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"Building Trust with Organic Food: The Case of Organic Eggs"

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Problem statement

Many consumers do not understand the significance of the Organic labels. The EFSA and the USDA makes no claim that organically produced food is safer or "healthier." or more nutritious than conventionally produced food. Consumers will still need to read nutrition labels and make wise selections to maintain an overall healthy diet. "Organic" food does not mean "natural". Only food labelled "organic" designate that the product meets the new EU or USDA organic standards.

In Europe and elsewhere, food products' Quality Labels (QL) have appeared in the early 1960s and their number has been increasing since then. QL are publicly owned, like "Organic Label" or privately owned, like "Carrefour Bio" brands which signal a "quality" difference from other products.

In the European Union, the partners of the European project ORGAP (Development of criteria and procedures for the evaluation of the EU Action Plan for Organic Agriculture) have recently compiled a list with the quantitative targets of action plans. By November 2008, at least 19 countries have or had action plans in place. Some of these have ambitious targets: Austria for instance aims to have 20 % organic land by 2010 (now: 13 %). The list is currently supplemented with information from other European countries. Furthermore an overview of the main qualitative targets and measures will be given.

Although the economic underlying principle is well known (Akerlof, 1970) *market for lemon* paper, QL performance have been mitigated.

With the increased importance of the *intellectual attributes* of the products, QL are the main tool available to signal product quality. Intellectual attributes are products' attributes that cannot be directly experienced through consumption (e.g. fair trade, healthy, organic). Other products' attributes can, partially or totally, assessed by experience, such as taste and convenience.

In France, there are several QL systems, public and private, at different stages in their development, some National and some European. Some have been (and still are) successful, while others are less successful. Among them, the recent expansion of "organic" label has brought to light a few issues, the integrity of the concept being one of them.

Previous research on QL (certification) focused on dual labeling (Hassan & Monier-Dilhan,

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2006), Consumer willingness to pay for QL (Hassan & Monier-Dilhan, 2002). Lagrange (Lagrange, Briand, & Trognon, 2000) provided a comparison between European QL system, while (Jahn, Schramm, & Spiller, 2005) described the economics of QL systems. Analyzing consumers' perception of health claim labels, Declerck et al (2007) showed that the most effective sentence on labels was the certification by a credible agent.

Objective

The main objective of the paper is to identify organic labels key factors of success. Preliminary explorations suggest that not only the specific attributes are important but also the consumers' perception of the national system for organic labels. Recent events, such as food crises, have brought into the consumer mind some doubts about the validity of food standard and reliability of label control process. These doubts have affected the credibility of regulators in their role as setting standards and monitoring the control process. All in all, they have affected consumers' perception about the value of organic labels.

Research Procedure

Structural analysis: The first research step aims at identifying the players, their role, objective and strategy in the making organic label systems. Both private and institutional organic label systems will be investigated and described, and typed.

Consumers' attitude, knowledge, perception and behavior toward specific QL: During this second step we will investigate from the consumer point of view the most important attributes of a organic label system.

Consumers trust:
Since consumer trust is hypothesized as a key factor of success, a strong emphasis will be put on this item with the objective of understanding how trust is built and destroyed.

Other attributes:
Other dimensions will be investigated as possible source of key factor of success or failure. For example, consumer surveys have shown that consumer attitude toward "organic food" is affected by the type of food (e.g. processed vs not processed), as well as product attributes directly assessed by experience, such as taste.

Other players:
With the increased power of consumers' association a special attention will be devoted to the role of these associations in the making of organic label success or failure. Interactions between organic labels and between organic label and Private labels and National labels will also be investigated.

The *potential* performance of organic label will be assessed trough a cascade model from consumer attitude to consumer behavior, not only on the QL itself but also on the major components of the QL system, such as the involvement of companies into the design of the standards.

Consumers' response will then be possibly compared to indicator, such as sales of QL products.

The paper focuses on consumers' trust and perception of the national QL system in order to identify QLs' key factors of success, since doubts have affected the credibility of regulators in

their role as setting standards and monitoring the control process. In any case, they have affected consumers' perception about the value of QL. The paper will contribute to an analysis of the situation in France.

Methods

Study population:
The only inclusion criterion was that subjects were all buyers. We also asked them if they were consumer of eggs. The age range was from 20 years to 60 years old. We chose indiscriminately women and men.

Study design:
Indeed, since consumer trust is hypothesized as a key factor of success, a strong emphasis has been put on this item with the objective of understanding how trust is built and destroyed.
In order to investigate the consumer point of view, we used a conjoint analysis. This technique used in market research allowed us to determine how people value different components of a QL system.
This investigation was based on eggs.

Subjects were exposed to a series of cards on which a picture of the product (top left), its description (top right) and a series of allegations referring to the QL were printed. A researcher (in face to face) displayed Thirty-two cards. The first eight cards were used to evaluate the confidence in these allegations. The following eight cards were used to analyze the purchase intention considering a price of 3 euros. The last 16 cards were used for the same purpose with a price decreasing from 2.25 euros to 1.5 euros. As regards to the sentences printed on these different series of cards, the subjects were exposed at first to a claim i.e. "Organic eggs", which was followed by different supporting claim sentences :

- a content sentence e.g. "No synthetic pesticide"
- a logo e.g. "AB logo"
- a legal support e.g. "this claim was authorized by the Ministry of agriculture" or "this claim is certified by producers" or "this claim is certified by an independent agent"
- the content sentence and the logo
- the content sentence and the legal support
- the logo and the legal support
- the content sentence, the logo and the legal support

All these cards were displayed one after another without turning back to the previous card. These experiments last around 10 minutes with every subject. After that, it was asked to all subjects, their age, their weekly budget for food and the number of person in the family

Plausible bias:
Another aspect worth mentioning is a likely bias based on cards presentation sequence. To insure comparability of results across participants, the cards were presented always in the same order: Fewer substantive to more substantive sentences and lower to higher prices. During a pre-test of the experimental design, we observed and were told by participants about the "negative" effect of presenting the prices in increasing order. For example, a participant told us she was upset by the fact "that the price was increasing" which affect her intent response at higher price level (she wanted to punish the *producer* for increasing the price). We taught that presenting the cards with prices in increasing order will reduce this bias. Our choice of a sequence may have

produced other types of bias (e.g., increasing intent to provide incentive for further price decrease).

Statistical methods

Differences in average observations for paired series

Differences in average answers for paired series are used since the same sample is asked to test the basic product (just with the claim) and the product

The difference in average, d_{2-1}, of trust for product m_2 with some mention added to the claim (claim content or/and claim content or/and scientific explanation or/and the legal support and/or agent certifying/ monitoring the claim) and basis product m_1 (just with the claim) is tested to be different from zero.

$d_{2-1} = m_2 - m_1$

The tested hypothesis is:
H_0: $d_{2-1} = 0$, there is no difference in average of trust for product with some mentions added to the claim (claim content or/and agent certifying/ monitoring the claim) and the basis product (just with the claim)

H_1: $d_{2-1} \neq 0$, there is a difference

Since the sample size is N = 124, a Student's t-test may be used with the test statistic Z as follows:
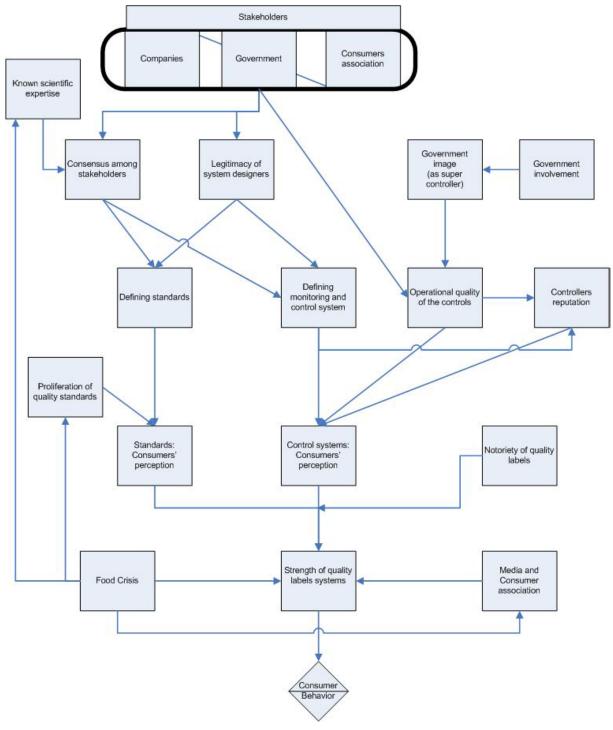
$$Z = \frac{m_1 - m_2}{S_d / \sqrt{N}}$$

For an α risk of 5%, the cut-off point is 1.984. For an α risk of 1%, it is 2.365.

The same method is used to test the average difference, d_{2-1}, of purchase intention for product m_2 with some mentions added to the claim (claim content or/and agent certifying/ monitoring the claim, price) and basis product m_1 (just with the claim at a given price). The is average difference, d_{2-1}, tested to be different from zero.

Results and Expected Results

Preliminary investigations, based on functional analysis, suggest that the determinants of QL systems performance are: QL standard, the QL control system, QL notoriety as well as the perception competing labels (such as national and producers labels or private labels) on specific attributes (see Figure 1, page 6).

Expected results will focus on key factors of success for quality labels.

Source: the authors' on going work

Figure 1. Quality Label System – Functional Analysis

Expected Conclusion

We wish to bring to light the key factor of success of quality labels systems, i.e. organic label, and provide practical advices to food manufacturers' and food retailers' managers who consider investing in quality labels. We hope our research will also provide insights to governmental agencies who consider implementing QL system within a broad representation of the food system, i.e., including players such as consumer associations, media, institutions and competing labeling systems.

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