dI)	Percent	.96	4.00	12.5	.23
m(dev C+dI)/m(C+dI)	Percent	8.66	20.21	18.21	3.15
m(dev T)	Million tons	.12	.13	.03	1/ .15
m(dev T)/m(C+dI)	Percent	5.76	17.33	18.75	.39
ratio i (correl) between dev Q					
and dev C		.66	.43	.15	.93
		(.89**)	(.82**)	(.46)	(.99**)
and dev dI		−.02	.09	.37	−.01
		(−.36)	(.63*)	(.78**)	(−.14)
and dev T		.35	.47	.46	1/ .04
		(.72**)	(.82**)	(.77**)	(.26)
ratio (correl) between dev Q^w					
and dev C		.08	.08	.007	.93
		(.56)	(.92**)	(.62*)	(.99**)
and dev dI		.00	.01	.01	−.01
		(.04)	(.48*)	(.69)	(−.14)
and dev (C+fI)		.08	.10	.01	1
		(.58*)	(.89)	(.82**)	(1)

ratio (correl) between dev T^{EC} and dev rest of world exports :+ + .43 .26)

ratio (correl) between dev T^{EC} and dev rest of world production :+ + 1.664 .25)

1/ World exports.