Bulgarian Journal of Agricultural Science, 22 (No 5) 2016, 705–712
Agricultural Academy

EVOLUTIONARY ASPECTS OF COFFEE CONSUMERS' BUYING HABITS: RESULTS OF A SAMPLE SURVEY

M. LANFRANCHI[1*], C. GIANNETTO[1] and V. DIMITROVA[2]
[1] *University of Messina, Department of Economics, 98122 Messina, Italy*
[2] *University of Agribusiness and Rural Development, Department of Management, BG-4003 Plovdiv, Bulgaria*

Abstract

LANFRANCHI, M., C. GIANNETTO and V. DIMITROVA, 2016. Evolutionary aspects of coffee consumers' buying habits: results of a sample survey. *Bulg. J. Agric. Sci.*, 22: 705–712

Coffee is the second marketed product on a worldwide level, after petroleum, with a market volume equal to around 15 billion dollars. Today it represents the only real source of income for more than 20 million farmers in the South of the world. More than 25 million people perform their professional activity in the field of coffee cultivation, trade and processing. For many developing countries, coffee exports are an essential source for the growth of their economies. For these reasons, the international coffee culture has turned a commodity into a mass phenomenon. In Italy, coffee is a product consumed in large quantities and ranks 10th worldwide in terms of per capita consumption. The present survey aims at studying and investigating the identity, cultural and socio-economic aspects linked to the consumption of coffee in Italy. Therefore, the research object is to investigate whether the act of consuming coffee is not only connected with the satisfaction of basic needs, but if it implies a series of aspects linked to the individual's culture and identity, without forgetting the economic variables that the consumer must take into account at the time of purchase.

Key words: coffee market, coffee consumption, food model, sample survey

Introduction: the World Coffee Market and its Productivity

Coffee is produced by more than 50 countries of the world, and the most affected areas appear to be South America (46%), South East Asia (26%), Central America (16%) and Africa (12%). The main types of coffee are *arabica* and *robusta*. The *arabica* quality supply is starting to record a drop in favour of the *robusta* one, which shows lower production costs, requires less care, as it is less sensitive to climatic conditions, and tends to have higher productivity rates. Today, the *robusta* quality is mainly produced in Asia/Oceania (61.3%), in South America (24.7%) and in Africa (13.8%). The development of coffee production from the 1970s until today shows a growing trend within the market, which rose especially in the 1990s. This period represents the watershed between oversupply and overdemand (Basarir, 2013; Chang and Iseppi, 2012; Hristov and Kuhar, 2014). Throughout history, the most dynamic Countries within the coffee market have been: Brazil, Vietnam and Colombia. In the past, the Asian area represented an irrelevant component for this market, while since the 1990s, thanks to the carried out reforms (liberalisation of the economy and opening up of international trade), it has become the second largest world producer and the first with regard to the *robusta* quality (Stefani et al., 2006). One of the peculiarities of coffee production is the strong cyclicality of prices (Crescimanno et al., 2013; Nocella et al., 2014). It depends mainly on two structural phenomena:

- in the short term, supply and demand are strongly inelastic, and, therefore, they need a high volatility of prices in order to absorb any excess in supply and demand;

Corresponding author: mlanfranchi@unime.it

● the coffee production phase implies a long lasting cycle (from five to seven years since the plant's birth up to the production phase. As a consequence, it is possible to register peaks in prices which give rise to investments that generate future output and that, consequently create cyclical phenomena.

As is known, many developing Countries concentrate their economy in the production and distribution of some *commodities*, and coffee certainly proves to be a proper solution. One of the examples of "economic dependence" is given by some African States. Indeed, in these Countries, coffee generates around 60% of the local economy (Cranfield et al., 2010; Migliore et al., 2015). This monocultural attitude is offset by that of Brazil, which over the years has progressively succeeded in reducing the dependence on this product. Indeed, already in the second half of the 1970s, it was possible to register a greater diversification of economic activity, of exports, and of industrial development, thanks to which, nowadays coffee represents only 20% of exports. On average, in the several Countries, exports mainly deal with green coffee (95%), while the remaining share consists of others forms of coffee, such as the soluble one and the roasted one. However, exports remained strong in the year 2014/2015, even though compared with the previous year in the same period (from October to December) a drop of 0.8% was registered. In 2014 they were equal to 111.7 million bags, with Brazil as the main consignment (a quantity equal to 36.3 millions, a greater one compared with 2013, a year in which it exported 31.5 millions). Vietnam exports 4.5 million bags (thus registering a decline compared to the previous year, which was equal to 10.9 millions). Next ranked is Colombia with 11 million bags (it registers a growth compared to the previous year, 9.7 millions in 2013). This analysis shows that the value of exports of all the countries in the 2013/2014 period is equal to 8.85 million bags considered for December 2014, in opposition to the 8.83 million bags of 2013; in the first three months of the year 2014/2015, exports decreased by 0.8% compared to the previous year. In the table 1 the data on the worldwide demand for coffee are highlighted (Table 1).

Table 1
Worldwide demand for coffee (%)

Western Europe	39.2
North America	27.3
South America	24.9
Asia & Oceania	24.8
Eastern Europe	12.9
Africa	7.8
Middle East	4.5
Central America	4.5

Source: Ns elaborations on Istat data

Going into the specifics, exports assume different values according to the considered quality: there were 8.26 million bags in 2014 for the *Arabica* (68.53 million bags in the previous year); while there were 43.47 million bags in 2014 for the *Robusta* quality (42.55 million bags in the previous year). In the Table 2 the data on the worldwide demand for coffee are highlighted for each type. As far as imports are concerned, instead, a greater concentration in the European countries, in the USA and in Japan can be recorded. As regards consumption, the trend is very different from the one concerning exports. Indeed, consumption appears to be extremely heterogeneous, both for preferences and for consumption itself.

Table 2
Worldwide demand for coffee by type in 2013

Type	N° sacchi	%
Arabica coffee full-strength	39 600 000	27
Arabica coffee	45 200 000	31
Robust coffee	61 000 000	42
Total	145 800 000	100

Source: Ns elaborations on Istat data

With regard to consumption, it must be considered mainly within the producer countries. Currently, the internal consumption is equal to around 25% (this share is mainly "carried" by Brazil, which consumes around 36% of its own production).

Exports and consumptions are different for two reasons:

● not all the consuming countries are green coffee importers, due to the lack of development of a roasting industry;

● there are relevant re-exports of green coffee by those countries which import and partly consume it. For example, in Italy about 25% of coffee imports are subequently re-exported to other countries.

The first phase of coffee transporting (from the plantations to the port of embarkation) is carried out by local agents or companies (Pecorino et al., 2016). The main harbours are the *delivery points*, divided into those used for the Robusta quality trade (accredited by London's *Liffe*) and those used for the Arabica quality (accredited by New York's *Nybot*)). The harbours that are mainly concerned with the Robusta trade are: Trieste, Antwerp, Amsterdam, Barcelona, Bremen, Hamburg, Le Havre, London, Marseille, Rotterdam, New Orleans and Genoa. For *Nybot* we must mention: New York, New Orleans, Miami, Houston, Antwerp, Hamburg, Bremen. The activities regarding *import-export*, processing, packaging and distribution are managed by big international competitors (Nestlè, Kraft Foods, Strass Coffee) (Brunori et al., 2013. Celik and Emre, 2014; Freibauer et al., 2011). They also influence the economies of local producers, since some of them internalise certain processes that are carried out by the producers in order to cut costs (storage, grinding, etc) (D'Amico et al., 2014; De Salvo and Signorello, 2015; Dogan et al., 2011).

The Italian Coffee Market: Imports and Exports

Currently, Italy is the fourth world's largest importer of coffee after the United States, Germany and Japan. Coffee is a very important resource for Italy, to the point that it is associated to the traditions and peculiarities of our Country (pasta, pizza, ice-cream, etc.) (Schleenbecker and Hamm; 2015). In spite of this, the coffee consumed in the several regions differentiates itself for its quality, roasting, extraction, etc. Coffee consumption in Italy mainly occurs in relation to two types: *espresso* and *cappuccino*.

These two methods of preparation have led to a popular growth of Italian coffee and even to an increase in terms of world consumption. In Italy, the import of coffee is entrusted to several national *competitors* (Scuderi and Pecorino, 2015). Brazil is the main exporter, with a quantity equal to 30.1% of Italian imports (2.5 million bags), Vietnam ranks second with a quantity equal to 21.5% (1.8 million bags) and, finally, India with 12.7% (1 million bags, with a low volatility). However, these three main exporters only constitute 64.3% of the coffee imported from Italy (they represent the two thirds of the total coffee), the remaining part (one third) is composed by other countries, such as Indonesia (660 kg), Uganda (460 kg), Honduras (240 kg), Guatemala (197 kg), Camerun (144 kg), Tanzania (126 kg), Peru (121 kg), Ethiopia (116 kg), Colombia (110 kg) and Costa Rica (56 kg) (Figure 1).

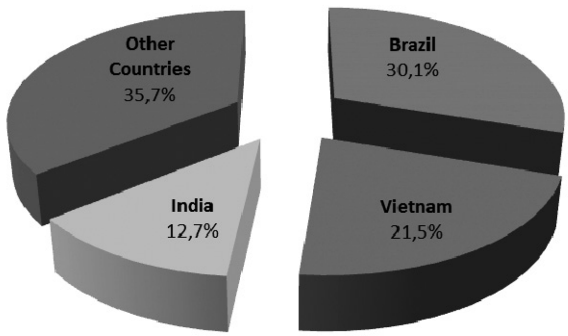

Fig. 1. Main countries which import coffee into Italy
Source: Ns elaborations

Espresso coffee is traditionally composed by 40% of Arabica quality, by 20% of washed Arabica and by 40% of Robusta. Nowadays, instead, the quantity of Arabica and of Robusta used is respectively 45% and 55%. The reasons for this change are attributable to four factors:

- the crisis of Italian consumers has led to the consumption of cheaper types of coffee;
- *Horeca* shows a negative trend due to the crisis;
- the considerable price difference between the Robusta and the Arabica quality;
- the tendency of some "*outsiders*" to offer cheap combinations that discourage price within the market.

Owing to these problems, the choices of Italian companies are directed towards a minor quality in favour of costs which are minimised. Fortunately, this *trend* is not subject to any variations in the short term (Table 3).

Table 3
Import-export and internal demand of coffee in Italy

Total imports 8.400 mln €		
Roasted coffee export	2.800 mln €	33%
Domestic consumption	5.600 mln €	67%
Domestic demand for coffee 5.600 mln € (67%)		
Domestic consumption	4.100 mln €	73%
Consumption outside the home	1.500 mln €	23%

Source: Ns elaborations on Istat data

As far as exports are concerned, instead, Italian roasters occupy a prominent place in the international market ever since espresso coffee started to "lead" the growth of the world consumption. Since 2004 to date, an increase of 22% in Italian exports has been recorded. Indeed, over the past ten years, it has reached 33%. Roasters operating in Italy are around 700, and 170 of these are personal importers (with a volume equal to 8 million euros), while 530 purchase it (with a volume equal to 0.4 million euros). Professionals who operate in the sector are more than 7.000. The main exporters Countries are community ones and cover more than 60% of the international trade of Italian roasted coffee. The main Community Countries which export roasted coffee are France, Germany, Switzerland and Austria. The main extra-Community countries which export roasted coffee are: the United States, Canada, Australia and Russia. The Italian coffee market has recently expanded to the Eastern European Countries, the United Arab Emirates, China, the Republic of Korea, Israel and Japan. Italy ranks third in Europe and fourth in the world, after Germany, Belgium and the United States as roasted coffee exporter.

With regard to the Italian per capita consumption, we can highlight two aspects:

- the Italian consumption of coffee is always inelastic, since it is protected by economic fluctuations;
- the recent stability of the *trend* has been interrupted by some negative circumstances.

Coffee Consumption in Italy

Global per capita consumption is stationary, but there are significant differences in the several geographical areas. For example, in the USA per capita consumption is equal to 4.20 kg, while in the EU area it is equal to 5.20 kg. Among the EU countries Finland ranks first in per capita consumption (11.4 Kg per year) followed by Denmark (9.99 kg) and Netherlands (9,85 kg). Italy ranks tenth in per capita consumption with 5.56 kg per year. In recent years in Italy a new "trend" concerning coffee consumption has affirmed itself, that is to say the advent of coffee pads and capsules, which have upset the product market (both for domestic and for external consumption). With capsules and pads a qualitative improvement of coffee and of its distribution can be recorded, but also a significant increase in prices (Migliore et al., 2015b; Muratore and Zarbà, 2011). Indeed, coffee pads require more space than traditional coffee packages, even though the increased use of capsules has generated a new problem, that is, its disposal after consuming the beverage. In order to fully understand the turning point that this type has made to the coffee market, one need only think of the fact that ISTAT has recently included coffee pads into its baskets. However, this innovation has not fully shown its effects, owing to two main reasons:

- the spread of coffee machines still shows large margins of improvement and growth;
- there are limitations to patents that do not permit, today, a full "explosion" of the market.

On a worldwide level, the figures concerning the market of coffee pads are starting to be significant. According to *Euromonitor* the market is worth around 8 billion dollars and it is assumed that there will be an increase up to 12 billions in the current year (2015), with a growth equal to more than 50% over a two-year period. In the last twelve years in Italy the average price of capsules has recorded a drop equal to 2.5% (corresponding to 46.48 euro per kilo), while the growth rate of sales volumes continues to be quite high (around more than 20%) (Cosmina et al., 2016. Di Vita et al., 2016. Langen, 2011).

Research Objective

The present survey aims at studying and investigating the identity, cultural and socio-economic aspects linked to the consumption of coffee in Italy. Therefore, the research object is to understand and to prove that the act of consuming coffee is not only connected with the satisfaction of basic needs, but if it implies a series of aspects linked to the individual's culture and identity, without forgetting the economic variables that the consumer must take into account at the time of purchase (income, price of the goods, price of the related goods, information and communication) (Allegra et al., 2012). In particular, we analysed the answers given by the respondents resident in Messina (Sicily/Italy), in relation to certain personal characteristics, such as age, gender, number of family components, municipality of residence, qualification. The results deriving from this survey, even though they cannot be considered as generated from a typical random sampling procedure, can be certainly used for fact-finding and future research purposes (Lanfranchi et al., 2014; Schimmenti et al., 2013). Indeed, it is a pilot survey on a significant number of interviewed units where information is particularly important for reducing information asymmetry, a condition to which the consumer is subject at the time of purchase (Lanfranchi et al., 2014c; Stratton and Werner, 2013).

Materials and Methods

The survey technique which was used was the administration of an anonymous questionnaire circulated by directly interviewing a sample of respondents, with the face-to-face method, and by using a questionnaire that was prepared *ad hoc* by the research group (Lanfranchi et al., 2014b; Schimmenti et al., 2010). Bearing in mind the objectives set in the present work and considering the available financial resources, the research group decided to select the sample of subjects to be interviewed by choosing the quota sampling methodology among the several non-probability sampling techniques. This methodology is largely used in the scientific literature related to the market investigations carried out by getting opinions, since it needs fewer resources in phase of data acquisition (Marbach, 1996). The sampling technique chosen by the research group consists of selecting the population under investigation, according to certain structural variables. The population was divided into internally homogeneous and as much heterogeneous as possible strata, in which the selection of the subjects is entrusted to the interviewer, and not randomly. In the present work, the variables used to rank the subjects in order to create the sample were: gender; age; professional conditions (Lanfranchi et al., 2015;Van Loo et al., 2015). The population is divided into homogeneous groups, according to a given feature, for example into two groups. In the case of the city of Messina, there are 47.9% males and 52.1% females. In order to identify the population groups to which to submit the questionnaire, divided by gender, age and profession, we used the data distributed by ISTAT in 2015 in order to calculate the percentage weight of each group. This proceeding is aimed at dividing the sample units among the different groups, in order to reflect the population's percentage composition (Table 4, 5, 6). In the survey questionnaire all the questions were closed or multiple choice ones and were formulated according to a methodology which has been largely used in the study of the analysis on consumption (Begalli and Berni, 1993; Chinnici et al., 2001; Antonelli, 1996). A questionnaire composed by 21 questions was realised. Through these questions we tried to interpret tastes and preferences of the Messina consumer. The questions aimed at understanding the consumer behaviour were mainly focused on the structure of the individual demand of coffee, on the frequency of purchase, on the favourite products, on the volume of daily consumption, and on consumption patterns. The period where the interviews were conducted was the one between January and April 2016, over a sample of 500 people. In the Table 7 the social and economic features of the interviewed consumer are listed according to the quota sampling techniques. Table 7 shows that the interviewed sample is composed by 500 people, of which 47,9% men and 52,1% women. The survey was carried out in Messina. The respondents were divided into 4 age groups: (13,2%), 15 – 34 (22,7%), 35 – 49 (21,7%), over 50 (42,4%). The household of the sampled subjects ranges from the single to the family composed by more than 5 people. Most of the interviewed coffee consumers are included in the income bracket between 12.001 and 40.000 euros, with a percentage equal to 81,6%.

Table 4
Distribution of the population in 2015 in relation to gender – Messina

	Male	115 052	47.90%
	Female	125 362	52.10%
Gender	**Totale**	**240 414**	**100%**

Source: Ns elaborations on Istat data

Table 5
Distribution of the population in 2015 in relation to age – Messina

	0 / 14	13.2%
	15 / 34	22.7%
	35 / 49	21.7%
	Over 50	42.4%
Age	**Total**	**100%**

Source: Ns elaborations on Istat data

Table 6
Distribution of the population in 2015 in relation to profession – Messina

	Employed	23.7%
	Unemployed	35.6%
	Students	40.7%
Profession	**Total**	**100%**

Source: Ns elaborations on Istat data

Table 7
Socio-economic features of the interviewed sample

	Character	Number of respondents	%
	Male	240	47.90%
	Female	260	52.10%
Gender	Total	500	100
	0 / 14	66	13.20%
	15 / 34	113.5	22.70%
	35 / 49	108.5	21.70%
	Over 50	212	42.40%
Age	**Total**	**500**	**100**
	Messina	500	100
Residence	**Total**	**500**	**100**
	Diploma	275	55
	Degree	184	36.7
Educational qualification	Other	41	8.3
	Total	**500**	**100**
	Employed	119	23.70%
	Unemployed	178	35.60%
	Students	203	40.70%
Profession	**Total**	**500**	**100**
	1	50	10
	2	84	16.7
	3	150	30
	4	208	41.7
	5	8	1.6
Nuclear family	**Total**	**500**	**100**
	Up to12.000 €	34	6.7
	From12.001 to 25.000 €	233	46.6
	From 25.001 to 40.000 €	175	35
	Over 40.000 €	58	11.7
Class	**Total**	**500**	**100**

Source: Ns elaborations

Results: Analysis for Measuring the Consumption of Coffee in Messina (the Food Model)

61.7% of the respondents admit that they were influenced by the informative messages produced by the mass media and 16.6%, instead, state that advertising played no role regarding the purchase of coffee. However, advertising is not the only variable that influences the consumer choices. Indeed, it is possible to highlight the influence of price, quality and quantity at the time of purchase. The carried out survey shows that most of the interviewed sample choose coffee according to the product quality (43.8% of preferences). Price, instead, ranks third in the considered variables with 24.1%; only a marginal part of the respondents considers the quantity of coffee in each package (5.1%) as an important variable for the purchase of coffee (Figure 2). As regards the choice of coffee in relation to provenance, almost all the respondents answered that they prefer to buy an Italian product. Indeed, only 10% state that they consume a coffee which is not produced in Italy. In this regard, the exports of the Italian product have significantly increased, since the consumption of "espresso" coffee has largely increased in the global market. Subsequently, they were asked to express their opinion on the prices of the packages purchased by the consumer. 61.7% of the respondents state that the price is appropriate and economically reflects the value of the drink. As regards the place of purchase, more that half of the surveyed sample (51.7%) claim that in their city it is more comfortable to drink coffee in bars. 26.7% prefer to buy it in supermarkets, while the remaining 21.6 % are used to buying it in coffee shops.

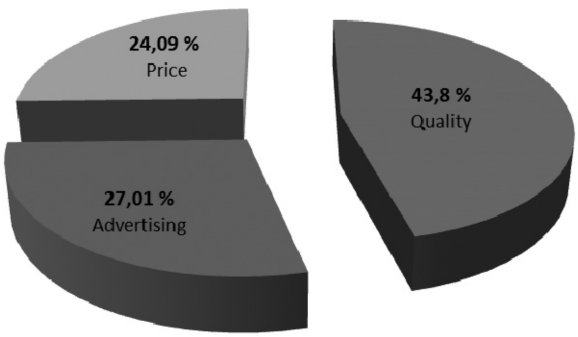

Fig. 2. Influence of variables on the purchase of coffee
Source: Ns elaborations

In order to know the consumer's level of information regarding coffee, he was asked if he is used to reading the label at the time of purchase. The answers were quite balanced. Indeed, 53% read the label, while 47% show not to be interested in the indications on the product that appear on the package. As far as the monthly expenditure is concerned, more than 85% of consumers spend on average more than 15 euros a month to buy coffee. Only 15%, instead, spend on average less than 15 euros. In addition to this, they were asked about their favourite way to drink coffee. It is possible to distinguish between five different ways of preparation. The respondents gave the following answers: 45% prefer to consume the "classic" espresso, 33% moka, 15% decaffeinated, and only 2.5% drink barley coffee (Figure 3). Moreover, the respondents expressed their own opinions about their purchasing preferences. There are five forms in which to buy coffee, and our sample expressed itself as follows: capsules 45% ground coffee 28.4%, coffee pads 18.3%, soluble coffee 5% and coffee beans 3.3% (Fgure 4). The answers show that the consumption of coffee capsules appears to be the most convenient and widespread method. As regards the daily consumption of coffee, 70% of the interviewed sample drinks between 1 and 3 cups of coffee a day. The remaining 30% claim they drink between 4 and 6 cups a day. The answers show that the best time of the day to drink coffee is in the morning during breakfast (93.5%), while the other breaks represent the following proportion: lunch is equal to 56.6%; mid-morning is equal to 35% and, finally, dinner is equal to 20%. However, the respondents are almost equally divided regarding their favourite place of consumption. 52% prefer to drink coffee in a bar, while 48% prefer to have it in their own home. The survey finishes with the consumer's perceptions. Indeed, the respondents were asked about what coffee means for them, not only from a strictly alimentary point of view.

The chart 5 shows that coffee is undoubtedly a moment of pleasure to share with other people, and it is also a good reason to have a break from work or studies (Figure 5). The

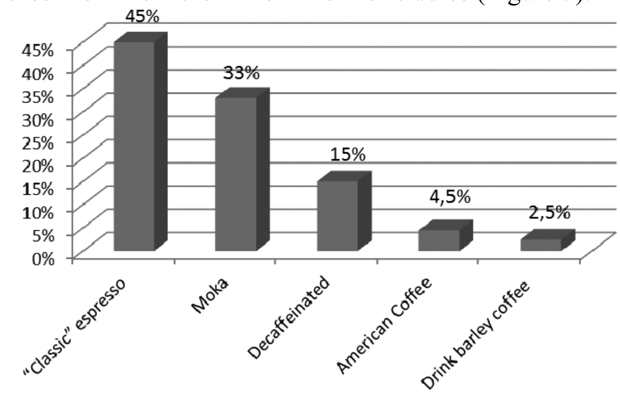

Fig. 3. Ways of consuming coffee
Source: Ns elaborations

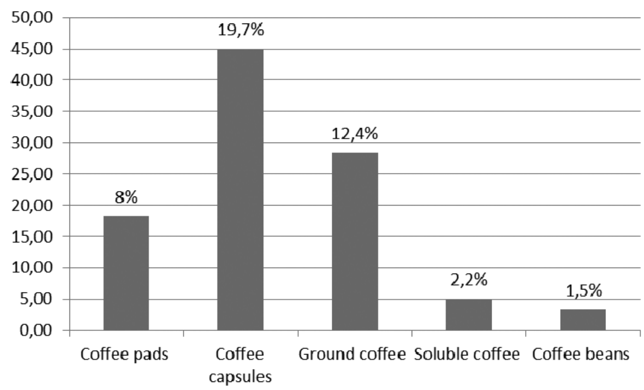

Fig. 4. Ways of purchasing coffee
Source: Ns elaborations

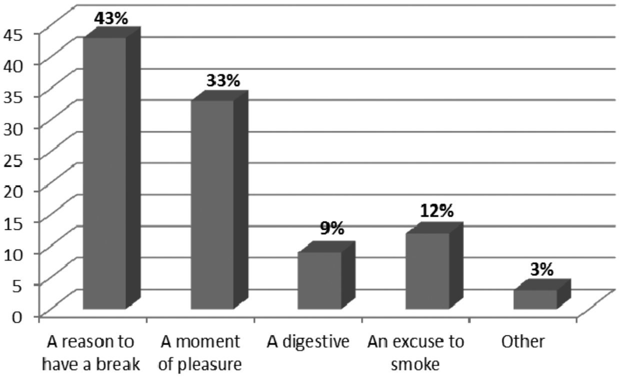

Fig. 5. What coffee means for the consumer
Source: Ns elaborations

other answers show that coffee is seen as an important moment of sharing, and offering it to other people is considered as something pleasant. It is an experience to share: there are those who admit that they like when someone offers them a cup and there are those who consider it as a delicate moment for themselves. Instead, coffee tends to be associated with family, friends, work and school. When analysing the negative feelings associated with coffee, it is possible to see that they have an irrelevant weight. 5% see it as a an addiction, 1,1% is not interested in it, and 0.3% feel remorse after consuming it. However, many people believe that, if taken late in the afternoon, it can cause sleeping problems.

Conclusions

The evolution of the consumers' purchase habits that have been recorded in the latest years is mainly oriented towards the choice of quality, which is often identified in the traceability, provenance and origin of the food or agrifood product (Bruni and Santucci, 2016; Gjonbalaj et al., 2010; Migliore et al., 2012). Today, the consumer is increasingly conscious and informed and he shows to be willing to pay more for those products which guarantee quality (Tudisca et al., 2015b; Schimmenti et al., 2008). These considerations seem to be extremely important to determine the structure of consumption and the related consumer behaviour. The evolution of tastes and preferences has also involved the consumption of coffee. Indeed, the estimates obtained from the survey on coffee consumption in Messina show the figure of a consumer who, despite being influenced by advertising in his choice of coffee, makes a selection according to the product quality, chooses the Italian production as his favourite provenance, thinks that the price is appropriate for the beverage, and prefers to purchase coffee at the bar, considering it more convenient. He generally prefers to drink coffee at breakfast. The consumer is willing to spend more than 10 euros a month and his favourite coffee quality is espresso. Therefore, coffee consumption in Messina has not suffered from the economic crisis that has affected the whole of Europe, but rather, the interviewed sample is still thinking that coffee is an essential element of consumption. Although traditional ground coffee continues to be the favourite consumption pattern, the survey has shown that the favourite purchasing and consumption pattern is that of coffee capsules and the daily consumption ranges from 1 to 3 cups. Therefore, the introduction of coffee pads and capsules in the market has generated significant changes, orienting the domestic consumption of the citizens of Messina towards the single dose. Through the investigation, it was possible to ascertain that coffee consumption in Messina is gradually evolving and that the importance of coffee capsules or pads is constantly growing (Tudisca et al., 2015).

Author's contributions

The work is the result of intensive research in the University of Agribusiness and Rural Development, Department of Management of Plovdiv and Department of Economics of the University of Messina. The article is the result of a full collaboration of the authors.

References

Allegra, V., A. S. Zarbà and G. Muratore, 2012. The post-purchase consumer behaviour, survey in the context of materials for food packaging. *Italian Journal of Food Science*, **24 (Suppl.)**: 160–164.

Antonelli, G., 1996. Il mercato dei prodotti dell'agricoltura biologica: un'indagine in un'ottica di marketing. *Economia Agro-Alimentare*, **1.**

Basarir, A., 2013. An almost ideal demand system analysis of meat demand in uae. *Bulgarian Journal of Agricultural Science*, **19** (1): 32–39.

Begalli, P. and D. Berni, 1993. Le caratteristiche strutturali dei consumi di riso in due aree rappresentative dell'Italia nord-orientale. *Rivista di Economia Agraria*, **4.**

Bruni, M. and F. M. Santucci, 2016. Agribusiness at global scale and smallholders. *Bulgarian Journal of Agricultural Science*, **22** (1): 1–9.

Brunori, G., V. Malandrin and A. Rossi, 2013. Trade-off or convergence? The role of food security in the evolution of food discourse in Italy. *Journal of Rural Studies*, **29:** 19–29.

Celik, Y. and M. Emre, 2014. The effect of economic size on profitability of apple farms. *Bulgarian Journal of Agricultural Science,* **20** (1): 46–50.

Chang, T. F. M. and L. Iseppi, 2012. EU Agro-Food Chain and Vertical Integration Potentiality: A Strategy for Diversification? *Transition Studies Review*, **19** (1): 107–130.

Chinnici, G., M. D'Amico and B. Pecorino, 2001. A multivariate statistical analysis on the consumers of organic products, Seminar "Organic Food Marketing Trends" *town, country, time.*

Cosmina, M., G. Gallenti, F. Marangon and S. Troiano, 2016. Attitudes towards honey among Italian consumers: A choice experiment approach. *Appetite,* **99:** 52–58.

Cranfield, J., S. Henson, J. Northey and O. Masakure, 2010. An assessment of consumer preference for fair trade coffee in Toronto and Vancouver. *Agribusiness,* **26** (2): 307–325.

Crescimanno, M., A. Galati and D. Yahiaoui, 2013. Determinants of Italian agri-food exports in non-EU Mediterranean Partner Countries: An empirical investigation through a gravity model approach. *New Medit,* **12** (4): 46–54.

D'Amico, M., G. Di Vita, G. Chinnici, G. Pappalardo and B. Pecorino, 2014. Short food supply chain and locally produced wines: Factors affecting consumer behavior. *Italian Journal of Food Science,* **26** (3): 329–334.

De Salvo, M. and G. Signorello, 2015. Non-market valuation of recreational services in Italy: A meta-analysis. *Ecosystem Services,* **16:** 47–62.

Di Vita, G., G. Pappalardo and M. D'Amico, 2016. Exploring the determinants of consumption for an Italian traditional product: The case of pizza. *Quality – Access to Success*, **17:** 216-221.

Dogan, I. S., O. Yildiz, E., Eyduran and S. Kose, 2011. A study on determination of functional food consumption habits and awareness of consumers in Turkey. *Bulgarian Journal of Agricultural Science,* **17** (2): 246–257.

Freibauer, A., E. Mathijs, G. Brunori, Z. Damianova, E. Faroult, J. G. Gomis, L. O'brien and S. Treyer, 2011. Sustainable food consumption and production in a resource-constrained world. *EuroChoices,* **10** (2): 38–43.

Gjonbalaj, M., I. Miftari, H. Bytyqi and J. Shkodra, 2010. Kosovo beer markets – Consumer preferences and baying behaviour. *Bulgarian Journal of Agricultural Science*, **16** (1): 74–79.

Hristov, H. and A. Kuhar, 2014. Young urban adults' preference for wine attributes applying best-worst scaling: An exploratory study for Republic of Macedonia. *Bulgarian Journal of Agricultural Science*, **20** (3): 541–551.

Lanfranchi, M., C. Giannetto, A. Alibrandi and A. Zirilli, 2015. Analysis of the propensity to fruit consumption among young people through the cumulative proportional odds model. *American Journal of Applied Sciences,* **12** (8): 542–548.

Lanfranchi, M., C. Giannetto, M. D'Amico and G. Di Vita, 2014b. Analysis of demand determinants of fish products in Messina: An economic survey on the fish consumption. *Quality – Access to Success,* **15** (142): 106–108.

Lanfranchi, M., C. Giannetto and A. De Pascale, 2014. The role of nature-based tourism in generating multiplying effects for socio economic development of rural areas. *Quality – Access to Success,* **15** (140): 96–100.

Lanfranchi, M., C. Giannetto and A. De Pascale, 2014b. Analysis and models for the reduction of food waste in organized large-scale retail distribution in Eastern Sicily. *American Journal of Applied Sciences,* **11** (10): 1860–1874.

Langen, N., 2011. Are ethical consumption and charitable giving substitutes or not? Insights into consumers' coffee choice. *Food Quality and Preference*, **22** (5): 412–421.

Migliore, G., L. Cembalo, F. Caracciolo and G. Schifani, 2012. Organic consumption and consumer participation in food community networks. *New Medit,* **11** (4 Special): 46–48.

Migliore, G., M. Crescimanno, G. Schifani, P. Romeo and A. Galati, 2015. Quality perception and consumer choice of cactus pear: Results of direct survey in Italy. *Acta Horticulturae,* **1067:** 275–281.

Migliore, G., G. Schifani, P. Romeo, S. Hashem and L. Cembalo, 2015b. Are Farmers in Alternative Food Networks Social Entrepreneurs? Evidence from a Behavioral Approach. *Journal of Agricultural and Environmental Ethics,* **28** (5): 885–902.

Muratore, G. and A. S. Zarbà, 2011. Role and function of food packaging: What consumers prefer. *Italian Journal of Food Science*, **23** (Suppl.): 25–29.

Nocella, G., D. Romano and G. Stefani, 2014. Consumers' attitudes, trust and willingness to pay for food information. *International Journal of Consumer Studies,* **38** (2): 153–165.

Pecorino, B., M. Signorello and G. Trovato, 2016. How sensory attributes affect consumption of functional foods? Evidences from a consumer test in Sicily (Italy). *Quality – Access to Success,* **17:** 113–117.

Schimmenti, E., A. Asciuto, A. Galati and M. Valenti, 2010. Consumers of flowers and ornamental plants: An exploratory survey in the Italian «Mezzogiorno» regions. *New Medit,* **9** (3): 36–46.

Schimmenti, E., A. Galati, V. Borsellino, C. Ievoli, C. Lupi and S. Tinervia, 2013. Behaviour of consumers of conventional and organic flowers and ornamental plants in Italy. *Horticultural Science*, **40** (4): 162–171.

Schimmenti, E., A. Galati and R. Carapezza, 2008. Sicilian floriculture companies and the role of transport in increasing their competitiveness. *New Medit,* **7** (4): 20–28.

Schleenbecker, R. and U. Hamm, 2015. Information needs for a purchase of fairtrade coffee. *Sustainability (Switzerland),* **7** (5): 5944–5962.

Scuderi, A. and B. Pecorino, 2015. Protected designation of origin (PDO) and protected geographical indication (PGI) Italian citrus productions. *Acta Horticulturae*, **1065:** 1911–1917.

Stefani, G., D. Romano and A. Cavicchi, 2006. Consumer expectations, liking and willingness to pay for specialty foods: Do sensory characteristics tell the whole story*? Food Quality and Preference,* **17** (1–2): 53–62.

Stratton, J. P. and M. J. Werner, 2013. Consumer behavior analysis of fair trade coffee: Evidence from field research. *Psychological Record*, **63** (2): 363–374.

Tudisca, S., A. M. Di Trapani, E. Donia, F. Sgroi and R. Testa, 2015. The market reorientation of farms: the case of olive growing in the Nebrodi Area. *Journal of Food Products Marketing,* **21** (2): 179–192.

Tudisca, S., A. M. Di Trapani, F. Sgroi and R. Testa, 2015b. Socio-economic assessment of direct sales in Sicilian farms. *Italian Journal of Food Science*, **27** (1): 101–108.

Van Loo, E. J., V. Caputo, R. M. Nayga, H.-S. Seo, B. Zhang and W. Verbeke, 2015. Sustainability labels on coffee: Consumer preferences, willingness-to-pay and visual attention to attributes. *Ecological Economics,* **118:** 215–225.

Received August, 2, 2016; accepted for printing August, 29, 2016