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FranceAgriMer

2013

Online at <https://mpra.ub.uni-muenchen.de/105369/>
MPRA Paper No. 105369, posted 27 Jan 2021 08:44 UTC

The French Food Sector Price and Margin Surveillance Program: Economic Studies and Interprofessional Dialogue in French Food Chains

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The *French Food Sector Price and Margin Surveillance Program*, also called the *Observatory*, was created at the end of 2010 in the following context:

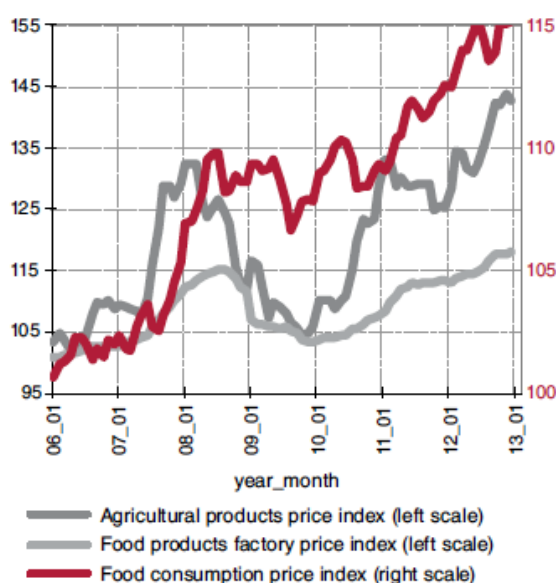
- increasing price volatility
- suspicions expressed by producers and consumers about retail margins
- political commitment in favour of enhanced consumer *purchasing power*, of a more market-oriented economy, and raising farmers' concerns.

The observatory's mission is to provide analysis of the values collected at various stages of the food chain. After describing the context of the observatory's creation, this paper outlines its organisation and margin calculation methodologies, illustrating them through the use of case studies. The paper also focuses on analysing supermarket food sections' accounts, which traditionally raises suspicions from both producers and consumers. As a supplement to its sectoral analysis, the observatory recently developed a macroeconomic decomposition of food demand into added values, imports and taxes.

A Political Initiative in the Context of Price Volatility and Traditional Distrust along the Food Chain

Figure 1 shows the increasing variability of French food prices. This variability aggravated old debates about each sector's 'responsibility' in the price spread between production and retail – with particular suspicion aimed toward the supermarkets sector. In 2007, facing a general increase in commodities prices and its flow-on impact on consumer prices, the government set up a website to inform consumers about prices of various mass-consumption goods (not only food products). With the rationale being, that providing this information would enhance competition and as such limit excessive price increases.

Figure 1: French food chain price increases, 2006–12 (base: 100 in 2005).



Source: INSEE.

In the context of rising prices for the year 2007, the first so-called *Margin Surveillance Program* was started, mainly intended for consumers.

In 2010, the French Parliament adopted the *Modernization of Agriculture and Fishery Law* (LMAP); two years after the *Modernization of Economy Law* (LME), was enacted in 2008, in favour of a more market-oriented economy and of strengthening the purchasing power of consumers¹. One of LMAP's primary measures was establishing the obligation for signed contracts between farmers and their initial buyers. This measure was expected to soften the effects of the increasing volatility of agricultural prices and to balance the relationship between farmers, food processors, and the rest of the food supply chain.

LMAP was initiated when the agricultural price reductions of 2009 were not followed by an equivalent reduction in food prices. This reinvigorated suspicions of *excessive margins* in the retail sector, frequently expressed by producers and consumer organizations.

It is in this context that legislators decided to include an article in LMAP creating the Food Sector Price and Margin Surveillance Program, responsible for "informing public authorities and stakeholders on prices and margins formation within transactions in the food chain".

The Observatory

The observatory is monitored by a steering committee, chaired by Pr. Philippe Chalmin, an expert in commodities markets, which includes representatives of agri-food businesses and public authorities. The observatory's mission is to produce information based on statistical data and economic studies. It clearly does not aim to control markets or competition, or elaborate the regulations regarding commercial relationships, these activities are managed by other public organizations².

The observatory's management and most of its work is assigned to FranceAgriMer (the national agency for agri-food policy and economy), with the support of the national statistics services³, the farming sector's technical institutes⁴, agro-economic research⁵, and some professional unions⁶.

The observatory's programs (studies and reports) are discussed in the steering committee and in specialized working groups. Agri-food chain stakeholders are closely associated with the observatory from the definition of study themes through to the choice of methodology and data, including validation of the results. Thus, the observatory contributes to an improved dialogue between farmers, food processors and retailers.

¹ The LME undertook measures to promote greater competition in the French economy, in particular: the liberalisation of supermarkets, setting-up freely negotiable price lists between suppliers and retailers, modifications to the thresholds of 'resale below costs' prohibitions, and of merger controls in the retail trade sector, etc.

² The *Competition Authority* is a type of court of justice for competition law matters. The *Commission for Commercial Practices Examination* is an advisory committee on *Business to Business* relationships. The *General Directorate for Competition Policy, Consumers Affairs and Fraud Control* is a division of the Economy and Finances Department in charge of Competition and Consumer Economic Protection

³ The *National Institute for Statistics and Economic Studies* (INSEE) and its agriculture branch supply data to the observatory: accounts for the agriculture and food processing sectors, and prices at some stages of the food chain..

⁴ These institutes, linked to farmers' unions give data to the observatory about agricultural production costs.

⁵ Economists of the *Agronomic Research National Institute* (INRA) participate in the observatory via methodological advice and specialized studies

⁶ For examples, the meat processing industries' unions give the observatory prices and technical data about carcass valorisation; and the supermarkets' unions help to collect the food sections' accounts.

How to Calculate Supply-Chain Margins?

First step: decomposition of retail prices in agricultural raw material and gross margins, by the processing industry and trade sectors

The retail prices of various food products are decomposed as follows (in the simple case where there are only three stages):

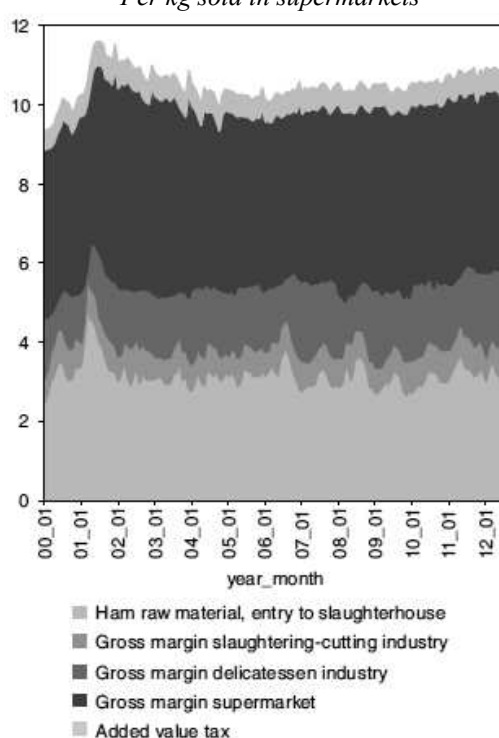
$$\begin{aligned}
 &\text{Retail price} \\
 = &\quad \text{Value of the agricultural commodity purchased by processing industry, by unit of final product at retail level} \\
 + &\quad \text{Gross margin in the processing food industry, by unit of final product at retail level} \\
 + &\quad \text{Gross margin of the retailer, by unit of final product at retail level.}
 \end{aligned}$$

Gross margin in the processing industry is the value-added by this industry to the agricultural commodity. For the retailer, the gross margin is the difference between sales to consumers and purchases from suppliers.

To decompose the retail price correctly, the calculation must take into account the gains and losses at each stage of processing and trade. In the case of by-products, their valuation is taken into account in the calculation of the cost of the raw material used by the processing industry.

Figure 2 shows, for example, the monthly decomposition of standard ham retail prices from 2000 to mid-2012.

Figure 2: Decomposition of the average French supermarket retail price for standard ham.
Per kg sold in supermarkets



Source: OFPM.

The following food products are currently studied by the observatory: fruit and vegetables, fresh bovine meat, fresh pork meat and ham, poultry, and dairy products. The addition of fisheries and cereal products are scheduled for 2013.

The observatory focuses on the supply chain for all these products, ending at supermarkets and hypermarkets⁷, and not in traditional shops or food services.

⁷ In France, a supermarket is classified as sized from 400 m² to 2500 m², while a hypermarket is more than 2500 m². In this paper, we use supermarkets to denote both stores

Second step: cost valuation in the agriculture processing industry

To analyse the different components of retail prices (commodity prices, gross margins) the observatory estimates costs and net margins from firms' accounting data.

Depending on the sectors, these data may or may not be already available in the statistical database:

- costs in agriculture are extracted from the FADN (Farm Accounting Data Network) and from accounts and technical results of panels of farms monitored by professional organizations
- the evaluation of costs in specialized processing industries results from the INSEE's statistical surveys on the sectoral accounts
- in the supermarkets sector, statistical accounts exist but, as the sector is multi-product, it is impossible to use these general accounting data to estimate costs for each food section.

As such the observatory, in close collaboration with the retail sector, set up a specific survey.

A specific approach for estimating supermarket margins

In France, the retail food sector appears to be slightly concentrated, due to the market share of supermarkets (about 60%) and to the small number of major supermarket chains (the first seven chains represent 50% of the food market share). Retailers can be organized into four types:

- integrated chains, where the shops are branches of the same firm, and not independent companies
- cooperatives of independent shopkeepers, where each shop is an independent firm, members form a cooperative organization for common negotiation with suppliers and common marketing strategies
- chains of independent shopkeepers organized by a wholesaler, another case of independent partnerships
- franchised stores, independent stores, mainly small supermarkets, which use the brand and services of a company (franchisor) on payment of royalties.

The question of supermarket margins: from *hidden accounts* to transparency?

From producers' or consumers' points of view, the price disconnection between farm and retail is due to growing margins in the supermarket sector.

It should be possible to reduce food prices *and* to increase agricultural prices, only by reducing these *margins* (considered as net profits) to a reasonable level.

Statistical data show that the net profit ratio of the sector is often smaller than some imagine (see Figure 3). However, these available statistical accounts are global and do not show any result by type of food product, as such the supermarket sector was accused by producers and consumers of "hiding something".

Clarifying this issue was a major task assigned to the observatory. In view of these often repeated demands, representatives of the retail sector⁸ finally considered that they had "nothing to hide" and "little to lose" in further transparency. They considered that acting transparently would be more positive for their public image than appearing once again as "the ugly duckling" of the food chain. As a result, they agreed to answer a FranceAgriMer survey, gathering analytical accounting data in the various food sections of their stores.

The supermarket survey method

The survey, addressing the previous year, started in 2012. Questionnaires were sent to the supply managers of the seven major supermarket chains, to be completed by accountants or supply controllers.

Questions were asked regarding the following products: fruit and vegetables, fresh meat, poultry, delicatessen, and dairy. An extension is scheduled in 2013 to address other food products: fishery, beverages, dry grocery, and bakery.

⁸ The FCD union (Federation of trade and distribution) represents four of the seven major supermarket chains. FCD members and the three other major chains agreed to participate in the observatory's works.

The questionnaire aimed to register values for the following items (for each food section of each supermarket's chain, in euros for the year 2011):

- 1) sales
- 2) the purchasing costs of food goods (including transport and logistics, with revenues deducted for *commercial cooperation*⁹)
- 3) gross margin = (1) – (2)
- 4) the specific costs of each food section: including the salaries of specialized staff (butchers, head of food section, etc.), specific supplies (packaging, water, energy, etc.), specific equipment costs, etc.
- 5) general costs: the salaries of non-specialized staff (managers, cashiers, etc.), interest, rent, general repair, maintenance and depreciation, advertising, and corporate tax
- 6) the contribution of the food section to the net income of the store's chain or 'net margin'
= (3) – (4) – (5).

Figure 3: Reported earnings of the French supermarket sector in 2010.



Source: INSEE.

In the *independent shopkeepers' chain*, each supermarket is a firm with its own accounting data. These supermarket chains completed the questionnaire using accounts from a group of shops. The retail and the wholesale levels of the independent shopkeepers' chains, organized by wholesaler, were considered as a whole and their accounts consolidated.

In the integrated chains, costs are generally reported and paid by the network's headquarters. These organizations used their centralized reporting system to complete the questionnaire.

Not without difficulties, using conventions and approximations, the observatory adapted the questionnaire for different types of organizations to make the answers as homogeneous and comparable as possible¹⁰.

⁹ Financial participation paid by suppliers to retailers for advertising campaigns and sales promotions.

¹⁰ For example, in the management control of some integrated chains, the line "interests" charged to shops may include an objective of returns on investment for the owners of the chain: in order to estimate the net margin (income **before** returns on capital to the owners of the firms), this data must be corrected to be homogeneous with the interest paid to their banks by independent shopkeepers.

Results

The results shown in Table 1 are averages from the seven major French supermarket chains. These results must be interpreted carefully:

- a major proportion of supermarket costs are common to all departments: the amount of general costs and net margin by food section depend on the choice of the distribution keys
- the role of supermarkets is to sell all sorts of goods, and balance out the profitability and deficits of various departments.

Presenting analytical results by food section is somewhat artificial, but producers and consumers strongly expect such analysis from the observatory, and the results offer benchmarks for long-term analysis and comparison.

Given these reservations, the fresh meat department appears in deficit in 2011 (€ –1.9 per € 100 of sales), due to the weight of specific salary costs, with part of the meat processing being still completed in the supermarket's back stores (deboning, cutting, processing into retail portions).

The fruit and vegetables department presents in 2011 a poor net margin ratio (€ 0.6 per € 100 sold) which is partially due to the distribution of some common costs (labour for frequent assortment renewal) in proportion to surface, for a small sales/surface ratio.

Table 1: Averages for € 100 of sales of goods in fresh food sections of supermarkets in 2011.

	<i>Fresh meat</i>	<i>Poultry</i>	<i>Delicatessen</i>	<i>Dairy</i>	<i>Fruits and vegetables</i>
Goods purchases	€ 75.9	€ 73.8	€ 69.4	€ 76.6	€ 72.6
Gross margin	€ 24.1	€ 26.2	€ 30.6	€ 23.4	€ 27.4
Specific labour costs	€ 10.4	€ 3.6	€ 6.7	€ 4.0	€ 8.0
Other expenses	€ 15.5	€ 16.6	€ 18.7	€ 17.5	€ 18.7
Net margin	€ –1.9	€ 5.9	€ 5.1	€ 1.9	€ 0.6

Source: FranceAgriMer, super-hypermarket chains.

The dairy products department generates an average net margin ratio of €1.9 per € 100, but this department is the biggest among those studied (Figure 4), so its net margin mass is one of the highest.

Two fresh food departments present a high net margin ratio: poultry (€ 5.9 per € 100) and delicatessen (€ 5.1 per € 100). Here, the labour costs are less important than in the meat department because these products are generally not processed in the supermarkets and their turn-over is high. In volume the delicatessen section has the highest margin.

Figure 4: Expenses and net margins in the fresh food sections of supermarkets for € 100 total sales in all sections in 2011.



Source: FranceAgriMer, super-hypermarket chains.

In 2013, the observatory launched a new study on supermarket chains to update and improve these data.

What food expenses pay for? The food euro, a macroeconomic approach

As a supplement to the sectoral approaches of the observatory, INRA and FranceAgriMer apply a methodology developed by the USDA concerning the *food dollar* (Canning, 2011). Using Leontief's inputs-outputs relationship matrices, this methodology consists of decomposing the food consumption level into importations, taxes and value-added for the various sectors (Boyer & Butault 2013).

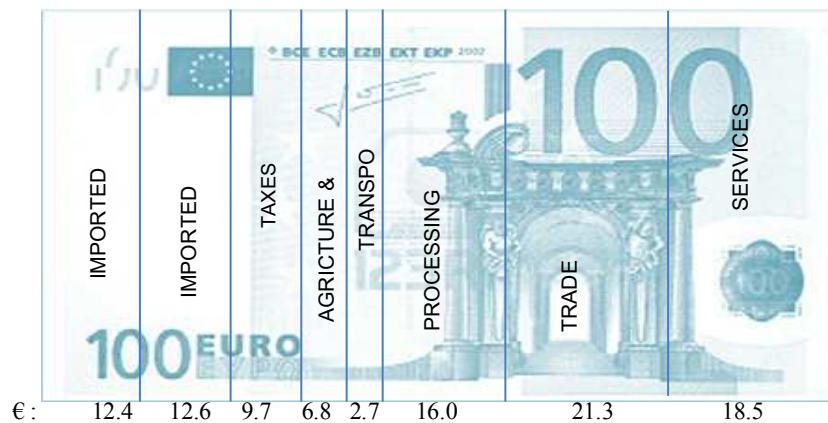
Figure 5 shows that for € 100 of French food expenses in 2009:

- € 25 are imported foods (€12.4) and imported inputs (€12.6: raw materials, petrol, etc.)
- € 9.7 are various product taxes
- € 65.3 are the value-added in the supply chain.

The major components of this total added value are taken by trade (€ 21.3) and services (€ 18.5). The processing industry's share is € 16 (€ 11.8 for food industries), the transport share is € 2.7.

Due firstly to the decrease in agricultural prices after successive CAP reforms, and secondarily to the increased processing of food products, agriculture's added value for €100 of food is only € 6.8.

Figure 5: The decomposition of the food euro into added values, imports and taxes.



Source: INSEE. Calculation: INRA, FranceAgriMer.

Conclusion

The French Food Sector Price and Margin Surveillance Program was introduced as a political solution to questions from producers and consumers about the divergence of production and retail prices, in the recent context of increasing and volatile prices.

Due to the market-oriented position of the French economy in the European Union framework, the solution could not be a return to controlled prices, and is based on the principle that better information and *transparency* leads to fairer competition.

The twin roles of the observatory are providing a place of interprofessional dialogue and an applied research centre, incorporating several partners.

This approach was the only one that enabled data acquisition in the supermarket sector.

It is impossible to say whether the observatory's activities have already rebalanced the distribution of added-value in the food sector. However, the observatory contributes to a better understanding between stakeholders, and objectifies the terms of the debate, but does not eliminate, nor even soften it!

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About the Authors

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In the last 10 years, Philippe has been Director of the News Market Service, and Deputy Director of Economic and Financial Affairs Directorate at the Agriculture Ministry.

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