The French Observatory of Food Quality (OQALI)

JOINT MEETING OF THE HIGH LEVEL GROUP

ON NUTRITION AND PHYSICAL ACTIVITY AND THE PLATFORM FOR ACTION ON DIET, PHYSICAL ACTIVITY AND HEALTH

29 November 2011

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RÉPUBLIQUE FRANÇAISE

MINISTÈRE DE L'ÉCONOMIE, DES FINANCES ET DE L'INDUSTRIE

MINISTÈRE DE L'AGRICULTURE, DE L'ALIMENTATION, DE LA PÊCHE, DE LA RURALITÉ ET DE L'AMÉNAGEMENT DU TERRITOIRE

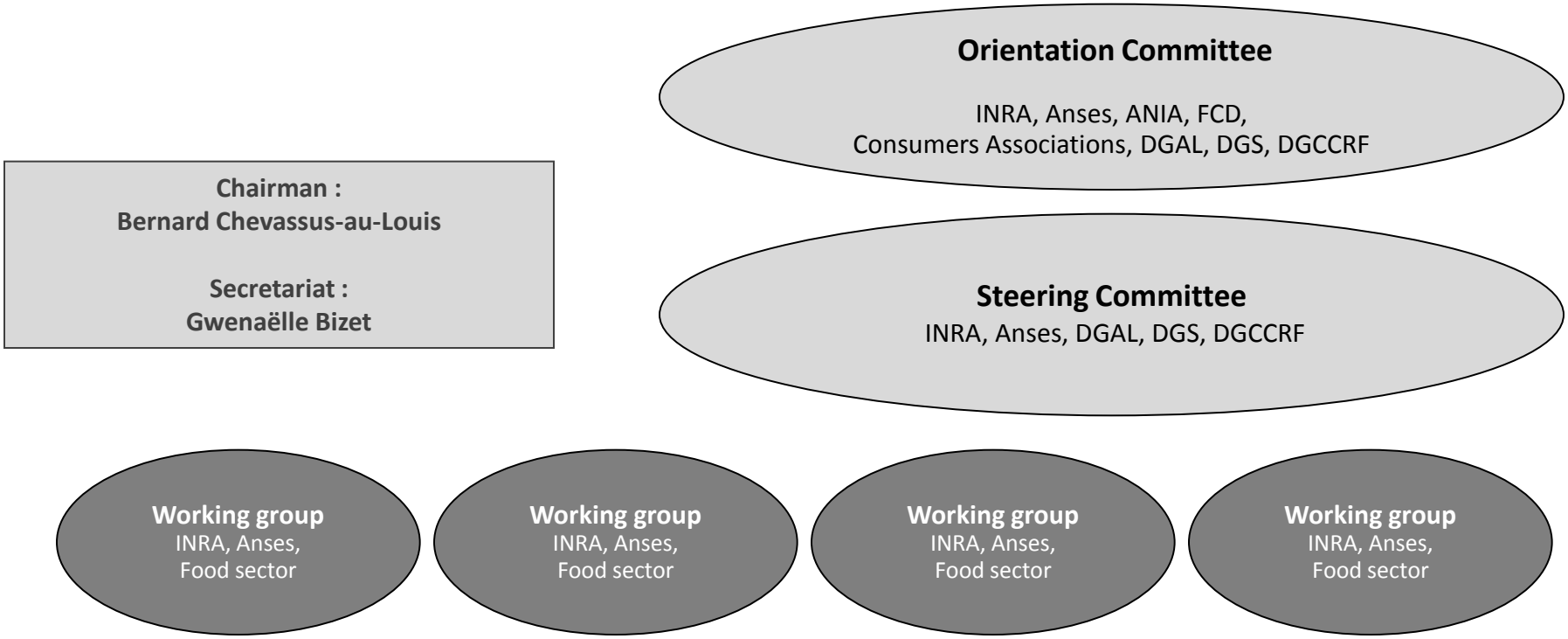
MINISTÈRE DU TRAVAIL, DE L'EMPLOI ET DE LA SANTÉ

The French Observatory of Food Quality

- Set up in 2008 as part of the French Nutrition and Health Programme 2006-2010 by the Ministries in charge of Agriculture, Health and Consumer Affairs

- Managed both by
  - The French Agency for Food, Environmental and Occupational Health & Safety (ANSES)
  - The French National Institute for Agricultural Research (INRA)

- Public financing



The French Observatory of Food Quality

- In July 2010, the French Food Observatory was created with the "law on the modernization of agriculture and fishing (LMAP)**",** as part of the French Food Plan (PNA) which is a real application of the French Food Public Policy **:**

- The French Food Observatory by how the "agriculture and fisheries code", is composed by 3 sections:
  - nutritional section (= OQALI)
  - food safety section
  - socio-economic section

  - **To inform publics authorities and socio-economic actors about changes on food supply and food consumption**
  - **To analyze collected data**
  - **A tool to define objectives of public policies**

- According to the first results of the EATWELL project, reformulation is a cost effective approach in order to improve nutrient intakes

OQALI Aims

- Oqali aims:
  - To collect and analyze nutritional data on branded processed foodstuffs, taking into account socio-economic parameters such as:
    - types of brand (national brands, private labels, discount brands)
    - market shares and prices
  - To follow nutritional and labelling changes in the food supply (nutrient content, ingredients, serving size, claims, ..)

➢ To evaluate and publish efforts realised by food operators

➢ To clarify and assess public and private interventions

➢ To support initiatives which favor the adoption of strategies aiming to improve the nutritional quality of the food supply (for example, voluntary commitment charters signed by food operators)

➢ To monitor voluntary commitment charters signed by the main food operators of a food sector

Decision tool for French authorities

Data collection (1/2)

- **General Information**: food sector, food categories, type of brand, name, commercial name
- **Nutrient content**
- **Nutritional information:** type of nutrition facts panel (big4 or Big8), nutrition labelling schemes (e.g. the GDA or Traffic Light systems), nutrition and health claims, consumption advice, and serving sizes.
- **Ingredient list:** order an quantity
- **Others information**: organic or environmental label
- **Economic data:** average price, market share
- **Retrospective data**

➢ **And All changes**

⇒ **World's first database connecting nutritional and economic data**

Data collection (2/2)

- Collaborations with manufacturers and retailers by food category are essential:
  - To facilitate data collection
  - To establish a relevant food classification
  - To identify the relevant nutrients to study
  - To validate the methods used to analyze data
  - To determine the frequency of the monitoring

Sources of data

1. **Information provided on products labels:**
    1. PDF of products packaging, send by manufacturers
    2. Pictures of the products taken on shelves by OQALI staff
    3. Internet websites of manufacturers or retailers
    4. Products bought

1. **Manufacturers data (Excel files, database access)**, particularly for retrospective data

2. **Results of manufacturers nutritional analyses**

3. **Private database on new products (i.e. GNPD)**

4. **TNS/Kantar Worldpanel marketing panel**

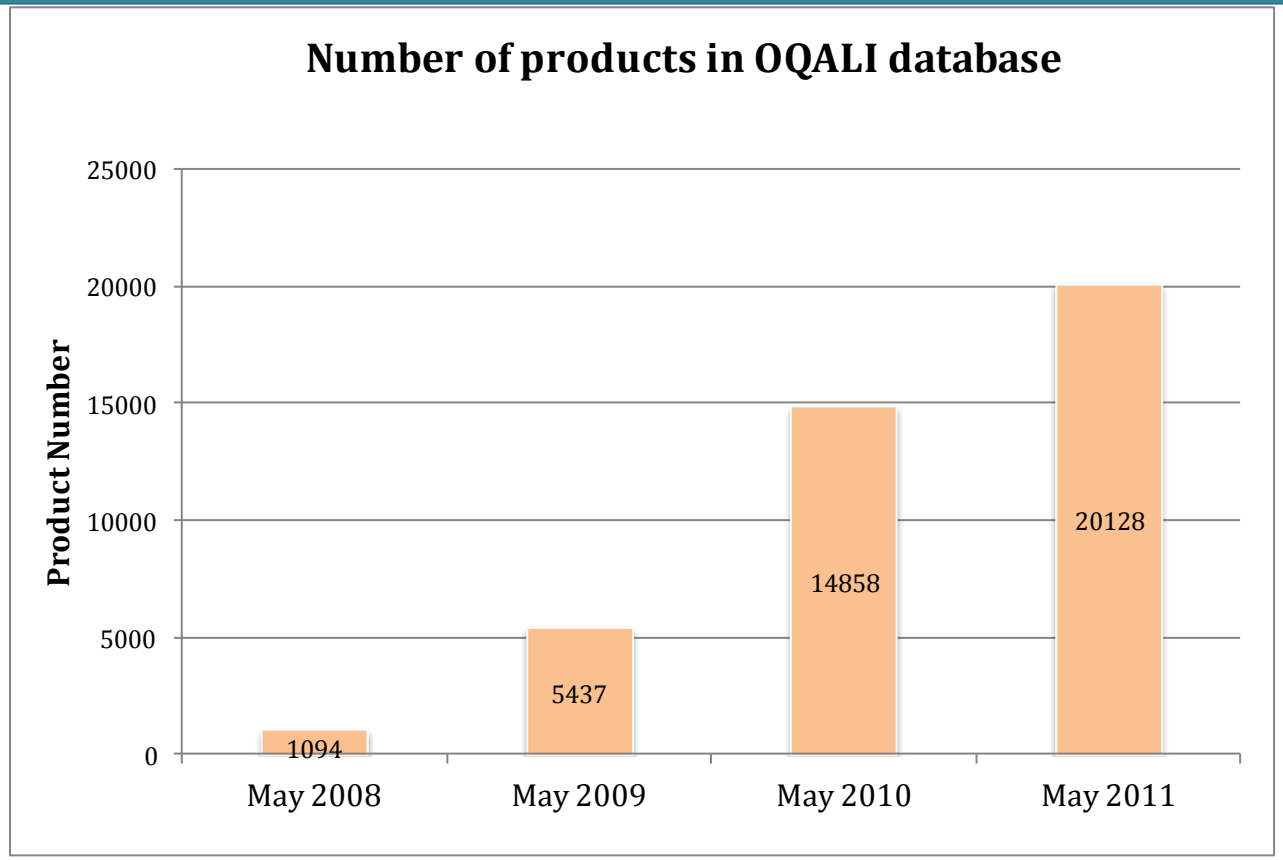
OQALI studies

- Food sector reports
  - Monitoring of nutrition information provided on labels
  - Assessment of the nutrient composition variability, integrating product market shares
  - Connection with recipes (i.e. % of pastry for pizzas or % of meat for sausage meat)

    ➢ **Food sector reports already published for more than 18 food sectors**

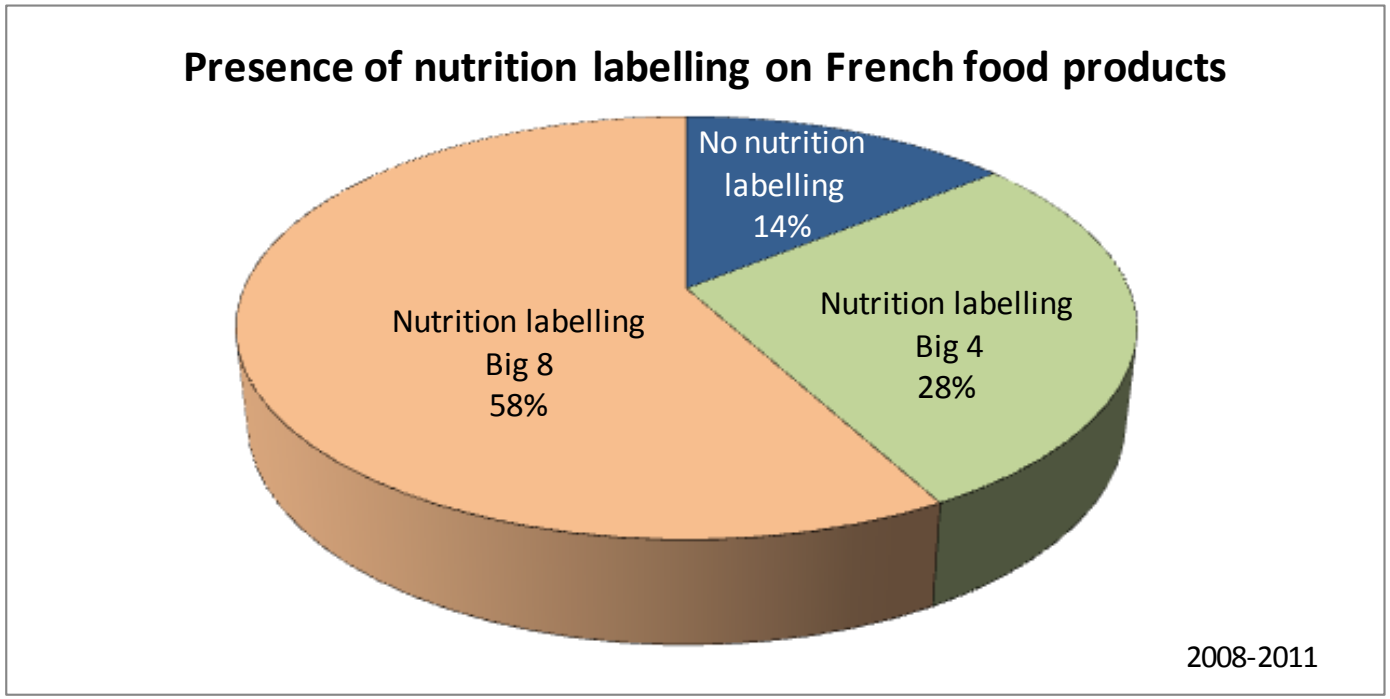
- Thematic studies
  - Assessment of the potential cumulative impact of voluntary commitment charters on:
    - consumer nutrient intakes
    - volumes of sold nutrients
  - Ingredients study on all the food sectors
  - Impact of voluntary nutritional labelling on firms' strategies (price and product characteristics) and on consumers' behaviour (willingness to pay)

OQALI database



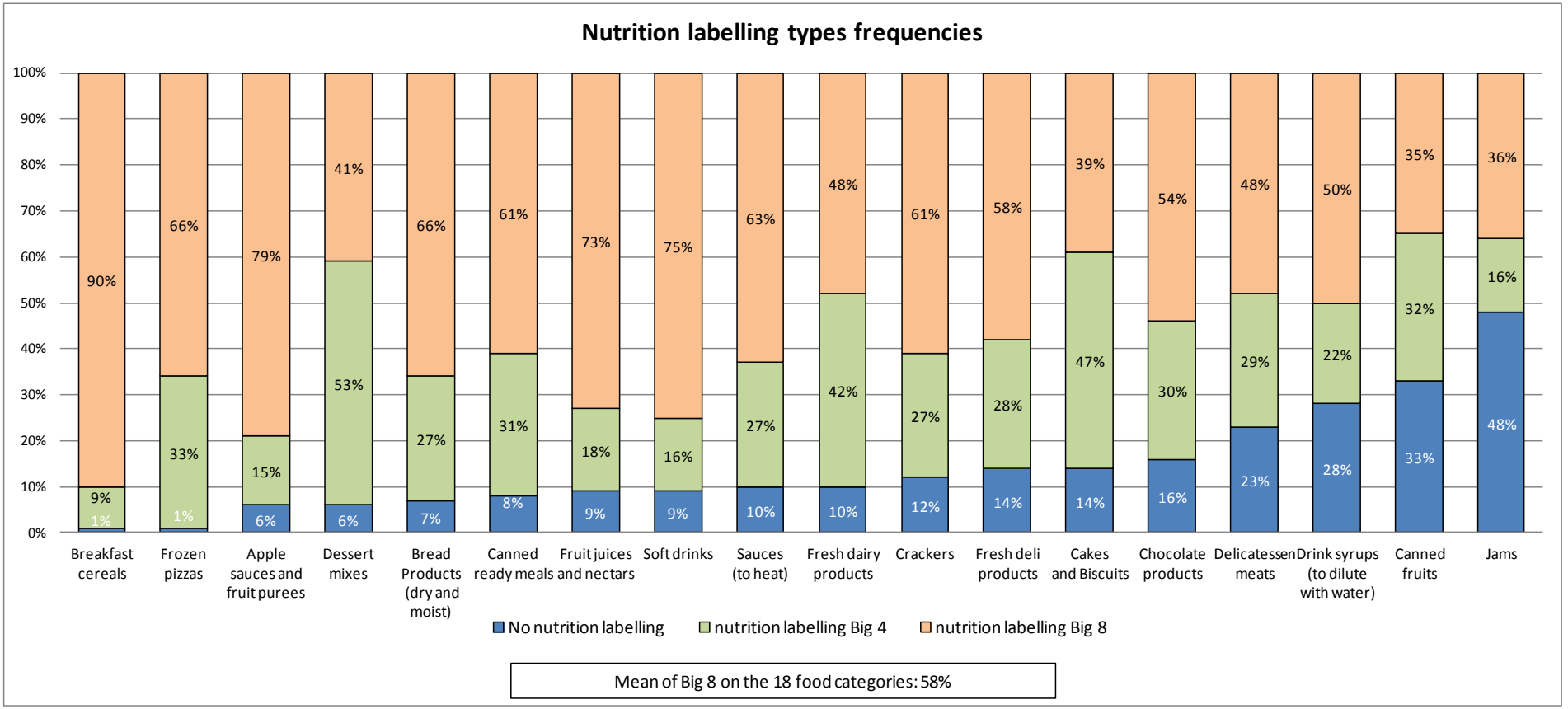
- More than 20 000 food items from 18 different food sectors:
  - Covering between 30% (Fresh deli products) and 78% (Soft drinks) of each market category
  - Corresponding to 72% of the manufactured products consumption and to 39 % of energy dietary intake of French consumers (raw foods are not monitored).

Nutrition information frequency (1/3)



On average, **nutrition labelling was provided on 86%** of studied products :
58% with Big 8 information and 28% with Big 4 information

Nutrition information frequency (2/3)



Presence and type of nutrition labelling depend on the food categories

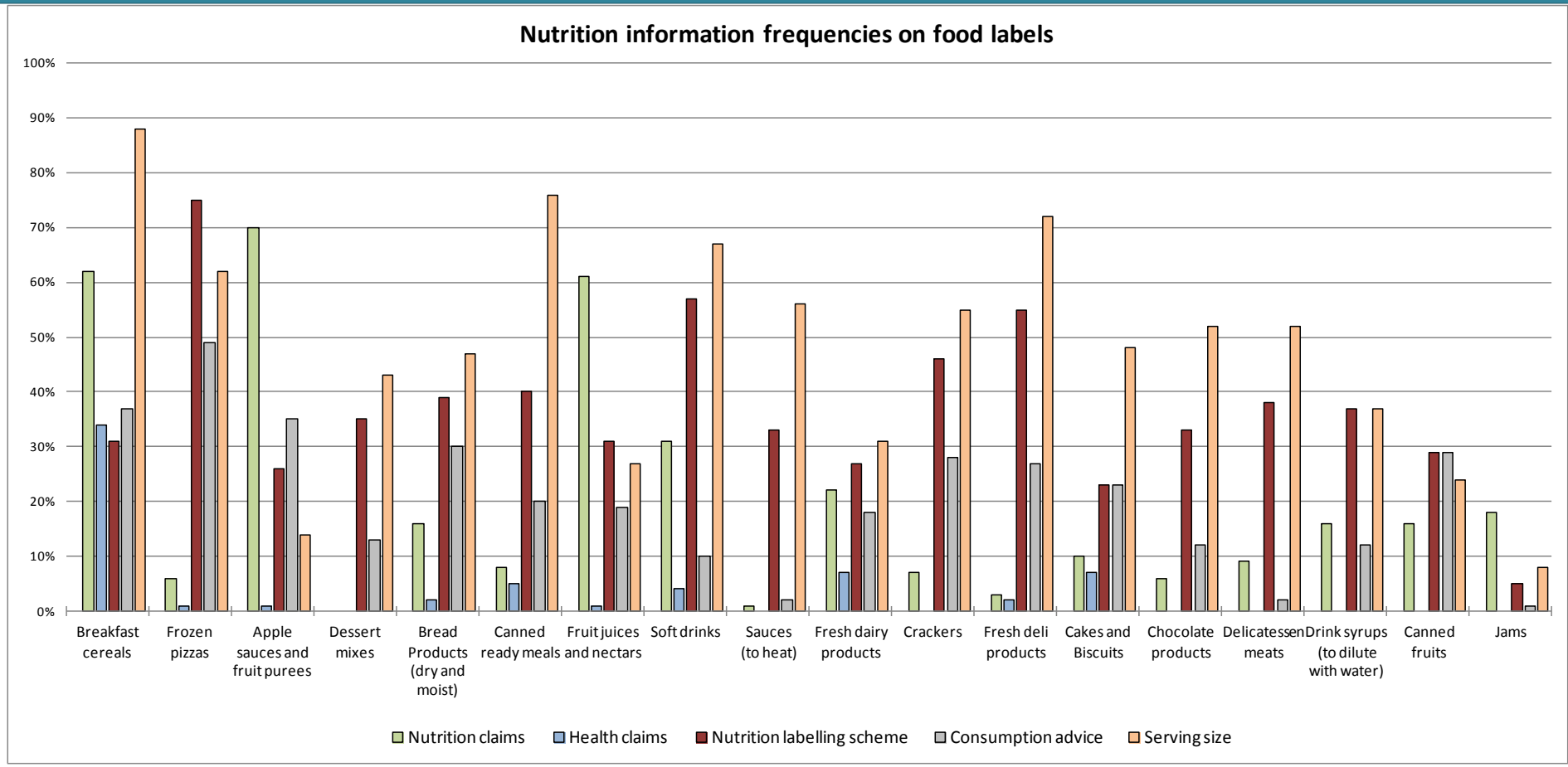
Big 8 is more often provided on:

- Breakfast cereals (90%)
- Apple sauces and fruit purees (79%)
- Soft drinks (75%)
- Fruit juices and nectars (73%)

Lack of nutrition labelling is most often encountered on:

- Jams (48%)
- Canned Fruits (33%)
- Drink syrups (to dilute with water) (28%)
- Delicatessen meats (23%)

Nutrition information frequency (3/3)



The frequency of other nutrition information depends also of the food categories

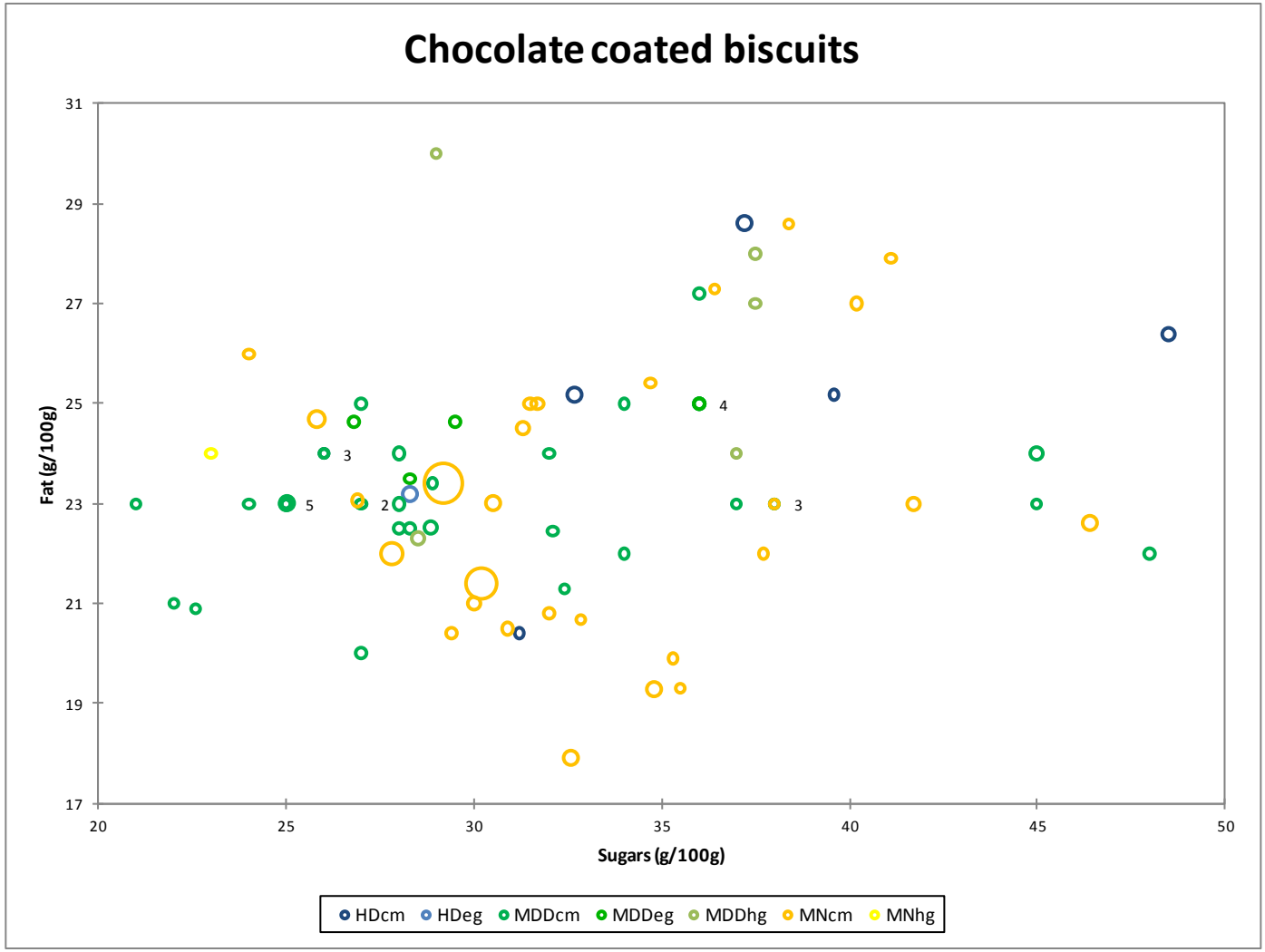
Nutrition labelling schemes are displayed on 37% of products: from 5% for Jams to 75% for Frozen pizzas

20% of products provide a **nutrition claim**, with the proportion rising from 1% for Sauces (to heat) to 70% for Apple sauces and fruit purees

20% offer **consumption advice** on their label: from 1% for Jams to 88% for Breakfast cereals

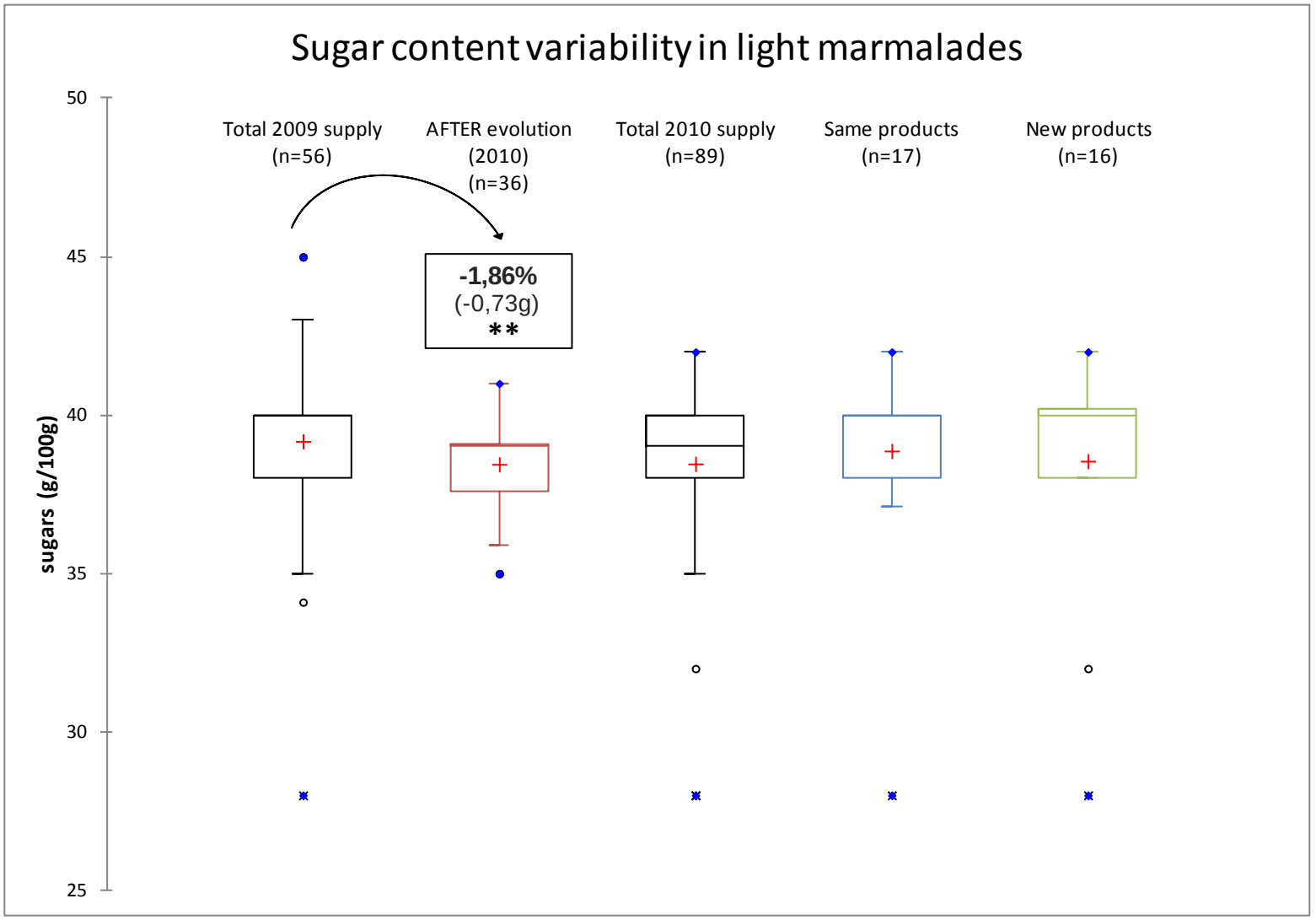
48% of products indicate a **serving size**: between 8% for Jams and 72% for Fresh deli products

Nutritional composition variability



Example of scattering : the midpoint of the circle represents the nutrient content of a single product weighted by its market share. Types of brands are coded with different colours.

Monitoring of the nutritional composition variability



Thematic study: analysis of retrospective data

Aim: testing 2 methods for monitoring the changes in the nutritional quality of the food supply

Data: Retrospective data available in Oqali database

- nutrient content of breakfast cereals, cakes and biscuits, chocolate products, bread products and crackers items,
- nutritional information for cakes and biscuits products

Method 1: monitoring changes at the reference level

Method 2: monitoring changes at the category level (evolution of the mean nutritional composition)

Results :

Method 1 shows some significant evolutions. For a specific item, several cases are possible :

- all the evolutions observed follow the nutrition guidelines
- all the evolutions observed go against the nutrition guidelines
- evolutions follow the nutrition guidelines for some nutrients but are compensated by a spoiling for other nutrients (for example a decrease in fat content compensated by an increase in sugar content)

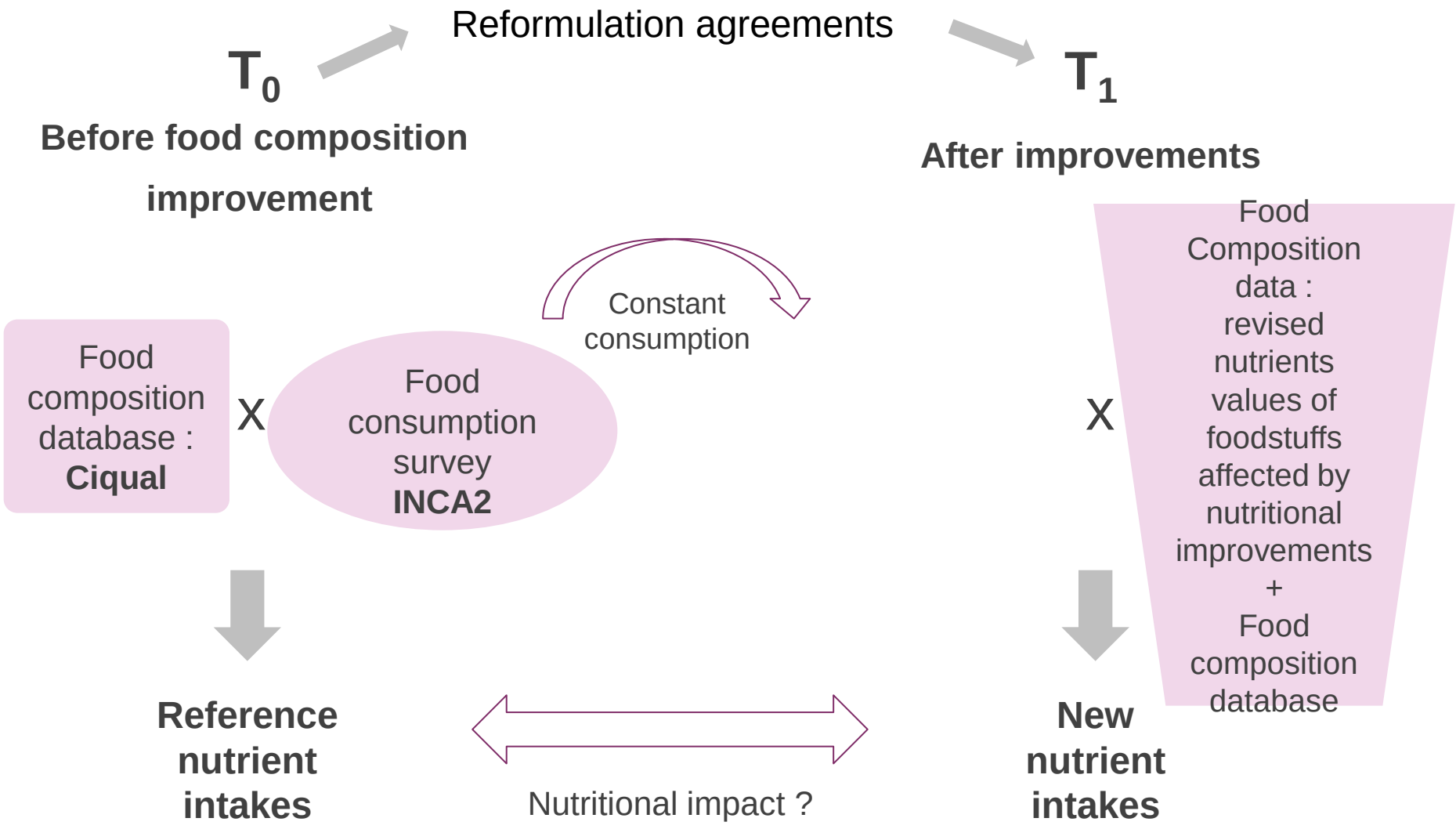
Changes at the category level are not significant (method 2)

Is that because items don't « move » the same way? Is that because a one year follow-up is not enough?

Nutritional information on labels are progressing for cakes and biscuits

For example, nutrition labelling schemes were displayed on 26% of products on 2008 and on 46% of products in 2009

Thematic study: impact of new food composition on nutrient intakes (1/2)



Thematic study: impact of new food composition on nutrient intakes (2/2)

		BEFORE FOOD COMPOSITION IMPROVEMENT	AFTER IMPROVEMENTS			
			SCENARIO 1 100%	SCENARIO 2 50%	SCENARIO 3 25%	SCENARIO 4 10%
Nutrient	% of food concerned (% of consumption affected)++	Reference average daily nutrient intake (g/day+)	Evolution %	Evolution %	Evolution %	Evolution %
Sugars	13.9% (9.0%)	95.0	**-4.2****	**-2.1**	**-1.0**	**-0.4**
Dietary fiber	2.2% (4.8%)	17.5	**+2.3***	**+ 1.2**	**+ 0.6**	**+ 0.2**
Lipids	16.5% (8.5%)	89.3	**-2.5****	**-1.2**	**-0.6**	**-0.2**
Saturated fatty acids	2.0% (0.2%)	36.4	**- 0.2**	**-0.1**	**-0.1**	**-0.0**
***Trans* fatty acid**	3.8% (0.4%)	2.3	**-1.4**	**-0.7**	**-0.4**	**-0.1**
Sodium	13.8% (11.3%)	2967.9 (mg)	**-7.8*****	**-3.9*****	**-1.9**	**-0.8**
Calcium	0.3% (0.1%)	914.0 (mg)	**+ 0.1**	**+ 0.0**	**+ 0.0**	**+ 0.0**
Vitamin D	0.7% (0.7%)	2.6 (µg)	**+8.3*****	**+4.1***	**+ 1.9**	**+ 0.7**

+ average daily nutrient intakes g/day except for calcium (mg/day) ; sodium (mg/day) and vitamin D (µg/day).
++ according to the INCA2 food consumption survey classification
*p<0,05 ; **p<0,01 ; ***p<0,001 : significant difference between reference and new nutrient intakes (according to scenario).

- Ongoing study with real market shares of reformulated products (for instance 50% for breakfast cereals or 18% for canned fruit)

Thematic study: Impact of voluntary nutritional labelling on firms' strategies (1/3)

Aim: To get better insights about the firms' strategies related to labelling in the current policy framework
What do signal the voluntary labels? What role does play nutritional labelling in the firms' strategies?

Data: around 800 items from biscuits and cakes sector (Oqali database)

Method:

- to analyze the use of nutritional or health claims → Binary logit model
- to analyze the probability to observe a more detailed nutritional label → Ordered logit model
  (performed on items without nutritional or health claim)
  labelling gradient : no labelling or BIG4 < BIG8 < BIG8 + GDA/TL on BOP < BIG8 + GDA/TL on FOP
- to analyse the willingness to pay of consumers → hedonic price regression

Results:

- **Presence of nutritional or health claims:**
  - Products with nutritional claims are of better nutritional quality (- saturated fat, + fibres)
  - National brands positively related to claims, private labels negatively related to claims
  - Presence of nutrition labelling schemes decreases the probability of the presence of a claim
  - Consumption advices and organic or fair trade labels are likely to be associated with claims

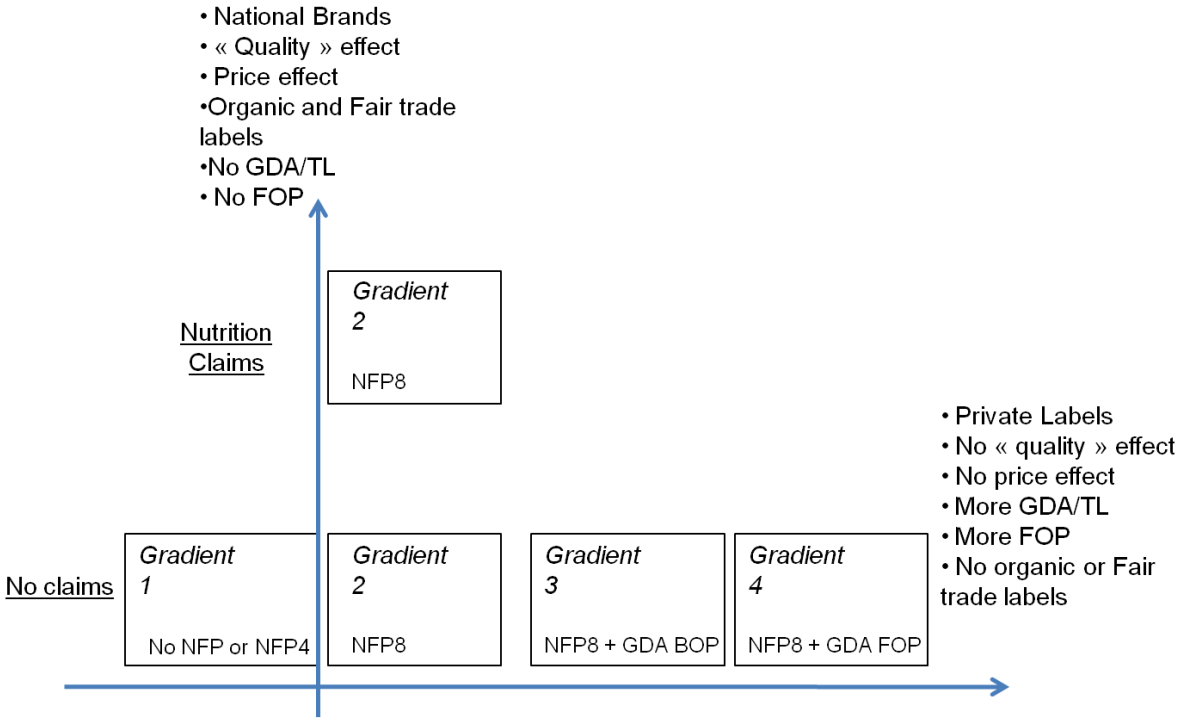
- **Detail of the nutritional label:**
  - no clear relation between nutritional quality and labelling gradient
  - main effect obtained for the type of brand: lower probability of observing extensive information on the packages if the product is marketed through a national brand

Thematic study: Impact of voluntary nutritional labelling on firms' strategies (2/3)

- **Hedonic price regression:**

–the type of label does not influence the price of products

–the presence of a claim has a positive effect on price (as does the presence of an organic or fair trade label)



Interpretation:

–Firms Processing National Brands clearly use nutritional claims for vertical differentiation strategies

–One can assume that consumers' WTP is more likely determined by the presence of a claim combined with certain other labels (organic or others) rather than by GDA or TL logos, even on the FOP. Consumption and accompaniment recommendations on the package may reinforce the WTP of targeted consumers.

–Retailers respond with more detailed labelling through GDA and TL logos on the FOP, which do not impact price and are not clearly related to the nutritional quality of the food. Strategy to compete with national brands ?

Thematic study: Impact of voluntary nutritional labelling on firms' strategies (3/3)

Conclusion:

Our analysis suggests that it might be important to consider the role of labelling in the competition between firms as labelling decision is clearly related to brand strategies in a different way for national brands and private labels

Perspectives:

- work in progress to extend this study to other food sectors
- methodological improvement needed especially to better assess the price effect
- Connection with data from consumer panels to assess the impact of labelling on consumers' behaviour

Perspectives

- Continue monitoring of manufactured food sectors
- Integrating the Away from Home Foodservice
- International comparaisons-Eurofir

- OQALI website: www.oqali.fr

- OQALI publications:

- Goglia R., Spiteri M., Menard C., Dumas C., Combris P., Labarbe B., Soler L.G., Volatier J.L. Nutritional quality and labelling of ready-to-eat breakfast cereals: the contribution of the French observatory of food quality. (2010*). European Journal of Clinical Nutrition,* 64 (S3): S20–S25
- Menard, C., Dumas, C., Goglia, R., Spiteri, M., Gillot, N., Combris, P., Ireland, J., Soler, L.G., Volatier, J.L. OQALI: A French database on processed foods. (2011) *Journal of Food composition and analyses*, 24:744-749
- Menard, C., Dumas, C., Gillot, N., Laurent, L., Labarbe, B., Ireland, J., Volatier, J.L. The French OQALI survey on dairy products: comparison of nutrient contents and other nutrition information on labels among types of brands. *Journal of Human nutrition and Dietetic,* Accepted
- Combris P., Goglia R., Henini M., Spiteri M., Soler L.G. Improvement of the nutritional quality of foods as a public health tool. (2011). *Public Health*, Accepted