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Future Market of Pizza: Which Attributes Do They Matter?

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Abstract

Pizza is eaten all over the world because of its simplicity and taste. Given its importance in the Italian diet, this paper provides a qualitative insight into fresh pizza consumption for the first time. This study deals with the perception of pizza attributes in Italy focusing on the main drivers of consumer acceptance of the traditional Margherita pizza, and analyzing in addition consumers' preferences for novel types of pizza in the marketplace, such as those made with organic, low calorie or frozen ingredients. The results show how respondents firstly prefer to eat traditional pizza and mainly prefer organic ingredients leading Italian consumers to perceive them more positively than conventional ones. Furthermore, despite the frozen pizza market being fairly well-established in many countries, the study finds a strong propensity to buying fresh pizza in the traditional market. The role of low calorie pizzas appears to be limited despite consumers being quite interested in this type of product. The novelty of this paper is to fill the knowledge gap about new typologies of pizza available in the marketplace, by exploring consumer preferences for and perceptions of a traditionally made product in a traditional producer country. The study will also offer managerial-oriented implications to help pizza producers develop new strategies for better identifying the ongoing demand of pizza consumers both for traditional and new typologies.

Keywords

Pizza consumers, traditional food, product innovation, fresh pizza.

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Introduction

In the last decades, food-consumption trends in western countries have been experiencing deep changes due to the continuous innovation of the agro-food system and the modern evolution of lifestyles and diets, including therefore the needs of consumers (Fonte, 2002; Leclercq et al., 2009).

Increasing attention has been paid to the evolution of eating patterns and consumer attitudes and behaviours to traditional food that have increasingly acquired elements of innovation and differentiation (Gracia and Albisu, 2001; Casini et al., 2015). This trend has involved several traditional products in the European market and ongoing development in types of consumption has been observed (Di Vita et al., 2013; Caracciolo et al., 2016).

The existing literature has pointed out from several perspectives the role and significance of traditional products in consumer behaviour (Guerrero et al., 2010; Di Vita et al., 2014; Vanhonacker, et al., 2010). A traditional food product can be defined as follows: "a product frequently consumed or associated with specific celebrations and/or seasons, normally transmitted from one generation to another, made accurately in a specific way according to gastronomic heritage... distinguished and known because of its sensory properties and associated with a certain local area, region or country" (Guerrero et al., 2009).

Traditional foods represent the basic constituent of Italian gastronomic culture, since Italy is the leading country in the EU for the number of PDO and PGI designations and its cuisine is rich in several and differentiated typologies of dishes and food recipes. Moreover, among them, a very important role in the Italian food pattern is played by cereals and pizza (Leclercq et al., 2009) which form the food pyramid base of the Mediterranean diet.

From this point of view, pizza can be argued as a traditional Italian product. In fact, despite

the consumption of pizza being widespread almost all over the planet, and representing one of the "most popular family foods" (Singh and Goyal, 2011a), with relatively high rates of pizza consumption also observed in non-Mediterranean countries (Myrland et al., 2000), Italy is considered the birthplace of the Margherita pizza, since the modern pizza was made for the first time in Naples (Statistic brain, 2015) and as such it can reasonably be considered an Italian product.

Moskowitz (2001) argues that pizza is a very "complex product" since in the marketplace it includes different typologies and varieties as well as a plurality of toppings such as meats, vegetables, fish and other condiments (Singh and Goyal, 2011a). In Italy, the Margherita represents the most widespread pizza being commonly made of tomato, sliced mozzarella, salt, and extra-virgin olive oil, wheat flour type '0', brewer's yeast and natural drinking water, and it consists of flatbread topped with tomato sauce and mozzarella baked in an oven.

Despite the prominent role of pizza in the food habits of many countries, there is relatively little analysis of it by the international scientific community. Food science literature reports few studies based on the analysis of the sensorial aspects of pizza (Moskowitz, 2001; Fedoroff et al., 2003) and its role in the dietary habits of households (Myrland et al., 2009) or associated with other food ingredients such as tomato and cheese pizza (Lucier et al., 2000). Another strand of literature has focused on the health effects of pizza, by analysing its role in cancer insurgency or prevention (Gallus et al., 2006) or to improve its nutritional properties (Combet et al., 2014). Simultaneously a series of studies have been directed towards agro-industrial aspects taking into account the production technologies able to enhance the antioxidant properties of pizza raw materials such as whole-wheat (Moore et al., 2009) and tomatoes (Singh and Goyal, 2011a). Furthermore some aspects of frozen pizza demand have been studied in the consumer marketing literature in the context of price sensitivity by measuring brand penetration and household purchases (Albuquerque et al., 2009), or estimating the price sensitivities of households in online and offline shopping (Chu et al., 2008), or exploring the interaction effects of income as well as social and consumption context on price sensitivity (Wakefield and Inman, 2003).

Furthermore, with the exception of two studies regarding the intention to buy organic pizza and an econometric approach to the exploration of the main determinants of pizza consumption (Dean et al., 2008; Di Vita et al., 2016), the existing literature presents a significant paucity of studies on the preferences and attitudes of pizza consumers, primarily with respect to the purchase intention of pizza eaters. However, no specific study has been carried out on consumer preferences for fresh 'margherita pizza' characterized as fresh, handmade and prepared (cooked) in restaurant pizzerias, as well as for novel typologies of pizza. In fact, alongside the traditional pizza, the food markets now offer different forms of commercial or industrial pizzas such as frozen and chilled pizzas, available at large retail stores, or semi-finished pizza delivered to pizza chains (i.e. Domino's and Pizza Hut). In recent years, energy-reduced pizzas or low-calorie pizzas with soy or whole wheat flour have also been gaining importance, as well as organic pizzas, made with organic food ingredients.

The question this paper explores is the extent to which consumers' behaviour towards traditional food has been progressively modifying. In particular, this study aims at investigating if in local markets there exists a more or less noticeable propensity towards traditional pizza consumption or conversely there exists a potential demand for new typologies of pizza.

This paper deals with the quality perception of pizza in Italy and focuses on the main drivers of consumers' acceptance of Margherita pizza, analysing in addition consumers' preferences for novel types of pizza available in the marketplace such as those made with raw materials from organic farming, or low in calories or frozen.

This paper is organized into four different steps as follows: the first one presents the current scenario of pizza consumption in Italy; the second section describes the methodological approach of the paper to reporting sampling methods and data collection modalities; the third part of the study focuses on the main outcomes of the univariate statistical analysis and shows the results of the conjoint analysis carried out on respondents' perception of quality by taking into account the main attributes of pizza. The last part of the paper discusses the main implications and concludes the study.

Market and consumption of pizza in Italy

The market of pizza in Italy is very well-established: in 2014 3 billion pizzas were eaten, an average of 7.6 kilograms of pizza per person per year. This data places Italy as the second largest consumer in the world, after the United States of America

whose consumption amount to 13 kg of pizza per person (Il sole 24ore, 2014) is eaten. In Italy, the turnover generated by the whole sector, including non-traditional pizza restaurants and industrial production, amounts to €16.63 billion.

But despite the favourable trend of consumption, consumers' expectations and tastes are quickly becoming oriented towards the consumption of food outside the home whose growth has favoured the spread of catering companies with an increase in fast-food restaurants, snack bars, and workplace canteens leading to an increase in the market demand of semi-cooked or ready-meal foods and ingredients (Kearney et al., 2001; Celnik et al., 2012). As a consequence, the pizza market is gradually evolving. Within this context, traditional pizza restaurants have had to face increasing competition from different distribution chains, such as take-away pizza and a large retail sector, whose growth is directly correlated to the development of different patterns of consumption. Furthermore, the increasing expansion of different typologies of industrial pizzas, primarily frozen and semi-finished sold through the retail channels has greatly modified pizza eating patterns thus exacerbating competition between traditional and industrial producers.

Frozen pizza has become one of the most important frozen food categories (Albuquerque and Bronnenberg, 2009) and its consumption is growing especially in the northern and central regions of Italy and this trend is slowly involving even southern regions. From 2004 to 2014, there was a significant increase in the frozen pizza market which traded volumes from 31,400 tons to 42,650 tons, an increase of 35% in the last ten years (Istituto Italiano Alimenti Surgelati, 2015). In addition, the number of consumers also eating takeaways or delivered meals (pizza) has considerably increased.

Nevertheless, the consumption of artisan pizza is well established at pizza restaurants as well as at home which benefit from takeaway pizza and pizza delivery. Currently, traditional pizza restaurants represent 40% of Italian restaurants; recent statistics showing that there are 25,300 and are slightly fewer than pizza delivery outlets which number 26,700.

As a food fact, the strong point of fresh handmade pizzas is the quality of their raw ingredients, the craftsmanship with which they are made, the expansion of the product range (eg: use of organic ingredients, energy reduced wheat, gluten free and vegan pizza), the increased efficiency of the take out service, the choice of location and the value-added services.

Traditional pizza restaurants have had a strong traditional identity that may be viewed as a repetitive and stereotypical expression throughout Italy, but nowadays Pizza restaurants are greatly modifying the way they offer their product by becoming more marketing-oriented. To be more market competitive, Pizza restaurants have had to radically change, changing their model structure to cater for entertainment, where the experience is not just consumption but tends to be more engaging, multi-sensory and gratifying even in terms of aesthetic satisfaction. Conversely, takeaway pizza and pizza delivery should improve the quality of their product and offer more value-added services.

Materials and methods

The survey was carried out in two different areas of Sicily from February to April 2014. A specific questionnaire containing closed-ended questions was administered to a casual sample of 202 consumers in the metropolitan areas of Palermo and Catania.

Some preliminary focus groups were formed to select the broad items to include in the final questionnaire as well in the conjoint card. Within the focus groups held at two different traditional pizza restaurants, a selected cluster of 16 consumers was invited to express their opinions on their attitudes to pizza (eating habits, shopping places, frequency, etc.) and the most important attributes and characteristics they consider when eating them such as colour, wheat typology, price, method of production, and so on. The focus groups discussed the Margherita pizza in order to identify the main determinants of its consumption. The choice of Margherita pizza pizza was due to the fact that this type of pizza is the most common within the Italian restaurants as well as among the frozen pizzas available in supermarkets.

The interviews were random, face-to-face, daily and they were carried at different times of the day. 60% of the sample were interviewed at large retail stores, while the remaining 40% were interviewed at pizzeria restaurant. According to a previous study (Panzone et al., 2016) arguing the best option in the choice of purchases places during a conjoint experiment, the selection of sample aimed to capture a random population of consumers (i.e. individuals responsible for household provisions) in a real shopping environment.

The demographic characteristics of the sample are reported in Table 1.

Category	Variable	N.o	%
Gender	Female	117	57.9
	Male	85	42.1
Age	18-30	110	54.5
	31-45	57	28.2
	46-60	22	10.9
	> 60	13	6.4
Education	Primary	48	23.8
	Secondary	108	53.5
	Graduate / Postgraduate	46	22.8
Income	- < 10,000 Euros	95	47.0
	- 10-20,000 Euros	85	42.1
	- 20-40,000 Euros	2	1.0
	- > 40,000 Euros	20	9.9
Respondents		202	100.0

Source: own processing

Table 1: Demographic characteristics of the sample.

Before administering the questionnaire, a conjoint experiment was conducted with the interviewees. According to the conjoint analysis approach, we assumed that the pizza descriptors could be expressed through a sequence of specific attributes and levels since the total utility that theconsumer gets fromthe product is determined by the partial utilities (part-worths) of each attribute level (Krystallis and Ness, 2005, Di Vita et al., 2013).

To reduce the number of pizza profiles evaluated by respondents and to facilitate the identification of attribute combinations that would maximise their utility to the consumer, eight different combinations of attributes and levels were presented (Table 2). The conjoint card was obtained by orthogonalizing all the attributes (including price levels) to remove collinearity. According to previous research, a fractional factorial design was applied to test attribute effects on respondents' preferences (Harrison et al., 1998; Campbell et al., 2004; Claret et al., 2012) and an orthogonalization procedure was adopted to get an orthogonal array. To limit the occurrence of investigator bias, consumers performed the conjoint card alone.

The interview was full-profile and was executed using SPSS 15.0 software for Windows which helped identify the combinations of attribute that would maximise utility to the consumer so the rule of additive linear composition was used.

Respondents were presented with eight different pizza profiles, differing in terms of price, organic ingredients, origin, wholegrain wheat and whether fresh or frozen. The final subset of combinations (choice set) which estimated the utility to consumers is presented in Table 2.

Option	Price (€)	Fresh/Frozen	Organic ingredients	Energy-Reduced wheat
1	4.0	Frozen	Yes	Yes
2	5.5	Fresh	Yes	No
3	2.5	Fresh	Yes	Yes
4	4.0	Fresh	No	No
5	2.5	Frozen	No	No
6	5.5	Frozen	No	Yes
7	2.5	Fresh	No	Yes
8	2.5	Frozen	Yes	No

Source: own processing

Table 2: Description of the choice set.

Results and discussion

The results were presented in two different sub-sections, the first reports and discusses the results derived from univariate analysis, while the second focuses on the consumer's perception of pizza attributes and presents the results of the conjoint analysis and discusses the main outcomes.

By taking into account pizza consumption behaviours and habits, all the sample declared to having eaten pizza regularly, and 99% of them reveal having eaten this product over more than two years. Nevertheless, as reported in table 3, the frequency of pizza consumption varies a lot: the majority of the sample (38.1%) declared to eating pizza regularly, at least once a week, while 32.2% declared to purchasing it occasionally at least once a month. Surprisingly, almost a third of the sample (29.7%) eat pizza 'frequently', or 2–3 times a week.

Item	Mean	Respondents
Weekly (one time a week)	38.1	77
Monthly (at least one time a month)	32.2	65
Frequently (2-3 times a week)	29.7	60
TOTAL	**100.0**	202

Source: own processing

Table 3: Frequency of pizza consumption.

With regard to pizza purchase venues (Table 4), 'takeaway pizzerias' were identified as the leading outlet by respondents (30%). This

initial result reflects analogous trends in other western countries such as the USA where takeaway pizza is the leading product on the market (Statista, 2015). Furthermore, this result is in line with current trends of meal and beverage consumption, where consumers are more inclined nowadays to have lunch out, and where takeaway or delivered meals are progressively gaining popularity, particularly in the Italian agro-food market (Censis, 2010; Di Vita et al., 2015).

Pizza restaurants are in second place (28.3%) by sample, confirming their important role in the Italian life-style, since going out to restaurants at weekends is fairly widespread among Italian families, more than 80% of Italians eating out at least once a week (Censis, 2010).

The remaining outlets are closely linked to characteristic Italian diversified food services as well as to food consumption culture in Italy. Bakeries and snack bars, each represent 16 % of outlets where pizza is produced and supplied. Finally, only 10.1% declare they buy pizza in large retail stores (hypermarkets and supermarkets).

These outcomes point to a close correlation between hand-crafted pizzas and southern consumers, thus highlighting the direct relationship between pizza-makers and their customers which induces consumers to prefer buying directly from restaurants or takeaway pizzerias, rather than purchasing pizzas in bakeries, snack bars or cafés let alone in large retail stores like supermarkets.

Item	Mean	S.D.
Takeaway Pizzeria	30.2	0.72
Pizza Restaurant	28.3	0.74
Bakery	16.0	0.70
Snack bar and cafè	15.4	0.76
Large retail	10.1	0.71
TOTAL	**100.0**	

Source: own processing

Table 4: Purchasing places of pizza preferred by sample.

In restaurant pizzerias or takeaway pizzerias the owner is often the one who produces the pizza which means that usually the owner himself establishes a fidelity relationship with his customers, compared to other outlets where operators change in quick succession according to planned daily shifts. These results confirm that a direct relationship with the producer represents an important consumer loyalty strategy, as previously reported in other studies on locally produced foods (D'Amico et al., 2014; Giampietri et al., 2016).

Respondents were asked to identify the main reasons they ate pizza. For 37.1% of respondents, 'taste' is the primary reason why almost four in ten consumers like eating pizza. This result also confirms the popular worth and appreciation of pizza in the Italian diet (Leclercq et al., 2009) also suggesting that the pizza consumption is dictated primarily by 'gastronomic passion'.

Concerning any additional motivations which encourage respondents to eat pizza (Table 5), it has emerged that 25.1% of the sample do so because of their 'nutritional properties', while 19.6% eat pizza because it's cheap.

Item	Mean	S.D.
Taste	37.1	0.7
Nutritional properties	25.2	0.7
Cheapness	19.6	1.0
Healthy food	18.1	0.9
TOTAL	**100.0**	

Source: own processing

Table 5: Motivations for pizza consumption.

These last two results, suggest firstly that pizza is perceived as suitable for a balanced diet and therefore not perceived as 'junk food' as opposed to observations in a recent study in the USA (Combet et al., 2014). This discrepancy probably depends on the different eating patterns among countries, since hand-crafted pizza is a traditional food in Italy while in the Anglo-Saxon countries most pizza is industrially made. Secondly, respondents are influenced by the cheapness of pizza; this outcome certainly represents an important marketing tool in western countries given the current economic crisis which also involves food consumption dynamics.

Furthermore, despite no studies consider pizza as nutritionally undesirable (Devine et al., 2007), a significant proportion of respondents (18.2%) surprisingly declared they ate pizza because it is 'healthy'. This perception would seem to be in line with a recent study reporting that pizza consumption is negatively correlated with cancer occurrence (Gallus et al., 2006), so the improvement in pizza composition and ingredients could therefore have had a positive impact on preventing ill-health and ensuring optimum energy intake (Combet et al., 2014). Our results are further corroborated by another study arguing that consumers perceived

pizza as a healthy and convenient food (Singh and Goyal, 2011a). This is consistent with a previous study arguing that consumers consider cereal products as good for their health (Arvola et al., 2007).

Finally, a Likert scale was proposed to consumers to test the main descriptors and quality attributes in evaluating pizza (Table 6). As widely reported in existing literature, quality cues for pizza were divided into intrinsic and extrinsic attributes (Acebrón and Dopico, 2000; Migliore et al., 2015; Campbell et al., 2004) to identify the optimum pizza quality levels.

According to previous research which identified four classes of sensory attributes for pizzas appearance, aroma, taste/flavour and texture (Moskowitz, 2001), the study aimed at identifying the main determinants in the sensory evaluation of pizza.

In our study we included some new parameters such as saltiness, crust colour, crunchiness, softness and the gumminess of the dough. Respondents were asked to identify and rank, using a seven point scale, the most important intrinsic characteristics of pizza. Consumer awareness of the sensory attributes of pizza - due to type of wheat, crust and salt (Moskowitz, 2001) - was confirmed by favourable evaluations of taste, aroma, crust colour and crunchiness, whose appreciation levels were between 6.8 and 5.9. However, a large proportion of the sample did not seem to be so well-informed about the negative effects of salt on health. Although the dissemination of many scientific studies and reports have shown how important low-salt diets are, saltiness endures as a rather well-requested attribute. By contrast, the softness and gumminess of dough are qualitative attributes scarcely or negatively appreciated.

Concerning the extrinsic attributes of pizza, local raw ingredients scored highest, confirming the importance that locally produced food has in the eye of consumers (Cranfield et al., 2012; D'Amico et al., 2014; Cembalo et al., 2013; Cosmina et al., 2016).

Somewhat less but certainly significant was the use of nationally sourced wheat, price and low environmental impact production. Nationally sourced wheat seems to reinforce current studies on southern Italian consumers who are willing to pay more for local products highlighting broad correspondence between the origin of a consumer and the food (Panzone et al., 2016, Scozzafava et al., 2014). While price, despite negatively correlating to utility, confirms its role in indicating the quality of food, since consumers use price to infer unobservable quality (Panzone, 2012).

Concerning environmental issues, earlier research pointed out that eating and nutrition behaviors are deeply influenced by environmental consciousness and context (D'Amico et al., 2016; Story et al., 2008). In this regard, our results seem to be consistent, highlighting how the availability of healthy products in nearby stores, can contribute to enhancing healthier and more sustainable eating patterns (Glanz et al., 2007).

Despite recent research pointing out the importance of packaging as an extrinsic quality attribute for fresh as well as processed produce (Ragaert et al., 2004; Koutsimanis et al., 2012), pizza packaging was perceived as a scarcely important extrinsic characteristic. This is consistent for consumers who expressed a preference for purchasing fresh pizza - the majority of the examined sample - while it could be interesting to examine the importance of this extrinsic attribute for frozen pizza's usual consumers.

In the last part of the analysis based on descriptive

Intrinsic characteristics		**Extrinsic characteristics**	
Taste	6.8	Local raw material	6.1
Aroma	6.4	National origin of wheat ??	5.8
Color of crust	6.0	Price	5.6
Crunchiness (crusty)	5.9	Low environmental impact production	5.5
Saltiness	5.3	Packaging	4.6
Softness of dough	4.8		
Gumminess of dough	1.9		

Note: 1 = less positive, 7 = more positive

Source: own processing

Table 6: Quality attributes in evaluating pizza.

statistics, consumers were asked to express their intention to pay more for organic and/or energy-reduced pizza (Table 7).

According to our results, it is reasonable to consider as positive consumers' intention to buy and pay a premium price for new typologies of pizza. The intention to buy appears quite important for both types though organic pizza records the highest average values (69.3%).

Concerning the intention to pay a premium price, the results were positively significant for prices between 10-20% higher, while consumers' willingness to pay more for a pizza considered healthier, does not exceed a 30% higher price.

Conversely, consumers appeared to be scarcely disposed to pay premium prices, of 30% and 40% respectively, for organic pizza and energy-reduced pizza.

Overall, this last result indicates that pizza consumers are also potentially willing to spend more for a healthier product which confirms the growing interest in functional and organic products (Bonanno, 2013; Zanoli et al., 2013). These outcomes are consistent with previous studies that found healthiness as a driver in the decision-making of Italians to buy agro-food produce (Di Vita et al., 2014; Wongprawmas et al., 2016; D'Amico et al., 2016, Vernau et a., 2014, Panico et al., 2014).

The second part of the analysis concerned evaluating preference by using conjoint analysis. As reported in the methodology section, consumers were presented with eight different pizza profiles ranging in price from €2.50 to €5.50, with differing freshness, presence or absence of organic ingredients, and low or normal calories. Energy-reduced pizza was presented as low-calorie pizza due to the use of whole meal wheat flour. According to Regulation CE n.1924/2006, a "food is energy-reduced only when the energy value is reduced by at least 30 %, with an indication of the characteristics which make the food reduced in its total energy value".

Subsequently consumers were then asked to rank the different pizza profiles according to preference (utility) from 1 (least preferred) to 8 (most preferred).

The results of the conjoint analysis, reported in Table 8, show that the most important attribute is the traditional typology, handmade fresh pizza showing 72.87% of utility, while price represents the second attribute to which consumers assign 12.72% of utility.

	Intention to buy	Premium price			
	(%)	10%	20%	30%	40%
ORGANIC PIZZA	**69.3**	39.1	39.1	20.3	1.5
ENERGY REDUCED PIZZA	**54.0**	54.0	32.2	13.4	0.5

Source: own processing

Table 7: Intention to buy and to pay a premium price.

Attribute	Level	Mean	
Typology		72.8	
	Fresh		17153
	Frozen		-17153
Price €		12.7	
	2:50		-0.1584
	4:00		0.3787
	5:50		-0.2203
Organic ingredient		3.3	
	yes		0.0767
	no		-0.0767
Low in calories		11.2	
	yes		-0.2624
	no		0.2624
Constant			4.5396

Source: own processing

Table 8: Conjoint analysis results.

At the same time, according to respondents' opinions, it emerges that new typologies of pizza don't seem to engage southern Italian consumers, so low-calorie pizzas is negatively correlated with quality while the sample showed a positive but limited propensity towards pizza made with organic ingredients. This corroborates official statistics and current research which show Italian consumers' increasing interest in organic food products (Di Vita et al., 2014; D'Amico et al., 2016), thus also confirming pizza consumers' increasing interest in environmentally-friendly products (Zanoli et al., 2012).

At the same time, the negative coefficient for the attribute "low in calories" - a whole grain flour pizza, confirms the limited interest of Italian consumers towards foods containing wholegrain, since Italian consumers perceive fewer differences in benefits between wholegrain and refined cereal products (Saba et al., 2010). This outcome might be explained by the fact that Italian consumers consider wholegrain foods to be less tasty compared to the corresponding white-flour alternatives (Arvola et al., 2007; Saba et al., 2010).

The processed data was called the 'ideal profile' of Italian pizza consumers and showed that a Margherita has to be fresh and hand-crafted, with a price of €4, prepared with organic ingredients and have a 'normal' calorie count. The results were also confirmed by Pearson's r and Kendall's t values which provides an indication of the model's degree of adaptation to the observed data.

Conclusion

Margherita pizza has become widespread throughout the world, because of its simplicity and taste. Given its significance in Italian diet patterns, this paper shows for the first time the qualitative profile of pizza as perceived by the Italian consumer.

The survey included a descriptive statistical and conjoint analysis to identify the main drivers of consumer interest in margherita pizza and verify consumer acceptance of new typologies of product available on the market.

Despite current research efforts to extend pizza shelf life, with new refrigeration techniques and modified atmosphere packaging (Singh and Coyal, 2011), the sample of Italian consumers we analyzed primarily prefer to eat traditional pizza. This last outcome is certainly due to the fact that pizza restaurants are very common and widespread both in small towns and in metropolitan areas. At the same time, respondents prefer mainly organic food ingredients rather than conventional ones which means that organic ingredients lead consumers to positively perceive the image of a quality product, although within a price increase not exceeding 20%.

On the basis of the first results of this survey, the appeal of low-calorie pizza appears to be limited, consumers still not being well informed and this is probably not helped by its rarity in local pizza restaurants. Wider availability could have a positive impact on consumers'.

In addition, despite the frozen pizza market being fairly well-established and it is one of the most important product among purchased frozen food (Weakfiled and Inman, 2003; Albuquerque and Bronnenberg, 2009), our study observes a strong propensity towards buying fresh pizza on the traditional market denoting how rooted the linkage is between Italian consumers and traditional pizza. The widespread availability of ready-to-serve pizza, such as frozen pizza is still of limited interest among respondents and although this kind of pizza is certainly not perceived as a high-quality food, its convenience as a quick meal is likely to see increased consumption in the future also in Italy.

Furthermore, consumers seem willing to demand healthy product nutrients with a low calorie content, since slightly more than half of the respondents declare their intention to buy energy-reduced pizza, paying an additional price up to 10 to 20% more. The acceptability of new typologies of pizza, such as organic or energy-reduced ones, will depend also on consumer awareness of any perceived health risks.

Finally, this paper also has implications for pizza restaurant owners suggesting the growing potential in diversifying the product both for themselves and for frozen pizza producers. Our study also suggests that the quality of raw materials can't be the only lever that encourages the consumption of pizza; nowadays food consumers require more added services than in the past, such as safety, environmental friendliness and nutritionally balanced food. As a consequence, the results recommend investing in both quality and healthy food consumption, since the consumption of pizza, like that for traditional food products, is not only a gastronomic experience but also an emotional experience.

Notwithstanding some limitations in this study due to the relatively small number of observations and limited geographic area of the survey,

the socio-economic and geographic connotations of the sample allow the results to be reasonably extended to the current Italian scenario. Further research could analyse consumer behaviours taking into account the influence of socio-demographic characteristics focusing especially on gender, age and income as well as aspects related to the comfort food consumption of pizza consumers. Finally, another strand of interesting investigation could verify whether differences exist between different regional identity groups of traditional Italian consumers as well as across non-traditional consumers from different European countries."

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