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RESEARCH IN ECONOMICS AND RURAL SOCIOLOGY

French agriculture and the food industry: in search of lost competitiveness

The competitiveness of the European agricultural and food industries has been one of the key concerns of the Common Agricultural Policy (CAP) since its creation in 1958. This objective was reaffirmed in the proposals made for the CAP reform post-2013. Yet, this competitiveness became fragile during the last decade, as we can see in the increase of the EU-27 trade balance deficit from 7 to 11 billion between 2000 and 2009. In France, agricultural production has been stagnating for 15 years, productivity has failed to increase and imports of food and agricultural produce are progressing more rapidly than exports.

Stagnation of production and stalled productivity gains in agriculture

Agricultural and food-processing production has stagnated in France, and the rate at which productivity increases has been slowing since the middle of the 90s. From 1960 till 1996, agricultural production increased at an average annual rate of 1.6 %, which corresponds to a near doubling over the period. This rate approximately corresponds to the increase in total productivity, which means that while agricultural production increased the quantity factors in production increased proportionally (work, land, capital, intermediate consumption). A great part of the increase in overall productivity was due to increased productivity (about 5% a year), with a corresponding decrease in the number of people employed on farms. The increase in output, in particular in vegetable production, also generated a significant increase in the partial productivity of the soil.

But, since 1996, production has stagnated and productivity gains have declined to the current rate of approximately 0.6% per year. These

productivity gains are chiefly due to the increase in working productivity which is also slowing (increase of 2% per year), while the partial productivity of intermediate consumption has stagnated and capital productivity has deteriorated (table1).

After the implementation period of the intensive model of production (1960-1980), the productivity of intermediate consumption improved between 1980 and 1995, with progress in genetics increasing the efficiency of input factors. After 1996, we see an inversion of this trend. The drop in capital productivity is due to a certain resumption of investments, which had fallen in the previous decade.

Productivity growing slowly in agribusiness

For long periods, gains of productivity in the agribusiness were always lower than those seen across the industry as a whole (respectively 0.1% and 0.7% from 1974 till 2004) because of the weight of intermediate consumption (about 70% of costs) and of the rather fixed coefficients of conversion. Unlike the rest of the industry,

employment in agribusiness remained steady. Between 1997 and 2002 overall productivity decreased then stagnated from 2002 until 2006 (table 2). Across the whole period, productivity dropped by an average of 0.4 % a year. The reductions in productivity were most significant in the meat sector and other agribusiness markets. On average, for the milk, drink and grain sectors, the total productivity of the factors varies little. During that period, agribusiness production progressed by 1% a year.

The loss of "revealed competitiveness"

At the beginning of the 70s, France had become a major net exporter of farm and food products. From the middle of the 90s, this trend is reversed in all sectors. The performances of the agribusiness foreign trade crumble off and the volume of imports grows faster than the volume of exports (graph 1).

The relation is purely arithmetical: stimulated by the increase in incomes and more recently by the development of the first generation of agro-fuels, domestic demand kept on increasing, production remained steady and the trade surplus could only recede. Identifying the underlying cause of this dynamic is more problematic. We do not know if it is the stagnation of agricultural production which limits the export potentialities or the reduced competitiveness of agribusiness which prevents the conquest of new markets.

The effects of the CAP reforms and of the liberalization of trade

For export products, there is little doubt that the successive reforms of the CAP and the increase in foreign competition spurred by the liberalization of trade are at the origin of the stagnation of agricultural production. Lower prices and the decoupling of aid played in favour of a certain extensification of beef production. Dairy production stagnated despite the recent increase in the quotas. In the sectors of white and red meats, the suppression of the returns highly affected export potential which, until then, essentially relied on these subsidies. Production of arable crops slightly increased because of the abolition of the compulsory fallow requirement but the yields did not follow suit. The opening of the borders resulted in an increase in fruit and vegetable imports. The wine sector has had difficulties in adapting itself to the development of international demand.

The stagnation of agricultural production is not restricted to France. It concerns almost all European countries, and all OECD countries who previously offered substantial support to their agricultural producers and have since committed themselves to a policy of subsidy reduction, or who have substituted price-indexed support with a system tied to income. On the other hand, growth of agricultural production is high in countries that did little to support agriculture and in emerging economies which have benefited clearly from the increase in world food prices.

A break in the technical progress of arable crops?

In arable crops, agronomists and economists have observed a stagnation of yields since the middle of the 90s, in particular for common wheat. They do not attribute this stagnation to a change in farming practices. There was no de-intensification induced by the change in the price ratios and we observe only a slight decline in the quantity of the variable inputs such as fertilizers or pesticides use per hectare. Moreover, there has been a stagnation of intermediate consumption which corresponds to a stagnation of productivity. A phenomenon which is not observed in the United States (see graph 2), even if the context is different.

Nevertheless, according to the geneticists, there has been no slowing of genetic progress. Agronomists suggest that the effects of climate change have led to more frequent unfavourable climatic episodes, in particular for common wheat which is very sensitive to temperature variation. They also mention the shortening of crop rotation periods and the spread of colza crops which require more pesticides. The idea that technical progress has stalled has a definite influence in France, penalized by its specialization in fragile crops requiring inputs (common wheat, colza), while international research in genetics (despite the INRA programs) has focused primarily on crops such as maize and soya, which are less adapted to French soil and climate conditions.

What about environmental constraints and public health concerns?

Constraints linked to the environment and public health are often invoked to explain the loss of competitiveness of the French agribusiness industry. In vegetable production, the weight of these constraints seems to be too low to explain the slowdown in productivity gains, apart perhaps

from the ban on the use of certain pesticides on fruit crops. In animal production, several measures on the standards of buildings, new conditions on manure and the identification of animals doubtless generated costs which could explain the declining productivity of intermediate consumption and of capital. This is probably also the case for agribusinesses. The deterioration of productivity, such as it is measured, in the meat industries is probably partially imputable to the measures put in place after the mad cow crisis and other sanitary crises. Protecting oneself against these risks is expensive but also leads to an improvement in the quality of the product, not often taken into account in analyses of productivity. In all areas, the priority is not to go back on these constraints but to make them compatible with improving performances in these sectors. Numerous examples show that it is not necessarily a paradoxical ambition.

A few final considerations

The stagnation of agricultural production in a context of dropping prices and slowing productivity gains has had negative effects on the evolution of agricultural income. This price reduction corresponds to the CAP objective almost reached today, to bring European domestic prices into alignment with world prices.

This alignment of domestic prices with world prices was made in a context where world prices were rising because of the increase in demand from emerging countries. According to the projections of the FAO and the OECD (2008), this trend will continue in the next decade due to population growth, particularly in emerging countries. The downward trend in agricultural prices in the European Union should be checked, even if it does not exclude a greater variability in the prices.

In this new context, it is no longer practical for French agribusiness to rely on price competitiveness for basic products. In this sector, a certain number of emerging countries have more comparative advantages than France has. As much on the domestic scale as on the international market, only a production concentrated on quality can be competitive, by boosting the value of labels

and encouraging the differentiation of products, and by adapting better to international demand. At the local level, the development of close networks must not be neglected. For agribusiness, an increase in the size of firms, in particular the small and medium-sized firms, is doubtless desirable. It is all the more important since the access to export markets is expensive and requires sufficiently high levels of productivity.

For the last decade, slowing productivity gains can be attributed almost entirely to the decrease of agricultural employment. Numerous indications show that this decrease in farming employment will continue, though perhaps at a slower rate. Is the continuation of the reduction in the farming jobs socially desirable? This reduction may indeed be in contradiction with the economic objectives of our regions. We need to identify the optimal size of farms, not only from a strictly economic point of view with regards to agricultural food suppliers, but taking into account the non-marketable functions of agriculture, in particular those relating to land use. Highlighting this debate is an important and relatively urgent research priority in order to guide public policy.

The other big dilemma faced by researchers is how to end the stagnation of production while improving the productivity of intermediate consumption and overall productivity. By adopting alternate techniques, it is possible to improve simultaneously the economic performances of the farms, via the improvement in the productivity of intermediate consumption and overall productivity, and their agro-environmental performances, via the decrease in inputs. But, at the current level of our knowledge, the adoption of these techniques would be translated by moderate reductions in production. Yet we cannot be complacent about the stagnation of agricultural production. As well as adopting less intensive techniques, it will be necessary to tackle phenomena such as limited yields by adapting vegetables to the new weather conditions.

Jean-Pierre Butault, (corresponding author) INRA, UMR 210 Economie Publique, F-78850 Thiverval-Grignon, France butault@nancy-engref.inra.fr
Vincent Réquillart, INRA, UMR 1291 GREMAQ, F-31000 Toulouse, France
vincent.requillart@toulouse.inra.fr

For further information

Ball V.E., Butault J.P., San Juan Mesonada C., Mora R. (2010). Productivity and International Competitiveness of European Union and United States Agriculture, 1973-2002. *Agricultural Economics*, 41(6), 611-627.

Butault J.P., Réquillart V. (2010). La stagnation de la production, l'essoufflement des gains de productivité et le déclin de la compétitivité de l'agro-alimentaire en France. Note de travail pour le MAAPRAT INRA SAE2, AgroParisTech, Toulouse School of Economics, 17 p.

Bontemps C., Maigné E., Réquillart V. (2012). La productivité de l'agro-alimentaire français de 1996 à 2006. A paraître dans *Economie et Prévision*.