

“Health-enhancing” Products in the Italian Food Industry: Multinationals and SMEs Competing on Yogurt

Giacomo Boesso, Nebojsa St. Davcik, and
Francesco Favotto

University of Padova

The purpose of this research is to present a detailed analytical (qualitative) study of the new “health-enhancing” products in the Italian marketplace, with a focus on both the multinational corporations and the small and medium enterprises (SMEs). The analysis is based on a new products development framework (NPD) which is operationalized by isolating four key strategic elements and other support variables from the literature. The theoretical framework is matched with seven health-food categories and seven yogurts marketed by international corporations and local SMEs in the Italian marketplace. The research provides an in-depth analysis of the emerging strategy in the food industry using the NPD theories in a national context (Italy) where the attention to food quality is well-known worldwide and the appeal of the so-called “functional food” seems to be barely—or poorly—investigated.

Key words: health-enhancing foods, new product development strategies, Italy, multinational enterprises, small and medium enterprises.

Introduction

If you believe the vendors of the major world food conventions, you may soon be able to eat and drink your way to better health. On display as well as in the research pipeline are aisle upon aisle of foods made to do more than provide basic nutrition. There are kinds of yogurt to lower cholesterol and others to curb appetite; cheese cubes that supposedly increase energy and strengthen the immune system; desserts laced with heart-healthy fish oil; and pomegranate-flavored water containing fiber to promote digestive health. The primary talk is what might be the next big thing in a market with some so-called functional foods—like energy drinks and probiotics, or products containing beneficial bacteria. Will probiotics be supplemented by prebiotics (non-digestible ingredients that promote the growth of healthy bacteria in the intestine)? Or will it be coenzyme Q10, known as CoQ10 (a vitamin-like substance that is said to enhance stamina)?

(adapted from Martin, 2007, in the New York Times)

A growing body of scientific evidence supports the argument that certain foods can improve human health more than traditional ingredients (Tuley, 1995). Bogue and Sorenson (2001) define health-enhancing food as

“natural or manufactured food or food ingredients which confer specific health-enhancing benefits beyond their basic nutritional functions.” Recently, the new term of “functional food” has been used when the food touts its added health-value to consumers (Bozzi, Perrin, & Schilter, 2006). Despite the existing regulatory uncertainties, functional food products have been launched in Europe since the mid-1990s. According to Bogue, Coleman, and Sorenson (2005), implicit consumer demand for healthy, health-enhancing, and functional foods has not materialized into positive dietary changes, particularly among males and the lower socio-economic groups. In summary, a new, promising niche is emerging in the food market, but the industry’s players are still defining the boundaries and strategies.

This article refers to “health-enhancing food,” or a broad category of healthy products (dietary, organic, functional, integrative, etc.) in which “functional foods” are a specific sub-group characterized by a functional ingredient added to regular food and adequately promoted to the final consumer. Functional products have been mainly launched in the soft drink, confectionery, dairy, bakery, and baby food market. Among these products, dairy products are probably the “key product.” The yearly growth rate is above 10% for yogurt (Romeo, 2006) and 6% for drinks (Wiggins, 2007).

Given these strong premises of growth and innovation, this article aims to analyze the situation in the Italian marketplace, discussing an original framework for new product development (NPD) in the food industry and matching it with a sample of popular new dairy

products. The article presents a detailed analytical (qualitative) study of the new “health-enhancing” yogurts in the Italian market with a focus on multinationals, as well as small and medium enterprises (SMEs). We investigate whether and how local SMEs compete with large multinationals by handling the NPD value-creating process differently. Data availability is limited to the Italian market (as a result of a national research grant); consequently, the nature of the study is mainly introductory and descriptive.

The article provides a literature and industry review on an existing theoretical framework in the NPD literature from which we extract the base for our qualitative analysis. Subsequently, we present our research hypothesis and methodological approach. Then, the article provides a detailed description of the NPD framework applied in this study. The best-practices cases are presented next. We then interpret and discuss our findings and conclude with the implications of the study and possible future enhancements.

Literature and Industry Review

New Product Development Process

According to Cooper and Kleinschmidt (1996), product success in the NPD is most dependent upon a high-quality new product process, clearly defined as new product strategy; this includes adequate resource allocation (people and money), senior management commitment and accountability, as well as properly defined and organized cross-functional teams. Building on these premises, several researches in the food industry better indicate factors associable with the NPD success: (1) high-quality, unique products; (2) consultation of experts and cooperation during the product development process; (3) a source of inspiration able to increase the market/consumer knowledge (i.e., suppliers, customers and research centres); (4) involvement of a food technologist; and (5) technical and marketing skills (Mark-Herbert, 2003, 2004; Stewart-Knox & Mitchell, 2003; Stewart-Knox, Parr, Bunting, & Mitchell, 2003). Once the food mass market is targeted, however, it is possible to scale down to the interaction of only four comprehensive cornerstones (research, testing, consumer adoption, and branding). This interaction contributes to creating a sustainable competitive advantage, which may result in continued growth of sales and profits to meet the financial objectives. Successful introduction of new “health-enhancing” products in the food market is thus determined by selected key activities performed internally in

the company as well as in the market. Accordingly, this research first adopts these four common points in identifying the factors of NPD success in the food industry:

1. research,
2. testing,
3. consumer adoption, and
4. marketing communication.

These four factors are pillars of our quality analysis and are named as “key NPD variables” in the following text and tables. While these four key variables may form a first, parsimonious group of factors that explain the NPD in the food industry literature (Bozzi et al., 2006; Mark-Herbert, 2003; Rizzo, 2006), other variables are also often discussed by the management literature in terms of strategic factors that might facilitate the launch of new products. In particular, a complete managerial framework for the analysis of the targeted industry should also include an analysis of the average customer, competitor and supplier analysis, potential entrant and substitute analysis, as well as micro and macro surroundings analyses (Bagozzi, Rosa, Celly, & Coronel, 1998; Kotler, 1999; Porter, 1998). According to these authors, a market analysis approach can undertake the average profile of the consumer and competitor analysis, with special emphasis on a target segment and sales trends (Bogue et al., 2005; Gilbert, 2000). Furthermore, analysis of the industry barriers, such as legal and/or trade obstacles, is a necessity in the enriched-food industry because there are conflicting rules and standards for functional products (Mark-Herbert, 2002). Supply-chain analysis is also a necessity for the producer in order to facilitate procurement of the appropriate raw materials and ingredients (Folkerts & Koehorst, 1998; Ibeh, Ibrahim, & Panaydes, 2006). In fact, only a reliable food control procedure can reduce the risk of food scandals in the long run (Jahn, Schramm, & Spiller, 2005). Finally, in order to meet product reliability and market validity, companies often follow international standards and labels, such as: ISO, HACCP, organic standards, etc. In these processes, an independent organization manages the control and certification of products in order to guarantee the quality and/or benefits of the products claims (Crespi & Marette, 2001; Hatanaka, Bain, & Busch, 2005; Unnevehr & Jensen, 1999).

A more complete framework of the health-enhancing food industry analysis will thus include four additional variables:

5. market analysis,
6. industry's barriers analysis,
7. supply chain analysis, and
8. external production control.

These four variables are included in our industry analysis framework and are named as “support NPD variables” in the following text and tables.

Products' Qualitative Analysis

Research Hypothesis

When analyzing the supply structure of any “health-enhancing” food, and in particular probiotic yogurts, difficulties emerge because the industry is almost as fragmented and difficult to define as is the overall market. Taking into account these difficulties, six main types of actors in the commercial segment are generally identified in the EU market (Menrad, 2003).

- Multinational food companies with a broad product range
- Pharmaceutical and/or dietary product-producing companies
- National “category leaders”
- Small and medium-sized companies (SMEs) of the food industry
- Food retail companies with proprietary brands
- Suppliers of “functional ingredients”

Food companies fight on a daily basis for consumers' attention and develop strategies in order to become relevant to them. Researchers claim that the prevalent strategies in the standardized food industry over the last years have been limited to (Nestle, 2002)

- providing attractive taste, which favors men's apparently innate preference for energy-dense food;
- offering a low cost as a basis for competition and consumption creation, leveraging food processing to create perceived value;
- developing convenient offering to make it easy to buy and eat larger amounts of food anytime and anywhere; and
- offering a natural production and supply chain in order to meet the organic standards.

In recent times, the above-discussed concept of functional foods represents a unique opportunity for a

significant shift in the food industry and its strategies. Companies search for the possibility of offering to receptive people specific benefits that call for higher prices and more profitable margins (Bogue et al., 2005; Menrad, 2003). Despite a growing number of definitions in the scientific literature, companies have entered the market of “health-enhancing” foods, designing products that are often only related to consumers' vague desire for a “better” life. This equivocal attitude represents an easy move toward the so-called “health opportunity” that represents an attractive, emerging niche for the food industry (Rizzo, 2006). Accordingly, the growing number of functional yogurts launched in the market may be explained by the different patterns taken by companies in NPD. In particular, one would expect to see different types of new products targeting different segments of customers/consumers, deploying different types of innovations, exploiting different types of labeling, and so on. Accordingly, the basic hypothesis which we aim to test with a qualitative analysis is the following: *“The large variety of health-enhancing products recently launched in the Italian marketplace is the result of the different interactions among the variables that characterize any new product development (NPD) strategy.”*

Methodology

This article performs a qualitative analysis of the dairy industry in Italy; coherently with other qualitative studies, the analysis is developed discussing the features of products of competing companies according to a common NPD research framework (Kumar, Chandra, & Storergerinzer, 2001; Kumar, Massie, & Dumonceaux, 2006). The first research task is thus to classify the different product types in order to create homogeneous groups that then will be matched with the NPD framework in order to highlight if—and how—the NPD process varies across different product categories.

A “market pull” business model is often described as creating consumers' awareness about new products in the functional food industry (Mark-Herbert, 2003). In this model, the consumer segment labeled as “sufferers” is presented as the most inclined to try a new product able to relieve symptoms from the onset of a disease (obesity, cholesterol, or others). Next, for “at-risk” people, the target looks similar to that of the sufferers, except that this group is twice as large as the sufferers segment. Positive personal experience from any of the above consumer segments also helps spread the news to the “prevention” segment and its broader market.

Table 1. New product development (NPD) framework.

NPD key variables	NPD support variables
1. Research into the benefit and proof of it: 1a. Research challenge 1b. Type of innovation	5. Market analysis: 5a. Consumer base 5b. Potential margin 5c. Packaging 5d. Placement
2. Production and organoleptic testing (taste, color, astringency, aroma, etc.) 2a. Way of production (conventional, organic, mixed, etc.) 2b. Fit with product's nature (taste, color, aroma, etc.)	6. Analysis of industry's barriers (legal barrier)
3. Control for the ease of adoption	7. Supply chain analysis (procurement of raw ingredients)
4. Labeling and communication	8. External production control (independent certification)

Finally, efforts are generally made to target health magazines and papers to raise general awareness of the product and its benefits. Once consumers reach this final level of awareness, the product takes on a new shape. A medical product may thus become an ingredient in a food product. While the medical aspect plays a major role in the functional segment, this attribute can be partially substituted for by different claims attached to other types of “health-enhancing” products, such as dietary, natural, wellness, or organic foods. In these latter cases, the main claim is not related to an additional functional ingredient, but to the absence of specific components such as fat or sugar or to other “wellness-related” benefits, such as “light tenure” or organic production (Rizzo, 2006).

The product's claim, usually attached to any new product, provides an excellent proxy for isolating the products' features among “health-enhancing” foods. These claims can generally be classified (Rizzo, 2006) as *minus* claims (“low in” or “free from”), *plus* claims (“rich” or “high”), *natural* and *organic* claims (with the last one strictly related to the certified production), and *clinical* claims (based on internal testing, available basic research, or independent specific study of the product). Accordingly, the yogurts analyzed in this study are grouped according to seven large product categories (absence of negatives, presence of benefits, natural wellness, organic production, natural functional, clinical functional, nutraceuticals/nutricosmetics). Furthermore, in accordance with our hypothesis, the next section associates with each product category a possible different characterization of the NPD process that—it is contended—might have contributed to the increasing variety of “health-enhancing” yogurts.

New Product Development (NPD) Framework

For all the NPD key variables presented in Table 1, companies have different options in terms of specific activities to be implemented. In more detail, academic literature shows how multinational corporations investing large amounts in research (NPD variable 1) are often present in the mass market with new products; however, also, SMEs conducting little or any basic research and development are often able to get new ideas and market solutions through cooperation or partnership with external players and partners (Chesbrough, 2003). As a result of the innovation model moving from disruptive innovation (breakthrough and radical new process or technology in the production and/or in the product's features) to incremental innovation (improvement or change in the production system and/or in a product that already exists), it is possible to identify at least six new innovation categories (Bagozzi et al., 1998; Kotler, 1999).

- *New-to-the-world products*: New products that create an entirely new market
- *New product lines*: New products that allow companies to enter an established market for the first time
- *Additions to existing product lines*: New products that supplement company's already-existing product lines
- *Improvements and revisions of existing products*: New products that provide improved performance or greater perceived value and that replace existing products
- *Repositioning*: Existing products targeting new markets or segments
- *Cost reduction*: New products or processes that provide similar performance at lower cost

Table 2. The new product development variables in the food industry.

	Product type	Absence of negatives	Presence of benefits	Natural wellness	Organic production	Natural functional	Clinical functional	Nutraceutical/nutricosmetic
	Standard claim	Free-from or low in ...	Rich or high in ...	Naturally good and healthy	100% organic production	Enriched with ...	Consumed regularly ...	Right assumption causes ...
NPD key variables	1a. Research challenge	Good taste and structure	Good taste and structure, fit with brand	Good taste and structure, fit with brand and trend	Good taste, fit with the production standards	Good taste, fit with brand, vague proof of benefit	Good taste, fit with brand, clinical proof of benefit	Fit with brand, heavy clinical test and description of benefits
	1b. Innovation category	Repositioning	Improvement	Addition	New product lines	New product lines	New to the world product	New to the world product
	2a. Way of production	Conventional	Conventional	Mixed conventional and organic	Purely organic	Mixed conventional and organic	Conventional	Pharmaceutical
	2b. Fit with the product's category	High	High	High	Very high	Medium: requires some changes	Low: requires change of the very nature of the product	Very low: it is a different product
	3. Ease of adoption	Easy	Easy	Easy	Medium: higher price may be a barrier	Medium: higher price may be a barrier	Difficult: need to stick to a regimen, ongoing	Difficult: need to stick to a regimen, ongoing
	4. Suitable labeling & promotions	Standard labeling and coupons or discount	Standard labeling and coupons or discount	Standard labeling, advertisement, and discounts	Detailed labeling, advertisement, and public relations	Detailed labeling, advertisement, and seasonal discounts	Detailed labeling, advertisement, and public relations	Information sheet, advertisement, and public relations
NPD support variables	5a. Consumer base	Large	Medium	Medium	Medium-low	Medium-low	Low	Very low
	5b. Potential margin	Low	Medium	Medium	Medium-high	Medium-high	High	Very high
	5c. Packaging	Same as conventional products	Same as conventional products	Similar to conventional products or higher in quality	Similar to conventional products or higher in quality	Brand-new packaging	Brand-new packaging	Brand-new packaging
	5d. Placement	Mainly grocery chains	Mainly grocery chains and beauty shops	Mainly grocery chains and beauty shops	Grocery chains, beauty and bio shops	Mainly grocery chains and beauty shops	Mainly grocery chains and beauty shops	Grocery chains, beauty and drug shops, pharmacies
	6. Legal barriers	None	None	Low	Very high	In progress	In progress	In progress
	7. Ingredients	Make and buy	Make and buy	Make and buy	Make	Make	Make	Make
	8. Certification	Private standard	Private standard	None	National and international standards	Private standard	Possible medical certification	Probable medical certification

It is contended here that the transition from conventional to health-enhancing yogurts covers the entire typology, and Table 2 shows how the different innovation categories can be easily associated with the previously defined product types.

Next, the literature points out how the final product needs to be tested for both the fit with the category (NPD variable 2) it contributes to create, establish, supplement, or reposition (i.e., yogurt, juice, milk, etc.), and the ease of adoption (NPD variable 3) by the final con-

sumer (Rizzo, 2006). Any new product is expected to meet the general expectations of the food-category it targets (plain yogurt, for example) and to be easy to consume despite its new functional benefit (i.e., when regular and repeated consumption enhances the immune system). Many observers cite failure rates in the food NPD as high as 90 to 95%; thus addressing changing tastes and needs with new products is essential in maintaining customer loyalty. Consumer testing, such as surveys and prototypes, is thus critical in such a turbulent market, especially if it brings in consumers' views on products' new features (Suwannaporn & Speece, 2003). Accordingly, Table 2 summarizes which of the different product types represents the major change in consumers' habits.

Finally, in the food industry, labeling and promotion (NPD variable 4) are mandatory activities for launching new products in the mass market. Based on innovative benefits and on the targeted segments, companies will make decisions on suitable marketing strategies, as well as on the right approaches to educate consumers about the new product (Kotler, 1999). Especially for the functional segment, product information and health claims should be presented in a number of iterations: on the product's label, in the media, and at doctors' offices. Many consumers are also developing the belief that foods can be used to reduce their use of drugs, and 78% of consumers sharing this belief always or usually read labels when shopping (compared with 22% of other shoppers). However, considering that healthy eating and deriving adequate nutrition and health protection from natural sources are also strong trends, it may be successful to market the functional yogurts as just one of the ways to take better care of oneself (Gilbert, 2000). Accordingly, Table 2 points out different marketing techniques as associated with the different products' claims.

Also for the NPD support variables summarized in Table 1, the literature points out plenty of different options that managers may consider undertaking in order to gain a sustainable competitive advantage. Market analysis (NPD support variable 5) refers to targeted segments, sales trends, price, packaging and placement, and providing any company with an insight into the trends of the monitored markets, the sales results, and the possible niches of new customers for the newly introduced product (Bogue et al., 2005; Gilbert, 2000). This information will provide additional help in defining suitable marketing to be used, determining the distributional channels, as well as assessing the price levels (Kotler, 1999). This analysis may lead managers toward

a niche strategy or, vice versa, toward a mass-market strategy, and Table 2 summarizes how the decision is often made based on the consistency of the consumer base and on the potential profitability associated with the new products.

Furthermore, in the food industry there are (possible) industry barriers (NPD support variable 6); at present, there are numerous rules and standards for creating and distributing functional products. Therefore, it is possible that firms cannot cover all legal requirements for every national market because of the wide array of ingredients that can be subject to different standards, legal procedures, and practices. On this controversial point, Mark-Herbert (2002) argues that specific product health arguments in marketing of functional foods in Sweden are related to food products and not to food additives. On the contrary, in the US market, food additives are less legally restricted and therefore are easier to market. Accordingly, managers can design the product's features based not only on the targeted consumers' profile, but also according to the characteristics of the legal requirements. Table 2 shows how a higher legal complexity is generally associated with the most advanced functional claims.

The influence of the supply chain (NPD support variable 7) on the future product is based on the dilemma of whether to buy the raw materials (ingredients) in the open market or to engage in direct production (buy vs. make). In the food industry, firms offering unique and specialized products gain distinct competitive advantages, and often the internal production of all ingredients drives this advantage (Ibeh et al., 2006). In fact, the external material supply may result in unstable offers, quality, and price. The strength of the concept lies in the fact that direct production ensures a stable supply of raw materials and makes it possible to better control the cost of the final product itself (Folkerts & Koehorst, 1998). Both options seem to be always available in the yogurt industry, and Table 2 hypothesizes strict "make" choices only for the most advanced functional claims.

Finally, any large industry is also the object of attention by consultants and other external players who develop relevant knowledge and facilitate the innovative aptitude of companies willing to buy their services. For example, certification schemes are often used to ensure marketing claims for unobservable quality attributes. A certification organization is an independent third player (NPD support variable 8) that deals with the control and certification of products. Its task is to determine the origin and method of production of the target product and

to guarantee quality and/or benefits. The recent globalization of agrifood production and distribution introduced private retail standards as well as international food standards—such as ISO (International Standard Organization) and HACCP (Hazard Analysis Critical Control Point)—and shifted this task to third-party certifiers (TCP), such as BSC Oko Garanteie, ISC, or QAI (Crespi & Marette, 2001; Hatanaka et al., 2005; Unnevehr & Jensen, 1999). Accordingly, internal quality controls and independent certifications are likely to be adopted any time a new product claim is proposed in the market, as presented in Table 2.

The above-proposed NPD model provided a comprehensive set of basic elements to be considered in analyzing new yogurts proposed by different competitors. The eight research variables are proposed here as an accurate synthesis of the NPD marketing and food literature analyzed (Bagozzi et al., 1998; Jago, 2000; Kotler, 1999; Mark-Herbert, 2003; Stewart-Knox & Mitchell, 2003); the variables' typology (key NPD vs. support NPD variables) is an original theoretical contribution of this article (as such, questionable and arguable) which was generated in order to accurately match the NPD literature with the yogurt industry.

Best Practices

In order to investigate the basic theoretical hypothesis presented above (*Research Hypothesis* section) and better detailed in Table 2, for each of the seven product categories, one success story in the Italian marketplace is briefly described and compared with the others.

Esselunga

Esselunga is a major retail grocery chain in Italy with an 8.5-10% market share and approximately 130 supermarkets and hypermarkets. It is a family business still controlled by the founder. With a 4,9€billion total turnover and 180€million of net revenue (2006), it is among the most profitable and certainly one of the most reputable companies in its industry. Esselunga competes with the international grocery chains (Auchan, Carrefour, etc.) and local actors (Coop and others), providing an upscale and sophisticated environment and its management is particularly attentive in analyzing the consumers' needs. On its shelves, successful products are offered both by multinational brands and by the Esselunga proprietary brand. Decisions about proprietary branding are generally taken in isolating the "blockbuster" products and the emerging volume trends. For example, the Esselunga Bio label, started in 1999, was among the first

experiments in proprietary branding in the Italian organic food industry. Accordingly, Esselunga Magro has been inserted in the research sample. It is a low-fat yogurt that clearly builds on the emerging trend of the low-fat dairy products; as such, it represents an example of cost leadership in the yogurt industry. The production of it is 100% outsourced to one of the company's long-term suppliers.

Valsoia

Valsoia is an SME started in 1990, with the aim of producing meat-free functional foods. Its mission incorporates the idea of improving the quality of life through nourishment. All products leverage the high nutritional properties of soya, and over the years the product lines have grown along all the classical daily needs: milk, cookies, yogurt, snacks, pasta, pizza, hamburgers, cheese, vegetable meals, ice cream, and dietary dressings. Its operating profitability is often above 10% of total sales, and the 2006 turnover closed at 50€million. Valsoya Yosoi is a soya yogurt proposed for controlling and enhancing an organism's natural balance and vitality of the intestine. The advertising is based on the pharmacological properties of soya: hypocholesterolemic effects, protection against osteoporosis, and protection against some types of cancer. As such, it is inserted as an example of the improvement of the classical yogurts.

Yomo

Yomo is one of the most popular Italian brands in the yogurt industry. Started in 1947, it became the national category leader with a 32% market share in 1993 and is one of the most successful SME businesses in the food industry. In 2003, due to heavy competition with the multinational brands and to a sort of manager myopia, the market share was reduced to 14% and the total turnover fell to around 240€ million. The group was acquired in 2006 by another national competitor (Granarolo), which is the national leader in fresh milk. The new group made its name in high-quality milk, and nowadays it keeps competing in the yogurt arena by launching new and highly differentiated products. Yomo Frutta e Verdura (Fruits and Vegetables) is one of the latest issues that leverage the natural idea of wellness by mixing the tastes of fruits and popular vegetables (such as tomato, carrot, pumpkin, spinach, and fennel). It is advertised as naturally healthy, light, and enriched with all the benefits of the specific vegetables. By adding the vegetable ingredients, it enlarges the existing product line.

Table 3. Italian best practitioners and main competitors in the yogurt segment of the dairy industry.

Product type	Absence of negatives	Presence of benefits	Natural wellness	Organic production	Natural functional	Clinical functional	Nutraceutical/nutricosmetic
Case analyzed	Esselunga Magro	Valsoia Yosoi	Yomo Frutta e verdura	Fattoria Scaldasole Biovitalis	Latterie merano ActiFControl	Nestlé LC1	Danone Essensis
Other competitors	- Centrale Torino defilé - Centrale Vicenza slimmy - Danone Vitasnella - Fage siloutte - FinIPER magro - Granarolo magro - Mandriot magro - Torre in pietra magro - Trentinalatte magro - Yomo leggero	- Bifisoy soia - Nestlé sveltesse - Parmalat phisiCal - Yomo fibrya - Coop vialactis - Amalattea probiotico	- Auchan nature - Berga-min bontà viva - Despar Prodring - Latteria Merano bella vita - Natura più nanoyo - Nestlé fruttolo bere	- Bergamin fattoria bio - Danone bio - Trentinalatte bio - Yomo bio - Auchan bio - Granarolo prima natura	- Auchan Equilibrio - Carefur regulactis - Parmalat Omega3 - Techno food - Omega3 - Trentinalatte probiotico - Valsoia soiattiva	- Danone activia - Danone actimel - Fattoria scaldasole lactobac - Granarolo vivivivo - Parmalat actionis - Parmalat KIR - Stuffer vivita - Yomo ABC	- Danone danacol - Emmi benecol - Emmi evolus - Latterie Merano actifage - Maya pro-active - Parmala jeunesse - Yomo equicol

Fattoria Scaldasole

Fattoria Scaldasole was started in 1986 and was among the first brands exploring the growing business of organic production. It actually opened the organic market in Italy, highlighting this new niche, and became the national leader in the 1990s. In 1998 the company and its popular brand were sold by the two founders to Plasmom, a company belonging to the Heinz US food group, and it was next passed to the French company, Andros, in 2005. Fattoria Scaldasole’s founder is still celebrated as an ecological guru. Its organic yogurt, Biovitalis, is the organic leader in the Italian market and the probiotic version has been recently added to the existing product line. This product has an independent certification for organic and biodynamic production. It is included in the sample as an example of a new product line that allowed the company to enter a new market (the functional one).

Latterie Merano

Latterie Merano is a social cooperative started in 1954 by the mountain farmers operating around Merano in northern Italy, close to the Austrian border. The total turnover is around 40€million, of which 90% is generated by yogurt. In 2005 it launched a joint-venture with another local researcher who is well known for his wellness studies and related business: Dr. Henri Chenot. A new line of yogurt was thus launched under the Henri Chenot brand; Bionessere ActifControl is rich in natural

lipids—tested at the university level—which are useful to reduce and curb the desire for food (or appetite) for a few hours after the product’s consumption. It is presented in the sample as an improvement and repositioning of the existing product line.

Nestlé

Nestlé developed its first milk for infants in 1867 in Switzerland. Nowadays, it is the world’s biggest food and beverage company. Total turnover in 2006 was 98 billion Swiss francs, with more than 265,000 employees, factories all around the world, and an operating profit around 11% of total sales. Dairy products account for approximately 25% of its turnover. Nestlé LC1 is an innovative yogurt developed by the R&D internal department. With its probiotic cultures, it provides independently certified, healthy benefits for the consumer. Launched in 1998, it was the first international probiotic yogurt on the Italian market, second only to the Italian Parmalt KIR, which was very poorly advertised in its functional properties. As such, it is presented in this research as a product “new to the world.”

Danone

The French corporation Danone is the current leader in the Italian yogurt market, with a market share of almost 30%. Established in 1919, it has developed several business units that are today reduced to dairy, mineral water,

and cookies. In each unit, Danone pursues personal wellness and healthy nutrition. Danone Essensis was launched in 2007 as the first “cosmetic yogurt,” which feeds the skin from the inside. Developed by the internal R&D product department of the corporation, this “new to the world” product is a major innovation that should reinforce the 13€ million turnover and 13% operating profit of 2006.

Overall, the above-discussed companies with the seven selected products plus their other yogurt lines control more than 60% of the Italian yogurt marketplace, a market that has shown in the last years a stable two-digit growth rate (more than 10% yearly). The remaining 40% of the marketplace is controlled by

- other multinational brands such as the Italian Parmalat (5.3%), the German Muller (15.3%), the Swiss Emmi, etc.;
- local SMEs such as Bergamin (6%), Mandriot, Stuffer, Trentinlatte, etc.;
- some municipal milk consortiums (centrali del latte); and
- other food retail proprietary brands.

A selection of these main competitors is also listed in Table 3.

The seven selected success histories provide a detailed framework for the analysis of the NPD model discussed in Tables 1 and 2, and a comparative analysis is carried out in Table 4. Information about the products’ claims, research accomplishments, production accomplishments, and certifications are available on the companies’ web sites or directly on the packaging of the products. The ease of adoption accomplishments are measured; the consumer ranking is available at www.ciao.it, one of the largest open-source consumers’ blogs. On the blog, each of the selected products is listed in the discussion forum with a minimum of four (Esselunga) and a maximum of 15 (Essensis) comments (as of September 2007). Comments are always organized according to a suggested standard, which includes a ranking based on taste, tenure, price, packaging, benefits, and other product features. This ranking is within a range from zero to five stars. Promotion accomplishments are based on the data from a company website as well as the financial press analysis published near the product’s release date. Market analysis is based on the information gathered by researchers in 10 hypermarkets in Northern Italy during the month of September 2007 (the average of 10 price observations for each product as collected in 10 different hypermarkets during a one-shot

visit). All prices are gross (including VAT at 4%) and promotions were not considered, if offered. Legal and procurement analysis are based on industry literature reports available in the AIDA (Accessible Information on Development Activities) database and local newspaper database.

Discussion

The dairy industry in Italy presents a large variety of products, which is a tangible sign of the maturity level reached by this market. In addition to the seven cases described in Table 4, this study acknowledges another 49 competitors grouped in the same categories (Table 3), and the actual number of products available for the customer is three-times larger, according to AC Nielsen (Infoscan; 2005).

Despite this huge offer, it seems possible to organize the leading companies’ strategies according to specific variables. As predicted with the analysis of the literature summarized in Tables 1 and 2, the NPD key variables (research, testing, consumer control, and branding) matched with the support variables represent a meaningful set of attributes for segmenting the companies’ offers.

First, it was easy to isolate best practices for each of the standard claims proposed to consumers in order to differentiate the products’ features. Next, it was always possible to compare these best practices according to the selected New Product Development variables. In detail, a popular grocery chain such as Esselunga proposes—under its proprietary brand—an appreciated low-fat yogurt, which is the cost leader in the sample analyzed (2.8€/kg). Conversely, a yogurt national leader, such as Yomo, builds on its longtime history of being a natural yogurt maker (preservative- and colorant-free) by launching a new product that targets meeting the customers’ need for natural products with simple R&D but high originality and medium price (4€). Furthermore, multinational research-oriented corporations explore new niches of the market with tested functional foods (Nestlé) and “new-to-the-world” cosmetic yogurt (Danone), charging top prices (6.5€ and 8€ respectively).

However, the more profitable niches of the market apparently are not impossible for local SMEs to enter; Valsoia differentiates its offer, transforming a vegetarian and cholesterol-free yogurt into a wellness product enjoyable for every diet (5.8€). Fattoria Scaldasole protects and allocates its product under the larger umbrella of certified organic production and, accordingly, it mar-

Table 4. Italian best practitioners analysis in the yogurt segment of the dairy industry.

Product type	Absence of negatives	Presence of benefits	Natural wellness	Organic production	Natural functional	Clinical functional	Nutraceutical/nutricosmetic	
Claim	Only 0.1% fat	Rich in inulin & fibers, naturally cholesterol-free	The wellness of fruits & vegetables' properties	From organic agriculture	Enriched with natural lipids, it curbs the appetite	Reinforces the intestines & the immune system	Feeds the skin from inside	
Case analyzed	Esselunga Magro	Valsoia Yosoi	Yomo Frutta e verdura	Fattoria Scaldasole <i>Biovitalis</i>	Latterie merano <i>ActiFControl</i>	Nestlé LC1	Danone Essensis	
Type of actor	Retail company	SME	National category leader	SME	SME	Multinational	Multinational	
NPD key variables	1. Research accomplishment	<i>Repositioning</i> of a popular product with a low production cost	<i>Improvement</i> of the classical yogurt for milk-intolerant and/or healthy people	Adds popular vegetables to the fruit	Product and packaging reflect <i>new</i> organic and ecological approaches	A <i>unique</i> mix of probiotics, fructose and Fabules [®] , it matches health and fitness	Drinkable <i>healthy yogurt</i> with a milk LC1 [®] culture of over 1 billion ferments	Drinkable <i>cosmetic yogurt</i> with Pronutris [®] natural nutrients, it matches health & beauty
	2. Production accomplishment	Free of synthetic flavors, but ferments are the basic ones	Low in fat (1.8%), high in fiber (1.3%) and sodium (0.5%)	Product similar to a shake (min. 4% veg., 20% fruits & veg.)	Low in fat (0.7%), high in calcium (0.01%)	Low lactosium (0.1%), vegetable oils (1%)	Low in fat (0.9%), high in fiber (0.03%) and sodium (0.05%), with colorants and preservatives	Low in fat (1.5%), traces of vitamins (0.02%) and antioxidants (0.04%) with thickeners
	3. Adoption accomplishment	4 (web rating)	5	3	5	4½	4	3½
	4. Promotion accomplishment	Extra point for the fidelity card	Company general campaigns	Product launch campaign	Company general campaigns	Little promotion, co-branding	Product launch campaign	Product launch campaign
NPD support variables	5. Market analysis	It builds on the brand name for marketing a popular product with a low-cost strategy; classical plastic pots; avg. price: 2.8 €/kg	It is a product for a niche, but it targets the general wellness; plastic pots; avg. price: 5.8 €/kg	Respecting the brand tradition and formats it; opens a new natural segment; plastic pots; avg. price: 4 €/kg	First mover in the organic industry, it leverages on high brand awareness; glass pots; avg. price: 6 €/kg	It exploits the joint knowledge of two companies physically located in the same city; plastic bottles; avg. price: 7 €/kg	First probiotic milk in Italy, it builds on research and new packaging; plastic bottles; avg. price: 6.5 €/kg	First nutricosmetic in a fridge, it crosses the bridge with a different industry; plastic bottles; avg. price: 8 €/kg
	6. Legal analysis	None	None	None	Enforced EU rules	Call for future EU regulation	Call for future EU regulation	Call for future EU regulation
	7. Procurement analysis	Outsourced—buy	Internal—make	Internal—make	Internal—make	Alliance—make and buy	Internal—make	Internal—make
	8. Certification	The entire supply chain is "certified" by the company itself	It guarantees GMO-free products, certified by CSQA	None	Externally certified by BioagriCért	Tested with the University of Ulster	The Nestlé Research center is a CNR site	Internal clinical test on 72 women

kets its yogurt with a larger mark-up (6€). Finally, Lattoria Merano takes advantage of a clear example of open innovation by entering the wellness arena with a price

(7€) proposed in joint venture with one of the most popular and media-exposed health and wellness leaders.

While heavy research investments are possible only for the multinationals, innovation is a clear driver of NPD for six out of the seven cases analyzed (excluding only Esselunga). Specifically, *disruptive innovation* (new components and ingredients for new-to-the-world products) seems accessible only to the research center of Nestlé and Danone, while all other SMEs successfully mix a so-called “incremental innovation” (improvement, addition, and new product lines) with additional elements of the NPD framework, such as certification (Valsoia and Fattoria Scaldasole), co-branding (Latteria Merano), or brand awareness enhanced by a specific product launch campaign (Yomo). Only three companies claim proprietary rights on their innovations, two from the so-called *closed model* (Nestlé and Danone) and one belonging to the *open model* (Latterie Merano). Large and costly marketing campaigns specifically designed for the launch of the new product were undertaken by both the two multinationals (Nestlé and Danone) as well as the national category leader (Yomo).

Organic production faces enforced national and international rules (Fattoria Scaldasole), while calls for future regulations are becoming popular in the functional food arena. Probably in order to anticipate these future norms, all companies—except the national category leader (for whom innovation is certainly simpler, the addition of vegetables to the regular yogurt)—clearly promote internal and external certifications of their products.

All the analyzed yogurts seem well designed to meet consumers’ habits—taste, tenure, described benefits, and suggested consumption behavior are appreciated according to consumers’ comments (always above three stars). Bottom line, the good research and production accomplishments of each company probably reflect the attention paid to this highly competitive and mature segment of the dairy market.

Conclusion

Selling a health-enhancing yogurt through a food retail channel assumes large volume and a willingness to compete for exposure on the shelves. Consumers compare prices of new products with those of existing products and certainly match their expectations with the promised benefits. This article shows how in the Italian dairy industry research in the area of the so-called functional foods pushes new technologies (trademarks, patents) and new business models (alliances, organic production, natural ingredients, certified supply chains, etc.) as tools to differentiate the advertised products’ features. Ideally,

trademarks, contracts, and other forms of immaterial property rights are used to protect the return on investment for the high-margin products and to prolong the value-added innovation life cycle. Competition, however, leverages on the porosity of the boundary between organizations and competitive environment, allowing ideas, technical, and commercial solutions to move easily around entry barriers and to implement both incremental and disruptive innovations that target in different ways the increasing need for enhanced “wellness.”

Based on these premises, pricing strategies become fairly aggressive and the “functional” Danone Essensis yogurt is marketed up to 2.85 times more than the “wellness” cost leader Esselunga Magro (+285%). This price bracket increases to 520% if we consider the cost leader in the plain yogurt sample (on average 1.78€/kg) versus the cholesterol-lowering probiotic marketed by the Swiss Emmi under the Benecol brand at 9.36€/kg. The qualitative nature of this study does not allow any detailed discussion of these data; however, it certainly opens interesting lines of research. While the consumers’ demand is changing, companies react by following different innovation patterns that need additional analysis in their determinants. Furthermore, an analysis of the cost structure of each strategy would offer a better picture of the actual mark-up of new products. Finally, the overall profitability of the strategy would be better investigated by analyzing volumes of sale as well.

Despite these limitations, the shift toward health-enhancing products is successfully accomplished by all the analyzed competitors via the addition of functional, natural, organic ingredients as well as through partnering policies or cooperation with other industry and distributional channels. Consumers’ comments are reasonably positive, despite the disruptive innovations and high prices, and the future of functional food might foresee more joint ventures between drug companies, cosmetic companies, and nutritional/food companies. This evolution will be interesting to watch as long as people see nutrition as a powerful and meaningful tool for reinforcing health, beauty, and wellness. Drawing lessons from best practitioners may influence the strategic options for other companies in industries with mature, yet competitive, environments. Options may include taking steps to differentiate the product lines and to emphasize process innovation and the benefits of new ingredients. Who is to say, for example, that Italian food companies will not be able to change the color of milk, yogurt, or cheese by adding natural antioxidants extracted from the *radicchio*’s (popular Italian red salad) production residuals? This and other process

innovations are already available for multinationals and SMEs interested in adding accessible ingredients to mature products.

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Authors' Notes

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