

DOES FOOD SECURITY JUSTIFY SUPPORT FOR AGRICULTURE?

Food security is often invoked to justify protectionist policies in the agricultural sector. Yet supplies are largely guaranteed due both to possible forms of substitution on the supply side and on the demand side. Protectionist measures have shown themselves to be poorly adapted to the stabilisation of world prices, when they do not in fact worsen price volatility. Lastly, rules relating to the quality of products are preferable to traditional forms of protection which are less direct and more expensive. The best justification for agricultural support therefore lies in the recognition of the "multi-functionality" of this activity. Agriculture not only produces goods, it also produces regional and environmental services whose public nature justifies collective support. For these reasons, CAP agricultural support should be reformed along the lines set out by the WTO.

European agriculture is in a state of crisis. While international pressure to liberalise this sector is strengthening, the Common Agricultural Policy (CAP) model is being called into question within the European Union. By constantly seeking productivity growth, farm producers have neglected the consequences of their activity on the environment. The crisis has opened up the debate as to the goals of agricultural support. Does the sector hold a specific place in the economy? Should it be protected, through special support? How is the cost of such support to be justified?

Assuring the security of food supplies was one of the essential objectives that lay at the origin of the CAP: the goal was to organise production so as to guarantee the satisfaction of overall demand. For some years now, two new dimensions have been added to this concept. First, strong price volatility for agricultural and food products creates substantial risks for the world's poorest populations. Second, the quality and the innocuous nature of food products have become major concerns. Should a trade authority intervene to ensure food security, in the three senses of the term? Would this challenge trade globalisation?

■ SECURING SUPPLIES

Ensuring food supplies for a population is one of the oldest goals of a policy aimed at supporting agriculture systematically. From this point of view, the issue of food security led to the creation of the Food Agricultural Organisation (FAO) of the

United Nations Organisation, in 1945. This idea is also strongly present in the design of the CAP: as of 1962, Europe has striven for food self-sufficiency.

Various forms of production organisation and trade may be envisaged in order to supply a population. The global vision (held by the World Bank, for example) stresses the importance of international trade and the essential role of comparative advantage, with insolvent, deficit countries being accorded food aid. A more nationalist vision (FAO, European Union) underlines the systematic risks of cuts in supplies, and the importance of self-sufficiency¹.

Aside from the risk of facing a complete breakdown in food supply, a dependent country is exposed to partial supply cuts and price manipulation by the exporting countries. Economic theory shows that a country or a cartel of exporters holds such power when, on the one hand, the share of global production controlled by the cartel is high, and on the other hand, when global demand and the cartel supply of the good react only a little to price increases. Agricultural production for certain crops (maize, rice, soya etc.) is indeed strongly concentrated, and the demand and supply of agricultural products is highly rigid, at least in the short term. This could justify public intervention in support of local production in order to guarantee supplies to national consumers.

The weight of such arguments is qualified, however, by the fact that supply and demand elasticities generally rise in the medium and long term. When a particular product is rationed, its world price tends to rise. In the medium term, production

1. This latter issue is often associated with a certain vision of development: proponents of self-sufficiency insist notably on the essential role agriculture plays in economic take-off.

Table - Distribution of world production (in volume terms) for several basis products - 1998/1999 (in %)

Wheat		Maize		Rice		Sugar		Soya	
China	18.8	United States	41.8	China	33.6	EU	13.7	United States	48.8
EU	17.8	China	20.9	India	22.2	Brazil	13.0	Brazil	19.5
United States	11.8	Brazil	5.5	Indonesia	9.1	India	13.0	Argentina	10.6
India	11.3	EU	5.9	Bangladesh	5.0	China	6.6	China	8.6
CIS	9.6	Mexico	3.0	Vietnam	4.9	United States	5.9	EU	1.2
CEECs	5.1								
Canada	4.1								
Australia	3.6								

Source: D m ter, 2000.

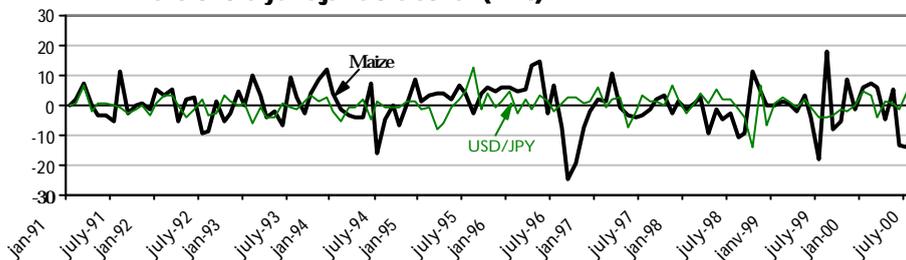
outside the cartel must increase. At the same time, demand may shift to substitute products. In other words, a country or a group of countries cannot exploit its dominant market position indefinitely.

This issue would be important were a single country to be the producer of a large share of all agricultural products. Other countries would not then be able to find substitutes. Nor would they be able to retaliate within the field of agriculture against the country which started such an aggressive policy. Presently no such concentration exists, but it is also true that it is difficult to reach definitive conclusions in as far as a general liberalisation of the agricultural sector could largely modify the distribution of world output, which could lead to the emergence or the disappearance of certain producer countries. However, even if trade liberalisation generates greater concentration in a small number of countries (eg: the Cairns group: Australia, New-Zealand, Canada etc.), they would have little incentive to cut supplies voluntarily. Substitution for

The debate over free trade and price instability of agricultural goods has strengthened since 1998, when in the wake of the Asian crisis, economists such as J. Bhagwati or P. Krugman² stressed, if not the inefficiency, then at least the costs generated by liberalised capital movements. This argument was extended to include trade in raw materials and for agricultural goods, in order to gauge the costs which could stem from the complete liberalisation of these sectors. A detailed study³ has notably shown that price volatility of agricultural goods is entirely comparable to the price of financial assets, and far superior to that of the price of manufactured goods. But, while it is easy to demonstrate the instability of agricultural prices (cf. graph), it is difficult to conclude what the consequences for the trade liberalisation process should be.

If the origin of the instability is exogenous (for example, random climatic fluctuations), then liberalisation should reduce price instability. This stems especially from the fact that with a very large, unified market the same random shocks are

Graph - Relative monthly variations in the price of a bushel of maize (Chicago) and of the yen against the dollar (in %)



Source: IFS of the IMF.

consumption is, in the short term, stronger than for other raw materials and supply can rise strongly in the medium term. The chances of a world cartel in agricultural products trying to capitalise on a deliberate strategy of reducing supply would therefore appear to be very slight and in itself does not justify self-sufficiency policies.

THE STABILITY OF AGRICULTURAL PRICES

The stability of agricultural prices, and beyond this consumer food products, is a fundamental issue. These are essential goods. Price volatility is costly, especially for poor populations, but also for single-product exporters.

absorbed far better. In contrast, when the origin of the distortion is endogenous (errors in expectations formed by agents, demand rigidity etc.) then liberalisation may lead to greater instability.

Whatever the impact of trade liberalisation in agriculture may be, it is generally admitted that current policies, which are very interventionist, worsen instability. The major producing countries are highly protected, such as the European Union, and seek to stabilise prices in their home markets. As a result, surplus quantities (either of demand or supply), which are highly variable, are transmitted to the world market. These policies basically mean that instability is being exported, at the expense of small developing countries which have liberalised their economies and which import agricultural output⁴. The

2. J. Bhagwati, "The Capital Myth: The Difference between Trade in Widgets and Dollars", *Foreign Affairs*, vol. 77, n°3, pp 7-12, May/June 1998; P. Krugman, "The Return of Depression Economics", *Foreign Affairs*, January/February 1999, pp 56-74.

3. T. Voituriez & F. G rard, "Les arguments contre le libre- change des capitaux sont-ils transposables aux march s agricoles ? Les le ons d'une controverse", Working Paper for the colloquium on *Agriculture et commerce international* SFER/CEPII/INRA/INA/GDR E.F.I., 6 and 7 f vrier 2001.

4. Cf. T. Giordano, Y. Jadot, L. Tubiana & B. Vergriette, "S curit  alimentaire, Etats et march s internationaux", *D m ter 97/98 - Economies et strat gies agricoles*, Armand Colin, Paris 1997.

liberalisation of trade will suppress this factor of instability. K. Anderson and R. Tyers⁵ estimate that complete free trade would significantly reduce the volatility of agricultural prices: price fluctuations would run at about a third of their current level with interventionist policies.

That other sources of agricultural price volatility may exist is not necessarily an argument for retaining a certain level of intervention: there is no reason why production subsidies and prices should be an instrument adapted to this type of structural problem, or at least that they should be superior to more direct tools as world stabilisation organisms. It is thus possible to envisage the liberalisation of agricultural products in rich countries and forms of control in poor countries, based on the schema put forward in the field of global financial liberalisation.

■ THE QUALITY AND HARMLESSNESS OF PRODUCTS

In 1986, the World Bank introduced a qualitative dimension into the concept of food security. This dimension is today of primary importance. Currently opinion (at least until recently) has held that local production is a guarantee of product quality and harmlessness. In contrast, foreign products cause anxiety. The agricultural lobbies thus justify their demand for protection by the fact that national agricultural production is a guarantee of food quality. A succession of "European scandals" (bovine spongiform encephalopathy, dioxin, swine fever, foot-and-mouth disease etc.) should seriously weaken such sentiment.

Theoretically, free trade is better than generalised protection, in agricultural as in other sectors. In a world of perfect competition and information, it helps bring down the costs of goods with of a specific quality and raises the number of varieties available. Under free trade, consumers thus have access to products which correspond best to their desires or can buy a greater variety of products. However, if the competition or information is imperfect, different conclusions may follow⁶.

To illustrate the first situation, let us take an autarkic country in which a monopoly producer supplies the local market with a product of a certain quality. To obtain this quality, the monopoly must carry out a certain level of research & development (R&D) which represents a fixed production cost. If the market subsequently opens, competition will rise as a foreign company can enter into competition with the national firm. Competitive pressure is beneficial for the economy in terms of consumer prices. But it also leads to a cut in R&D, via a fall in profit margins, and hence to a fall in quality.

In the case of imperfect information, let us take a market with a product whose quality only becomes known to the customer after consumption. If a producer seeks to sell a higher-quality product he/she will need to obtain a higher price than that

which would prevail with perfect information, in order not to cheat. The difference in prices, which constitutes an "information rent", is a diminishing fraction of the prices applied to lower-quality goods. The lower these latter prices, the more the producer is encouraged to cheat: he can produce at a low quality and immediately make a profit, even if consumers will trust him/her less in the future. In the case of low prices for low quality products, a producer will need to benefit from a high rent in order to supply high-quality products. Trade liberalisation may make it possible for a country to import low-quality products at low prices. In this case, if local producers supply higher-quality goods, then they will tend to raise their prices on these goods (constituting a rise in the rent on information). Liberalisation may therefore have ambiguous consequences.

Economic analysis also makes it possible to show up various situations in which shifting from autarky to free trade is of no interest to the economy. Should traditional protectionist measures be applied as a consequence? S. Donnenfeld and W. Mayer⁷ answer this question by describing a sector made up of numerous companies which produce and export different qualities of one particular good. No company alone has any interest in raising the quality of its product so long as export demand depends on perceived quality, in other words the average quality of all goods supplied by all companies. If the government is concerned about raising the quality of national goods, then it can impose a voluntary restriction on exports, which will encourage the producers to maximise their unit profits and hence the quality of the goods sold⁸. But a minimum quality standard would be a preferable solution: restricting exports is an instrument with only an indirect impact on the objective in hand, and which may have negative side-effects (a fall in export volumes, costs linked to distributing licences etc.).

This conclusion is reached by most analyses: liberalisation is the best policy (annulment of tariffs, quotas, subsidies etc.) accompanied by the parallel introduction of regulations: labels, certificates of origin, the harmonisation of technical specifications, or even a minimum quality standard. Such regulatory instruments are especially adapted to goods requiring consumer confidence, goods whose quality is never revealed to the consumer, or just in the long term. Many such products exist in agriculture. Classic protectionist measures are the instruments are the cheapest.

■ WHAT ARE THE JUSTIFICATIONS FOR SUPPORTING AGRICULTURE?

The objective of food security is often put forward to justify protectionist policies in the agricultural sector. Given the arguments which have been put forward here, such policies

5. K. Anderson & R. Tyers, "How Developing Countries Could Gain from Agricultural Trade Liberalization in the Uruguay Round", in I. Goldin & O. Knudsen, *Libéralisation des échanges agricoles*, OCDE, Paris, 1990.

6. See, for example, E. Gozlan & S. Marette, "Commerce international et incertitude sur la qualité des biens échangés", *Economie internationale* n°81, 1st quarter 2000, pp 43-63.

7. S. Donnenfeld & W. Mayer, "The Quality of Export Products and Optimal Trade Policy", *International Economic Review*, vol. 28, n°1, Feb. 1987, pp.159-74.

8. Profit is generally an increasing function of quality and unit value-added.

would appear to be little adapted, and even damaging, both to guaranteeing supplies and stabilising world prices, as well as to the harmlessness of products. On this last point, the implementation of national regulations and their harmonisation at the international level should be favoured.

Beyond food security, the political argument justifying subsidies for production and exports cannot be seen as legitimate, given the export orientation of European agriculture. There is no rationale for exporting when the costs incurred to an economy exceed earnings. From this point of view, economic theory is formal: an assessment of such subsidies is negative. They impose budget costs and higher prices for consumers. Furthermore, such subsidies increase the instability of world markets and are damaging to smaller economies. The best-grounded justification for supporting the agricultural sector thus lies in the fact that it is "multifunctional". Agriculture does not just produce goods, it also provides regional and environmental services. As L.-P. Mahé has pointed out, the upkeep of the countryside, the preservation of resources and the settlement of areas suffering natural handicaps are all services of a public nature which clearly justify collective financing of the agricultural sector⁹. The collective demand for regional and environmental services cannot be met within the framework of a type of agriculture whose income only stems from the sale of its agricultural products in world markets. Accordingly, the instruments for remunerating such services must be specific and uncoupled from income on agricultural products. For agricultural activity to improve the public environment, a system combining subsidies and remuneration, but also penalising and so

discouraging pollution, must be designed to take into account the social costs and benefits related to it, as is the case for all such public goods¹⁰. The social benefits derived from an improvement in the environment may be evaluated by surveys of what individuals are prepared to pay for such a good or by indirect measures based on the evolution of prices in a market influenced by this good (the housing market, the location of holiday accommodation in the countryside, etc.)¹¹.

These arguments point to continued renovation of the CAP towards a system implementing regulations on quality and towards the creation of support instruments of agricultural earnings which are uncoupled from the supply of products and which are linked to precisely defined functions. Such an evolution should conform to the rules of the Agricultural Accords of the Uruguay Round relating to support, and should improve the position of European negotiators within the possible framework of a new WTO cycle.

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9. L.-P. Mahé, "Comment négocier le modèle agricole à l'O.M.C. ?", *Le Monde*, 20 February 2001, p. VII. See also L.-P. Mahé & F. Ortalo-Magné, *Politique agricole : un modèle européen*, Presses de Sciences Po, 2001.

10. For further information on these issues see D. Bureau & J.-C. Bureau, *Agriculture et négociations commerciales*, Rapport au Conseil d'Analyse Economique, La Documentation française, Paris, 1999.

11. A recent study of the French case shows the positive impact which copses, orchards and meadows have on the rental of holiday accommodation in the country side. See V. Richard, "La rémunération des effets externes de l'agriculture", *in* D. Bureau & J.-C. Bureau, *op. cit.*

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