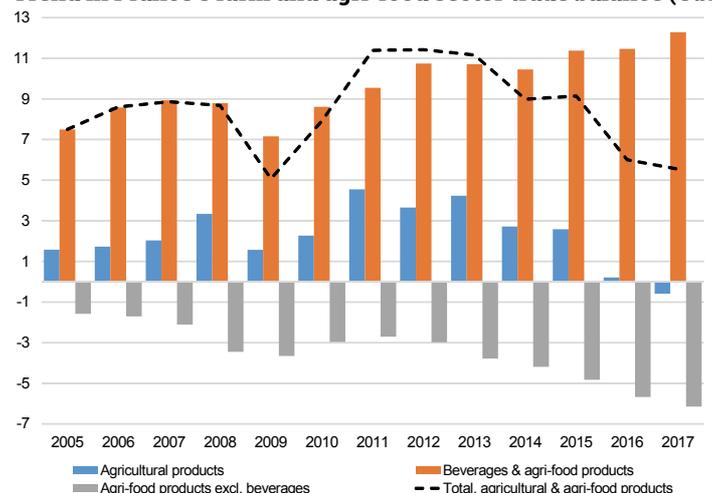


Investigating France's shrinking agricultural and agri-food trade surplus

- The agricultural and agri-food sector is one of France's strongest export performers. Its trade surplus – €5.5bn in 2017 – is the third largest, on the heels of the aerospace and chemicals sectors. A large proportion of this surplus is attributable to a small number of products, beverages and cereals in particular.
- Since the beginning of the 2010s, this surplus has gradually declined. The increased surplus of regional products (notably thanks to higher prices for wines and spirits) has admittedly offset the widening deficit in other processed products, but the trade balance for raw agricultural products (mainly determined by the trend in cereal exports) has deteriorated substantially since 2013.
- In line with the general trends in its foreign trade performance, France has seen a sharp decline in its export market shares in the agricultural and agri-food sector over the past 15 years, especially vis-à-vis the European Union, whereas its main European competitors (Germany in particular) have shown greater resilience. It is estimated that a competitiveness shortfall accounts for more than 70% of this decline, with France's relatively weak positioning on buoyant markets contributing to a lesser extent.
- This competitiveness shortfall is flagrant in the processed products segment. Since the 2000s, labour costs in the agri-food industry have been higher and have risen more sharply in France than in its main European competitors. Recent measures to reduce labour costs are nonetheless expected to improve the cost competitiveness of the French economy and to feed into the export trend.
- Other factors – while not quantified precisely for the time being – may have dampened the agricultural and agri-food sector's competitiveness: the size of farms, high taxes on production, environmental regulations, a lack of value chain integration (upstream and downstream), or a mismatch between French production and international demand.

Trend in France's farm and agri-food sector trade balance (€ bn)



Source: French Customs.

1. Agricultural and agri-food products are a strong contributor to French exports, but performance has fallen off since the start of this decade

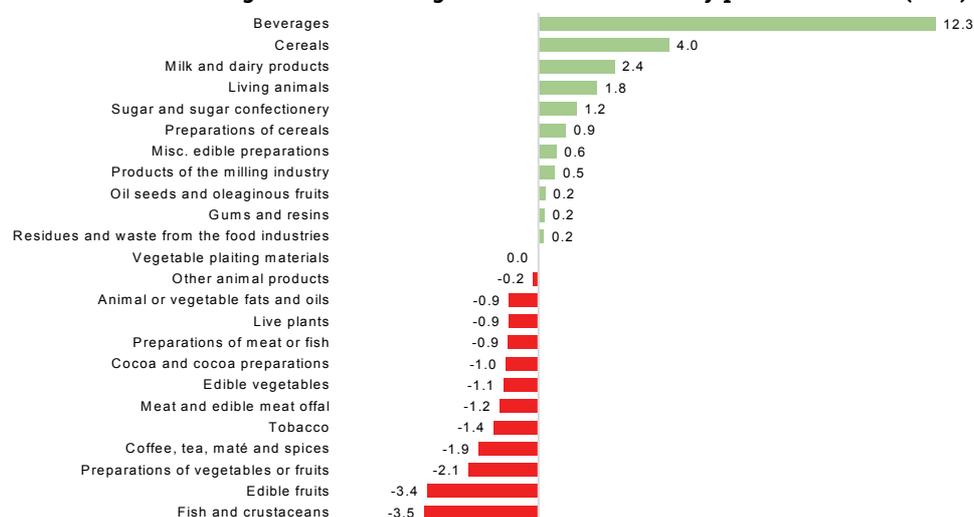
1.1 One of France's strongest export sectors

The agricultural and agri-food sector (which encompasses farming, forestry and fishing products, as well as the agri-food industry) remains one of France's strongest export sectors. It posts the third-largest sector trade surplus (€5.5bn in 2017), behind the aerospace sector (2017 surplus of €17.4bn) and the chemicals, perfumes and cosmetics sector (€12.5bn). With exports totalling €61.2bn in 2017 (of which €47.3bn for the agri-food industry and €13.9bn in agricultural products), France was the world's sixth-largest agricultural/agri-food exporter in 2017, after the United States, the Netherlands, Germany, China and Brazil.

1.2 Beverages and grains, two strong drivers for the sector's trade surplus

In 2017, the sector's surplus was mainly driven by regional products – a category that includes wines and spirits (surplus of €11.8bn) and Protected Designation of Origin cheeses (€1.2bn) – and by cereals (€4.0bn). Conversely, primary and secondary processed products posted trade deficits (€1.6bn and €4.2bn, respectively, in 2017).¹ Of the main European exporting countries (Germany, the Netherlands, Poland and Spain), France was the only one to post a trade deficit for both primary and secondary processed products.

Chart 1: France's agricultural and agri-food trade balance by product in 2017 (€ bn)



Source: French Customs.

1.3 The sector's trade surplus has declined in the 2010s, especially vis-à-vis the European Union

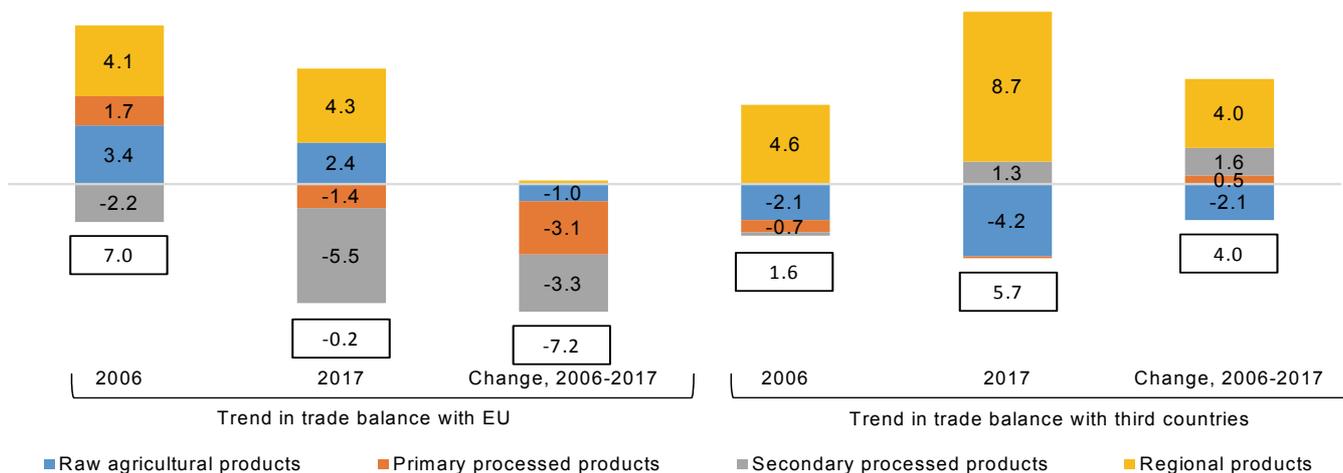
Since the beginning of the 2010s, the surplus of France's agricultural and agri-food sector has declined to its lowest level since 2000 (€9.3bn in 2000,² €11.4bn in 2011 and €5.5bn in 2017). The increased surplus of regional products (€6.3bn in 2000 vs. €13.0bn in 2017) has offset the deterioration in the balance of processed products (surplus of €1.0bn in 2000 vs. a deficit of €5.8bn in 2017). The trade balance for "raw" agricultural products has been mainly

determined by the trend in the cereal surplus, which in turn is tightly correlated with world cereal prices (the agricultural trade surplus peaked between 2011 and 2013 due to the surge in wheat prices) and with weather events (production plunged in 2016, and the surplus fell from €6.4bn in 2015 to €4.0bn in 2017). In geographic terms, the agricultural and agri-food trade surplus vis-à-vis the EU has declined substantially (the surplus was even nil in 2017), whereas it has risen vis-à-vis third countries, notably for regional products and secondary processed products (see Chart 2).

(1) The breakdown is borrowed from the Customs nomenclature: raw agricultural products (such as cereals, coffee or tea), primary processed products (such as meat, dairy products, sugar, oils and fats, or water), secondary processed products (e.g. preparations of cereals, of meat or fish, confectionery and animal fodder) and regional products (wines and spirits, Protected Designation of Origin cheeses).

(2) Eurostat figures.

Chart 2: France's agricultural/agri-food trade balance by degree of processing and region (€ bn)



Source: French Customs.

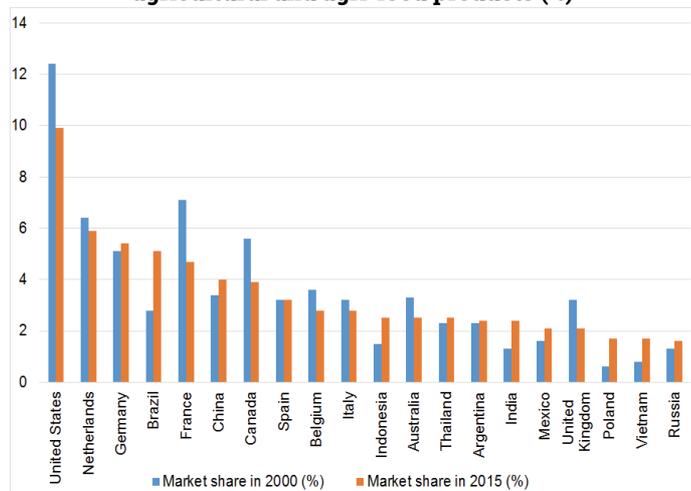
1.4 France's export market shares have declined significantly

France's export market shares have deteriorated significantly since 2000 (see Chart 3). While exports grew at a steady pace (4.5% p.a. in real terms between 2000 and 2015), this growth is mainly attributable to higher selling prices with a very slight increase in volumes. Moreover, French export growth was lower than the increase in world demand (7.4% p.a.). Thus, France's world market share declined (from 7.1% in 2000 to 4.7% in 2015, in real terms). Its main European trading partners were generally more resilient. In particular, Germany even posted a slight increase in its world market share (from 5.1% to 5.4%), moving ahead of France over the period.

France has mainly lost market share vis-à-vis the EU (see Chart 4), its leading export market (63% of French exports). France's share of the EU market has declined by 3.9 points over the past 15 years (from 11.9% to 8%), with France losing ground to Poland (+2.8 points), Germany (+1.7 points) and the Czech Republic (+1.1 points) in particular. France's market share vis-à-vis third (i.e. non-EU)

countries has declined less sharply (down 0.8 points from 3.9% to 3.1%). Asia is the only major geographic region in which France has gained market share, with its market share in Northeast Asia rising 0.3 points. China is the main contributor to the increase in French agricultural and agri-food exports.

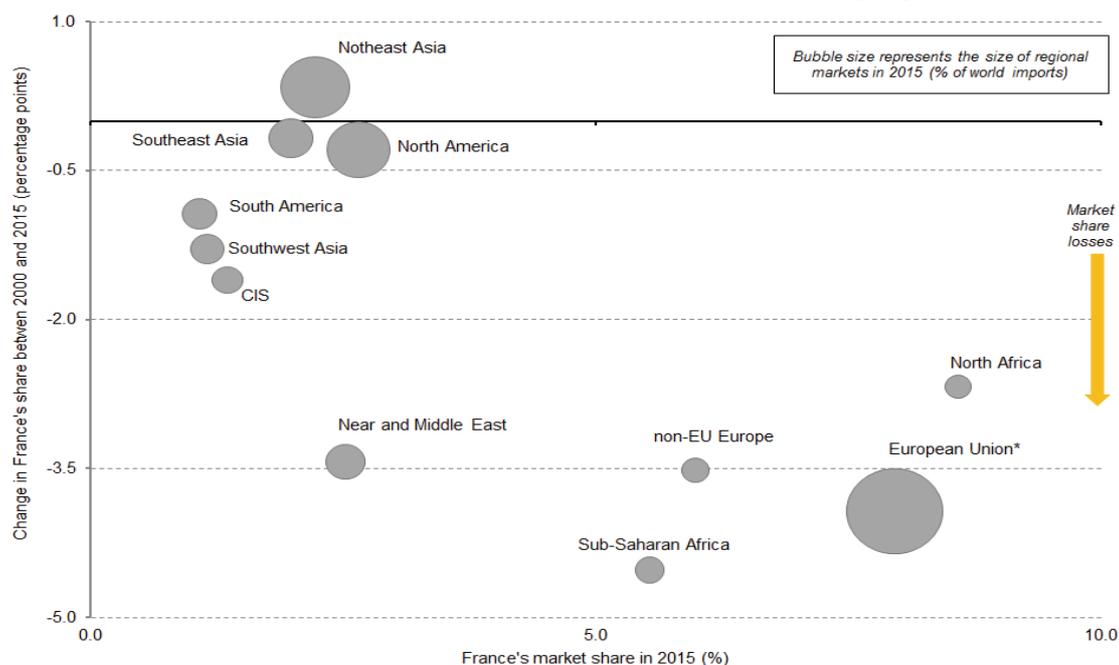
Chart 3: World market shares of the main exporters of agricultural and agri-food products (%)³



Source: CEPII (CHELEM database).

(3) In 2016, China moved ahead of France, which is now the world's sixth-largest exporter.

Chart 4: Size of the world market and French market share by region



* Excluding France.

Source: CEPII (CHELEM database).

How to read this chart: France has lost market share in North Africa (-2.75 percentage points between 2000 and 2015 to 8.6%). North Africa is a small market, accounting for 2.5% of world agricultural/agri-food imports in 2015.

Table 1: Trend in French market share between 2000 and 2015 (% points)

Products	World	EU	Third countries
Regional products	-4.8	-4.7	-4.5
Other processed products	-2.4	-3.9	-2.3
"Raw" agricultural products	-2.1	-4.3	0.1

Source: CEPII (CHELEM database).

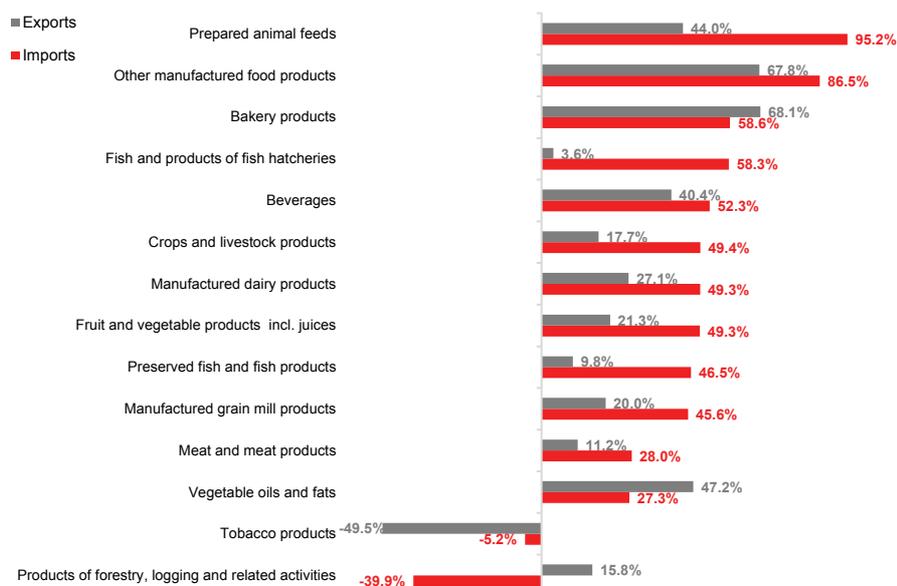
Even for products whose trade balance has improved (regional products and processed product exports to third countries), France's market share has declined significantly (see Table 1). While exports of these products have increased, world demand has risen even more sharply and France has only partly benefited from this trend.

1.5 In parallel, French imports have grown

Over the same period, French agricultural and agri-food imports have risen sharply (see Chart 5), especially in the

categories in which French production performs strongly (beverages and livestock). Between 2007 and 2017, French imports rose by 47.5%, while French exports increased by just 31.5%. This increase in imports reflects the difficulties of French producers to meet domestic demand given the increased competition not only from low-cost countries (Central and Eastern Europe, as well as emerging countries such as Brazil, India, China, Indonesia and Vietnam), but also from advanced countries such as Germany and the Netherlands (notably for meat and preparations of meat).

Chart 5: Change in French imports and exports between 2007 and 2017



Source: French Customs.

2. Several factors may have driven the recent decline in the agriculture and agri-food sector's competitiveness

The decline in the agricultural and agri-food trade surplus is mainly attributable to a deterioration in the sector's competitiveness compared to its trade rivals, particularly in Europe. First of all, labour costs impact the sector's price competitiveness.⁴ In addition to this factor, which is common to other sectors of the French economy, the agricultural and agri-food sector faces some specific disadvantages that may explain why its market share has declined more markedly.⁵ The sector's competitiveness shortfall may be due to factors along the value chain: upstream with a lack of competitiveness in agricultural production, and downstream with determinants specific to the agri-food industry.

2.1 The shrinking trade surplus is primarily due to a competitiveness shortfall, especially vis-à-vis the EU

The trend in France's market share can be interpreted by breaking it down into composition, competitiveness and adaptation effects (see Box 1). Looking at this breakdown,

we observe that the 2.4-point decline in the world market share of France's agricultural and agri-food sector between 2000 and 2015 is primarily due to a negative competitiveness effect (see Table 2). This effect accounts for slightly more than 70% of the decline in France's market share. By product sub-category, this competitiveness shortfall also explains the bulk of market share losses.

Although the composition effect contributed less to the decline in market share, it is also negative. This reflects an imbalance in French export markets, with strong positions on geographic markets whose contributions to world agricultural/agri-food demand have declined (notably Western Europe, the US and Japan) and weaker positions on dynamic markets whose relative weight has increased (namely emerging countries). Nevertheless, the slightly positive adaptation effect suggests that France has successfully strengthened its positions in dynamic geographic markets such as China. Within the EU, the negative competitiveness effect is even greater, explaining 85% of market share losses.

(4) See the special section entitled "Competitiveness of the French economy" in the Economic, Social and Financial Report annexed to the 2012 Budget Bill.

(5) Between 2000 and 2015, France's total export market share declined by 1.5 points, vs. declines of 2.9 points for agri-food and 2.1 points for agricultural products.

Table 2: Change (in % points) in France's agricultural and agri-food market share, 2000-2015

	World	EU	Third countries
Composition effect (1)	-0.8	-1.0	0.2
Competitiveness effect (2)	-1.7	-3.3	-0.6
Adaptation effect (3)	0.1	0.3	-0.4
Total (1) + (2) + (3)	-2.4	-3.9	-0.8

Source: CEPII (CHELEM database).

How to read this table: France's market share in each region (world, EU and third countries) is calculated as the ratio between French exports and the market for each region. Therefore, the sum of the changes in France's market shares for the EU and third countries is different from the change in France's world market share.

Box 1: Breakdown of the change in a country's market share for one sector^a

A country's market share is generally considered to be an indicator of its competitiveness. Its change over time is swayed by various factors and can be broken down into three components:

- The initial export market positioning: a given country's market share will automatically increase if its initial positioning is favourable, i.e. if it is positioned on geographic markets whose demand growth is higher than average. In this case, its world market share can increase even if its market share on each individual market remains the same or even declines. Conversely, a country whose specialisation is unfavourable, with positions focused on regions or countries of declining relative demand, will lose world market share even if it does not lose market share in each individual country. This is a composition effect.
- The trend in bilateral market share: assuming the structure of demand does not change, a country that gains bilateral market share (i.e. its share of the import market of a given country for a given product) will increase its world market share. This factor indicates the trend in the country's sector competitiveness in greater detail.
- Cross-effects reflect a country's adaptation to changes in demand. A country will gain (or lose) world market share in correlation with its market share gains (or losses) in the countries with the strongest demand trends. This factor indicates a country's "adaptation capacity" to the changes affecting the market in a given region.

The change in world market share over a given period is exactly equal to the sum of these three components.

a. Based on G. Thomas's breakdown between composition effect, competitiveness effect and adaptation effect ("Les échanges agro-alimentaires de 1992 à 2002", INSEE, *Économie et Statistique* no. 390, 2005).

2.2 The agri-food sector's labour costs are higher and have risen more rapidly in France than in its trading competitors

The agri-food industry's labour costs are higher, and have risen more rapidly, in France than in its main European trading competitors, especially compared to Germany (see Table 3). The hourly labour cost in France's agri-food industry rose by 58% between 2000 and 2017, compared to a 34% increase in Germany. In this sector, labour costs increased 1.8 times more rapidly in France than in Germany, compared to a factor of 1.4 in the manufacturing sector as

a whole. Incidentally, a portion of France's competitiveness shortfall in terms of labour costs may be due to the fact that the German meatpacking industry employs a large number of posted workers from other EU countries⁶

However, the French government's recent measures to cut labour costs⁷ are expected to slow France's labour cost trend compared to its competitors (especially Germany). These measures will underpin a recovery in the price competitiveness of the French agri-food sector, thereby fuelling a recovery in its exports.

(6) A. Besson and P. Deding (2015), "Réalité des écarts de compétitivité dans les secteurs agricoles et agro-alimentaires liés au coût du travail avec certains pays européens et analyse des dispositifs de protection sociale des salariés et non-salariés", *Rapport de l'IGAS et du CGAER* no. 14143.

(7) Notably: the Competitiveness and Employment Tax Credit (CICE), which will be converted in 2019 into a reduction in social contributions; reduced social contributions under the Responsibility and Solidarity Pact; the reduction in social contributions offset by an increase in the CSG; and the measure to abolish social contributions on overtime pay.

Table 3: Comparison of labour costs in the agri-food and manufacturing sectors, France and Germany

	Hourly labour cost in France (€)		Hourly labour cost in Germany (€)		Δ France / Δ Germany
	2000	2017	2000	2017	2000-2017
Agri-food sector	20.5	32.4	19.4	26.0	1.8
Manufacturing sector	24.0	39.4	28.5	39.3	1.4

Source: Eurostat. DG Trésor calculations. Data on labour costs are available on a per-sector basis until 2012, then extrapolated until 2017 using the labour cost index for the manufacturing sector as a whole.

2.3 Sector-specific structural constraints dampen its competitiveness

Other factors may have dampened competitiveness in both the agri-food industry and the agricultural sector.

French producers sometimes claim that regulations – notably environmental standards – are stricter than in other European countries. While there is no indicator to compare countries' environmental standards specifically for the agricultural and agri-food sector, according to the OECD, French environmental policy across all sectors was more stringent than the OECD average in 2012.⁸ Among EU Member States included in this comparison, France showed the second-highest increase in its environmental policy stringency over a ten-year period (behind the UK).

In addition, a look at changes in the farm structure over the past decade shows that farm concentration has not been as strong in France as in other countries (notably Germany, the Netherlands and Spain).⁹ This weaker trend in farm concentration may have reduced the economies of scale – and therefore productivity gains – achieved in France compared to its trading competitors. Grouping farms together in special organisations (such as producer organisations, farm cooperatives or farmer associations) would be one way to compensate by enabling the pooling of certain production and marketing factors.

Lastly, in the agri-food sector, the tax burden (excluding social contributions) appears to be higher for French

producers than for their European peers. Generally speaking, taxes on production are higher in France than the rest of Europe (3.1% of GDP in 2016 vs. 1.6% for the EU average, 0.4% in Germany, 0.9% in the Netherlands and 1.0% in Spain¹⁰). This gap has widened since the crisis (since 2010, it has risen by 0.3 GDP points in France, compared to a 0.1-point increase for the EU average and for Germany) due to fiscal consolidation. In addition, among productive sectors in France, the agri-food sector has the second-highest tax rate on production in terms of value added (5.5% on average over the period 2008-2016¹¹). The sector's higher tax burden is notably due to a large number of special taxes on French agri-food products.¹²

2.4 Investment and research efforts are needed for an upmarket shift

The investment rate in the agri-food sector has not increased in France since the beginning of the 2000s, contrary to its competitors. The investment rates in France and Germany were similar in 2001. Over the period 2001-2014, the French rate was flat at 13.5%, whereas the German rate increased by 1.9 points (from 13.7% to 15.6%) and the Dutch rate by 2.2 points (from 15.9% to 18.1%).

In the agricultural sector, by contrast, the investment rate has been higher than in the overall economy and has risen over time (39% in 2016 compared to 30% in 2000). Nevertheless, these investments – made at the cycle peak to take advantage of depreciation (or higher depreciation allowances when permitted)¹³ – may be of questionable

(8) The OECD's Environmental Policy Stringency (EPS) index is an internationally-comparable measure of the stringency of a country's environmental policy. Stringency is defined as the degree to which environmental policies put an explicit or implicit price on polluting or other environmentally harmful behaviour. The index ranges from 0 (not stringent) to 6 (highest degree of stringency). The most recent available data is for 2012.

(9) According to Eurostat data between 2005 and 2013. By focusing only on medium-sized, large and very large farms (i.e. 97% of France's potential production), Germany, the Netherlands and Spain have seen increases in the number of large and very large farms, to the detriment of medium-sized farms. France has seen a similar trend, but the increase in very large farms has been stronger in the other three countries.

(10) Source: Eurostat (DG Trésor calculations) for D29 "Other taxes on production" for non-financial corporations and financial institutions. Note that some taxes are classified differently in France than in other EU Member States.

(11) Source: INSEE (DG Trésor calculations), based on the NAF2 classification codes.

(12) A report of the National Assembly entitled "Rapport d'information sur la taxation des produits agro-alimentaires", 22 June 2016, lists 21 such taxes, in addition to a dozen types of fees. For example: tax on vegetable oils for human consumption, tax on wheat flour, semolina and groat for human consumption, and duty on products benefiting from a Protected Designation of Origin, Protected Geographical Indication or red label.

(13) Farms can also use the DPI (deduction pour investissement, a tax deduction for investments) to reduce their taxable income, but only to finance slow-moving inventory or to purchase shares in farm cooperatives. The DPI has not been allowed for depreciable investments (such as equipment) since 2013, thus limiting the risk of "overinvestment" due to this measure.

quality. Financing and maintenance costs may be underestimated, while the related productivity gains may be overestimated. These investments may therefore place farms in difficult circumstances, especially in the event of an economic downturn.¹⁴

Market share losses may also be related to the difficulties faced by French producers to improve their positioning on international markets, especially for mid-range products. Growth in French exports is mainly attributable to higher selling prices, whereas the volume effect has been very weak over the past decade. Volume growth on entry-level products is not possible given the competitive advantages of emerging countries.¹⁵ However, volume growth could be achieved on mid-range products by promoting the traceability and sanitary quality of French production,

¹⁶notably for animal products.¹⁷ In addition, research and investment efforts should be aimed at shifting production upmarket, especially to regain market share in Europe, where consumers' propensity to pay is directly correlated to product quality.¹⁸ Among these high-quality products, the growth of "organic" products illustrates the room for growth in this segment: between 2000 and 2016, and especially since the late-2000s, the total surface area dedicated to organic farming in France increased less rapidly than sales in France and Europe of products with the AB (*agriculture biologique*, organic) label.

These various factors are, for the time being, hypothetical reasons behind the French agricultural and agri-food sector's competitiveness shortfall on export markets. Additional data and analyses will be needed to measure their real impact.

Olivia Touze, Florent Dauba and Xavier Ory

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- (14) J.-Ch. Bureau *et al.* (2015), "L'agriculture française à l'heure des choix", *Les notes du Conseil d'analyse économique*, no. 27, December: "Certain deductions [...] give rise to inefficient tax optimisation behaviour and overinvestment in equipment that is often costly to maintain."
- (15) J.-P. Butault *et al.* (2012), "L'agriculture et l'agro-alimentaire français à la recherche d'une compétitivité perdue", INRA, February.
- (16) P. Rouault, "Analyse comparée de la compétitivité des industries agro-alimentaires françaises par rapport à leurs concurrentes européennes", *Rapport du délégué interministériel aux industries agro-alimentaires*, 2010; M. Zarka and A. Laroche, "De nouveaux modèles de croissance pour les industries agro-alimentaires françaises", *La Fabrique de l'Industrie et SAF*, 2015.
- (17) J.-Ch. Bureau *et al.* (2015), *op. cit.*
- (18) M. Doyon *et al.* (2011), "Mesure des propensions individuelles à payer pour les aliments fonctionnels", *Revue française d'économie* 2011/3 pp. 95-119; G. Giraud, "Perception des produits carnés labellisés par les consommateurs", in A. Audiot *et al.* (2007), International Symposium on the Mediterranean Pig, CIHEAM, pp. 317-326; P. Balogh *et al.* (2016), "Consumer willingness to pay for traditional food products", *Food Policy* 61, pp. 176-184.

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