Consumer preferences and coffee market supply survey in the South Moravian region

Tauferová, A., Tremlová, B.

Department of Plant Origin Foodstuffs Hygiene and Technology, Faculty of Veterinary Hygiene and Ecology, University of Veterinary and Pharmaceutical Sciences Brno, Palackého tř. 1946/1, 612 42 Brno

Abstract

The coffee market is an important and constantly evolving segment of the world market. On a global scale, there is a significant trend of increased coffee consumption; the increase is especially noticeable for specialty coffee of high quality and coffee produced with regard to the socioeconomic conditions of growers. This dynamic affects both consumers and distributors and their decisions at the national market level. The aim of this work was to evaluate the current state of the coffee supply and its structure in the market network of the South Moravian Region in comparison with the consumer preferences gained from the questionnaire survey. It was found that Czech consumers have coffee products available in a wide price range, but with a relatively low proportion of fair trade and organic products, despite the relatively high popularity of fair trade labels given by respondents. Instant coffee showed the widest range, and it was preferred by almost a third of respondents. The most popular format for buying coffee remains the supermarket, although the average price per unit of coffee is higher than in local roasters offering fresh coffee. Currently, more than a third of respondents prefer high-quality coffee and almost a third were willing to pay more than 100 CZK per 100 g.

shop format, questionnaire, shopping habits, coffee assortment

Introduction

Coffee has traditionally been one of the world's most popular beverages consumed for many reasons, whether due to its caffeine content and its stimulating effects, high antioxidant content, pleasant sensory experience, or because of social habits.

According to the data of the International Coffee Organization (ICO, 2019a), global demand for coffee continues to rise by an average of 2.2% per year over the past five years. World consumption in 2018 accounted for over 164.6 million bags (60 kg), with the EU accounting for the largest share of importing countries, currently 39.4% in 2018 (ICO, 2019b).

According to the data from the Czech Statistical Office, the consumption of coffee beans, including roasted coffee beans (ground and unground), instant coffee, coffee extracts, and concentrates in the Czech Republic has been hovering around 2 kg/person/year (CSO, 2018). In the retail trade, not including the Makro retail shop, 19 400 tons were sold in 2018. The Czech coffee market has reached 30 billion crowns and has an upward trend, partly due to rising prices, but also to a stronger orientation of consumers towards products of better quality (ČTK, 2018).

The purchase of household coffee makers represents the trend in recent years. It means that further increase of roasted coffee beans consumption can be expected. Consumers are likely to be more and more interested in the quality of coffee and the associated characteristics, such as information available on the origin, diverse cultivation, processing, and a variety of coffee beans. A certain demand increase in Fair Trade products may be expected since awareness about coffee producers' socioeconomic preferences has been increasing too. In addition, studies from different countries show the growing awareness and interest of consumers in organic products (Risius and Hamm, 2017; de-Magistris and Gracia, 2016; Yazdanpanah, Fourozani and Hojjati, 2015).

The question is, therefore: What is the current state of supply in the coffee market and to what extent do the preferences of Czech consumers follow the above-mentioned global

Address for correspondence:

Ing. Alexandra Tauferová, Ph.D.,
Department of Plant Origin Foodstuffs Hygiene and Technology,
Faculty of Veterinary Hygiene and Ecology,
University of Veterinary and Pharmaceutical Sciences Brno,
Palackého tř. 1946/1, 612 42 Brno

E-mail: tauferovaa@vfu.cz
www.maso-international.cz

trends? The aim of the study was to evaluate the supply of coffee and its structure in the market network of the South Moravian Region, in comparison with consumer preferences resulting from the results of the questionnaire survey.

Material and Method

The study carried out a survey of the coffee assortment in a total of 41 retail grocery stores of various formats in 6 district towns of the South Moravian Region between October and December 2018. The formats included supermarkets, hypermarkets, discount stores, smaller convenience stores or C-stores, specialized coffee shops, and retail roasters. In each store, information about the composition and coffee assortment was recorded. The obtained data were described both in text form and in the form of overview tables and graphs.

Subsequently, an online questionnaire survey was conducted, in which respondents' preferences and consumer behaviors were ascertained. Data were collected in the Czech Republic during 2018. The questionnaire survey was conducted using the Google Forms application and the questionnaire was distributed by e-mail and social networks. The questionnaire consisted of two parts. The first part (n = 8) focused on the socio-demographic characteristics of the respondents, and the second part (n = 22) contained questions concerning shopping habits and preferences of coffee consumers. A total of 331 respondents participated in the questionnaire survey; 277 respondents identified themselves as coffee consumers. Table 1 contains more detailed data characterizing respondents' characteristics.

Table 1. Demographic information about respondents (100%; n=331)

Demographic category	Groups	Number (n) of respondents	Percentage (%) of respondents
Gender	Female	230	69.5
	Male	101	30.5
Marital status	Married	150	45.3
	Not married	181	54.7
Educational level	Elementary school	27	8.2
	Certificate of apprenticeship	24	7.3
	Secondary school	204	61.6
	Higher education	76	23.0
Current status	Student	160	48.3
	An employee of the state	47	14.2
	Employee in the private sphere	83	25.1
	SEP (self-employed people)	15	4.5
	Parental leave	10	3.0
	Unemployed	2	0.6
	Retired	14	4.2
Income group*	< 15 000 Kč	52	15.7
	15 000 – 30 000 Kč	110	33.2
	30 000 – 45 000 Kč	76	23
	> 45 000 Kč	93	28.1

*time period: monthly/household

Results and discussion

The results of the survey of the assortment of coffee in brick-and-mortar shops in Brno are shown in Table 2. (Plate I, Fig. 1) shows a comparison of average prices for 100 g of coffee (of any kind) according to the store format.

Table 2. The results of the coffee supply survey in Brno

	price/100 g [CZK] min	price/100 g [CZK] max	the number of items	the number of organic labelled products	the number of fair trade labelled products
			supermarkets		
coffee beans	16	60	15	0	0
ground	13	208	36	0	0
instant	33	212	73	0	0
capsule	60	208	8	0	0
			hypermarkets		
coffee beans	14	179	43	1	0
ground	14	159	83	0	0
instant	10	219	93	1	0
capsule	21	156	18	0	0
			discounts		
coffee beans	14	34	5	0	0
ground	13	121	39	0	0
instant	11	140	44	0	0
capsule	50	104	6	0	0
			C-stores		
coffee beans	40	56	2	0	0
ground	33	100	7	0	0
instant	23	171	8	0	0
capsule	–	–	0	0	0
			Specialized stores		
coffee beans	67	193	58	3	55
ground	67	110	48	1	47
instant	72	72	1	0	1
capsule	0	0	0	0	0
			roasters		
coffee beans	68	137	65	0	0

The results of the questionnaire survey focused on respondents‘ preferences and consumer behavior in the market network of the South Moravian Region.

(Plate I, Fig. 2) shows the popularity of store formats, which resulted from the survey respondents‘ answers regarding the usual site of their coffee purchases.

Respondents were also asked to indicate the degree of influence of selected factors on their choice of coffee purchase location. The highest percentage, 80.9%, considered the quality of the offered products as important and very important. The possibility of a quick and convenient purchase was considered as very important and important by 54.5% of respondents. Favorable pricing policy as well as a pleasant environment was perceived as very important and important by 50.5% of respondents. Subsequently, 47.7% of respondents identified the breadth of the assortment as very important and important; the lowest percentage, 43.3%, of consumers perceived the store availability as very important and important.

Although a high percentage of consumers consider the quality of the offered products to be important, one aspect of quality, freshness, is not yet sufficiently perceived by consumers. Fresh coffee was briefly defined as having original, undeteriorated characteristics. These characteristics are most significantly related to the profile of volatile aromatic components, triacylglycerols and free fatty acids. Though coffee can be considered as a stable product in the view of microbial and enzymatic stability, storage changes inevitably lead to a deterioration in sensory quality, a less pronounced, „weathered“ perception, and an intense bitter taste (Yeretzian, Blank and Wyser, 2017; Dulsat-Serra, Quintanilla-Casas and Vichi, 2016; Toci et al., 2013; Ross, Pecka and Weller, 2006). Although the perception of freshness is influenced by several factors and technological processes, storage of already-roasted coffee plays an important role. From this point of view, roasters have the greatest potential of all available sales formats, which can offer customers a much fresher raw material. However, the results of the questionnaire survey showed that only a very small percentage of consumers currently make their coffee purchases in roasters. As can be seen in Fig. 2, the most popular format for the purchase of coffee is a supermarket. In this context, it is also interesting to perceive the average price at which the consumer can buy coffee in each store format. The results of a coffee market survey show that the average price per 100 g of coffee is higher in supermarkets than in roasters. The second most popular format is a specialized store or coffee shop. According to the results of a coffee market survey, the highest average price per 100 g of coffee was recorded in stores of this type (specialized coffee shop). However, the turnover of goods can be expected to be higher in these specialized coffee shops, and consequently it can have a positive effect on freshness, compared to roasters, since coffee shops are only one link lower in the distribution chain (Plate II, Fig. 3).

The results of our questionnaire survey differ somewhat from the published analyses regarding the most frequently purchased type of coffee. According to the analyst‘s data, the capsule business currently accounts for only 3% of the coffee sold, though it is declared as the most rapidly growing segment. It also states that in 2018 ground coffee made up almost half of the coffee sold in the Czech Republic, instant coffee almost a quarter, special coffee over 10%, and coffee beans less than 9%. The remaining percentages consisted of a mixture with coffee substitutes and coffee capsules (ČTK, 2018). The highest share of instant coffee among the types of coffee purchased by respondents may be due to a higher proportion of students with a lower income in the survey. An interesting comparison is also provided in Table 2 that shows the common trend of supermarkets, hypermarkets, discounts, and C-stores in Brno, where the highest number of items were offered in the instant coffee category. However, this trend was not so clearly apparent in stores in other towns in the region, where instant coffee switched with ground coffee in the highest number of items.

A positive finding is the high preference for roasted coffee beans that is the second-most-purchased type. In terms of sensory quality, roasted coffee beans have a higher potential to retain freshness. On the other hand, ground coffee is more easily subjected to oxidation reactions and retains a high proportion of volatile aromatic components for a shorter time, regardless of the type of packaging (Marin et al., 2008). While some packaging methods may slow down the oxidation reactions, in households, ground coffee is also stored for a longer period of time after opening the package. Consequently, the sensory characteristics of ground coffee decrease in a matter of days (Anese, Manzocco and Nicoli, 2006; Ross, Pecka and Weller, 2006). A possible solution to the unnecessary aging of the coffee and the deterioration of the sensory quality during the storage of the coffee in households is the choice of a suitable weight corresponding to the frequency of coffee consumption and the number of household members. (Plate II, Fig. 4)

Figure 4 shows that the most frequently purchased coffee package is a package weighing from 200 to 250 g, one of the smaller coffee packages. The coffee supply in most shop formats corresponds to the demand since packaging weighing 200 - 250 g is one of the most commonly offered coffee packages. Only 7.2% of respondents look for packaging of 1000 g or more, which is often more cost effective. (Plate III, Fig. 5).

Almost half of respondents stated that they are willing to pay between 60 and 99 CZK for 100 g of coffee. In terms of the average price of the products on offer, all store formats (including specialized stores and roasters) can meet the customer‘s needs and offer an acceptable option. An interesting result is the relatively high percentage (30.7%) of respondents who stated that they are willing to pay more than 100 CZK for 100 g of coffee. The fact is that in all the usual store formats (except for specialty coffee shops and roaster shops, Table 2), the most expensive type of coffee offered is instant coffee. Its higher price is mainly due to a greater number of technological steps during its processing. On the other hand, roasted coffee beans are offered at the highest price in specialized shops and roasters. The higher price of this coffee is often related to the higher quality of the raw material. Such coffee is labeled as ‚specialty‘. There are a number of definitions of specialty coffee, but they have two common denominators: they emphasize the transparency of origin (availability of information on the farm, variety, method of processing, etc.) and better coffee quality parameters. On a global scale, specialty coffee has already shifted from a niche market to the position of an important industrial segment of the coffee market (Sepúlveda et al., 2016). However, the results of our questionnaire survey showed that more than half (52.7%) of Czech respondents still do not distinguish between specialty and commodity coffee. Specialty coffee is preferred by 41% of respondents. Accordingly, less than a third (27.4%) of respondents are interested in information related to the processing, origin, and variety of coffee during purchase.

The results of the questionnaire survey showed that, regardless of the designation of coffee as specialty, consumers are gradually becoming aware of the socioeconomic aspects of coffee growing. Almost a third (30.3%) of respondents stated that they perceived fair trade as very important or important. On the other hand, only 17.3% considered the origin of coffee in organic farming to be very important or important. Langen (2011) stated that there is a growing interest among consumers in certain ethical aspects of food production. As in this work, a preference survey conducted in Spain and Colombia pointed to a higher preference of coffee consumers to fair trade labelled products than organic labelled (Sepúlveda et al., 2016).

Conclusions

The study emphasized the current broad price range of available coffee products. In terms of the average price, discounts were found to be the best option, roasters offered coffee at more favorable prices than supermarkets, and the highest average price was found in specialized coffee stores, but these offer the highest number of fair trade products, though fewer organic labelled products. Instant coffee showed the widest assortment and according to the conducted questionnaire survey, it represented the most popular variant. The most popular format for buying coffee was supermarket. According to the results of the questionnaire survey, roasters are not often a place for coffee purchase, though they have a high potential to offer fresh coffee, while simultaneously having favourable price policies and average prices. The results of the questionnaire survey showed a relatively high popularity of the fair trade label, which points to the growing importance of ethical aspects among Czech consumers. Almost a third of consumers were willing to pay more than 100 CZK per 100 g of coffee, which is the price level of specialty coffee preferred by more than a third of respondents.

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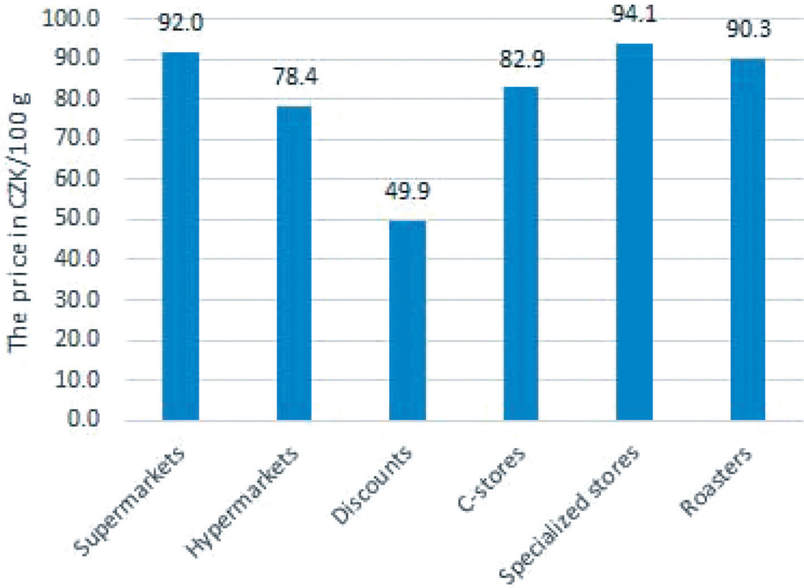

Fig. 1. Average price of 100 g of coffee in Brno according to the store format

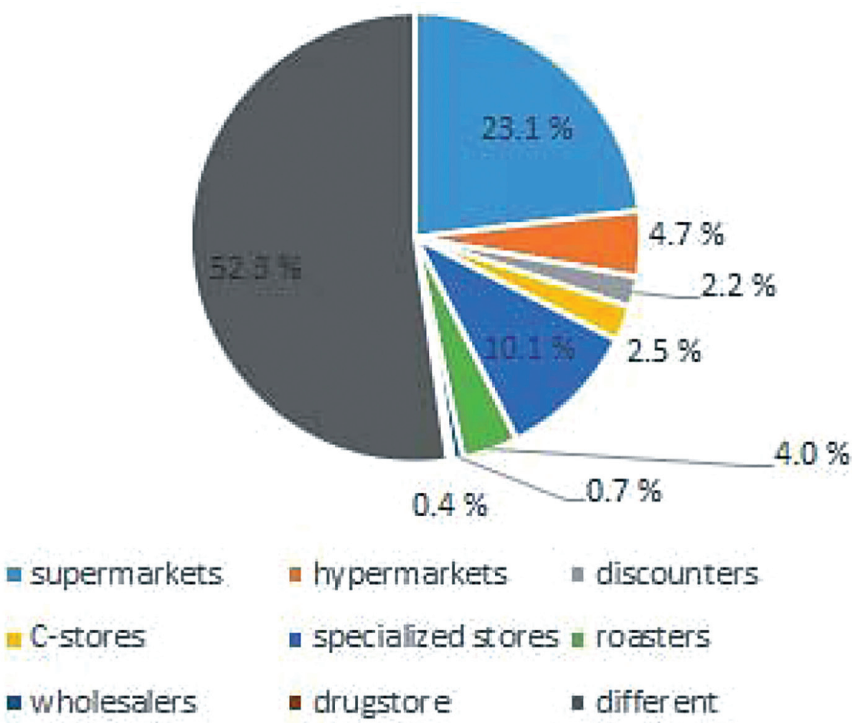

Fig. 2. Usual place of coffee purchase according to the questionnaire survey

Plate II

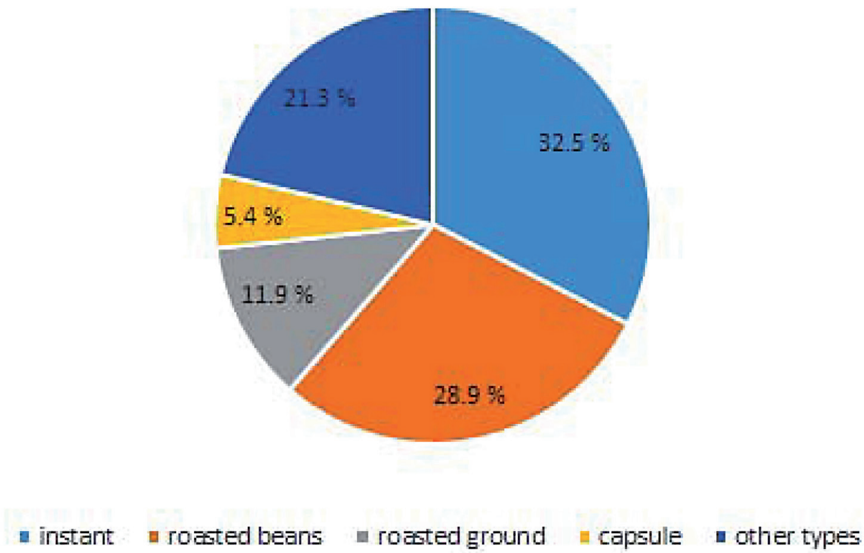

Fig. 3. The most frequently purchased type of coffee according to the questionnaire survey

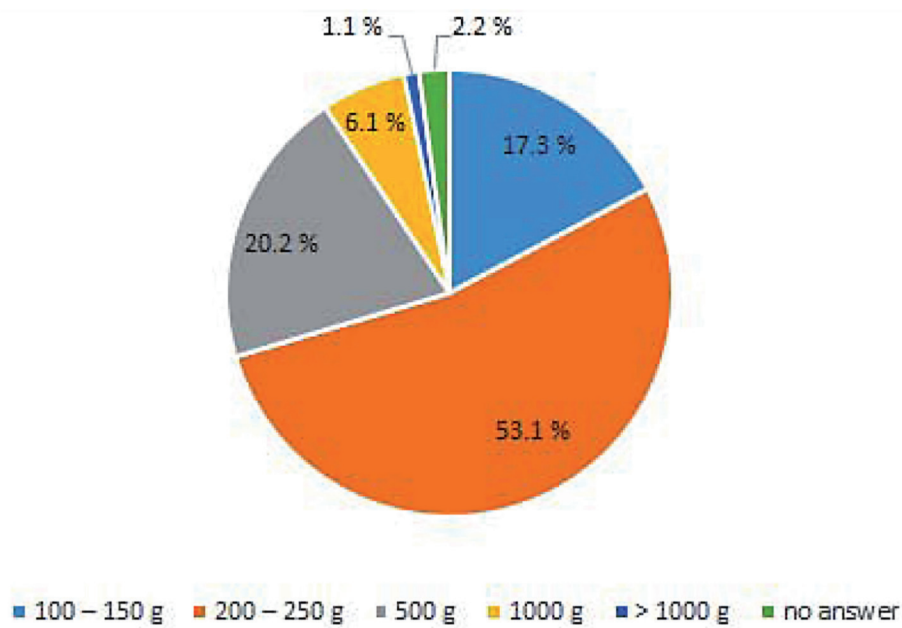

Fig. 4. The most frequently purchased grammage of coffee according to the questionnaire survey

Plate III

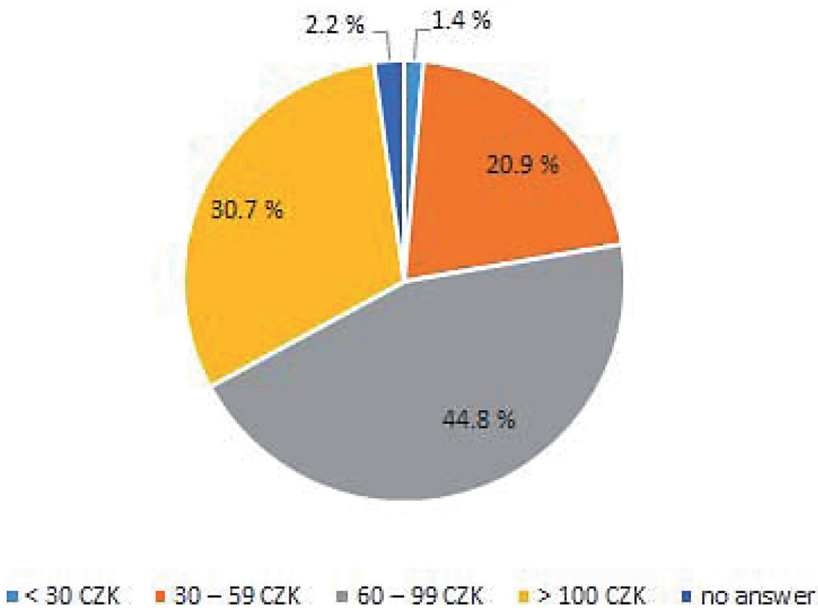

Fig. 5. Preferred price for 100 g of coffee according to the questionnaire survey