Regional Marketing of dried fig-based products: an exploratory consumer study[1]

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Jel classification : Q11, Q13

Abstract

Strategies for exploiting typical products represent a topic of great interest, in so far as proper marketing may make them better-known and promote their distribution. The "dried fig", is a product deeply rooted in the local food tradition and with a high penetration index, although its market share has decreased in favour of substitute sweets which provide some added advantage but not the same high qualitative characteristics to the consumer.

The area selected for this study is Calabria, in South Italy, where the fig cultivation is predominant and the processing plants are highly concentrated, taking into account the strategic role of dried figs for the preservation of local resources and the promotion of regional development. This paper probes into the potential of this traditional product applying descriptive statistical analysis to a sample of consumers. The X2 test has allowed to define the independent relation between the main characteristics of this product for the consumer.

It may be concluded that the consumer behaviour is determined not only by family tradition or habit but also by the intrinsic characteristics (taste) of these products which are closely related to the local culture in terms of origin and production methods.

Résumé

Les stratégies de valorisation des produits typiques s'avèrent de toute première importance, étant donné qu'une commercialisation appropriée peut favoriser considérablement la promotion et la distribution de ces produits. Les figues sèches sont fortement liées à la tradition alimentaire régionale, avec un index de pénétration élevé, quoique, dernièrement, leur part de marché ait accusé une réduction au profit des produits substitutifs qui présentent un avantage compétitif sans pour autant offrir au consommateur les mêmes caractéristiques de qualité .

La zone d'étude est la Calabre, dans le sud de l'Italie, où la culture du figuier est prédominante et les usines de transformation sont très concentrées, compte tenu du rôle stratégique des figues sèches pour la préservation des ressources locales et pour la promotion du développement régional. Dans le présent travail, on analyse le potentiel de ce produit traditionnel, en appliquant une analyse statistique descriptive à un échantillon de consommateurs. Le test de X^2 a permis d'identifier la relation d'indépendance des caractéristiques principales de ce produit pour le consommateur.

En définitive, le comportement du consommateur est déterminé non seulement par l'habitude ou par la tradition mais aussi par les caractéristiques intrinsèques (goût) de ces produits, très liés à la culture locale pour leur origine et leurs modalités de production.

1. Introduction

The decision of conducting a market research into dried fig-based products is the result of the increased consumer attention to typical products. The focus is on products closely linked with the regional food tradition and which, although representing a marginal niche market, could become an opportunity if proper strategies are worked out .

At present, given the international scenario, the huge product diversification offered by Calabrian and Italian firms creates considerable job opportunities, while facing the stiff competition by the main producers of figs (fresh and dried) in the Mediterranean basin and above all by Turkey and Greece.

In addition, since the eating habit in a given geographic area is strongly determined by the cultural heritage and the local tradition, this study intends to assess the demand segmentation according to the type of product and to highlight the distinctive attributes which mainly affect the consumer decision to buy the product.

The following approach, despite its limitations and the criticism it attracts (Romani, 2000), is of a qualitative kind with a primarily explorative objective (Calder, 1977). Indeed, it represents a preliminary contribution given that fig-based products have little been investigated so far.

2. The main characteristics of the dried fig market

Of the typical products of Calabria, figs and their by-products have a potentially important role in a strategy aimed at promoting local development, safeguarding and relaunching agriculture and handicraft.

Prior to reviewing the results of the consumer market survey, emphasis was laid on the fig cultivation and the related processing sector along with the marketing of the dried product since dried figs represent the raw material used by the Italian and, in particular, the Calabrian processing industry.

The commercial destination of the fruit is two-fold : fresh and dried fig.

Fresh fig is mainly intended for end consumption and only a small part is used for the production of "figs in

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syrup" and other minor products (jams, fruit salads, etc.)

The Italian dried product (subdivided into first/best quality category and waste), mostly deriving from the "Dottato" and "White Fig" cultivar, characterised by small-sized fruit, has to compete on the market with the Turkish and Greek figs, coming from wild cultivars with large-seeded, fleshy fruit and bulky syconiums.

The product that reaches the Italian and overseas end market is generally of first and/or best quality category and is packaged plain (plaits, rings) or prepared with almond, nut and citrus fruit rind fillings (crocette, fig balls); it can also be flavoured with various Mediterranean essences (anise, myrtle, laurel) or coated with plain chocolate (titbits). The waste is used for minor industrial purposes.

As shown in Table 1, based on the official statistical data in Italy, in the period 1998-2000 the dried fig production reached a total of 3,067 tons, with an increase of 46% in the 1990s. On the other hand, there was a progressive decline in the fresh product of 16% during the same period. Therefore, this data indicates a growing interest of producers in the dried product which is in high demand

Tab. 1. *Dried fig production in Italy (three-year means)**

Region	1991-93		1998-2000	
	tons	%	tons	%
Campania	1,700	81.0	2,467	80.4
Apulia	67	3.2	100	3.3
Calabria	200	9.5	300	9.8
Sicily	133	6.3	100	3.3
Other regions	-	-	100	3.3
Italy	2,100	100.0	3,067	100.0
	100		146	

* Data from: INEA "Annuario dell'agricoltura Italiana", various years

Tab.2. *Global exports of dried fig (three-year means)**

Country	1991-93		1998-00	
	tons	%	tons	%
Turkey	29,559	57.2	40,109	55.9
Greece	8,383	16.2	4,439	6.2
Syria	4,331	8.4	2,965	4.1
Spain	2,234	4.3	2,362	3.3
Germany	855	1.7	1,429	2.0
Portugal	387	0.7	193	0.3
France	225	0.4	855	1.2
Italy	522	1.0	360	0.5
Iran	397	0.8	8,956	12.5
USA	3,066	5.9	2,367	3.3
Other countries	1,723	3.3	7,705	10.7
Global total	51,681	100.0	71,740	100.0

(*) Data from FAO, "Trade Yearbook", various years

by local manufacturers due to the excellent variety grown in Italy, despite the considerable waste in the Italian product and the higher purchasing costs compared to other Mediterranean countries.

Following the progressive and constant reduction experienced during the 1970s and 1980s, the fig production in Calabria seems to remain stable and to increase partially during the 1990s, reaching a level of 7,200 tons of fresh product. This data needs to be handled with great caution since it may be over-estimated by experts and operators in the sector. FAO data also seems to be over-estimated and it sets the Italian fig production during the 1990s around 33-35 thousand tons (approximately 3% of the world production). It is necessary to underscore that the official statistics in this sector are particularly inaccurate and incomplete; however, this data allows to make a comparison on an international scale in order to examine the relative importance of Italy as against the global production.

Turkey is the main producer of fresh figs and in the last period under examination (1998-2000), it contributed 23.2% of the global production, followed by Egypt (18.3%), Greece (7.2%), Iran (6.5%), Morocco (6.2%) and the other countries.

Concerning the trade of dried figs, the import-export flows recorded during the same period, once again on the basis of FAO data, indicate, as shown in Table 2, that Turkey accounts for 55.9% of the global exports, followed by Iran (12.5%). Italian exports account for only 0.5%, decreasing from 1% at the beginning of the 1990s. In short, the global dried fig market highlights the increase in the number of non-producing countries like Germany and France, which, while meeting the internal demand for the product, vitalise the market with re-export operations to other countries. It should be underlined that the Italian exports regard a product which has been processed and wrapped manually by the processing plants and not loose dried figs as it occurs in a number of countries.

Import dynamics (Table 3) show that Germany ranks first (with 15.4% of the global imports), whereas for the other countries, the volume of French (7,611 tons, i.e. 11.8% of the total) and Italian (9.9%) imports seems strangely high.

The United States which, at the beginning of the 1990s, imported just about 14% of dried figs subjected to international trade, rapidly reduced the volume imported down to a small amount (5.2%).

As for the Italian foreign trade, data indicated a decreasing trend in the total dried fig exports (-29%) which was even more significant with reference to the European Union, where Italy has lost 63% of the exports recorded at the beginning of the 1990s.

With regard to imports, the global volume increased during the 1990s by 6.3%. The largest imports come from Turkey which alone account for 80.5% of the total imported volume, followed by Greece (16.1%), with smaller imports from other countries (Germany, Tunisia, France)

The Italian fig producers are more and more aware of the productive and commercial skills of competing countries (Turkey, Greece, etc.), which over time have gained an even larger share of the market. Accordingly, of utmost importance is maintaining and increasing the market share of dried product processing and handling which boast a deep-rooted tradition in Italy and, above all, in Campania and Calabria. Furthermore, a project should be designed to exploit and qualify the wide range of typical quality products.

3. Method overview

To pursue the above objective, a semi-structured questionnaire with free and/or preformatted answers was drawn up and distributed to a sample of 130 consumers.

Consumers were interviewed near retail outlets of confectionery producers and shops which specialise in the sale of confectionery located in different small towns in the area around Cosenza and Catanzaro, chosen at random.

The survey area was carefully targeted, since the processing plants of these products were mainly concentrated in the area around Cosenza, where there is a large number of "connoisseur" consumers ready to consume the product. Interviews were carried out during November and December 2001, on different days of the week, including Saturday.

The objective of the questionnaire was to identify:

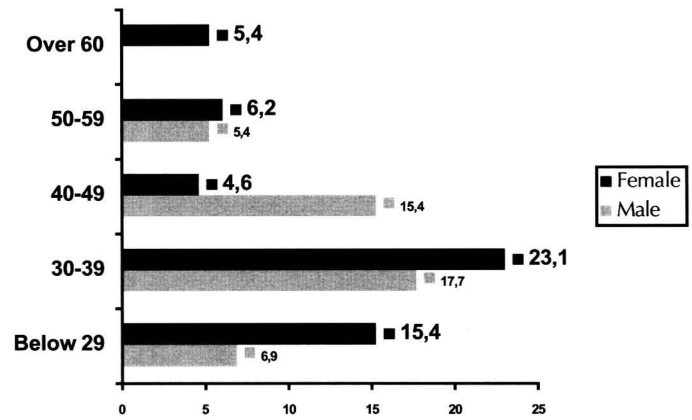
- the type of purchasers: the socio-economic level, the demographic characteristics, the taste, etc;
- the purchaser behaviour: the reasons for purchase, the sensory perceptions, the importance of the raw material origin;
- the purchase frequency and the quantity of the most recent purchase;
- the price opinion;
- the alternative and/or additional substitutes with other products.

Tab. 3. *Global dried fig imports (three-year mean values) (*)*

Country	1991-93		1998-00	
	tons	%	tons	%
Germany	7,412	15.2	9,959	15.4
France	6,431	13.2	7,611	11.8
Italy	4,804	9.9	6,373	9.9
China Hong Kong	471	1.0	5,643	8.8
Spain	2,000	4.1	2,267	3.5
United Kingdom	2,348	4.8	2,364	3.7
Switzerland	2,384	4.9	2,232	3.5
Sweden	1,197	2.5	1,005	1.6
Portugal	758	1.6	1,563	2.4
Turkey	-	-	858	1.3
United States	6,886	14.1	3,330	5.2
Other countries	14,043	28.8	21,279	33.0
Global total	48,735	100.0	64,485	100.0

(*) Data from FAO, "Trade Yearbook", various years.

Fig. 1. *Distribution of the sample by age group and gender (percentage values)*



The data were processed using the SPSS programme and the significance X2 (chi square) test was also performed to assess the independence of a number of variables found to be important to consumers.

4. Results

4.1 Characterisation of the Calabrian consumer of dried fig based products

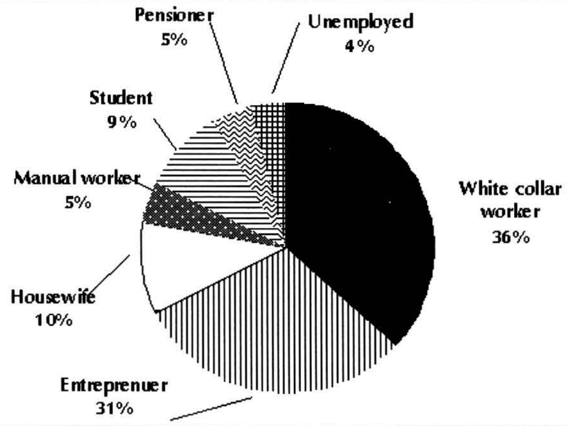
The survey results indicated a sample characterised by consumers of a medium-high education and professional level, mostly women, who are familiar with dried fig-based products (in particular, approximately 85% with the most widespread products such as crocette, plaits, rings, 81% with chocolate-coated figs and only 51.5% with fig balls) also in the case of non-purchasers (9.2% of the total interviewed).

In particular, as regards the socio-demographic characteristics of the sample interviewed, the youngest age groups are represented to a greater extent (fig. 1), namely the 30-39 age group (40.8% of the sample) and the below-29 age group (22.3% of the total), while the over-60 age group made up a smaller portion of the sample (5.4%).

Concerning the gender distribution of the sample, a slightly higher presence of women was noticed (54.6%). The majority of the answers given by female interviewees are concentrated in the first two age groups (15.4% and 23.1%, respectively), while answers given by male interviewees are more evenly distributed among the different age groups but are absent in the over-60 age group.

As for job distribution (fig. 2), white collar workers (36.9%) and the "entrepreneur-manager-professional" category (31.2%) are the most represented, in line with a higher number of school diploma-holders (46.9%) as a-

Fig. 2. *Distribution of the sample by profession*



gainst graduates (38.5%). A lower percentage include manual workers (4.6%), pensioners (4.6%) and the unemployed (3.8%). Housewives account for a rather significant percentage (10%).

All in all, given the answers of the first part of the questionnaire, the consumer appears to be aware of the importance of the Calabrian origin of the products (approximately 70% of the sample)and of the production area (43% identified the "Southern Tyrrhenian Cosenza" area).

Some fundamental aspects were once again confirmed when investigating the importance of a number of essential attributes[1] for the purchasing process (Table 4).

The attribute taste ranks first with popular with the family and emphasises the importance given to the intrinsic characteristics of the product, i.e. the organoleptic properties rather than the characteristics associated with external attributes (36.2% of the interviewees give little importance to the external appearance).

The search for quality along with wholesomeness and in contrast, the slight importance attributed to the keeping ability, lead to the conclusion that consumers somewhat associate these characteristics with the typicality and manually produced characteristics of typical products like figs: this is confirmed by a national survey (CIRM, 2001) indicating that "typical" dishes are the best for taste, wholesomeness and food safety according to 73% of Italians.

Tab. 4. *Priorities of choice parameters of fig-based products. (percentage values)*

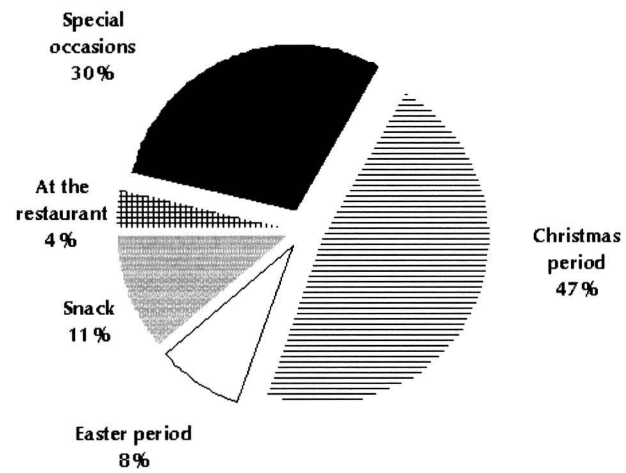
Characteristic	1st	2nd	3rd
Taste	72.3	21.5	6.2
Typicality	62.3	20.8	16.9
Popular with the family	50.0	35.4	14.6
Consumption occasions	49.3	31.5	19.2
Manually produced	47.7	36.9	15.4
Quality	46.2	29.2	24.6
Wholesomeness	44.7	41.5	13.8
Seasonality	40.0	31.5	28.5
External appearance	34.6	29.2	36.2
Keeping ability	30.0	40.8	29.2
Absence of preservatives	29.2	35.4	35.4
Price	6.9	30.0	63.1

[1] For each attribute, consumers were asked to indicate the importance on a qualitative scale consisting of: very much, a lot, quite, not much, not at all.

The price (only 6.9% of the sample considers it as important) is not deemed relevant, although it should be specified that consumers apply heuristic rules in choosing these products (Romani, 2000) since they are chosen for their excellent qualitative level and therefore other attributes, among which the price, are overlooked.

Consequently, a number of quite interesting thoughts are expressed when consumers describe their assessment of the product price. 22.3% of the interviewees "don't remember" and appear not interested in this variable when making a decision to purchase: in many cases, these are people purchasing due to their "greediness" or only to a lesser extent "non purchasers" (38%). However, the price is memorised since the interviewees identify price distinction taking into account that the price varies according to the different type of product (chocolate- coated, dried figs, filled figs, etc.). Furthermore, it was found that for approximately 47% of the sample (of which 58.1% are women), the price range varying between €14.50 and €18.00 is a fair and acceptable price, whereas 42.5% of those interviewed considered the price between €18.50 and €20.60 to be too high.

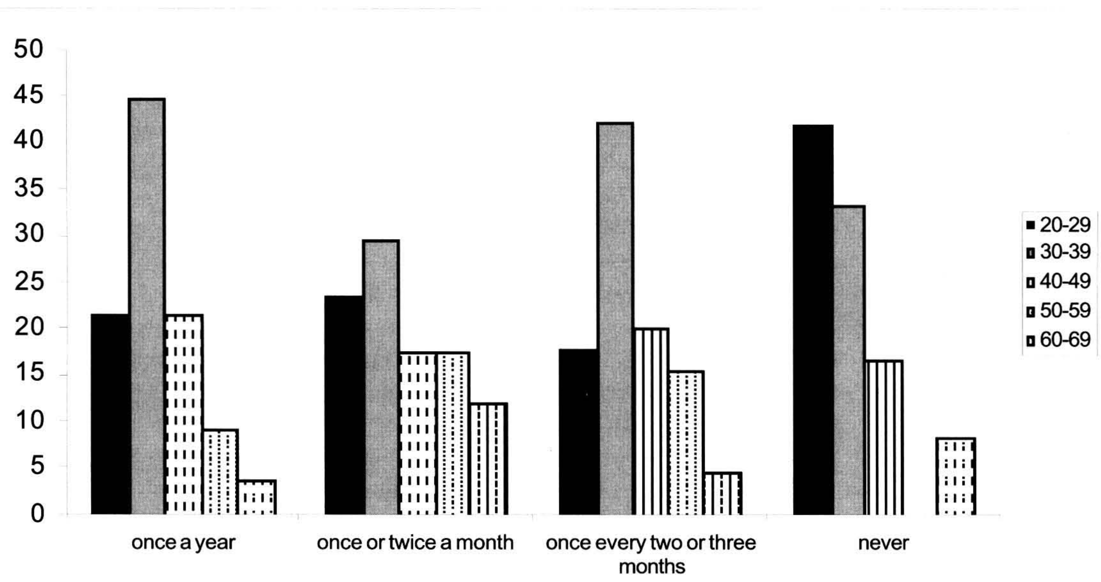
Fig. 3. *Consumption occasions (percentage values)*



Therefore, this is an esteemed product since it is part of the food culture of the land of origin, excluding the price consideration, where consumption occasions are concentrated in the Christmas period as "by tradition". Indeed, it seems that 43.8% of the interviewees consume the product on special occasions (mainly as a gift), with 69.2% of the interviewees during the Christmas period (fig. 3).

This seems in line with the purchasing frequency (fig. 4) if one considers that 43.5% of the interviewees purchase once a year (Christmas period) and 34.6% once every two

Fig. 4. *Purchasing frequency according to the age of interviewees (percentage values)*



purchase), of a product chosen for its taste and therefore for its intrinsic characteristics linked also to the land of origin.

Following the application of the X^2 test to pairs of variables considered to investigate and check the dependence or vice versa between the two "characters", the answer is in line with the behaviour assumed by consumers during the purchasing phase (tab.5).

It seems that a close relationship exists between the importance of the Calabrian origin of the products and the price opinion since the probability of making an error stating it is only 0.6%, even though the impact of price importance is unknown. Conversely, considerably higher values, again for the same variable Calabrian origin, were found for age and quantity purchased but a distribution very close to independence was noticed for education level (where the p-value of 0.683 assumes a quite high value).

The tendency to consider price opinion in the purchase as uninfluential is confirmed by the p-value of 0.011, whilst on the other hand, there is a definite dependence of purchase frequency on taste (0.0001) and on the importance of tradition (even if to a lower extent). The age and gender variables do not exhibit significant dependence on the particular taste of these products, confirming that the product is chosen for its intrinsic characteristics and not

or three months (on special occasions, for example for a gift, etc.) and is probably the consequence of the long shelf-life of these products. It is necessary to point out that in both cases the most representative purchasers are those in the 30-39 age group (44.6% once a year and 42.2% every 2-3 months respectively of the above-mentioned age group).

Finally, the answers relating to substitute products appear interesting: 32.2% consider it impossible to substitute these products and 30.8% don't know since they are not consumers or are not interested. In the list of the different types of product, the first position is occupied by "miscellaneous confectionery" (19.9%) which includes panettone, a typical Christmas product, followed by chocolate (8.5%) then dried fruit (6.2). The presence of dried fruit is important as this confirms the concentration of consumption of dried fig-based products during the Christmas period as, "by tradition" dried fruits are consumed in this period.

4.2 The dependence between different pairs of variables

Identifying homogenous consumer groups ("non purchasers", "habitual purchasers", "traditionalists") emphasises that purchasing behaviour (frequency of purchase; importance and knowledge of the origin; knowledge of different types of products) appears to be mainly related to the variables: taste, price opinion, age. In particular, the survey has pointed out the incidence of women among those responsible for purchase, the middle age group of the sample (30-39), the importance given to the origin of the product (confirmed by a broad knowledge of the production area), the exact knowledge of the price (uninfluential in the

Tab. 5. *Statistical independence test (X^2) for a number of variables*

Variable		p-*value*
Calabrian origin	*Price opinion*	0.006
Calabrian origin	Age	0.024
Calabrian origin	Quantity purchased	0.026
Calabrian origin	Education level	0.683
Frequency of purchase	*Price opinion*	*0.011*
Knowledge of production area	Age	0.039
Knowledge of production area	Gender	0.352
Taste	*Frequency of purchase*	0.0001
Taste	*Price opinion*	0.001
Taste	Age	0.390
Taste	Gender	0.336
Tradition	*Price opinion*	0.006
Tradition	*Frequency of purchase*	0.004
Tradition	Quantity purchased	0.019
Tradition	Gender	0.476
Tradition	Age	0.076

because it is traditional and linked to older age groups.

The p-value for gender seems rather high compared to tradition (0.476) and knowledge of the production area (0.352) variables, while being a woman or man is uninfluential to be linked with the tradition of fig consumption. However, it seems necessary to carry out further surveys, interviewing larger samples in order to gain greater credibility. At the same time, the consumption pattern seems to be strongly related to local tradition (0.004) or to a product consumed as it has "always" been, to offer on special occasions and/or mainly during Christmas holidays, even though it is bought and consumed due to the taste factor.

5. Final remarks

The analysis carried out in this paper, in view of obtaining useful indications about possible development and exploitation strategies in this sector, enables us to show, even if concisely and schematically, a number of strong and weak points of these products.

The sector is characterised by a heavy local concentration of consumption, which may be ascribed to the huge number of confectionery firms specialised in the processing and handling of dried figs which have an ancient tradition behind, coupled with high quality standards and food habits rooted in the local population.

Firstly, these typical products, as shown by the results of the consumer analysis, are known and viewed as "unique", given that the typicality is associated with the taste and the quality. On these grounds policies for products differentiation should be formulated, entailing huge economic investment and expertise which, unfortunately, are not available in this sector. The creation of a protection trust by managing a collective brand for the sector or together with other typical products could probably represent an efficient means to exploit such products, as demonstrated in other Italian regions (Segale, 2001). This could probably lead to the understanding of typical products by Calabrian consumers, but even more importantly, to make them differentiate the local products from those manufactured nationally and abroad.

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