Producers' quality policies and retailers' pricing: Honey a case study

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Abstract. Distributors' strategies and marketing activities influence always more those of the producers. In this setting whether the product quality policies of honey producers find a verification in the retailers' pricing or not has been considered.

A complex situation has emerged: 1) retail pricing in discounts considers the product quality policies of collective producers and particularly of the Italian origin certification 2) in super- and hypermarkets retail pricing considers mainly brand policies of producers 3) in herbalists' shops, retail pricing does not consider the product quality policies of producers but only the price image of the trade point.

Key-words. Product quality, honey, marketing.

Introduction. Marketing concerns demand analysis, planning and realisation of products that satisfy the demand, price promotion and distribution, analysis of the client's response. Since its origin, marketing has been conceived for producers and in particular for industry. Consequently all the above mentioned activities were the producers' concern. Wholesale and retail dealers had a minor role, only transmitting the industry's marketing initiatives to consumers. Things have changed radically with the growth of big retail dealers (big selling points and chains of selling points). Today, retailers' marketing strategies and activities (retail mix), interact more and more with the producers (Fornari 1999; Green & Schaller 1999; Melis 2000). At first, product policies and therefore also product quality policies, were exclusively the producers' concern. Not anymore. Regarding trademarks for example, product policies and therefore product quality policies are the retailers' concern. More generally,

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trade marketing approaches (marketing activity of producers towards retailers) highlights the collaboration among firms of the different stages in the distribution channel (Beltramini & Gaeta 1994; Lugli & Cristini 2000).

In Italy the agrifood sector is characterised by many small and very small firms and by the great importance given to the product quality policies.

This work tries to find out if retail dealers transmit product quality policies to small producers or, vice-versa, if the brand policies (or other) of retail dealers end up hiding those of the small producers. In other words in the selling points are small producers of foodstuff able or not to make their product quality policies reach consumers?

This paper regards the case of one foodstuff: honey. This was chosen because 1) there was already data available for the research 2) honey has a great number of selling points and producers 3) the producers, also those that supply the great distributors, are mainly small firms and often farms.

Materials and methods. The food product quality theme has been confronted in different ways. Gios and Clauser (1996) have singled out four approaches: the metaphysical one; the firms' approach; the economic approach and the perceived quality approach. According to Lancaster, 1966, 1991, the quality demand of consumers depends on all the variables that influence their perception such as brand, geographical origin, and publicity. Also, when firms fix the selling price they consider consumers' demand and therefore the perceived quality, the competitive system in which one works and the price aims of the firm (Antle 1999; De Benedictis 2000; Sillani & Grillenzoni 2001).

Unlike the production firms, that sell one or more products, or in any case limited lines of products, the trading firms sell an assortment. The policies of retail dealers' price determination do not refer therefore to single products, but to the whole assortment. This characteristic of the trading firms reflects many aspects linked to pricing. For example, when considering the price image of the sales point, signalling policies of some products used to communicate an image effect that can be extended to the whole assortment will be studied.

Another example is given by the fixing of the profit margin that goes from the single product to the whole assortment. Also planning discount interventions represents another example of how pricing is a decision that even if done on only some products, has an impact on the sales of the whole assortment (Schillaci 2001).

When retail dealers fix the prices of a product, they consider many things. Among these the product quality policies can be more or less important or not even be considered. The most important quality policies of honey producers and packagers are the collective ones based on the botanic origin, geographical origin and the single ones based on the product brand. The botanic origin is the variable that greatly influences the organoleptic and sensorial characteristics of the product. This variable has an important role in the quality perceived by consumers and the demand. The botanic origin determines the denomination of the honey that appears on the label (acacia, citrus, meadow flowers etc.) and can be certified by laboratory analysis.

In regard to the geographical origin the brand "Italian Honey" is frequently used to valorise the national product in respect to imported products. Other brands based on the origin are not much used or only used locally. Each geographic origin corresponds to a particular floristic association and therefore a particular sensorial frame recognizable by consumers or at least by the expert ones. The geographical origin of honey related to a particular flower association can also be certified by a melissopalinological analysis.

Concerning the brand, honey producers have small economic dimensions. There are only a few brands in the entire national territory but nevertheless they each have a small share of the market. Most of these honey brands on the Italian market have a regional or local diffusion. There are beekeeper brands and their cooperatives, industry brands and trademarks.

A part from the botanic and geographical origin, there are many other qualitative characteristics such as physical state, colour, aroma, taste, etc. that are not reported on the labels but are easily recognizable by the consumers. For the small firms that are not able to implement great communication policies and their brand serves only to identify the producer, these characteristics can be the only way the firm can communicate a special quality, differentiate their product from that of the competition, act on the quality perception of the consumer and on the demand.

Lastly, some qualitative characteristics that can be measured by analysis are commonly used by beekeepers, the first purchasers, and wholesalers for pricing even small lots of honey. Consequently, if retailers are interested in an objective quality of the honey they buy from their suppliers, they can ask and obtain the documentation that asserts this.

For this work a sample of 146 jars of honey in 4 hypermarkets, 5 supermarkets, 13 discounts, 7 herbalist's shops of Milan, Bologna, Treviso and Udine were used. In all 29 market banners and 40 honey brands were used. The sample was chosen in order to include statistical units with the maximum price and qualitative characteristics variability and not to be representative of any market. In particular the jars coming from the same selling point are all different in at least one of the variables that appear on the label and represent the whole honey assortment of that selling point.

The variables reported in table 1 were measured for each jar of honey. Glancing over the table, a part the consumption price, three groups of variables were noted: 1) variables managed by retailers and important

Name	Measuring method	Measuring level	Values or categories of the variable
Price	Label	continuous	€/kg
Banner	Selling point	nominal	Name on the banner of the selling point
Selling point category	Selling point	nominal	Discount; hypermarket; supermarket; herbalists' shop.
Brand	Label	nominal	Name of the honey brand on the label.
Botanical origin*	Label	nominal	Acacia; citrus; carob; chest- nut; heather; eucalyptus; sun- flower; honeydew; apple; mist- flower; medlar; sulla; taraxa- num: linden
Botanical origin cat**	Reclassification Label	nominal	Mistflower; diffused single -flowered (acacia citrus, chest- nut, eucalyptus; sunflower, honeydew, linden); less dif- fused single-flowered (carob; heather, apple; medlar; sulla; tarayacum)
Geographical origin	Label	nominal	Sub Italy (Alpi, Maremma, Lombardia,); Italy; Italy + Foreign: Foreign.
Physical state in the jar	Sensorial analysis	ordinal	Liquid; crystallizing crystallized.
Aspect in glass	Sensorial analysis	ordinal	Liquid limpid, liquid slightly turbid, liq. turbid; homoge- neously crystallized; less; ho- mogeneously crystallized; non; homogeneously crystallized
Colour	Sensorial analysis	ordinal	Nearly transparent, white, yellowish, ivory, beige, yellow, golden brown, light brown, dark golden brown, dark brown, nearly black
Odour intensity	Sensorial analysis	ordinal	Not perceivable, weak, medium, intense.
Odour description	Sensorial analysis	ordinal	Unpleasant, cooked, anony- mous, weak, pleasant, fresh, (typical of the orange one) fruity, aromatic.
Olfactory defects	Sensorial analysis	nominal	Present; absent.

Table 1. The variables of the model.

Sweet-sour	Sensorial analysis	ordinal	Very sour, slightly sour, not so sweet, normally sweet, very sweet.
Acidic	Sensorial analysis	nominal	Normally, definitely.
Salty	Sensorial analysis	nominal	Not perceivable, Not perceivable.
Aroma intensity	Sensorial analysis	ordinal	Not perceivable; weak, me- dium, intense.
Aroma description	Sensorial analysis	nominal	Unpleasant, nauseant, very sweet, anonymous, delicate, pleasant, sweet, fresh, fruity, aromatic, strong, complex.
Taste defects	Sensorial analysis	nominal	Present; absent.
Aftertaste persistence	Sensorial analysis	ordinal	Absent, little, enough, a lot.
Consistence	Sensorial analysis	ordinal	Compact cryst., soft cryst., liquefying cryst., very dense liquid, normally dense liquid, fluid.
Crystals	Sensorial analysis	ordinal	Big, medium, small, non perceivable.
Other defects	Sensorial and instrumental analysis	nominal	Present; absent.
Hmf	Instrumental analysis	continuous	mg/kg
Humidity	Instrumental analysis	continuous	% of water
Conductivity	Instrumental analysis	continuous	mS/cm

* This variable has to verify/exclude the hypothesis that retail dealers fix price considering the botanic origin declared on the label.

** This variable has to verify/exclude the hypothesis that retail dealers fix price considering the big categories of botanic origin.

for pricing in these firms (banner and trade point category) 2) variables managed by the honey producers and important in the quality policies of these firms (brand, botanical origin, geographical origin...) 3) variables that are commonly used in laboratory analysis and by the operators of the sector for evaluating the different aspects of honey quality (humidity, conductivity). There is also a fourth group of variables that even if important for retail pricing is not reported on the table (competitive system, publicity...).

This study supposes that if there is

a statistically significant relation between the price fixed by retailers and the explicit variables of the producers quality policies, the retail pricing considers also this aspect, otherwise said, the producers quality policies have passed through the retailers' filter.

To verify whether consumption prices fixed by retailers consider the product quality policies the Automatic Interaction Detection Technique and in particular the CHAID (Chisquare Automatic Interaction Detection technique) was used (Magidson 1993; Molteni & Troilo 2003; SPSS Inc. 1998). For each variable of table 1, the CHAID carries out the following operations: 1) it verifies whether there is a statistically significant relation with the price fixed by retailers: 2) it determines the sorting law of the sample jars of honev in groups, defines clusters, that permits the price variance to be minimised within the groups (variance of the sample, unexplained by the sorting law) and maximise the price variance of the price between groups (variance of the sample explained by the sorting law; 3) it selects the variable that obtains the best result; 4) it repeats steps 1, 2 and 3 for each group of jars of honey (cluster), until the price variable within the clusters cannot be reduced further or a stop law occurs, for example a low number of jars.

Results. The results of the analysis are reported in the price-quality tree of figures 1, 2 and 3. Before discussing the results it has to be pointed out that the variables that appear in the figures are the ones of table 1

which permit the best grouping of the sample, the clusters and the sub-clusters, that is, those that explain better the price variability of the sample and the single clusters. This however does not mean that other variables can be important in price determination and, most of all, that variables which are not listed in the table and that therefore are not part of the statistical analysis could be more important than those of the tree.

In figure 1 and 2 the zero cluster contains all the jars of honey of the sample or, in other words, is the sample. The jars are divided into two groups, cluster 1 and cluster 2, using the variable "botanic origin cat"; the jars of cluster 1 are divided into three groups with the variable "selling point category"; etc.

The price-quality tree resulted significant for = 0,05 and explains 95.5% of the price variance of the honey sample.

Figure 1 and 2 show that the variable selected for dividing the sample is the "botanic origin cat" and that the two categories of single-flowered honey, diffused single-flowered and not so diffused single-flowered are grouped in the same cluster. Amongst all the variables listed in table1, the one that best describes the price fixed by retailers is the botanic origin, the one that best represents the honey's sensorial characteristics and the quality politics of the producers. It can be said that retailers perceive only partially the quality approach of producers based on botanic origins. In fact, retailers use the honey's botanic origin to single out the big categories of



Figure 1. Price-quality tree map.



Figure 2. First three levels of price-quality tree.

price and product, categories, though, that are of little or of no use at all to producers for their marketing strategies.

Then, in order to divide the mixed flowered and the single flowered honeys into subgroups the category "selling point" was used, and, in both cases, hypermarkets and supermarkets resulted homogeneous in regards to the selling price of honey and have been inserted into the same price segment. In this case, a variable has been selected that refers only to the sales methods and the price image of the selling points and not to any quality policy of the producer.

At this point, it is best to continue discussing the categories of the selling points.

In the discounts the price variability of the single flowered honey which is the dearest (cluster 19) is not reducible in a significant way with any other variable of the model and therefore, this cluster remains undivided. The mixed flowered ones instead (cluster 2), are further divided first on the basis of their geographic origin (the Italian brand is sold at the highest prices) and then according to the banner of the selling point and the crystals. In the discount sample, the selling prices fixed by retailers consider the quality policies of the producers, and in particular, the collective ones, based on the distinction between single flowered and mixed flowered and the Italian geographic origin.

In the herbalist's shops the number of jars of mixed flowered honey (cluster 17) is lower than the minimum number of cases needed for further division. The single flowered ones instead (cluster 34), are represented sufficiently. The selected variable is the "banner" of the retailer and the four subgroups obtained are not further divided. In the herbalist's shops, the selling prices are fixed by retailers without considering the quality policies of the producers, collective or single, but only the price policies of the retail dealer. Product quality is probably considered when forming the assortment and in price dealing with the supplier. After this, though, no other variable of producers' quality policies has a statistical significant relation with the selling prices fixed by retailers. In conclusion, in the herbalist's shops the product quality policy is made by retailers and not by producers.

In supermarkets and in hypermarkets the best variable for dividing honey into more homogeneous groups in respect to price is the "brand" both for the mixed flowered (cluster 10) and the single flowered (cluster 20) ones. It is interesting to observe that in the groups with the most expensive jars of honey (cluster 29) there are only the producers' brands while in the other groups there are both the producer brands and the trade brands. This means that a lot of brands of the producers are sold at the same prices by the retailers, but also that the brands with the highest price image are all the producers' ones.

Then for the most expensive mixed flowered ones (cluster 16) no variable capable of further reducing price variability can be found. For the



Figure 3. Levels 4 and 5 of the price-quality tree.

cheaper mixed flowered types (cluster 11) instead, first the geographic origin is selected, then the "persistence and aftertaste". For the single flowered honeys the three groups (clusters 21, 24, and 29) are further divided. The single flowered honeys of the cheaper brands are divided according to the crystals as in the discounts; those of intermediate price according to the botanic origin and the dearest ones (all producers' brands) primarily according to the banner of the retailer and then to the "salty" characteristic. In conclusion, in the supermarkets and hypermarkets the variables that represent the producers' quality policies and in particular the single policies (brands) prevail over the other variables of table 1 as, for example, the retailer's banner.

Finally concerning the qualitative characteristics not reported on the honey labels but that can be used for communicating to consumers a special quality, the price-quality tree has singled out three (crystal persistence, aftertaste, salty). These variables are not important for the whole sample but only for some market segments. In particular, they are important for explaining honey prices, banner groups or brand groups. This means that they are used to differentiate their own honey from that of competitor producers and retailers.

Conclusions. Before discussing the conclusions, a summary of the main results is necessary. The retailers considered in this work, even if so different one from the other, all agree about using a typical variable of pro-

ducers' quality policies to define the price categories of the product.

Then, in the retailers' pricing, the price image policies of the selling point prevail over those of the producers. This does not mean that the many cases of the producers' product quality do not reach consumers because of the selling prices fixed by retailers. In particular, the honey producers have to operate in very different situations according to the category of the selling point. In the herbalist's shop the producers' quality policies can/have to deal with retailers, but do not have any possibility of reaching the prices consumers will pay. In the discounts, honey producers can reach the prices that consumers' will pay with the collective quality policies, in particular with the Italian origin certification. In the supermarkets and hypermarkets instead, the most efficient producers' policies to reach consumption prices is that linked to the brand.

A very articulated situation has so emerged. There is not just one answer to the question of who carries out retailers' product quality policies. In any case, the answer does not seem linked to the dimensions of the selling point nor to the retailer (number of selling points), but to the image the selling point wants to give itself. This work has confirmed that also in the product quality policies retailers are not passive subjects, but interact with producers or substitute them themselves.

In conclusion producers' policies of product quality can not ignore the strategies of the retailers' marketing.

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