

> ÉDITION
avril 2015
**RAPPORT
AU PARLEMENT
2015**



Observatoire
de la formation
des prix et des
marges des produits
alimentaires



*The French « observatory » on formation
of prices and margins of food products*

Methods and some results in the dairy products chain

Presentation for



July 22, 2015



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Contents

- ❑ Objectives, context, organization
- ❑ Method (principles)
- ❑ Datas and methods in dairy food chain
- ❑ Results in dairy food chain
 - Decomposition of retail prices into raw material and gross margins
 - Costs in the stages of food chains
 - Prices transmission

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Contents of the presentation

The presentation will start with a brief reminder of the objectives and the context of the creation of the observatory and its organization.

Then it presents the general principles of the method applied for all the sectors studied by observatory.

After that, it presents the specific data and method used, and main indicators and results developed by the observatory in the sector of dairy products.

Objectives, context, organization

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Objectives

- ❑ To measure and to explain the differences of values at every stage of the agri-food chains
- ❑ To produce informations shared by all stakeholders about often sensitive subject, in order to improve better relations and more transparency in food chains

The objectives of the observatory

Basically, the job of the observatory is to explain the differences of prices in the agri-food chains.

But it is not only a classical statistical objective : the observatory tries to produce informations shared and validated by a general consensus by all the stakeholders, in order to contribute to improve better relations in the food chains.

Objectives, context, organization :
Context

- ❑ Agricultural crisis, volatility of prices : costs transmission, divergent variations of the upstream and downstream prices
- ❑ Retail trade concentration
- ❑ Legislation
 - 2008: law ("*of modernization of economy*", LME) for a more market-oriented economy
 - 2010: law ("*of modernization of agriculture and fishery*", LMAP) for adaptation of agriculture facing uncertainty (contractualization)

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The context of the creation of the observatory

This context is, first, the entry of agricultural prices in an era of increasing volatility, since 2007.

This situation increased the old debates on the transmission of the prices from the upstream to the downstream of the food chain, with the background of the concentration in the food retailing business.

The other context of the creation of the observatory is the legislation. The observatory was created in 2010 by the Law of Modernization of Agriculture and Fishery. This law contains a number of measures to adapt the French agriculture to a more market-oriented European agricultural policy and to a more uncertainty of markets. In particular, the Law introduced the obligation of contracts between agricultural producers and their first buyers.

Organization

- ❑ Statistical and economic working project associating several organizations :
 - FranceAgriMer (National agency for support to agri-food sector)
 - Public services of statistics
 - Agro-economic research
 - Professional technical institutes
 - ...

- ❑ Not a new service, nor an authority of control of companies

- ❑ Orientation and validation of the studies: interprofessional steering committee, independent president (academic), technical management : FranceAgriMer

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Organization of the observatory

It is important to note that the observatory is not a new service of the state, nor a control or regulator authority

It takes the shape of a statistical and economic working project associating several organizations : FranceAgriMer(National agency for support to agri-food sector), Public services of statistics, Agro-economic research, Professional technical institutes.

The studies of the observatory are oriented and validated by a steering committee, where are represented every stakeholders of the food chain, from agricultural production syndicates to consumers organizations, including food processing and retail trade lobbyists. This steering committee, as the very observatory, is chaired by an academic (Pr Ph. Chalmin). The technical management is made by FranceAgriMer.

Method (principles)

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The principles of the method

The observatory develops two completely different approaches.

General method, sector by sector

1st stage

Retail trade price of a food product

Prices data
(cotations,
public datas,
ad hoc
surveys) and
technical
coefficients



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Source : OFPM

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The main approach is of sectorial, or microeconomic type.

It includes two stages.

The first one is the decomposition of retail prices of food consumer products into the value of the agricultural goods and gross margin in the food processing sector and in the retail trade sector (mainly hyper and supermarkets). This stage is realized on a monthly basis, at national level. This stage requires to have average technical references on the yields ratios of food processing, loss coefficients in the chain, etc.

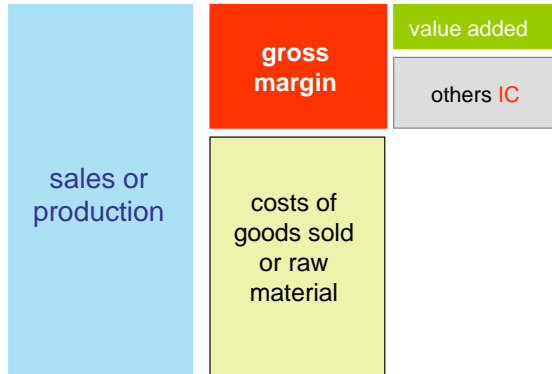
Note that the gross margins and the value of agricultural commodity included in the final product must be expressed in the same unit of measure and for one unit of quantity of final product.

Gross margin are calculated not from accounting data, but from prices data and processing coefficients : this is due to the availability of the data on a monthly basis, also due to the difficulty to obtain or realize analytic accounts (product by product) from general accounting data...

General method, sector by sector

Gross margin ?

From accounting data:



From unit prices and techn. ratios:



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IC : intermediate consumptions. $Q_{s/b}$ = quantity sold / quantity bought

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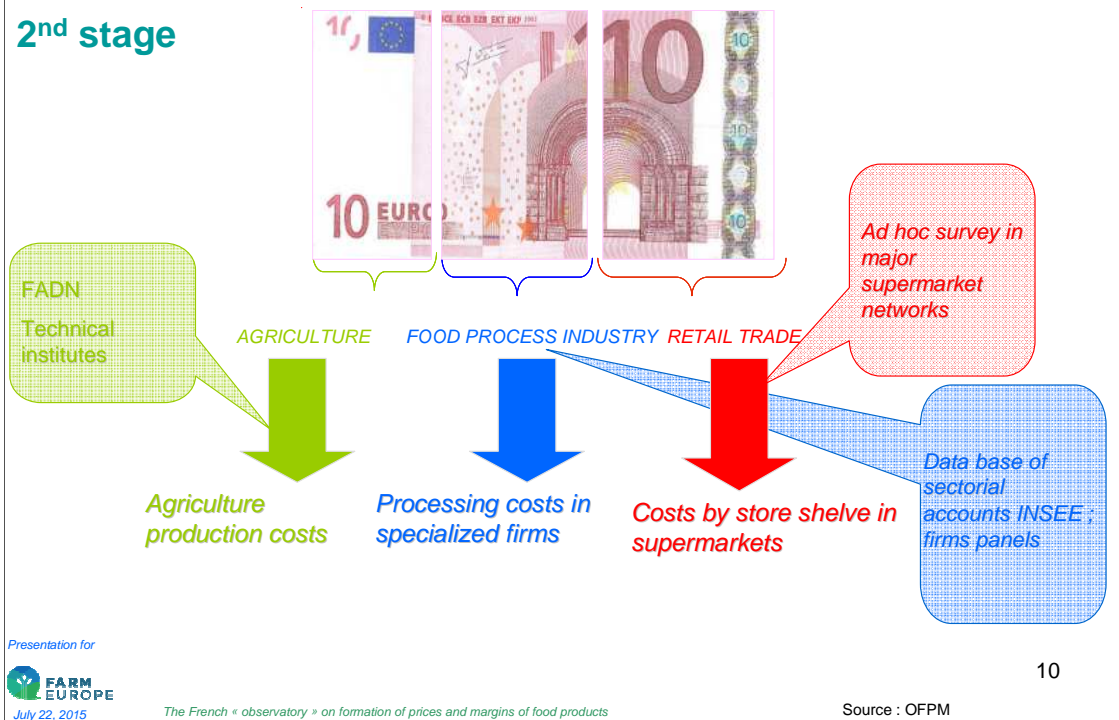
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Note that the gross margins and the value of agricultural commodity included in the final product must be expressed in the same unit of measure and for one unit of quantity of final product.

We calculate gross margin not from accounting data, but from prices data and processing coefficients : this is due to the availability of the data on a monthly basis, also due to the difficulty to obtain or realize analytic accounts (product by product) from general accounting data...

General method, sector by sector

2nd stage



In the second stage, the costs and the net margins in every sector are measured, as components of the agricultural value and of the gross margins amounts.

For this, accounting data are used : Farm accounting data network, for instance, in agriculture ; Sectorial statistics based on the accounts of companies (for the food processing industry) ; ad hoc survey in the distributors networks to estimate the costs and net margins in the various food department of hyper and supermarkets chains.

This stage is necessary on annual basis, as it uses accounts data

General method, sector by sector

Sectors → products at retail level

Dairy → skimmed milk, yoghurt nature, emmental cheese, camembert cheese, standard goat cheese, sheep cheese feta type & roquefort, butter (national brands, distributors brands), in supermarkets.

(Project : basket of products, prices weighted by volume of consumption)

Others :

Bovine meat → carcass of medium cow reconstituted with pieces of fresh meat at retail level (supermarkets)

Pork meat → products of pork loin (roast and chop), cooked ham (in supermarkets)

Poultry → whole chickens (labels, standards), cuts of chicken (in supermarkets)

Bakery → french « baguette », average of all channels of distribution (supermarkets, traditional bakery...)

Pastas → standard pastas in pack of 500 gr, average of all channels (but mainly supermarkets)

Fruits & vegetables → about 20 products, a seasonal basket of fruits, a seasonal basket of vegetables (in supermarkets)

Fishery : an example → whiting in supermarkets and traditional fish shop

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The food chains studied by the observatory with this method, since its creation, or a little later, are the followings :

In the dairy sector :

Dairy skimmed milk, yoghurt nature, emmental cheese, camembert cheese, standard goat cheese, sheep cheese feta type & Roquefort, butter (national brands, distributors brands), in supermarkets. (Project : basket of products, prices weighted by volume of consumption)

Others :

Bovine meat : carcass of medium cow reconstituted with pieces of fresh meat at retail level (supermarkets)

Pork meat : products of pork loin (roast and chop), cooked ham (supermarkets)

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Pastas : standard pastas in pack of 500 gr, average of all channels (but mainly supermarkets)

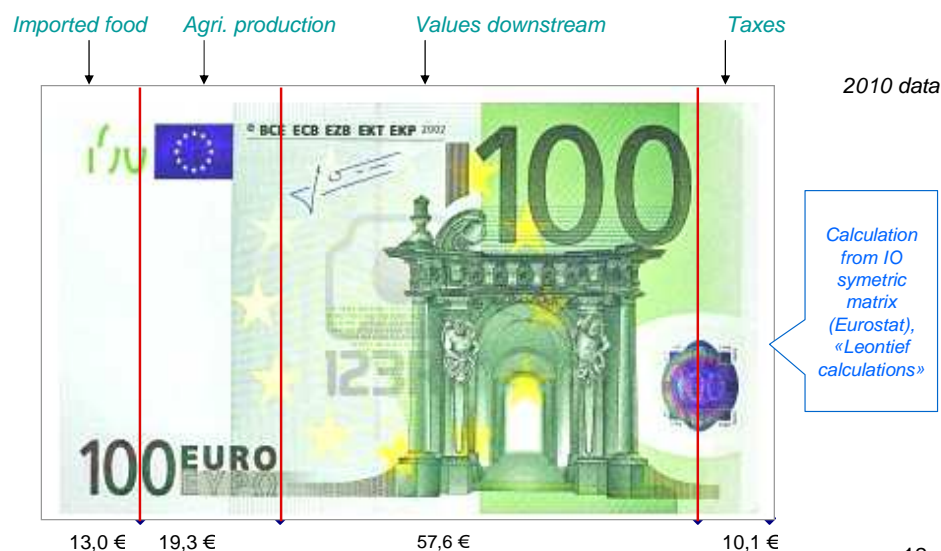
Fruits & vegetables : about 20 products, a seasonal basket of fruits, a seasonal basket of vegetables

Fishery : an example whiting in supermarkets and traditional fish shop.

Further analysis : macroeconomic method

1st approach :

Food consumption = Domestic agri production + « rest »



Further analysis : macroeconomic study of domestic food consumption

This part of the observatory work uses the Symmetric Input Output Matrices of the national accounts to decompose the domestic food expense into :

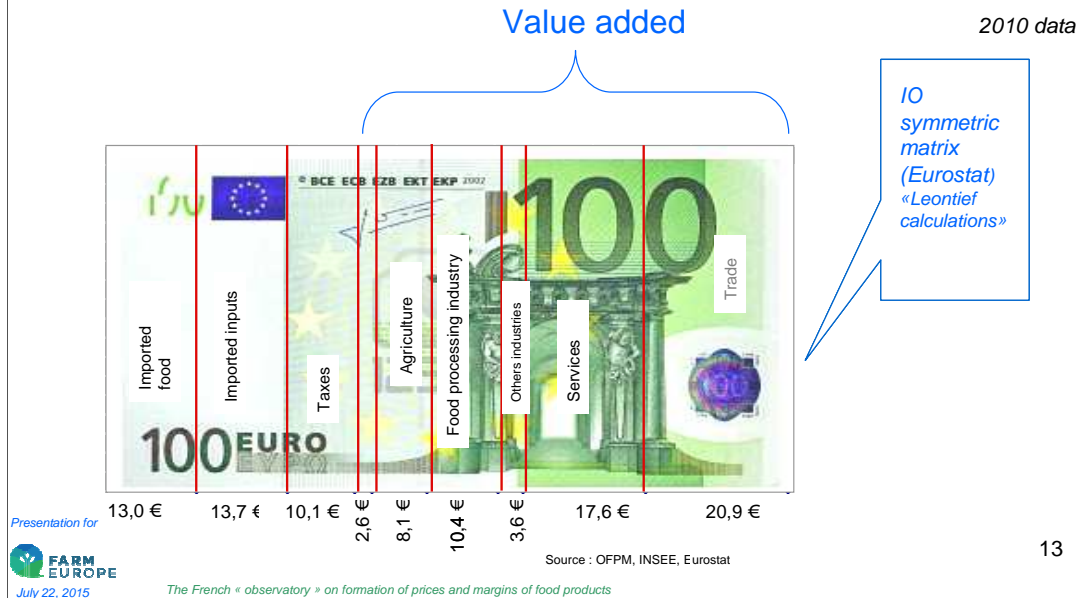
First, needed agricultural production and others values as a whole, final imports and taxes ;

Second : values added in every sector of national economy, final and intermediate imports, taxes.

Macroeconomic method

2nd approach :

Food consumption = Values added + food & intermediate imports + taxes on products



Further analysis : macroeconomic study of domestic food consumption

This part of the observatory work uses the Symmetric Input Output Matrices of the national accounts to decompose the domestic food expense into :

Second : values added in every sector of national economy, final and intermediate imports, taxes.

Datas and methods in dairy food chain

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Datas and methods in dairy food chain : products

	Half-skimmed ultra heat treated milk	All brands
	Emmental cheese	All brands
	Camembert cheese	National brands
		Retailer brands
	Natural yoghurt	National brands
		Retailer brands
	Butter (pack of 205 g)	National brands
		Retailer brands
	Standard goat cheese	All brands
Sheep cheese feta type	All brands	
Sheep cheese Roquefort	All brands	

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Data and methods in the dairy chain

The products monitored by the observatory are the followings, sold in super and hyper markets (except hard discount) : the half skimmed milk (basket of various brands, packaging and quality levels...), the emmental cheese (idem), the camembert cheese (idem), the plain yoghurt (idem) , the 250 g pack of butter (idem), and some sheep and goat cheeses.

For some of these products, two groups of brands are differentiated : national (or companies) brands ; retailers brands... as the distribution of the margins between processing sector and retail trade are quite different.

Datas and methods in dairy food chain : prices data sources

	AGRI. PRICES	INDUSTRY PRICES	RETAIL PRICES
Dairy products	Milk survey, SSP (p)	Ad hoc survey for Obs. (by INSEE)	Kantar Worldpanel ©

(p) : public data

Ad hoc survey

© commercial data

- Average values, France
- Retail prices in hyper and supermarkets , except hard discount
- Prices weighted by bought quantities Monthly frequency
- Availability : t + 2 or t + 3 months
- All prices « exit factory » ⇒ ad hoc surveys, no pre-existing statistics
- Problem** : retail prices include imported products (no data about origin of product in panel)
- Difficulty** : to collect prices of same product (or same basket of products) exit factory and in supermarkets

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Prices data

The prices data come from existing national statistics (milk producer price), ad hoc enquiries (prices exit factory) and panel of surveys private companies (retail prices in supermarkets).

These prices data are average values, at national level. The retail prices are ones in supermarket and hypermarket (“superettes” and hard discount shops not taken into account). The means of prices are weighted by quantities bought.

Two difficulties : the retail prices can include imported products (no data about origin of product in panel) and the basket of products, for a given item, is not always exactly the same for the price exit factory and for the consumer price.

Datas and methods in dairy food chain : the cost in milk for consumer dairy product processing

Cost in milk for 1 kg of consumer dairy product (CDP) processing

= **Necessary volume of milk** x milk production price
(depends on technical yields, losses, etc.)

+ **Net valuation of industrial dairy products (IDP) linked** to CDP and due to **surplus** milk collection / milk processing (*)

(*)

- Products jointly produced with the consumer dairy product processing: i.e. cream with skimmed milk...
- Industrial products (powders, industrial butter...) processed with surplus of milk : collected milk - consumer dairy product processing

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This is an important point of the method for the price decomposition in dairy food chain.

The cost in milk for a dairy consumer product is not only the cost of the milk required by the processing into final product, at a strictly technological point of view : two other elements must be taken into account :

First, the process produces not only one product – that is to say the consumer product, (skimmed milk, for instance), but also produces linked co-products (cream, in the case of the production of skimmed milk) for instance) : the valuation of these co-products must be taken into account in the calculation of the final cost in milk of the main product.

Second, milk collection and dairy products consumption are seasonal, and the seasonal surplus of collection for the process of the main product has to be processed into other dairy products : in fact, products for industry (powders, industrial butter). There is also a structural surplus of milk, compared with the trend of consumption : this surplus as also to be processed into other dairy products. The valuation of these others products must be taken into account in the calculation of the final cost in milk of the main product.

Note that we consider that all the linked products or every product processed from surplus are dairy products for industry (powders of milk, of buttermilk, casein, whey, industrial butter), even it is not always the case... But this hypothesis allows to calculate the cost in milk of every consumer product independently from each other.

The calculation of linked co-products is based on technological ratio.

The calculation of seasonal surplus is based on a classical statistical decomposition of milk collection and consumer product demand into trend, seasonal coefficient, calendar effect and stochastic component.

The calculation of the structural surplus is based on consumption-production balance.

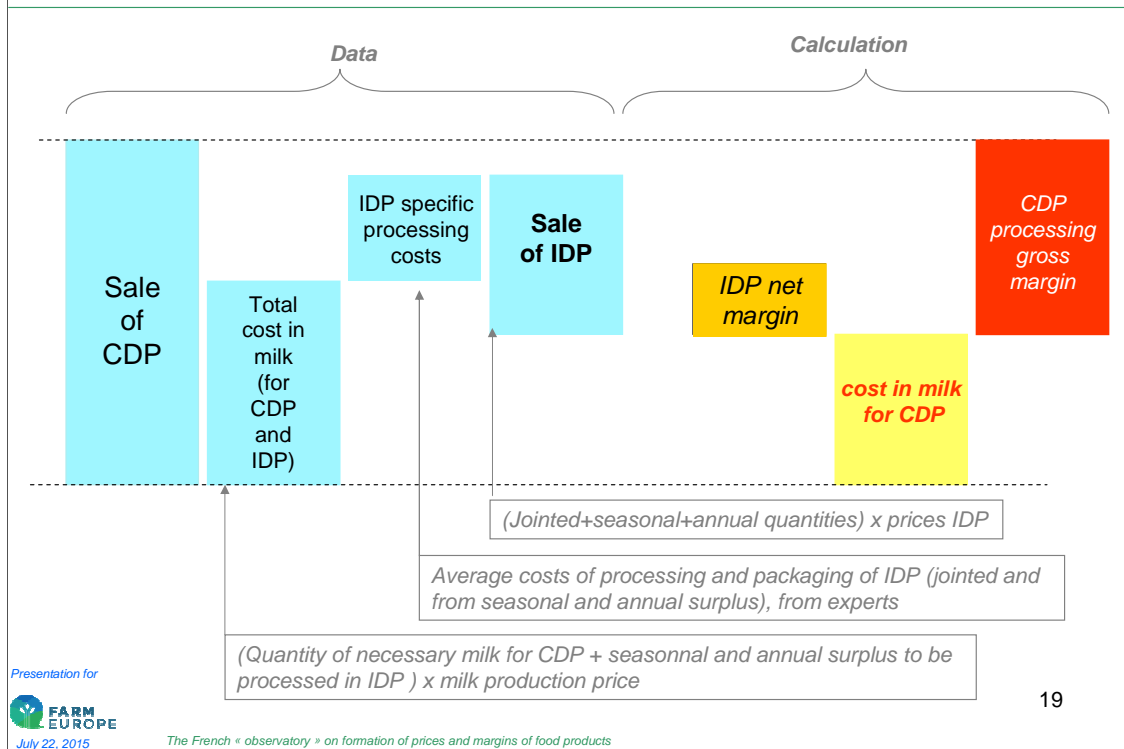
Cost in milk for 1 kg of consumer dairy product processing

= technically **necessary volume** of milk x milk production price

+ [**volumes of IDP**] x [prices of **IDP**]

- [**specific costs of IDP** processing]

Datas and methods in dairy food chain : the cost in milk for consumer dairy product processing



Principle

Milk consumption (or milk processing) and milk delivery :

- *Trend component*
- *Seasonal component*

*Difference between seasonal components of consumption
and delivery = seasonal surplus*

Principles (SAS proc X 11)

C_t , volume of milk collection at the date (month, year) « t »

P_t volume of milk processed at the date (month, year) « t »

$X_t : C_t \text{ or } P_t$

$$X_t = T^{(X)}_t \cdot S^{(X)}_t \cdot D^{(X)}_t \cdot I^{(X)}_t$$

With :

$T^{(X)}_t$: value of the long-run trend at the date (month, year) « t »

$S^{(X)}_t$: seasonal factor (% of T_t) at the date (month, year) « t » : $S_t \approx S_{t+12}$ (% of T_t)

$D^{(X)}_t$: the date effect at the date (month, year) « t » : holidays, etc., ... (% of T_t)

$I^{(X)}_t$: irregular component at the date (month, year) « t » (% of T_t)

$$S^{(C)}_t / \min_{2000-20..} (S^{(C)}_t - S^{(P)}_t) - S^{(P)}_t / \min_{2000-20..} (S^{(C)}_t - S^{(P)}_t) :$$

seasonal surplus, in %

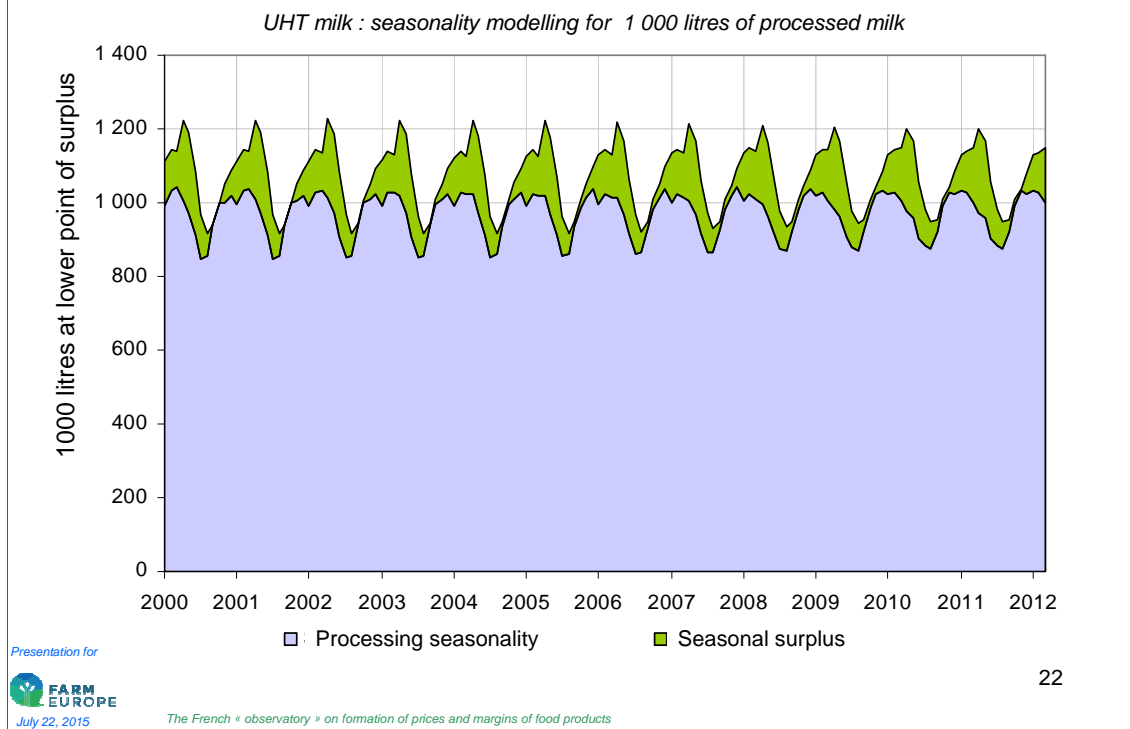
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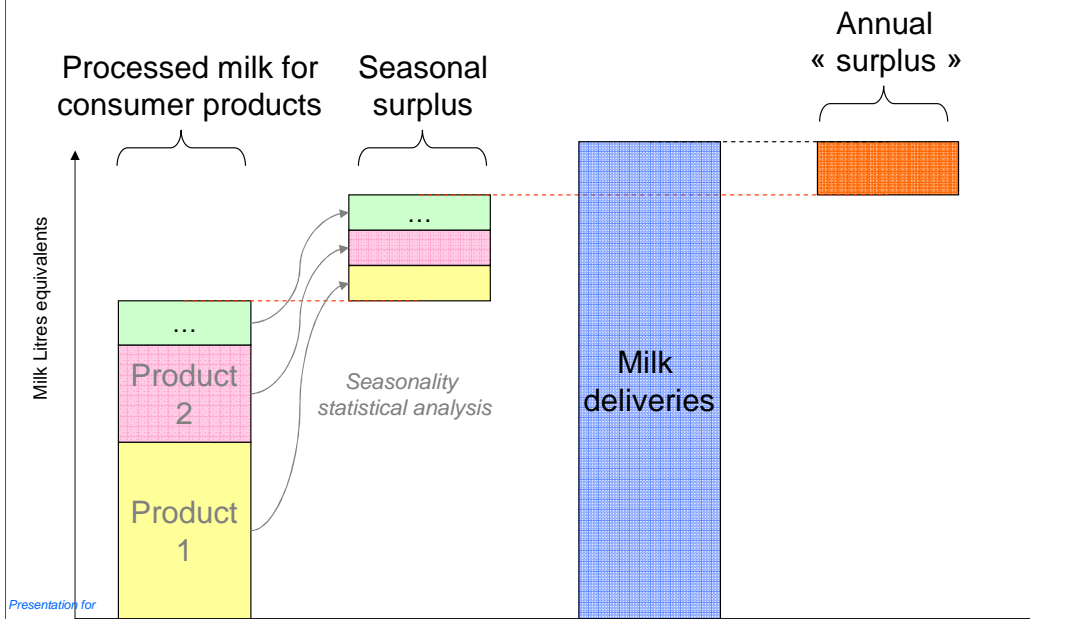
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Datas and methods in dairy food chain : milk deliveries seasonality modelling example : UHT milk



Datas and methods in dairy food chain : milk volumes structurally devoted to industrial commodities



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Results in dairy food chain

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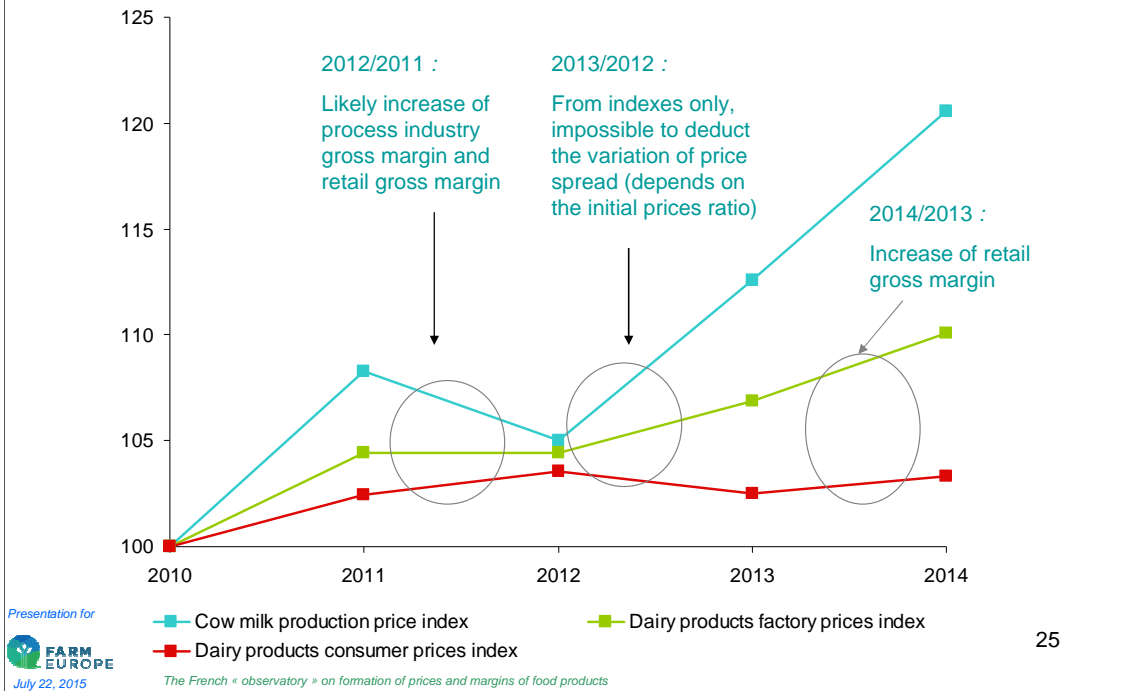


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Prices index

Except in some cases, impossible to deduct the variation of price spread (« margin ») from indexes...



Prices index can give a approximate information about the sense of the variation of the prices spread in a given stage of the food chain ONLY in some cases.

To deduct the sense of the variation of the prices spread in other cases, it is necessary to know the value of the initial prices ratio : cf. next slide

Prices index

Notations :

P_{A0} and P_{At} : prices at stage A of the food chain, for year 0 and t,

P_{B0} and P_{Bt} : prices at the stage B of the food chain, for year 0 and t,

$m_0 = P_{B0} / P_{A0}$, prices ratio for year 0,

$D_0 = P_{B0} - P_{A0}$ and $D_t = P_{Bt} - P_{At}$, the prices spreads for year 0 and t,

$\Delta D_t = D_t - D_0$, the variation of the prices spread,

IP_{A0} , IP_{At} , IP_{B0} and IP_{Bt} the indexes of the prices, for year 0 and t,

ΔIP_{At} and ΔIP_{Bt} the indexes variations for year t

$$\Delta D_t = P_{A0} \left[m_0 \frac{\Delta IP_{Bt}}{IP_{B0}} - \frac{\Delta IP_{At}}{IP_{A0}} \right]$$

m_0 is normally greater than 1, so :

$\Delta D_t > 0$ (increasing prices spread) if : $\frac{\Delta IP_{Bt}}{IP_{B0}} > \frac{\Delta IP_{At}}{IP_{A0}}$

$\Delta D_t < 0$ (decreasing prices spread) if : $\frac{\Delta IP_{Bt}}{IP_{B0}} < 0$ et $\frac{\Delta IP_{At}}{IP_{A0}} > \frac{\Delta IP_{Bt}}{IP_{B0}}$

In the other cases, the sign of ΔD_t cannot be deducted only from : it is necessary to know the value of m_0

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Prices index : limit

It is necessary to have **prices data in value** (level in €, VS index) **for the monitoring of margins variations**

It could be a problem in some case : concentrated processing sector → statistical confidentiality rules, respect of business confidentiality

Results in dairy food chain

1

Decomposition of retail price

[Clic here](#) : All the results, tables, charts, informations, in the website

Or :

<https://observatoire-prixmarges.franceagrimer.fr/resultats/Pages/ResultatsFiliere.aspx?idfiliere=6>






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Basket of dairy products from cow milk (test – temporary)

	% bought annuel quantities (average 2008-2012) *
    	<p>Half-skimmed ultra heat treated milk 74.5%</p> <p>Emmental cheese 6.1%</p> <p>Camembert cheese 2.6%</p> <p>Natural yoghurt 13.8%</p> <p>Butter (pack of 205 g) 3.1%</p>

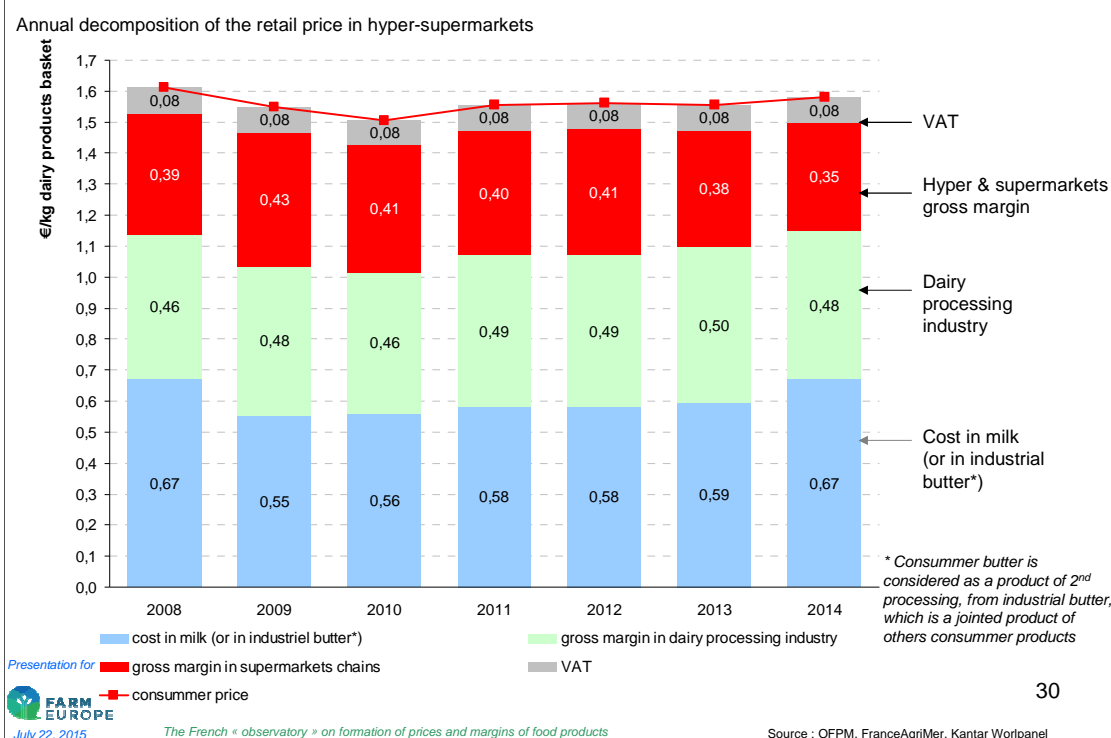
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* Kantar Worldpanel

Results in dairy food chain / decomposition retail price : basket of dairy products



Decomposition of retail prices into cost in milk and gross margins. Some examples.

Note that all these results concern average products, all types of brands (national and retailers brands), The distribution of margins, their level and the final prices are different for the same product as it is a national brand or a retailer brand.

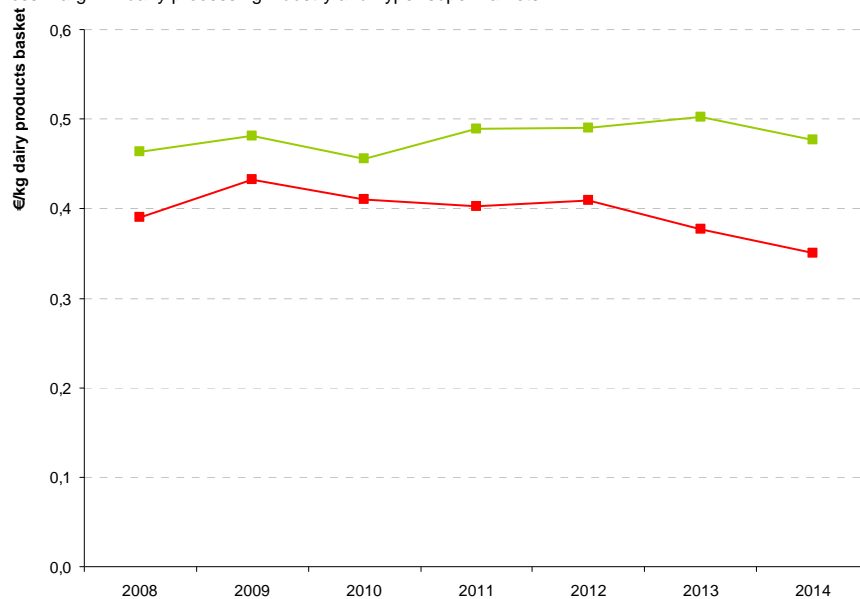
Following slides shows annual and monthly retail prices decomposition and a chart of the variations of the gross margins at industrial and retail level...:

- for the "basket" of all dairy products monitored by the observatory (products weighted by the percentage in basket purchased quantities),
- for some dairy products of this "basket"

It seems logical that the gross margin for processing industry is greater than the gross margin at retail stage, as the costs are more important in the first stage. But it is not always the case.

Results in dairy food chain / decomposition retail price : basket

Gross margin in dairy processing industry and hyper-supermarkets



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— gross margin in dairy processing industry

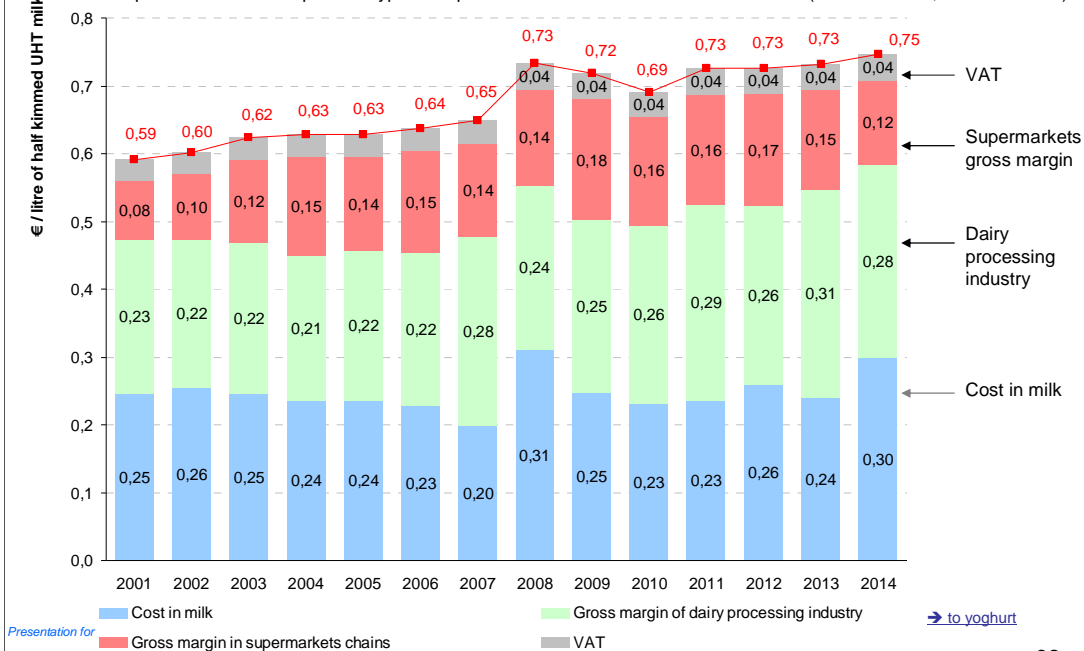
— gross margin in supermarkets chains

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Source : OFPM, FranceAgriMer, Kantar Worlpanel

Results in dairy food chain / decomposition retail price : skimmed milk

Annual decomposition of the retail price in hyper & supermarket of the skimmed milk: all brands (national brand, retailers brand)



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Consumer price

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Gross margin of dairy processing industry

VAT

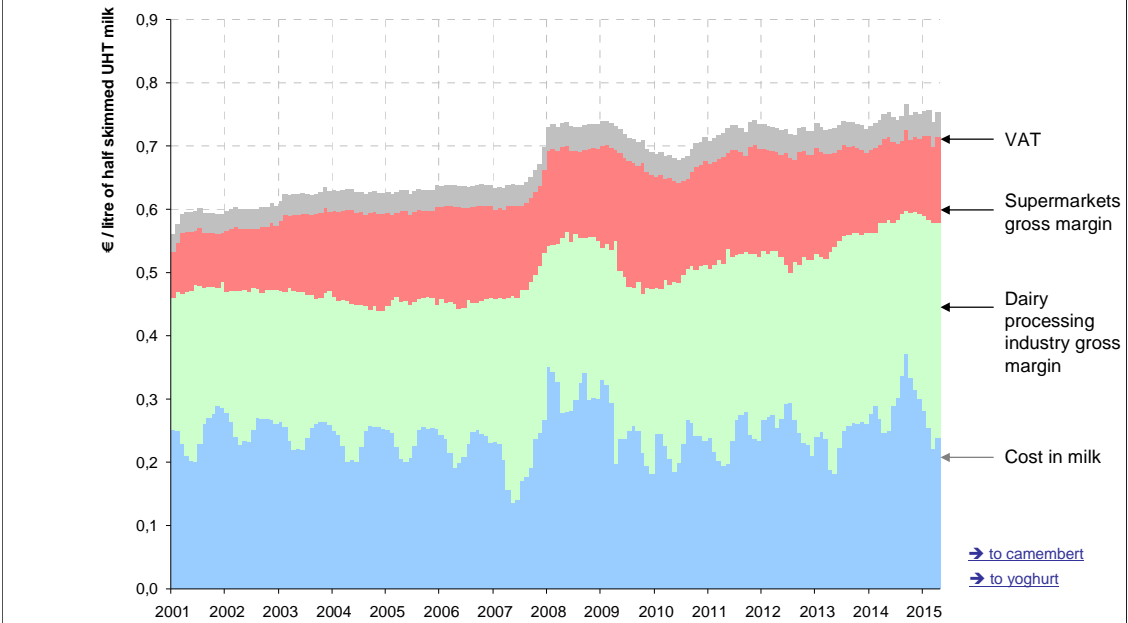
[→ to yoghurt](#)

Decomposition of retail prices into cost in milk and gross margins. Some examples.

For the skimmed milk : the gross margin of processing sector is approximately equal to the cost in milk, and the gross margin of the retail sector is approximately the half of which of processing sector.

Results in dairy food chain / decomposition retail price : skimmed milk

Monthly decomposition of the retail price in supermarket of the skimmed milk (national br., retailers br.)



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Cost in milk

Gross margin of dairy processing industry

Gross margin of supermarkets chains

VAT

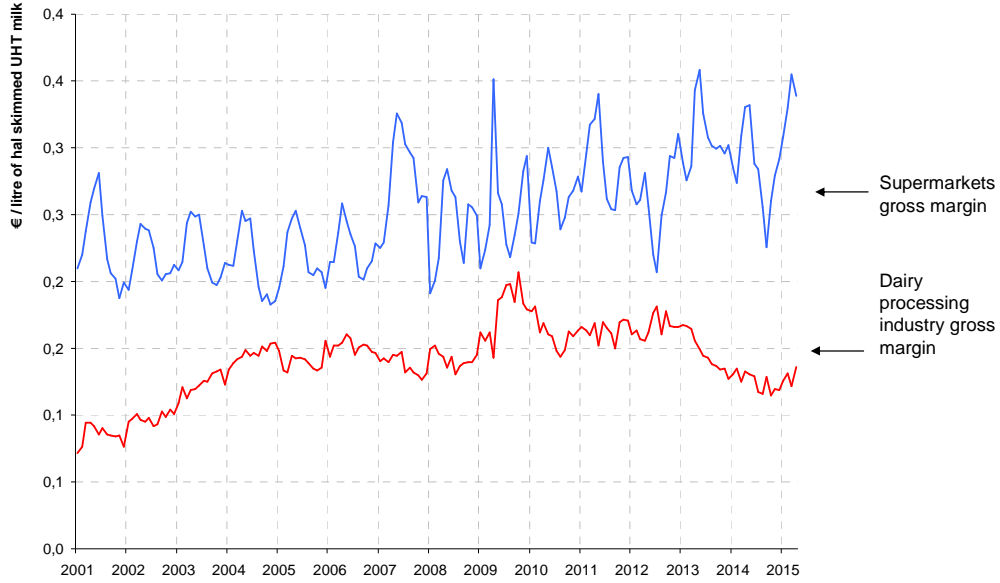
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Source : OFPM, FranceAgriMer, Kantar Woripanel

Results in dairy food chain / decomposition retail price : skimmed milk

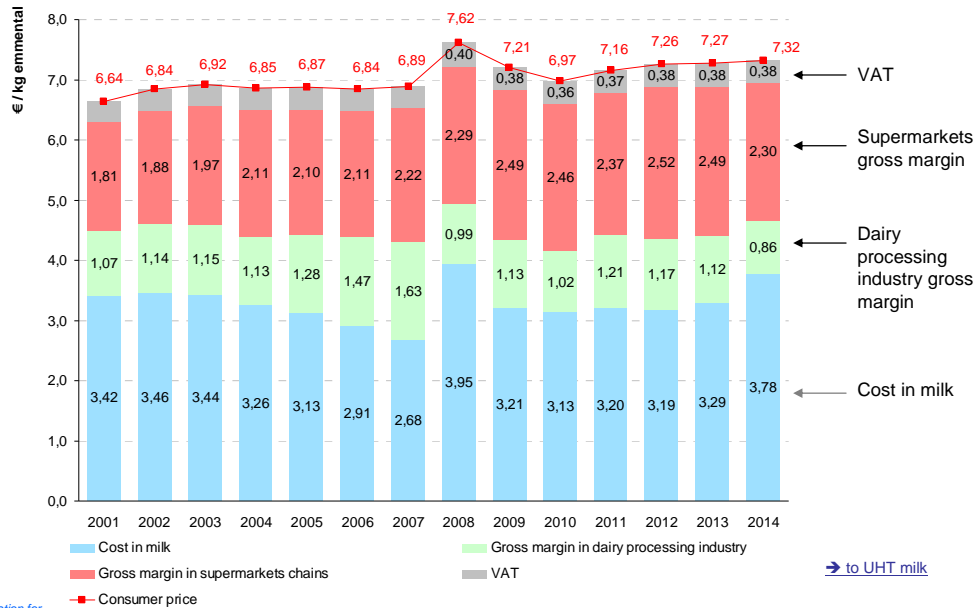
Gross margin in dairy processing industry and supermarket chain for the skimmed milk (national br., retailers br.)



Presentation for — Gross margin of dairy processing industry — Gross margin in supermarkets chains

Results in dairy food chain / decomposition retail price : emmental

Annual decomposition of the retail price in supermarket of the emmental (national br., retailers br.)



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The French « observatory » on formation of prices and margins of food products

Source : OFPM, FranceAgriMer, Kantar Worlpanel

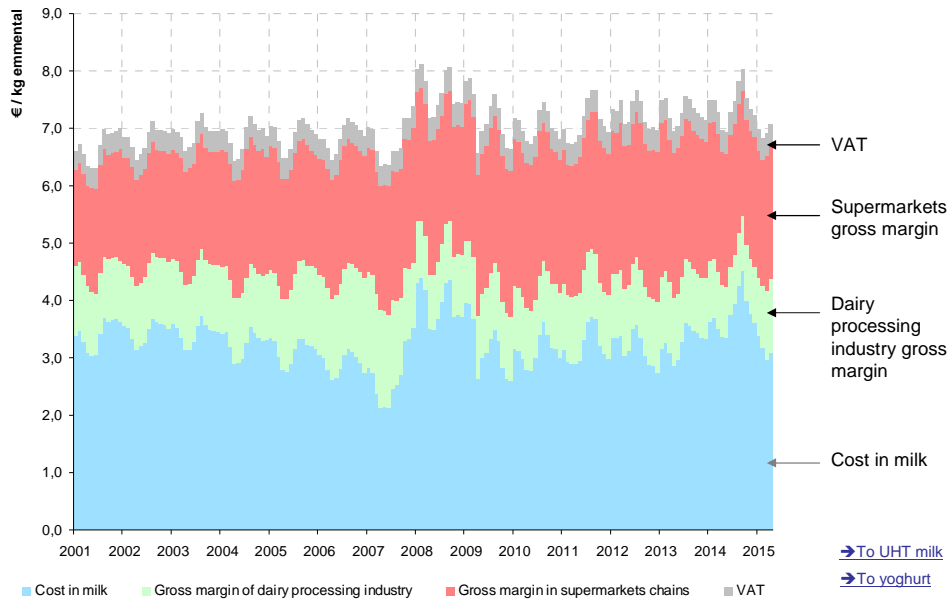
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Decomposition of retail prices into cost in milk and gross margins. Some examples.

For the emmental, due to the technological process with about 12 litres of milk for one kg of cheese, the weight of the cost in milk is more important, more than the half of the final price. The distribution of gross margins is paradoxical : the major part is in retail sector.

Results in dairy food chain / decomposition retail price : emmental

Monthly decomposition of the retail price in supermarket of the emmental (national br., retailers br.)



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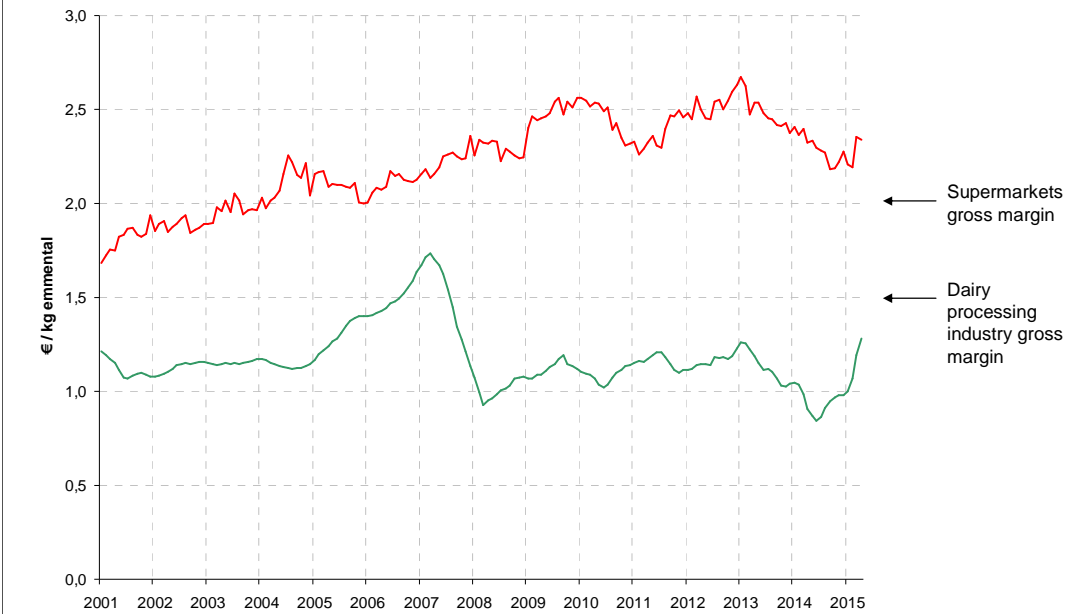
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Source : OFPM, FranceAgriMer, Kantar Worlpanel

Results in dairy food chain / decomposition retail price : emmental

Gross margin in dairy processing industry and supermarket chains for the emmental (national br., retailers br.)



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Gross margin in dairy processing industry

Gross margin in supermarkets chains

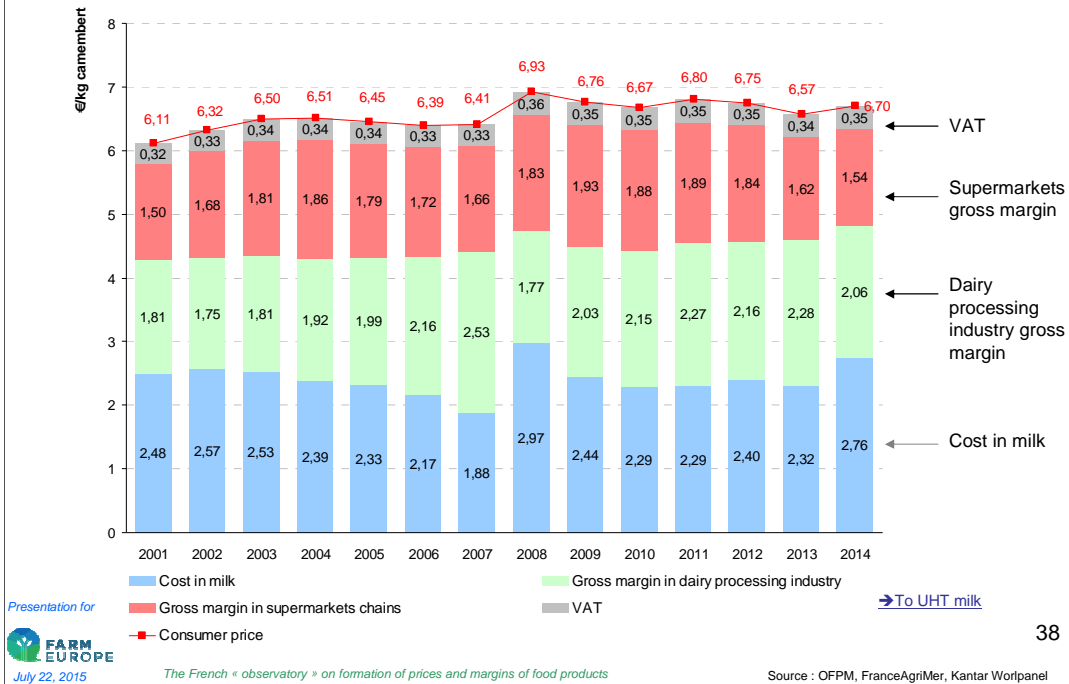
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Source : OFPM, FranceAgriMer, Kantar Worlpanel

Results in dairy food chain / decomposition retail price : camembert

Annual decomposition of the retail price in supermarket of the camembert (national br., retailers br.)



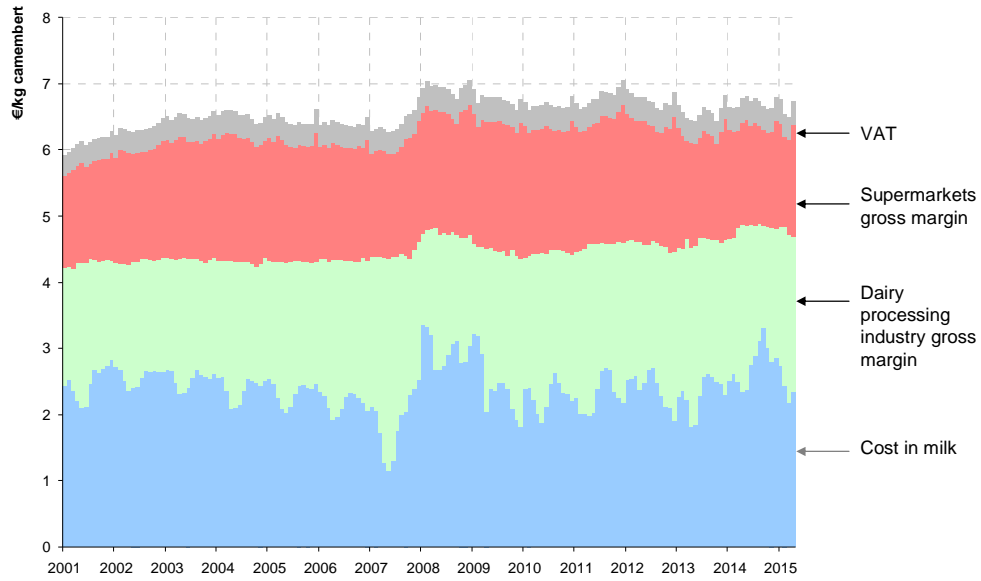
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Decomposition of retail prices into cost in milk and gross margins. Some examples.

This distribution of gross margins seems more balanced for camembert.

Results in dairy food chain / decomposition retail price : camembert

Annual decomposition of the retail price in supermarket of the camembert (national br., retailers br.)



Presentation for



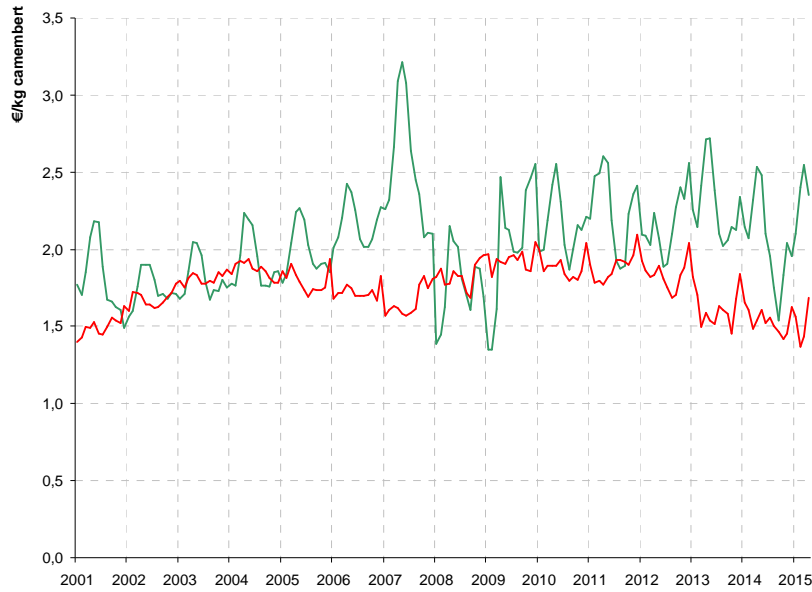
The French « observatory » on formation of prices and margins of food products

Source : OFPM, FranceAgriMer, Kantar Worlpanel

[→To UHT milk](#)

Results in dairy food chain / decomposition retail price : camembert

Gross margin in dairy processing industry and supermarkets chains (national br., retailers br.)



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— gross margin in dairy processing industry

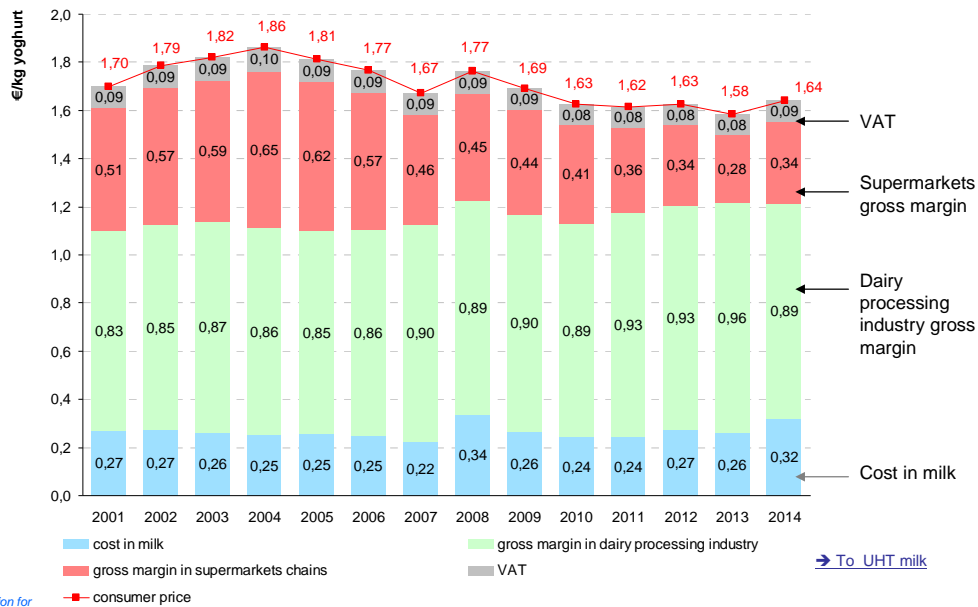
— gross margin in supermarkets chains

The French « observatory » on formation of prices and margins of food products

Source : OFPM, FranceAgriMer, Kantar Worlpanel

Results in dairy food chain / decomposition retail price : plain yoghurt

Annual decomposition of the retail price in supermarket of the natural yoghurt (national br., retailers br.)



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The French « observatory » on formation of prices and margins of food products

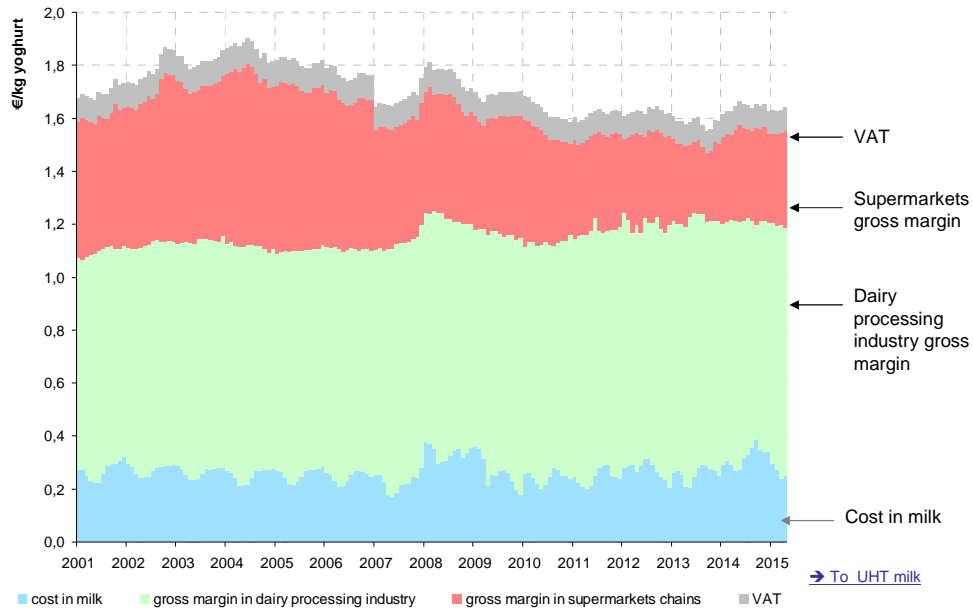
Source : OFPM, FranceAgriMer, Kantar Worlpanel

Decomposition of retail prices into cost in milk and gross margins. Some examples.

The yoghurt is a product with a high level of value added and the part of the gross margin of the processing industry sector is approximately the half of the final price.

Results in dairy food chain / decomposition retail price : plain yoghurt

Monthly decomposition of the retail price in supermarket of the natural yoghurt (national br., retailers br.)



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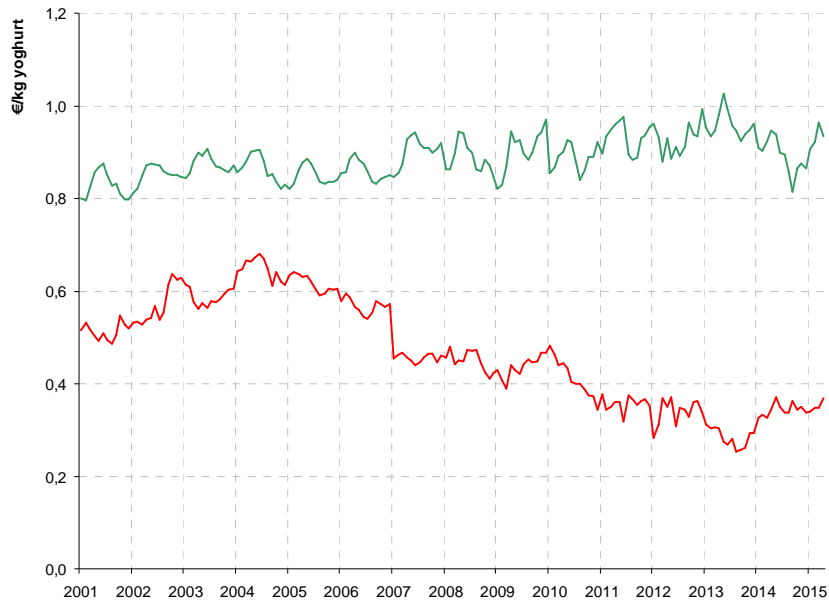
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Source : OFPM, FranceAgriMer, Kantar Worlpanel

Results in dairy food chain / decomposition retail price : plain yoghurt

Gross margin in dairy processing industry and supermarkets chains (national br., retailers br.)



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— gross margin in dairy processing industry

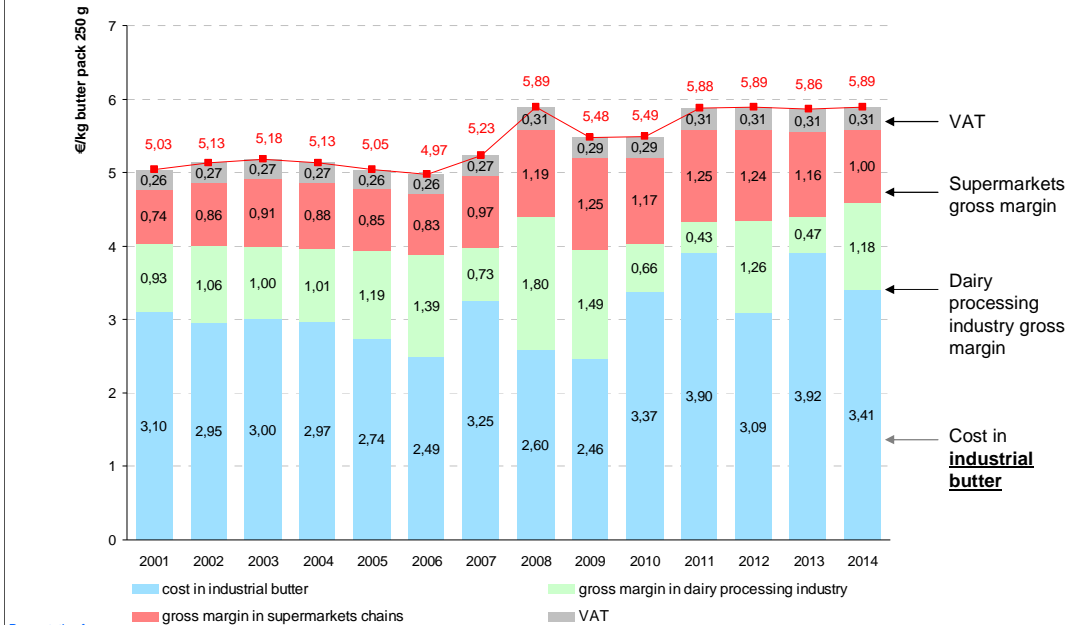
— gross margin in supermarkets chains

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Source : OFPM, FranceAgriMer, Kantar Worlpanel

Results in dairy food chain / decomposition retail price : pack of butter 250 g

Annual decomposition of the retail price in supermarket of the pack of butter 250 g : all brands (national br., retailers br.)



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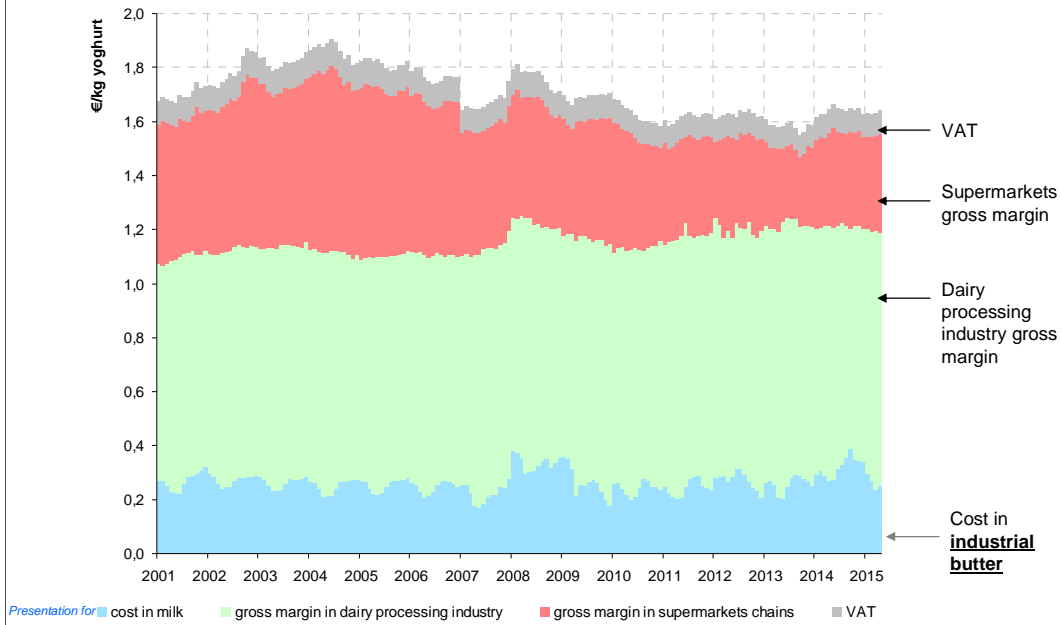
Source : OFPM, FranceAgriMer, Kantar Worlpanel

Decomposition of retail prices into cost in milk and gross margins. Some examples.

The case of the 250 g pack of butter is particular. In the modelization of the processing industry for the observatory, the butter for industry is a by-product of others dairy consumer product (skimmed milk, yoghurt...). So, it is considered that the raw material for consumer butter is butter for industry, and not milk. The part of this cost in industrial butter is approximately 60% of the final price of consumer butter.

Results in dairy food chain / decomposition retail price : pack of butter 250 g

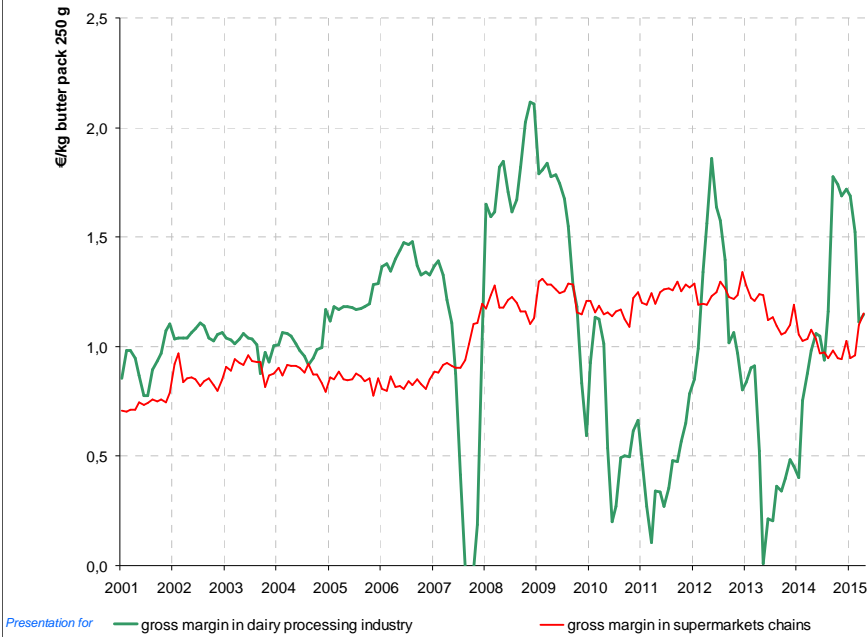
Monthly decomposition of the retail price in supermarket of the pack of butter 250 g (national br., retailers br.)



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Results in dairy food chain / decomposition retail price : pack of butter 250 g

Gross margin in dairy processing industry and supermarkets chains : (national br., retailers br.)



Presentation for — gross margin in dairy processing industry

— gross margin in supermarkets chains

Results in dairy food chain

2 Costs in farm

[Clic here : All the results, tables, charts, informations, in the website](#)

Or :

<https://observatoire-prixmarges.franceagrimer.fr/resultats/Pages/ResultatsFiliere.aspx?idfiliere=6&sousmenuid=71>

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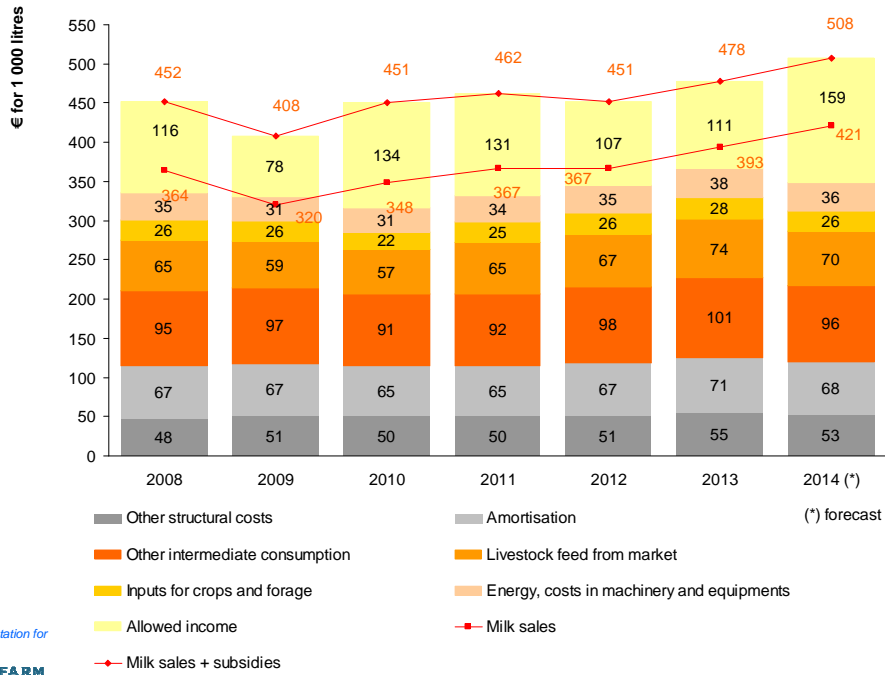
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Costs in farm

The costs in farm can be approximately estimated on the basis of FADN data or data from farm panel monitored by Institut de l'Élevage (Technical agency of the breeding sector)

Results in dairy food chain / costs in farm



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Source : OFPM, from FADN

Results in dairy food chain

3

Costs in dairy processing industry

[Clic here](#) : All the results, tables, charts, informations, in the website

Or :

<https://observatoire-prixmarges.franceagrimer.fr/resultats/Pages/ResultatsFiliere.aspx?idfiliere=6&sousmenuid=330>

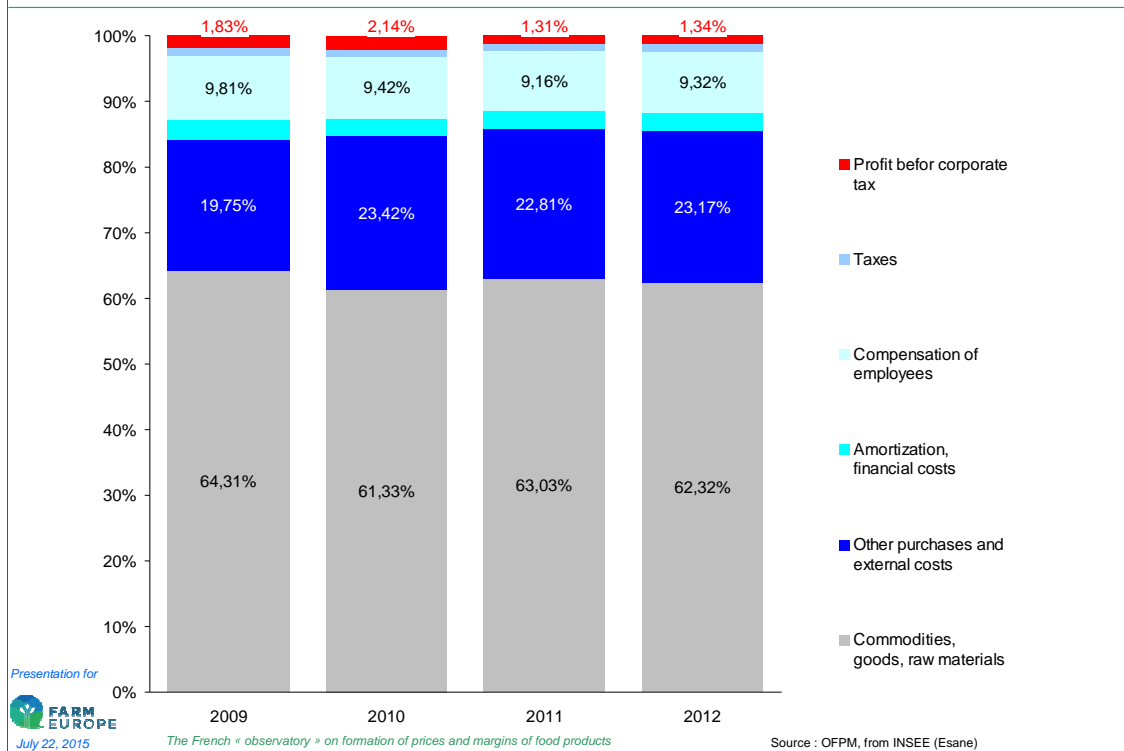
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Results in dairy food chain / costs in dairy process. industry : whole sector



Costs in processing industry

The costs in processing industry are given by national statistics based on companies accounts.

This slide show the average accounts of the dairy processing sector.

The observatory also realizes a statistical typology of dairy firms, according to the structure of their dairy productions.

Results in dairy food chain / costs in dairy process. industry : typology

Typology by structure of productions of dairy products :

Consumer products	liquid milk and cream, not concentrated	Companies owned by a group	Independent companies
	fermented milk (yoghurts)		
	cheese (except soft or spreads)		
	cheese spreads		
	soft white cheese		
Products for industry	butter and other fat products of milk		
	concentrated milk or cream		
	milk or cream in powder		
	buttermilk, casein, whey		

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The typology crosses structures of fabrication and belonging to a group of companies or not.

When a factory belongs to a group, some accounts may be not measured with market prices, but with internal prices. This can impact the results of the factory.

Results in dairy food chain

3

Costs in supermarkets chains

[Clic here](#) : All the results, tables, charts, informations, in the website

Or :

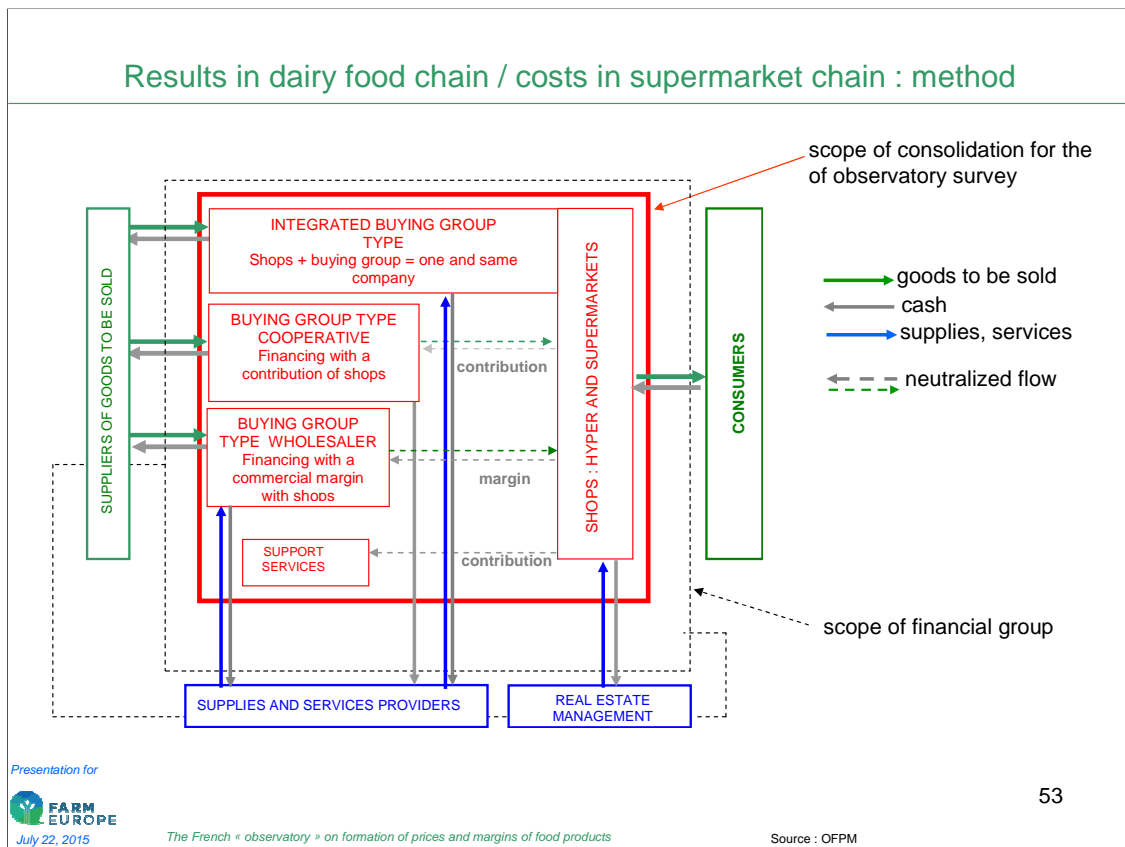
<https://observatoire-prixmarges.franceagrimer.fr/resultats/Pages/ResultatsFiliere.aspx?idfiliere=6&sousmenuid=70>

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Costs in supermarkets chains

The average costs in every food department of supermarkets chains are estimated from an ad hoc survey developed by the observatory since 2012.

The same scope of consolidation is applied to the various organizations or the supermarkets chains (integrated chains, chains of independents shops...) in order to calculate average results for all the sector.

This scope is limited to the retailing activities of hyper and supermarkets, including the buying groups of the chains and some of their support functions. Some other functions, sometimes included in the same holding group, are considered out of the scope of consolidation : this is the case for the commercial real estate management of the chains.

- Sales** of the department : meat department, delicatessen, poultry, fruits and veg., dairy, bakery
(measured at the entry of the perimeter : buying group)
- **Costs of goods sold**
(taken into account : back and rebates, internal logistical costs)
- = **Gross margin**
- **Specialized employees costs**
- = **Semi-net margin**
- **Others directs charges** (specialized supplies...)
- **Common costs** to be distributed (with keys) amongst the departments
(supplies, employees, real estate, financial costs, amortization...)
- = **Net margin** (before or after distribution of tax on profit)

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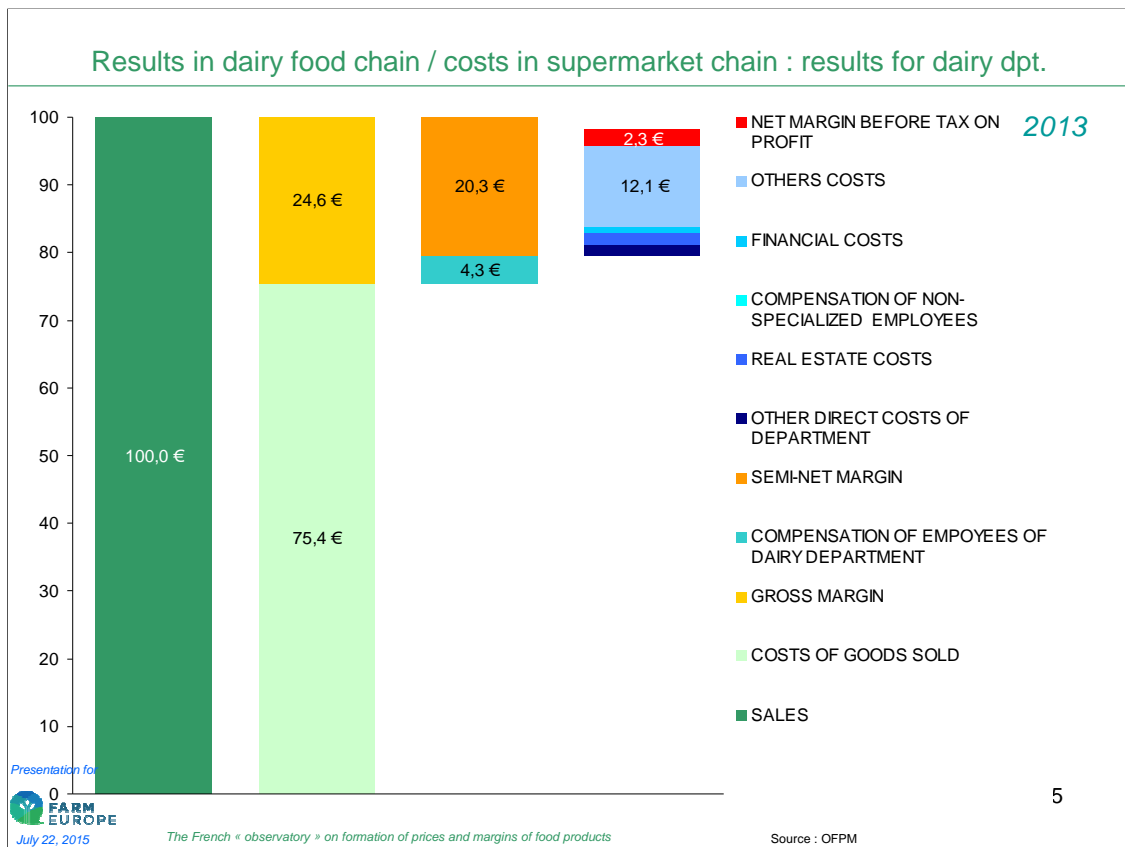
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In every food department (“fresh” food department at the moment), the following accounts are measured :

Sales of the department : meat department, delicatessen, poultry, fruits and veg., dairy, bakery

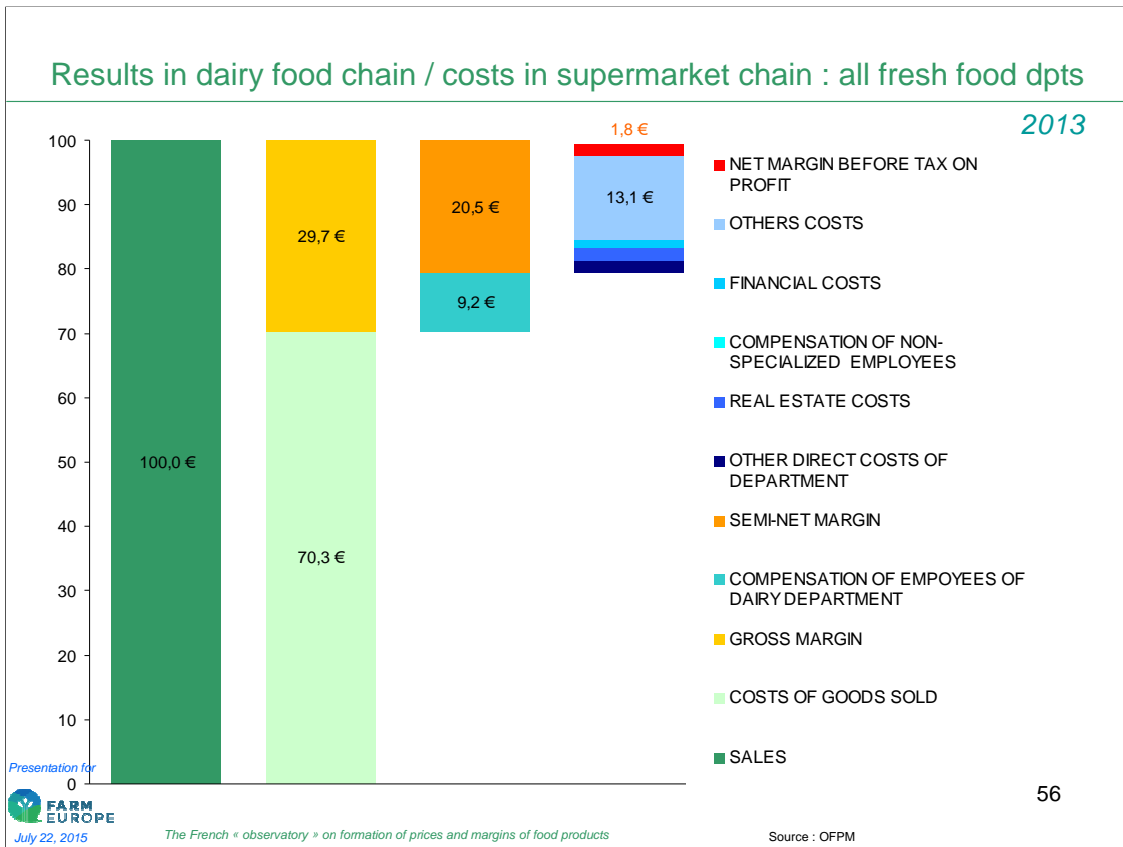
(measured at the entry of the perimeter : buying group)

- Costs of good sold
(taken into account : back and rebates, internal logistical costs)
- = Gross margin
- Specialized employees costs
- = Semi-net margin
- Others directs charges (specialized supplies...)
- Common costs to be distributed (with keys) amongst the departments
(supplies, employees, real estate, financial costs, amortization...)
- = Net margin (before or after distribution of tax on profit)



The dairy product department presents in 2013 an average net margin of 2.30 euros for 100 euros of sales (2.3%), higher than the net margin ratio for all fresh food department : 1.8%, and for all the sector : 0.9%.

The dairy product department is the biggest of fresh food departments in terms of sales.

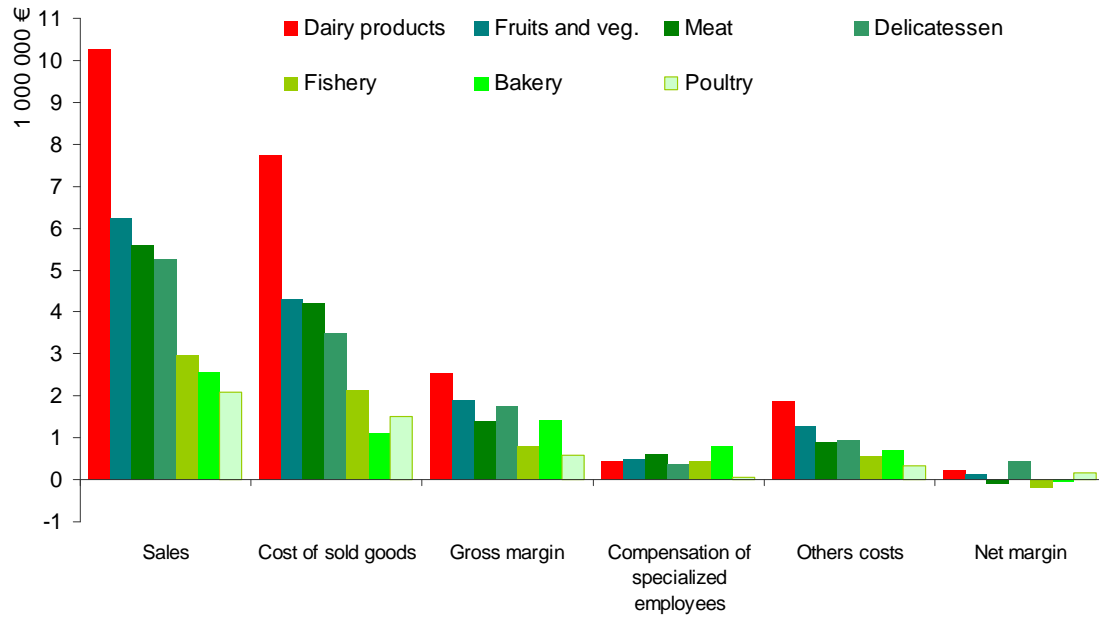


The dairy product department presents in 2013 an average net margin of 2.30 euros for 100 euros of sales (2.3%), higher than the net margin ratio for all fresh food department : 1.8%, and for all the sector : 0.9%.

The dairy product department is the biggest of fresh food departments in terms of sales.

Results in dairy food chain / costs in supermarket chain : Dairy dpt and others

2013



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The French « observatory » on formation of prices and margins of food products

Source : OFPM

Results in dairy food chain

3

Prices transmission indicators

[Clic here : All the results, tables, charts, informations, in the website](#)

Or :

<https://observatoire-prixmarges.franceagrimer.fr/resultats/Pages/ResultatsFiliere.aspx?idfiliere=6&sousmenuid=459>

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Results in dairy food chain / prices transmission : principles

At every stage of the chain (agriculture, processing, distribution) :

calculation of a « simulated price »

(of milk at the exit of farm, of processed product at the exit of factory, of consumer product in super-hyper markets).

This simulated price is such as the gross margin (GM) of the considered stage (GM on intermediate consumption in farm, GM on costs in milk in processing industry, gross margin on costs of sold products in supermarkets) is maintained at its level of 2005, inflation taken into account.

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Prices transmissions

This analysis gives some simplified indicators about the links between prices at every stage of the chain.

A simulated price is calculated a every stage. This price is such as the gross margin (GM) of the considered stage (GM on intermediate consumption in farm, GM on costs in milk in processing industry, gross margin on costs of sold products in supermarkets) is maintained at its level of 2005, inflation taken into account.

This principle of calculation is applied to :

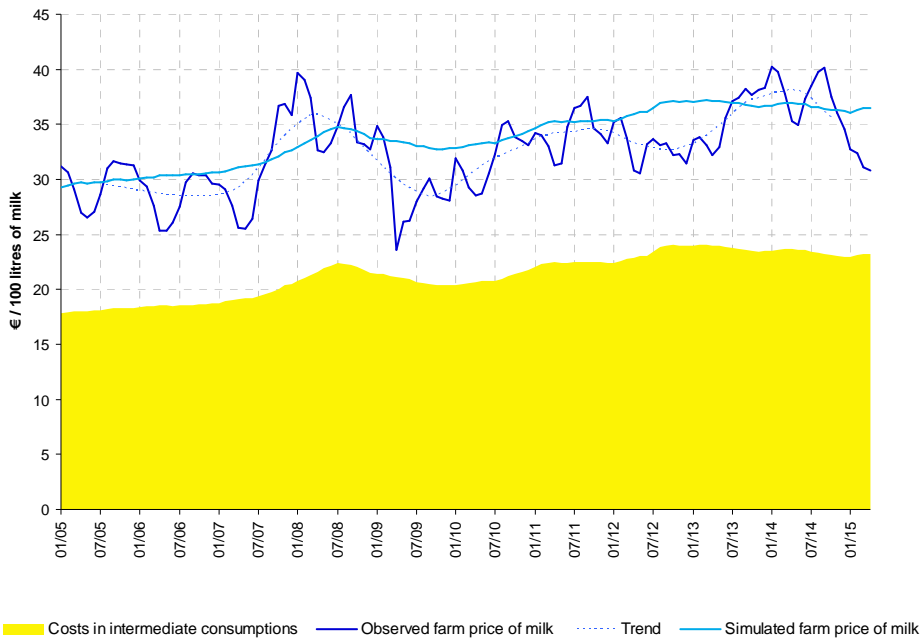
The price of the milk, at farm level, simulated according to the price of inputs

The price of processed products exit factory, simulated according to the cost in milk

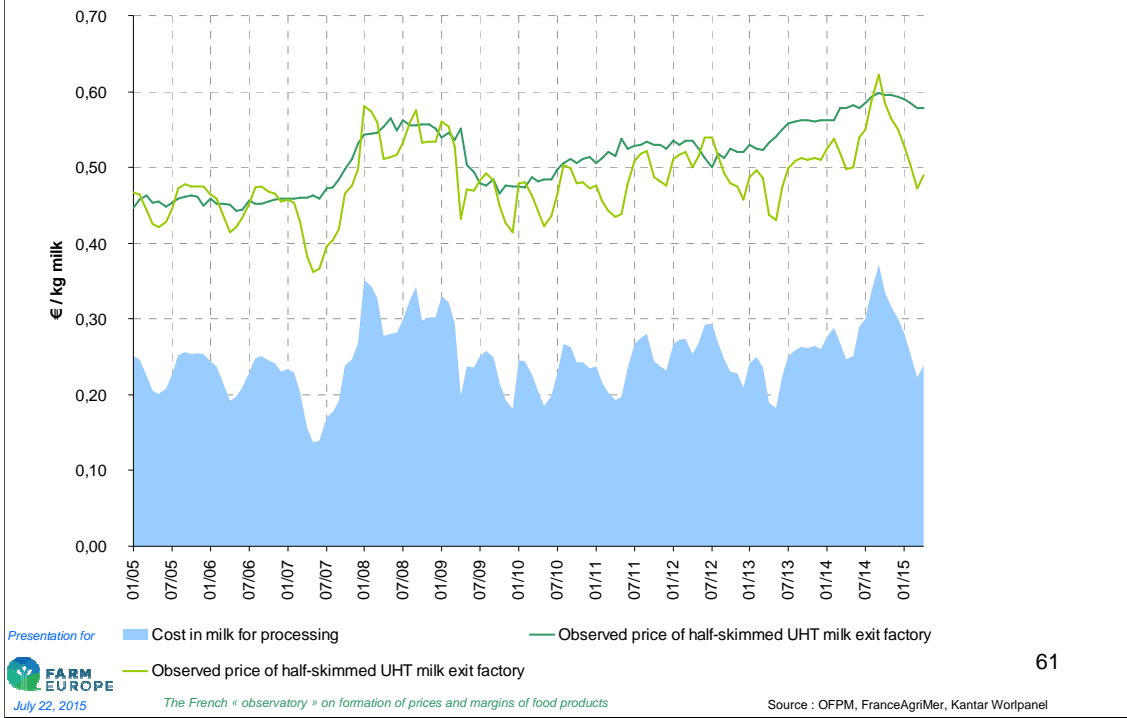
The price of consumer products in supermarkets, simulated according to the cost of good sold.

The slides only presents the example of half-skimmed milk. The result for others products can be different.

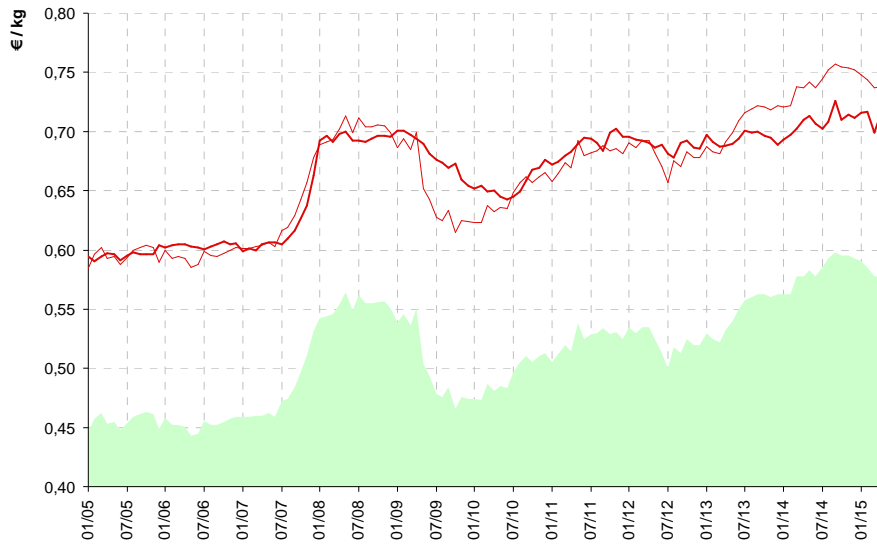
Results in dairy food chain / prices transmission :
farm costs → milk price at farm level



Results in dairy food chain / prices transmission :
cost in milk → dairy products prices at factory level



Results in dairy food chain / prices transmission :
dairy products prices at factory level → dairy products at retail level



- Half-skimmed UHT milk exit dairy factory
- Observed price of half-skimmed UHT milk in hyper-supermarkets
- Simulated price of half-skimmed UHT milk in hyper-supermarkets

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The French « observatory » on formation of prices and margins of food products

Source : OFPM, FranceAgriMer, INSEE

Main results of the Observatory *Dairy products*

- Increase of milk production price in 2014...
- ... totally or partially transmitted by food processing industry, according to products
- Retail prices in supermarkets : increasing
- Amelioration of the situation of dairy farms
- Contrasted evolutions of results in dairy industry, according to products
- Gross and net margins of the dairy sector in supermarkets decreasing in 2013... in 2014 ?

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The French « observatory » on formation of prices and margins of food products

> ÉDITION
avril 2015
**RAPPORT
AU PARLEMENT
2015**



Observatoire de la formation des prix et des marges des produits alimentaires



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Thank you for attention



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