



## Subjective quality of yogurts of two Slovene private and two national brands having equal objective quality

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### ABSTRACT

*In order to compare the subjective quality of yogurts sold on the Slovene market under private and national brands, 100 randomly selected consumers were asked to taste samples of yogurts presumably belonging to two Slovene private brands (PB1 and PB2) and two Slovene national brands (NB1 and NB2). The samples offered to participants did not differ in terms of objective quality (the same product was placed in all 4 samples). The participants assessed their quality by assigning to each sample a mark between 1 and 7 (1 meaning the lowest quality, 7 the highest). The average value of marks assigned to samples of presumably national brands was higher (5.61 for NB1 and 5.26 for NB2) than the average value of marks given to samples of presumably private brands (4.85 for PB1 and 4.72 for PB2). The paper discusses the possible reasons for such perception of brands and the potential consequences of the findings for milk producers.*

(Keyword: brand, subjective equality, objective quality, yogurt)

### INTRODUCTION

Considering the ex-farm gates value, milk production is the most important agricultural activity in Slovenia. The annual milk production quota set for Slovenia is currently over 550 million liters. With a buying-in price of EUR 0.30/l, such amount totals EUR 165 million. The buying-in price of milk that dairies pay to producers depends, among others, on how much the consumers are willing to pay for dairy products.

In Slovenia, as well as on other European and world dairy markets, consumers are able to choose between products of national brands and those produced under private brands. The market share of private brand products is increasing (*Private label today*, 2007). Some data indicate (*Pohar and Klopčič*, 2010) that for producers producing both groups of products, the production of private brand products is less profitable than the production of products under their own brands. The reason for such is that the purchase point price for private brands is not formed by marking-up the processor's price, but by subtracting the retailer's costs from the purchase point price which is set by the retailers themselves. Considering the above, the increasing market share of private brands in the dairy sector would mean lower profitability for certain processors, which can only be preserved if the prices at which milk is purchased from the producers are reduced. Therefore, a decrease in the market share of national brand products is not in the interest of milk producers. The complex issue of price transparency throughout the entire supply chain has been pointed out also by the European Commission (*European Commissions*, 2008).

The consumers' decision to buy a certain product also depends on the position such product occupies in their minds (*Ries and Trout*, 1986). One of the factors defining such

position is indeed the product's quality. Yet quality is a rather complex term, which is particularly true of food products (*Acebron and Dopico, 2000*). *Grunert (1995)* for example distinguishes among product-oriented quality, process-oriented quality, and users-oriented quality. He combines the first two into what is known as »objective« quality, as it may be measured on the product as such, whereas users-oriented quality may only be measured on the users and is therefore referred to as »subjective«. The author stresses, however, that all three types of quality are closely interrelated.

For certain types of products, differentiation based on objective quality is not easy and additional indicators known as extrinsic quality cues (price, brand name, place of origin, promotion, packaging, presentation) are needed, which are determined by marketing efforts (*Steenkamp, 1990*). *Olson (1977)* describes extrinsic quality cues as characteristics that are related to the product but are not a physical component thereof. In the context of the marketing mix concept known as 4P (*Pride and Ferrell, 1997*), which consists of four elements namely product, price, promotion, and place, *Kotler (1988)* distinguishes between the core of the product and other layers (design, primary and secondary packaging, guarantee, etc.). Thus, objective quality could be defined as the part of the product that *Kotler (1988)* considers to be the core of the product.

Our research focused on the subjective quality assigned by consumers to yogurts of different brands that do not differ in terms of objective quality and are also considered equal as regards other characteristics of extrinsic quality cues.

## **MATERIALS AND METHODS**

The research involved liquid yogurt with 3.2% milk fat, with no aromas, fruit pulps or probiotic cultures added. This product was selected for the following reasons: the product is generally well known, quantitatively important within the category of fermented dairy products, and is not a niche product. It can be found on the shelves of two national retail chains under their own brands, along with a similar product sold under the brand names of two Slovene dairies. Both retail chains as well as both dairies can be considered market leaders. The actual technology of production of such products does not allow for great differentiation among the products at the core level. Both dairies produce yogurts under their own brands and as private brand products. It can be therefore speculated that private brand products and national brand products purchased by consumers on a daily basis do not largely differ in terms of objective quality.

The research was conducted among the students of the Ljubljana University. 100 randomly selected students were asked to assess the quality of the samples offered and evaluate them with a mark between 1 and 7, 1 meaning the lowest quality and 7 the highest. The samples were provided in equal 100 ml cups. Two cups were designated as private brands (Private Brand 1, Private Brand 2), while the other two were designated as national brands (National Brand 1, National Brand 2). The designations were not provided in the original typography and color but were similarly neutral for all four samples. Thus, the evaluation could not be affected by design – one of the extrinsic quality cues. Moreover, the objective quality of all samples was exactly the same since each of the participants' four cups was filled with the same yogurt. This means that the research participants actually tasted a yogurt of the same objective quality although they believed they were evaluating yogurts of two national and two private brands. The differences in the marks assigned to the samples thus reflect the evaluation of the extrinsic quality cue element known as the brand.

After evaluating the samples, the participants were asked to tell us which yogurt would they buy if there was no difference in the price, and to explain their expected buying decision.

## RESULTS AND DISCUSSION

Table 1 presents the average values and standard deviations of marks assigned by research participants to each of the four samples, as well as their buying preferences for each sample.

**Table 1**

**Mean value and standard deviation of scores given to brands and number of times brand was selected as preferred buy**

Brand	Average score	Standard deviation	Number of times selected as preferred buy
National brand 1 (NB1)	5.61	1.26	59
National brand 2 (NB2)	5.26	1.31	28
Private brand 1 (PB1)	4.85	1.17	4
Private brand 2 (PB2)	4.72	1.28	9
NB1+ NB2	5.50	1.29	87
PB1+ PB2	4.76	1.22	13

Results show that higher values were assigned to yogurts presumably produced under national brands. In Table 2 probabilities that two average values under consideration do not differ are presented.

**Table 2**

**Probabilities of hypothesis  $\mu_i = \mu_j$**

	NB2	PB1	PB2	PB1+ PB2
NB1	0.2148	<0.001	<0.001	
NB2		0.0881	0.0167	
PB1			0.8746	
NB1+NB2				<0.001

From this table it can be seen that the difference between marks obtained by the samples Private Brand 1 and Private Brand 2 was not statistically significant. Likewise, there was no statistically significant difference between National Brand 1 and National Brand 2, while there was statistically significant difference between National Brand 1 and Private brand 1 as well as between National Brand 1 and Private brand 2. There was also statistically significant difference between National Brand 2 and Private brand 2. Considering the values for national brand and private brand samples in total, it may be concluded that research participants assigned statistically higher marks to national brand products. Thus, national brand products on average obtained better results although all tasted yogurts were of absolutely equal objective quality.

According to *Grunert* (2002), the brand is a particular type of extrinsic quality cues. Nowadays, in evaluating the quality of a product offered under a renowned brand, what also matters is consumers' past experience with such brand, not just the objective quality of the product at the time of consumption. Obviously, also in our case the evaluation of samples was affected by experience the research participants had with the

selected brands. If this had been irrelevant, the samples would not have been given different marks. Yet experience is not necessarily and exclusively related to objective quality. The participants tasted a product for which – to our opinion – the differences between brands in terms of objective quality, if any, are probably the smallest compared to other dairy products (with the exception of UHT and fresh milk). The products sold under private brands for a specific retail chain are in fact produced by the same companies that on the market feature also with their own brand products.

The evaluation could thus depend on experience with other products offered on the market under the same umbrella brand. According to *Podnar et al.* (2007), the image of a certain product placed on the market under an umbrella brand is defined also by other products sold under the same umbrella brand. If the latter corresponds to the name of the corporation, the image of such product also reflects the image of the corporation. In our case, the four products offered for evaluation feature on the market under umbrella brands that are identical to the names of the corporations.

Looking at the results from such point of view and considering the potential buying preference, there seems to be a significant difference even between the two national brands; the product under National Brand 1 would be preferred in 59 cases, while the product under National Brand 2 would be chosen in 28 cases. Altogether, only 13% of research participants would prefer private brands.

Also interesting is what they stated as reason why they preferred a certain product. The results are indicated in *Table 3*.

**Table 3**

**Reasons stated by participants why a specific product was chosen**

<b>Reasons for selection</b>	<b>Number of times product was selected for this reason</b>
I like the taste	47
I know the brand	21
Has the right acidity	15
I known product	5
Product comes from town I live in	4
I like the thickness	3
I like package of product	2
It has the highest quality	1
I usually buy in the shops of this chain	1
I selected it because of trend	1

Over 50% of participants said the reason for their decision was something related to the objective quality of the sample tasted. This category comprised replies such as »taste«, »acidity«, »thickness« and »quality«. Yet it should not be overlooked that a large share of participants also said the reason to prefer a certain product to be knowing of »brand«, »product«, and »origin«, i.e. attributes which do not directly relate to »objective« quality. One also needs to consider that the participants expressed their buying preferences on the assumption that the price of all products was the same. Private brand products are usually cheaper than national brands, which mean that in their everyday life the participants might not opt for the product they ranked higher or for which they expressed buying preference.

The question is to what extent the difference in the evaluation of specific products can be attributed to the reasons stated above, i.e. the participants' experience with the „real” similar products of the selected national and private brands, and experience with other products of the same umbrella brands. Considering the discussions about price transparency in the food chain held in 2009 also in Slovenia, it could be assumed that the difference in evaluation might even be related to consumers' values. *Brunso et al.* (2005) argue that the consumers' perception of quality of a certain product may be established as a relation between the product's qualities and certain rather abstract, more central cognitive categories, such as values. Here, the product's qualities are no longer relevant as such but only in relation to the fact that they cause certain desired or undesired consequences. The relevance of such consequences is therefore defined by consumers' values. A recent opinion in Slovenia (*Kuhar*, 2009) is that as regards food products, the share of value added pertaining to retailers is disproportionately large compared to the share of value added that pertains to processors and producers, which makes the distribution of value added unjust.

### CONCLUSIONS

If other segments of consumer would evaluate the quality of national and private brands similar, as established in our research, it could mean that the dairy industry in future would not increase its demands for lower buying-in milk prices. But such situation could change rather fast.

On long term Slovene dairy industry can only survive if production costs are equal to those of the European competition. The same is true for milk producers. The subjective quality of Slovene private brand products will not change if such products are no longer produced by Slovene dairies. Domestic retailers will search for non-local suppliers of products to be sold under their private labels in the case the prices of dairy products produced by local dairies would be too high. Likewise, the subjective quality of products of national dairy brands will remain the same even if products are not produced from milk of Slovene producers. This means that Slovene dairies will not produce their national brands from milk of local milk producers.

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