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Coffee consumption and purchasing behavior review: Insights for further research



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ABSTRACT

This paper presents a systematic literature review of consumer research towards coffee with the objective to identify and categorize motives, preferences and attributes of coffee consumption and purchasing behavior. Research papers were analyzed in terms of main characteristics and components (study type, research methodology, sampling, and product type). The review gives a systematic overview of the heterogeneous group of concepts and approaches that have been used so far to examine consumer behavior towards coffee. Results provide a model of key determinants for coffee consumption that can be grouped into the categories, (1) personal preferences, (2) economic attributes, (3) product attributes, (4) context of consumption, and (5) socio-demographics. The findings also show that there is a strong focus on coffee sustainability.

1. Introduction

Coffee is one of the most popular beverages worldwide and it has played an important role in consumer culture since the mid-sixteenth century.

Over the last decades, coffee has undergone a transformation from a pure commodity to a specialty product, an evolution that is commonly divided into the so-called "three waves of coffee consumption" (Manzo, J., 2014). The first wave of coffee consumption started in the 1960s, which was characterized as a mass-market with exponential consumption growth and wide availability. The second wave of coffee consumption began in the 1990s with the formation of coffeehouse chains, mainly Starbucks. Coffeehouses introduce specialty coffee¹ to respond to the new consumer interest in coffee quality. Coffee becomes a luxury product rather than a commodity (Carvalho et al., 2015). The third wave of coffee had its genesis with small roasters, who promoted specific regions and new brewing techniques.² Coffee is now considered a high-quality artisanal food, often compared to wine. The act of drinking a coffee means more than just consuming a beverage. It is about pleasure, experience, lifestyle and social status. This change in consumer behavior has been possible due to three approaches that currently characterize the consumer product coffee: pleasure, health and sustainability (International Coffee Organization (ICO), Global Coffee

Forum, 2015).

In 2015-2016 around 151.3 million 60-kg bags of coffee were consumed worldwide (ICO, 2018). The USA is the largest coffee consumer as a country (25 million bags). Brazil is the second largest consumer (20 million bags) and the largest coffee producer (55 million bags) in the world. The European Union stands alone with the highest consumption of 42 million 60 kg bags, while the strongest growth rates of coffee consumption have been found in Asia & Oceania (ICO, 2016–2017; Euromonitor International, 2014). Scandinavians have the highest per capita coffee consumption (Finland 12,2kg). Italy, a country known for its strong coffee culture, has a per capita coffee consumption of 5,6 k. The USA, where coffee is also deeply rooted in consumer culture and where the world leading specialist coffeehouse brand Starbucks comes from, has a per capita coffee consumption of 4,5 kg. In comparison, the UK and Japan, as countries with a long tradition of tea consumption, both have a lower per capita consumption of 3,6 kg (Brandeins Wissen, 2017).

Despite the popularity and importance of coffee as a consumer product and the growing interest of both market and academic research towards various facets of consumer behavior towards coffee, no systematic review exists that reports on results from past studies on coffee consumption. Therefore, this paper reviews the existent literature on consumer behavior towards coffee with the objective to systematically

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¹ The term Specialty coffee was first used in 1974 by Erna Knutsen. Specialty coffees are grown in special and ideal climates, and are distinctive because of their full cup taste and little to no defects. Countries known for producing specialty coffees are Colombia, Ethiopia, Brazil and Indonesia.

² The term "third wave of coffee" was first mentioned by Trish Rothgeb (formerly Skeie) in The Flamekeeper (November 2002). https://web.archive.org/web/20031011091223/http://roastersguild.org/052003_norway.shtml/Accessed 19 April 2018.

review evidence and identify key determining factors of coffee purchasing and consumption behavior. The review provides insight into the diversity of consumer studies towards of coffee, concerning methodological approaches, main issues and coffee product types.

The objectives of the presented paper are:

- To review studies on consumer behavior towards coffee to provide an overview of main research issues and approaches;
- To identify and structure key factors determining consumers' consumption and purchasing behavior towards coffee;
- To reveal emerging topics and gaps that give direction for further research.

2. Methods

A systematic literature review was chosen for this paper to identify, appraise and synthesize relevant studies on motives and characteristics of consumer coffee purchasing and consumption behavior. To retrieve relevant publications, the review followed a detailed and comprehensive protocol. The search strategy and inclusion and exclusion criteria were defined a priori to guarantee objectivity and transparency (Torraco, 2005; Webster & Watson, 2002). The literature search strategy and screening process are outlined in Fig. 1.

2.1. Search strategy

A systematic search of peer-reviewed journals was performed to retrieve relevant publications. The literature search was carried out on three scientific search engines, including Web of Science, Scopus, and Sciencedirect in January 2018. In Scopus and Web of Science the search was conducted in the search field abstract, title and keywords, whereas for Sciencedirect the search field was Topic. The search was limited to the post 2000 period to capture current trends in consumer behavior. Only research articles written in English and published in scientific journals were included.

A combination of search terms was used to conduct the search. The term "coffee" was used to limit the search to studies that take into consideration coffee. The research includes several product types, which are (1) generic coffees, (2) different coffee types/qualities (filter coffee, espresso coffee, coffee with milk, specialty coffee, iced coffee, fair trade coffee etc.), and (3) coffeehouses. The second group of terms was used to identify studies based on consumer behavior research. The term "coffee" was combined with the following second group of terms: consumption OR consumer OR purchase OR purchasing. Furthermore, the above research was then refined with the following terms: attitude OR behavior OR motive OR preference OR perception OR attributes OR willingness to pay. Based on review question and search terms, an initial pool of publications was built.

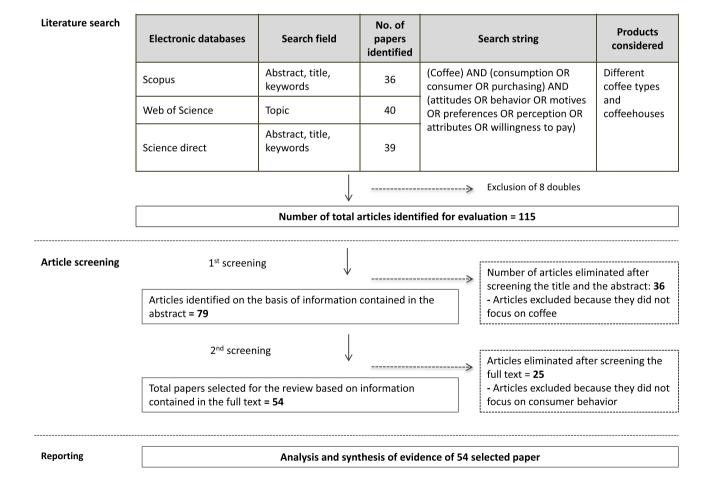


Fig. 1. Steps and criteria of literature search and screening process.

2.2. Selection criteria

An initial set of 115 articles was identified for first evaluation (excluding 8 doubles) based on the information contained in the abstract. title or keywords. Web of Science produced 40 papers, Scopus generated 36, followed by Sciencedirect with 39 papers. Those papers were selected for further screening. Two rounds of screening were conducted on the initial data set of 115 papers to ensure that the final selection of studies fulfills quality criteria. In the first round, abstracts were screened, which led to the elimination of 36 articles because they did not focus primarily on coffee. As a result, in the second round 79 articles were identified for closer reading of the full text. After consulting the full text, an additional 25 papers were excluded because those papers' content did not focus on consumer behavior. This screening process resulted in a total of 54 papers for further systematic literature review, based on the information and quality of the content contained in the full text. To construct the final database, key data were extracted and tabulated for each selected study.

To extract the information from each reviewed study, a data extraction form was used to capture the following information: (1) author (s), (2) year of publication, (3) country, (4) objective of the study, (5) measurement method, (6) sample size and composition, (7) data elaboration, and (8) type of products analyzed. The Description of primary studies included in the review can be found in Appendix A. In a last step of the systematic review, relevant information extracted from the reviewed studies was analyzed in detail with the aim of grouping research results into comprehensive categories. This allows for a complete and better understanding and interpretation of factors influencing consumer purchasing and consumption behavior towards coffee. Moreover, the results help reveal gaps, where further consumer research could be conducted.

3. Results

3.1. Methodological approaches and research issues of selected papers

Identified research adopts various methodological approaches that study different issues and different coffee product types (coffee beverage, coffee at supermarkets, and coffeehouses).

Table 1 reveals that 20 research papers refer to a specific methodological approach used in the study, e.g. choice experiments, experiments in the field or laboratory, experimental auctions, and eyetracking. The other 24 papers conducted a survey, and the remaining studies used a qualitative exploratory approach or market data for their analysis.

Table 2 shows data collection methods used by the studies. The majority of reviewed studies used a survey as main data collection methods (44 out of 54 studies). Some researchers conducted focus groups or interviews, and others combined them with surveys. Sales data (panel data and store scanner data) was used as a revealed preference method to investigate actual purchase behavior of fair trade coffee (Andorfer and Liebe (2015); de Ferran & Grunert, 2007; Cailleba & Casteran, 2009 and 2010).

Past consumer research towards coffee consumption and purchasing behavior has focused strongly on the issue of sustainability and ethical consumption (26 out of 54 papers). Among the sustainability labels, the fair trade issue was the most analyzed (17 out of 26 papers on sustainability). Most of the reviewed literature on sustainable consumption and purchasing behavior used a willingness-to-pay approach (11 of the 25 studies on sustainability), with choice experiments being the most adopted method to test willingness-to-pay for coffee with sustainability labels (e.g. Andorfer & Liebe, 2013; Asioli et al., 2016a; Asioli, Næs, Øvrum, & Almli, 2016b; Basu & Hicks, 2008). Researchers used consumer-preference methods based on actual purchasing behavior to overcome limitations of social desirability of stated preference methods (Arnot et al., 2006; Basu & Hicks, 2008; Breidert, Hahsler, & Reutterer, 2006). Two studies applied the hedonic price method that allows for an investigation of what consumers actually have to pay for various coffee attributes in the market (Bissinger & Leufkens, 2017; Schollenberg, 2012). Other authors conducted experiments with price perception in supermarkets (Andorfer & Liebe, 2015) or coffeehouses (Arnot et al., 2006), testing consumers for revealed and stated consumption and purchasing behavior. Arnot et al. (2006) study is apparently the first to examine fair trade purchase behavior in an actual market setting, adjusting prices of coffee vendor on campus. Similarly, Cailleba and Casteran (2009) claimed that there are not enough studies that measure and test actual ethical purchasing behavior, but they focus to consumer perception and values. Therefore, they used a quantitative approach and supermarket panel data to study actual consumer behavior towards

After sustainability, the second most important issue of interest is consumer behavior towards coffeehouse brands, mainly Starbucks (6 of the 9 papers focusing on coffeehouses). Six of these studies used a qualitative approach, applying interview techniques, direct observation, and text analysis as preferred methods for data collection. The qualitative studies focused mostly on consumer behavior in coffeehouses and on the context of consumption. These studies were conducted in North America and Asian markets (e.g. Bookman, 2013; Quintão et al., 2017; Huang, 2014; Smith Maguire & Hu, 2013; Wu, 2017).

Table 1Methodological approaches used in the selected studies.

	No.	Authors
Choice experiments	7	Andorfer and Liebe (2013); Asioli, Almli, and Næs (2016a); Asiolli, Næs, Øvrum and Almli (2016b) Basu and Hicks (2008); Cranfield, 2010; Langen (2011); Sepúlveda, Chekmam, Maza, and Mancilla (2016)
Experiments (in the field or in the laboratory)	11	Anagnostou, Ingenbleek, and van Trijp (2015); Andorfer and Liebe (2015); Arnot, Boxall, and Cash (2006); Asioli, Næs, Granli, and Lengard Almli (2014); Bhumiratana, Adhikari, and Chambers (2014); Giacalone, Fosgaard, Steen, and Münchow (2016); Labbe, Ferrage, Rytz, Pace, and Martin (2015); Obermiller, Burke, Talbott, and Green (2009); Penolazzi, Natale, Leone, and Russo (2012); Sörqvist et al. (2013); Spinelli et al. (2017)
Experimental auctions	1	Lange, Combris, Issanchou, and Schlich (2015)
Eye-tracking	1	Van Loo et al. (2015)
Surveys	24	Ágoston et al. (2017); Aguirre (2016); Carvalho et al. (2015); Chen and Lee (2015); Chen and Hu (2010); De Pelsmacker et al. (2005a); De Pelsmacker, Janssens, Sterckx, and Mielants (2005b); Gorgoglione, Messeni Petruzzelli, and Panniello (2017); Harith, Ting, and Zakaria (2014); Hewlett and Wadsworth (2012); Hsu and Hung (2005); Hung, Chang, Yeh, and Liao (2014); Kim and Lee (2017); Klimas and Webb (2018); Loureiro and Lotade (2005); Lanfranchi, Giannetto, and Dimitrova (2016); Lee, Bonn, and Cho (2015); Tumanan and Lansangan (2012); Sousa et al. (2016); Van der Merwe and Maree (2016); Wang and Yu (2016); Winchester, Arding, and Nenycz-Thiel (2015); Wu (2017); Yang, Qing, Hu, and Liu (2014)
Qualitative exploratory study	6	Bookman (2013); de Ferran and Grunert (2007); Smith Maguire & Dan Hu (2013); Wright (2004); Quintão, Brito, and Belk (2017); Richelieu and Korai (2014)
Market data (panel data or store scanner data)	4	Bissinger and Leufkens (2017); Cailleba and Casteran (2009; 2010); Schollenberg (2012)

 Table 2

 Data collection methods used in the selected studies.

	No.	Authors
Survey	44	Asioli et al. (2014); Asioli et al. (2016a; 2016b); Ágoston et al. (2017); Aguirre (2016); Anagnostou et al. (2015); Andorfer and Liebe (2013); Andorfer and Liebe (2015); Arnot et al. (2006); Basu and Hicks (2008); Bhumiratana et al. (2014); Carvalho et al. (2015); Chen and Lee (2015); Chen and Hu (2010); Cranfield, 2010; De Pelsmacker, Driesen et al. (2005)a,b; De Pelsmacker, Janssens et al. (2005)a,b; Giacalone et al. (2016); Gorgoglione et al. (2017); Harith et al. (2014); Hewlett and Wadsworth (2012); Huang et al. (2014); Hsu and Hung (2005); Kim and Lee (2017); Klimas and Webb (2018); Labbe et al. (2015); Lange et al. (2015); Langen (2011); Lee et al. (2015); Lanfranchi et al. (2016); Lange et al. (2012); Sepúlveda et al. (2016); Sorquist et al. (2013); Sousa et al. (2016); Spinelli et al. (2017); Tumanan and Lansangan (2012); Van der Merwe and Maree (2016); Van Loo et al. (2015); Wang and Yu (2016); Winchester et al. (2015); Wu (2017); Yang et al., 2014
Interviews (semi-structured or in-depth)	6	Bookman (2013); de Ferran and Grunert (2007); Gorgoglione et al. (2017); Smith Maguire & Dan Hu (2013); Chen and Hu (2010); Quintão et al. (2017)
Focus groups	6	Asioli et al. (2014); Bhumiratana et al. (2014); Cranfield, 2010; De Pelsmacker, Driesen et al. (2005)a,b; Tumanan and Lansangan (2012); Wu (2017)
Text analysis	3	Bookman (2013); Wright (2004); Richelieu and Korai (2014)
Direct observation	2	Bookman (2013); Quintão et al. (2017)
Market data (panel data, store scanner data)	5	Andorfer and Liebe (2015); Bissinger and Leufkens (2017); Cailleba and Casteran (2010; 2009); Klimas and Webb (2018); Schollenberg (2012)

 Table 3

 Location profile and main research issues of selected papers.

	No.	Main research issues/categories and corresponding number of papers
Europe	27	Sustainability (15); health (3); personal preferences (5); intrinsic attributes (3); extrinsic attributes (1)
Asia	11	Coffeehouses and context of consumption (5); sustainability (3); ready-to-drink coffee (intrinsic and extrinsic attributes) (3)
North America	11	Sustainability (7); coffeehouses (2); specialty coffee (1); emotions (1)
South America	3	Personal preferences and socio-demographics (3)
Australia	1	Coffeehouses (1)
South Africa	1	Specialty coffee (1)

Furthermore, it is worthy to note that the interest in specific aspects of consumer consumption and purchasing behavior towards coffee changes in relation to the geographical area where the studies were conducted. Table 3 offers a location profile of main research issues of the selected papers. The issues of sustainability and ethical consumption play a major role in consumer studies from Europe and North America. In Asia, the two issues still play a minor role. In studies from Asia, the main research subjects are consumer behavior towards coffeehouse brands and the context of consumption, as well as consumer preferences for ready-to-drink coffees. Some of the studies conducted cross-country analysis of consumer behavior (Basu & Hicks, 2008; Sepúlveda et al., 2016). The issue of coffee consumption and health is only addressed in three European studies and mainly limited to caffeine intake (Hewlett & Wadsworth, 2012; Ágoston et al., 2017).

Finally, the review shows that there has been an evolution in the researchers' interest. The interest in consumer behavior towards coffee consumption has grown over time. Before 2010 the number of studies

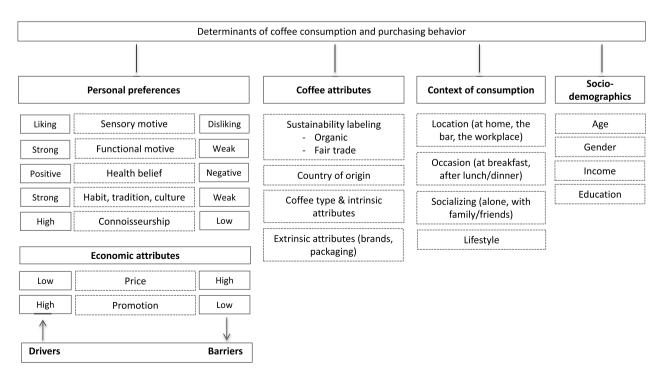


Fig. 2. Factors influencing consumer behavior towards coffee.

was limited and they investigated nearly exclusively the fair trade issue. In the following years other topics were analyzed. Fair trade has a peak of interest in 2015. In the recent years, there is a growing research interest in different aspects of coffee consumption behavior, such as motives for coffee consumption behavior, the context of consumption specialty coffee, coffeehouse brands, and coffee drinking as a lifestyle experience. The focus on coffee stores, brands and coffee consumption as an experience, increased beginning from 2012.

3.2. Factors influencing consumption and purchasing behavior towards coffee

Evidence from the systematic review of 54 papers helped identify various factors and product attributes that determine coffee consumption and purchasing behavior. These independent factors were classified into five main categories: (1) Personal preferences, (2) Economic attributes, (3) Coffee attributes, (4) Context of consumption, and (5) Socio-demographics, as shown graphically in the model in Fig. 2.

Fig. 2 provides a graphic representation of the five categories and single key factors that influence consumer behavior towards coffee. The factors in categories "Personal preferences" and "economic attributes" function as drivers and barriers of coffee consumption. They influence quantity and frequency of coffee consumption, depending on their strength. The factors grouped into the category "coffee attributes" represent the preference consumers have for single coffee product attributes. Category "Context of consumption" describes preferred consumption occasions, locations, time or lifestyle factors of consumers. Also "Socio-demographic" factors impact coffee consumption preferences. Interestingly, the review also showed that individual physiological characteristics determine preferences for different coffee consumption preferences.

3.3. Drivers and barriers to coffee consumption

Several studies have investigated the reason why consumers drink coffee or caffeinated beverages. The review identified seven main factors driving or limiting coffee consumption, which have been grouped into two categories: personal preferences and economic attributes. The category of "personal preferences" includes the motives "functional", "sensory (taste, smell)", "health belief", "habit, tradition and culture", and "connoisseurship". The factors of price and promotion build the category economic attributes. There is evidence that the two most important factors for consumers' coffee purchasing and consumption behavior are "sensory preferences" and "functional motives". Furthermore, some studies provide insight into how these two principal motives are related to the issue of emotions and physical effects experienced during coffee drinking.

3.3.1. Sensory perception and pleasure

The sensory qualities of coffee, taste and smell, are key motives for coffee consumption behavior. Several papers mention taste as the main motive for coffee drinking (Harith et al., 2014; Sousa et al., 2016; Van Loo et al., 2015). At the same time, the taste motive also limits the consumption of coffee. The main reason for those who do not to drink coffee is because they do not like the taste and/or the smell of coffee (Sousa et al., 2016). Similarly, Harith et al. (2014) report that coffeedrinkers appreciate the bitterness of coffee, while non-coffee drinkers disapprove of the bitter taste. People who like the sensory properties of coffee also have a positive attitude towards specialty coffee consumption (Van der Merwe & Maree, 2016). A study on motives for caffeine consumption of different caffeinated beverages (coffee, tea, energy drinks, etc.) shows that taste is equally and highly important for all types of caffeine consumers (Ágoston et al., 2017). Bhumiratana et al. (2014) relate the taste motive to the emotion type "positive-lower energy feelings": consumers want to elicit positive feelings from the coffee drinking experience that are related to sensory enjoyment and pleasure.

In the same vein (Labbe et al., 2015), illustrate that consumers who drink coffee for sensory enjoyment attribute more importance to coffee smell and taste and find the experience in general more pleasant. On the emotional level, drinking a cup of coffee is a personal moment of pleasure (Harith et al., 2014; Sousa et al., 2016) and a source of comfort, which allows consumers to stay calm and face daily challenges (Richelieu & Korai, 2014). For example, Richelieu and Korai (2014) mention that coffeehouse consumers associate coffee with attributes of happiness, joy, companion and extended relationship. Conversely, Aguirre's (2016) results show that the taste motive appeared only on the eighth position among the factors influencing coffee consumption behavior.

3.3.2. Functional motivation

The functional motive is a key motive for coffee consumption. Several papers mention physical and mental stimulation as one of the main motives for coffee consumption. People drink coffee to elicit positive-high energy emotions (Bhumiratana et al., 2014), with the objective to be aroused, to reduce fatigue, to stay awake, to improve work performance and for feelings of a focused mental state (i.e., to be motivated, in-control, productive, or clear-minded) (Aguirre, 2016; Bhumiratana et al., 2014; Harith et al., 2014; Hsu & Hung, 2005; Spinelli et al., 2017; Ágoston et al., 2017). Different motives for the consumption of coffee result in different emotional experiences. Labbe et al. (2015) observe that consumers who drink caffeinated beverages for stimulation consider the experience as functional, i.e. driven by caffeine absorption to obtain the expected mental and physical energy boost. Therefore, the functional motive results in a less pleasant experience compared to sensory motivation. Consumers seem to move from an impulsive behavior (such as consuming caffeine for its stimulant effect) to compulsive behaviors (consuming caffeine and coffee as a habit) (Ágoston et al., 2017). Conversely, Sousa et al. (2016) find the alertness motive to play a minor role: only 4% of respondents consume coffee because they consider it 'stimulating'. Concerning socio-demographics, age influences the preference for the stimulation motive. Younger consumers drink coffee more for stimulation reasons than older people, who mainly consume coffee out of habit and for symptom management reasons. Symptom management refers to the effect of coffee on specific physical conditions. Coffee is consumed for its perceived positive effects on blood pressure or headaches (Ágoston et al., 2017) and to improve physical performance, for example after a meal for the digesting effect (Spinelli et al., 2017).

A further surprising observation is that preferences for "sensory" or "functional" motivations of coffee consumption depend on "individual physiological characteristics". Subjects with a lower caffeine metabolism rate (CMI) focus more on social aspects of the coffee drinking experience, while higher CMI find the sensory properties of coffee more rewarding. Individuals with a lower number of fungiform papillae (FP)³ find the product sensory characteristics more rewarding than individuals with higher FP number, which focus more on the stimulating effect of coffee. Both PROP non-tasters and supertasters⁴ tend to prefer a context where the focus is on social aspects related to the coffee consumption (Spinelli et al., 2017).

3.3.3. Health belief

The health factor has not received a lot of consideration in coffee consumer research, which is surprising giving that the health aspect, even though controversial, is often an issue in coffee consumption. A consumer study reveals that 49% of respondents believe drinking coffee

³ Fungiform papillae are mushroom shaped structures located towards the front of the tongue containing taste buds; measurement of individual differences in their density is used to test variations in taste sensitivity in consumers (Spinelli et al., 2017).

⁴ PROP status is the genetically inherited trait that defines the ability to taste bitter compounds, and is used as a method to test the sensitivity to the bitterness of the compound 6-n-propylthiouracil (PROP) (Spinelli et. Al, 2017).

may cause health problems (ISIC, 2016). It would also be in line with the increasing interest on consumer health perception of other food products with debatable effects on health, such as wine (Samoggia, 2016). The belief in coffee's health benefits or risks can be a driver or barrier for quantity and frequency of coffee consumption. Aguirre (2016) finds the health benefit (e.g. anti-migraine effect) to be the second most important factor, after gender influencing coffee consumption in a consumption context, with a traditionally positive inclination towards the health benefits of coffee. On the other hand, other research findings suggest a possible link between certain coffee drinking habits and other pro-health behaviors. Hewlett and Wadsworth (2012) show that consumers who preferred drinking decaffeinated coffee do so for health reasons, and to avoid the full effect of caffeine. Sousa et al. (2016) find that 13% of respondents avoid coffee for medical reasons, like anxiety and insomnia, and 10% do so because they hold a general belief that coffee "is bad for health". The health motive can also have a significant positive effect on consumers' purchase intention towards coffee. Consumers with a positive attitude towards organic coffee will actually pay higher prices for it because of their belief in its health benefits (Lee et al., 2015). Interestingly, perceived health benefits also contribute to a positive attitude towards specialty coffee consumption (Van der Merwe & Maree, 2016).

3.3.4. Habit, tradition and culture

The habit factor includes items that characterize caffeine consumption as a daily routine, as a behavior that is regularly repeated and tends to occur subconsciously (Ajzen, 2002). Habit is one of the main motivational factors for coffee consumption identified by Ágoston et al., (2017). Results of their study on motives for consuming caffeinated beverages (coffee, tea, energy drinks, etc.) show that, for coffee-drinkers, the habit factor was of greater importance. The habit factor shows socio-demographic differences. Habit as a factor for coffee consumption is more important for women and for older people. Gorgoglione et al. (2017) find in a study comparing consumption of innovative and traditional coffee brands, that the item habit is associated with the concept of a traditional consumption behavior. Aguirre (2016) emphasizes the strong influence of culture and tradition and points to the family/ household context as a source of information in forming a coffee consumption behavior. In this context, gender also plays a role, as mothers transmit the taste for coffee and how to consume it to new generations. Likewise, Sousa et al. (2016) find the factor "tradition and habit" (e.g. consuming it since childhood as a part of breakfast/snack) to be the second most important driver for coffee drinking after taste.

3.3.5. Connoisseurship

Quintão et al. (2017) theorize the process that converts regular consumers into connoisseur-consumers by establishing standardized ritual practices that differentiates them from the naïve/mass consumers. Connoisseurship means applying a schema to understand, evaluate, and appreciate the consumption objects (Holt, 1998). A connoisseur-consumer has differentiated consumption knowledge compared to regular consumers due to his expertise. Connoisseur-consumers develop their taste perception through a reflexive consumption activity helped by professionals and other connoisseurs. Giacalone et al. (2016) point out that in contrast to the connoisseur-consumer, the regular coffee drinker may lack the sensory skills to recognize coffee quality. Naïve consumers are not able to detect quality differences between two coffee samples widely different in intrinsic quality. They suggest that the regular consumer may experience coffee as "just coffee" and, therefore, rely on external cues, such as price, packaging and advertising for their coffee purchase. Consumers who are better at identifying quality differences are more likely to prefer high quality coffee. Better sensory skills increase appreciation of quality (Giacalone et al., 2016).

3.3.6. Economic attributes

The price attribute of coffee is widely studied in connection to consumer perception of sustainable coffee and out-of-home coffee consumption. In these contexts, coffee consumers are significantly price-sensitive. A decrease in price, or an increase in price promotions, stimulates an increase in consumer purchasing attitudes.

In the reviewed papers, the price attribute is mainly discussed concerning the willingness-to-pay for specialty and sustainability labeled coffee products. Price is a significant barrier to the purchase of fair trade products (Cailleba & Casteran, 2010; Cranfield, 2010; De Pelsmacker et al., 2005b). In ethical consumption behavior, the price attribute stands in conflict with individual preferences for further coffee attributes. Consumers find that fair trade coffee is too expensive, but at the same time they feel a moral obligation to buy it (Andorfer & Liebe, 2015). Therefore, Cailleba and Casteran (2010) argue that price promotions can stimulate the adoption of fair trade coffee consumption behavior. Non-purchasers of fair trade coffee switch to opportunistic consumer behavior motivated by a lower price. Similarly, Andorfer and Liebe (2015) confirm that reduced product prices impact positively on fair trade consumption behavior. Sales of fair trade coffee increased significantly during a three-week price promotion experiment in supermarkets, while additional information and an appeal to consumers' moral obligation, on the other hand, showed no effect. Price influences purchase behavior of specialty coffee: as the price of coffee increases the likelihood of purchasing specialty coffee decreases (Sepúlveda et al., 2016).

Price promotions are of interest for marketing and consumer research in out-of-home coffee consumption. One study reveals that price promotions determine whether customers are satisfied with product and service quality and encourage repeat-purchase intentions in a coffeehouse context. Coffeehouse customers see price promotions as a reward or incentive. 31% of respondents in a consumer survey went to Starbucks due to promotional activities; compared to 41% who went because of the coffee itself.

The importance of the price attribute depends on age, gender, the social status and the cultural background of the consumer. Student customers were more attracted and willing to return to coffeehouses due to price-promotion activities (Huang et al., 2014). Age affects also coffee type preferences: younger consumers present higher willingness-to-pay for 'Latte' products, while older consumers show higher willingness-to-pay for 'Espresso' and vice versa (Asioli et al., 2014). There are gender differences concerning price sensitivity. As reported by Aguirre (2016), coffee price is a more relevant factor for women than for men. In another study, younger consumers prefer ready-to-drink coffees as a cheaper alternative to specialty coffees (Hsu & Hung, 2005). Concerning the cultural background, Aguirre (2016) has observed that consumers coming from a culture with a strong coffee consumption tradition are willing to pay for high-quality coffee a price premium about twice of what they pay today.

3.4. Consumer preferences for coffee attributes

A number of studies included in this review focused on consumers' preferences for the most important attributes of coffee. The review revealed seven key coffee attributes affecting consumers' consumption behavior: sustainability labeling, organic, fair trade, country of origin, type of coffee (espresso, filter, instant, single cup, with milk, iced) and intrinsic attributes (roast degree, specialty coffee), and extrinsic attributes (brands and packaging).

3.4.1. Sustainability labeling

Sustainability is one of the most-studied issues concerning research of consumer behavior towards coffee (25 of the 54 papers). The coffee industry is viewed as a pioneering industry for sustainability certification schemes. Interestingly, results from eye-tracking measures found that for consumers sustainability labels are less important compared to

other coffee attributes like flavor, price, type of roast, promotions, size of packaging, or brands (Van Loo et al., 2015). Organic and fair-trade labels are the two most important sustainability attributes in the coffee sector. Among these, consumers prefer fair trade labeled coffee to ecological and organic labels (Bissinger & Leufkens, 2017; De Pelsmacker et al., 2005b; Loureiro & Lotade, 2005). Likewise, Chen and Lee (2015) discover that "ethical sourcing" is the most effective label claim for a product to increase purchase intention as compared to labeling such as "energy and water saving" or "recycling". Consequently, consumers are willing to pay higher premiums for fair trade labeled or shade grown coffee than for organic coffee (Loureiro & Lotade, 2005; Obermiller et al., 2009).

3.4.2. Fair trade labeled coffee

Coffee was the first product to be fair trade certified and is one of consumer's favorite fair trade products (e.g., 56% of all fair trade farmers produce coffee and accounts for 25% of all fair trade sales) (Fairtrade International, 2016).

Nonetheless, fair trade consumption and purchase behavior remain controversial. Most papers investigating fair trade coffee consumption and purchasing behavior use a willingness-to-pay approach (11 out of 17 papers). According to Andorfer and Liebe (2015), consumers with a positive attitude towards fair trade, buy fair trade coffee more frequently. This view stands in contrast to further evidence indicating that consumers do not favor socially responsible coffee consumption if it impacts negatively on other personal interests, including fulfillment of taste expectations (Obermiller et al., 2009).

The evidence reviewed suggests that price is the most important attribute affecting fair trade coffee consumption and purchasing behavior (Cranfield, 2010). Consequentially, price is the most common reason for not purchasing fair trade coffee is because it is "too expensive" (Winchester et al., 2015). Nevertheless, data shows that consumers who do buy fair trade coffee are willing to pay a considerable price premium for fair trade coffee in Germany (fair trade ground coffee: 54.9%, espresso 24.7%, and single-serve coffee 18.9%) (Bissinger & Leufkens, 2017) and Sweden (38%) (Schollenberg, 2012). In Belgium, on the other hand, only 10% of consumers are willing-topay the price premium for fair-trade coffee. The average price premium consumers would be willing-to-pay for a fair-trade label was only 10% (De Pelsmacker et al., 2005a). Arnot et al. (2006) discovers contrary evidence for a consumer segment at campus outlets he characterized as loyal fair trade coffee purchasers. His field experiment shows that this segment of consumers was less responsive to higher fair trade coffee prices and based their decisions apparently on attributes others than

Taste is the second most important barrier for fair trade coffee consumption after price. Consumers believe that fair trade coffee tastes worse than other coffee types (Obermiller et al., 2009). This view is supported by results from a taste experiment by Lange et al. (2015), where consumers were even less willing to pay after they tasted a fair trade labeled coffee.

Concerning socio-demographics, some researchers maintain that gender and age do not affect fair trade coffee purchases (Cailleba & Casteran, 2009; De Pelsmacker et al., 2005b). Consumers' social position on the other hand influences fair trade purchases. Fair trade coffee purchases increases with educational level and the standard of living of the consumer (Cailleba & Casteran, 2009). Similarly, Andorfer and Liebe (2013, 2015) find a positive effect of education on the consumption of fair trade coffee, but they do not corroborate the effect of social status and actual income. Interestingly, they discover that respondents' subjective financial situation on the other hand and the price perception of fair trade coffee impact significantly on observed purchase of fair trade coffee. The more positive customers perceive their financial situation, the higher is the likelihood that they buy ethical products. Therefore, the authors appear to conclude that it is a consumer's perception of fair trade prices being too high rather than actual

budget constraints (i.e. households income) that influences fair trade consumption (Andorfer & Liebe, 2015).

Taken together the evidence from all the reviewed studies, fair trade coffee consumers show a disloyal and inconsistent consumption and purchasing behavior. The evidence supports the observation that many consumers claim to have a positive attitude towards ethical products, but reported purchases show that this behavior is not consistent (Cailleba & Casteran, 2010; Lange et al., 2015; Winchester et al., 2015). Therefore, Cailleba and Casteran (2010) conclude that fair trade attribute alone is not sufficient to capture consumers and retain loyalty. They argue that other attributes beyond fair trade coffee, such as health benefits, could be seen to generate higher consumers' commitment.

Lastly, product access and availability play also a role in fair trade consumption. Consumers attach importance to the distribution strategy of fair trade coffee. Fair trade coffee should be available in ordinary supermarkets and presented along with non-ethical coffee brands (De Pelsmacker et al., 2005b). Besides, de Ferran & Grunert (2007) found different motives for fair trade coffee consumption depending on where consumers buy the product. Consumers who buy the fair trade coffee in specialized stores are concerned with the organic nature of the product and its environmental impact, whereas supermarket buyers are mainly focused on their own satisfaction.

3.4.3. Organic labeling

Compared to fair trade, organic labeling seems to be less important in consumer preferences for coffee and has received less attention from researchers. Nevertheless, Sörqvist et al., 2013 discovers an interesting connection between environmental attitudes and how these can be predictive factors for coffee consumption behavior, and consequentially influence sensory ratings of organic coffee. This can be attributed to the fact that people endorse the values of products they prefer and, therefore, rate the taste of the product more favorably. This further suggests that consumers with strong sustainability attitudes were willing to pay more for an organic labeled coffee even when they preferred the taste of a non-labeled alternative. The conclusion is that the eco-label modifies the taste perception in individuals for whom the label symbolizes something positive. Similarly, also Klimas and Webb (2018) found that consumers with personal attitudes for pro-environmental behavior were willing to pay more for shade-grown coffee and purchased shade-grown coffee at a premium price. The moral approach (i.e. buying an ecofriendly product even though it costs more than a conventional alternative) appears to be a more important determinant than tangible product characteristics like taste (Sörqvist et al., 2013). Furthermore, Lee et al. (2015) observes that the consideration of personal health influenced the motivation to purchase organic coffee in consumers with a high level of ethical concern, while among those with low ethical concern, sensory attributes play a greater role.

Socio-demographic factors also play a role in organic coffee consumption. Educated, young female consumers accept higher prices and drink more organic coffee than any other group, despite their lower income level. The researchers find that this group is more concerned with environmental and social benefits and more conscious about drinking organic coffee. Therefore, they conclude that students with high level of education may soon become major consumers of organic coffee products in emerging coffee markets (Lee et al., 2015). Klimas and Webb (2018) reach a similar conclusion when comparing realized and stated preference for the certification of "shade-grown coffee".

Nonetheless, these arguments stand in contrast with Obermiller et al. (2009) who found that consumers do not favor socially responsible consumption if that impacts negatively on other functional benefits of a product choice, for example taste satisfaction.

3.4.4. Country of origin

The country of origin attribute has not received much attention in consumer research towards coffee. This is surprising as this attribute may have a positive effect on consumer preferences. This attribute can

be a way of differentiating coffee roasters to target consumers, especially in the current third wave of coffee (Euromonitor International, 2017). Existing research, such as Sepúlveda et al. (2016), finds a positive effect of Colombian origin attribute on consumer preference. Correspondingly, a qualitative study on global coffee brands observed that coffeehouse brands like Starbucks, which emphasizes country of origin as a factor distinguishing coffee quality and taste and to "introduce specialty coffees like fine wines" (Bookman, 2013, p. 61). Differences in origin are used to 'educate' consumers, develop their sensory skills, and encourage involvement in the coffee drinking experience (Bookman, 2013). These findings are similar to what was elaborated regarding connoisseurship consumption and appreciation of different coffee attributes through ritual practices (Richelieu & Korai, 2014). On the contrary, Basu and Hicks (2008) did not find that country of origin is an important determinant in coffee choice.

3.4.5. Type of coffee and intrinsic qualities

A limited number of the studies explore consumers' preferences for different coffee types and intrinsic quality attributes (e.g. roast degree) of coffee. Indeed, finding a relation between preferred coffee types or preparation methods is challenging because they seem to depend strongly on the habit, culture and tradition of each country (Sousa et al., 2016). Concerning preferences for different coffee preparation methods, Lanfranchi et al. (2016) confirm that, consistent with recent market trends, the introduction of coffee pads and capsules generated significant changes in the market, moving coffee consumption towards the single dose.

Other insights into specialty coffee consumption can be gained from Van der Merwe and Maree (2016), who observed that men consume more specialty coffee than women. Furthermore, they noted that younger consumers especially prefer specialty coffee compared to other coffee types. Their results show that consumers expected better quality and taste as well as health benefits from specialty coffee compared to regular coffee. Similarly, other authors note that coffeehouse customers place significant value on coffee shops provide unique coffee flavors and consistent quality (Kim & Lee, 2017). Another factor that influences preferences for different coffee qualities and types are consumption expertise and sensory skills. Generally, better expertise results in a preference for espresso coffee types (Quintão et al., 2017).

3.4.6. Extrinsic attributes

Despite the evidence that brands and labels are essential components in the coffee industry (Bissinger & Leufkens, 2017), few studies have investigated extrinsic coffee attributes. Some of the reviewed papers explore branding and packaging of coffee. Sustainability is the most considered issue among labels and packaging attributes. Studies from Bissinger and Leufkens (2017) confirm that sustainability labels achieve the highest willingness-to-pay compared to other labelling. Branding a product leads to a willingness-to-pay with an average price premium of 22.1%, while consumers pay the highest average price premium of 43.1% for fair trade labels, and an average price premium of 34.3% for organic coffee labels.

Concerning the essential role of packaging, Van Loo et al. (2015) contend that packaging plays an important role in communicating information about sustainability. However, results concerning information about labels/certification seem contradictory. Some studies have shown that providing more information about ethical labels on the packaging increases consumers' willingness-to-pay. For example, consumers are willing to pay premium price for ethical coffee, if the revenue going to the coffee producers is indicated on the product packaging (Lange et al., 2015). In contrast, Obermiller et al. (2009) argue that the general population seems to have a low understanding and knowledge of fair trade labels and, thus, conclude that consumers are less willing to purchase fair trade coffee if they do not understand what fair trade label stands for. Moreover, results from a price experiment by Andorfer and Liebe (2015) confirm that additional information on what

the fair trade label means did not lead to more purchases of coffee with fair trade labels.

Another approach to explain willingness-to-pay for specific labels is the concept of visual attention paid by consumers to specific information on the packaging. Results show that highlighting sustainability attributes leads to a greater willingness-to-pay for sustainable coffee (Van Loo et al., 2015).

Additionally, Yang et al. (2014) observe that consumers respond differently to information about fair trade coffee based on their socio-demographics and consumption characteristics. Young, married female consumers were willing to pay more for fair trade coffee when comprehensive product information was provided. Researchers also studied whether socio-demographics influence preferences for determined sustainability labels. According to De Pelsmacker et al. (2005b), age, frequency of coffee consumption, and quantity affect preferences for different sustainability labels. He finds that heavy and older coffee drinker attach more importance to the issuer of the label. In the same vein, Bissinger and Leufkens (2017) observe that willingness-to-pay depends on the body issuing the sustainability label and state-owned fair trade labels has the highest degree of willingness-to-pay.

Another area that interests researchers is the role brands play for consumer behavior in the coffeehouse business. For example, drinking a branded coffee like Starbucks is perceived as a status symbol, especially in emerging coffee markets (Harith et al., 2014; Van der Merwe & Maree, 2016). Together, these studies show that brand identification plays a significant role in the highly competitive coffeehouse market (Kim & Lee, 2017).

Lastly, one study focuses on consumers' perception of innovative and traditional attributes of different coffee brands. The authors note that consumers tend to associate every characteristic of an innovative brand with innovation. On the other hand, when a brand is perceived as traditional, consumers may associate some characteristics of the brand with tradition, while other characteristics with innovation. Interestingly, results show that only the packaging can be used to communicate both concepts of tradition and innovation. Consumers may perceive a coffee packaging as innovative if the packaging is made of recyclable and biodegradable materials, but as traditional when vacuum sealed (Gorgoglione et al.).

3.5. Context of consumption

The context of consumption emerges from the review as the third relevant category characterizing coffee consumption behavior. Different consumption contexts for the coffee drinking experience influence consumers' coffee purchasing and consumption behavior. Evidence emerged from the reviewed papers suggests four different, but interdependent consumption contexts: location (at home, at the bar/coffeehouse, at the workplace), occasion and time of day (at breakfast, after lunch/dinner, for breaks mid-mornings and afternoon), socializing context (alone, with friends, family, colleagues), and lifestyle.

3.5.1. Location

The reviewed studies provide some insights into consumers' motivations and preferences on coffee consumption locations. Results from several papers indicate the home, the bar/café/coffeehouse and the workplace as the three main locations for coffee consumption. A study on coffee consumption habits shows that preferences are nearly equally distributed between at home and out of home consumption (Lanfranchi et al., 2016). Additionally, locations for coffee consumption are influenced by age, social status, and cultural context. For example, in Asia, young female consumers prefer to visit cafés, while middle-aged and older adults usually drink coffee at home or at the office (Lee et al., 2015). Results from Aguirre (2016) interestingly show that the availability of free coffee at the workplace influences the quantity of coffee people drink during their workday.

3.5.2. Occasion and time

Despite different cultural contexts, coffee consumption seems to occur principally in three types of occasions: at breakfast, after a meal (lunch, dinner), and midmorning breaks or in the afternoon. One consumer study reveals that 93.5% respondents indicated that the most important time of day to drink coffee is in the morning during breakfast; 56.6% prefers coffee at lunchtime; 35% mid-morning, and 20% at dinner (Lanfranchi et al., 2016). Other papers confirm that coffee is consumed generally as part of meals (Sousa et al., 2016) or after a meal for the digesting effect and/or for socializing with colleagues (Spinelli et al., 2017). Furthermore, researchers highlight the break function of coffee that allows, for example, socializing with colleagues over coffee and recovering from work (Spinelli et al., 2017). Further evidence suggests that occasion and time also depend on coffee type and motivation for consumption. A consumer study on ready-to-drink coffee shows that the main motivation for ready-to-drink coffee consumption is functional, i.e. to stay awake and improve work/learning performance. This functional motivation and the type of coffee correlate to time in the afternoon and the evening to midnight. Less than 10% of coffee-drinking respondents of ready-to-drink coffee consume it before 10:00 AM (Hsu & Hung, 2005).

3.5.3. Socializing opportunity

A number of authors investigated whether consumers prefer to drink their coffee alone or in company of others. Overall, evidence from the reviewed studies essentially reveals two modes of coffee consumption. The first is the private consumption mode, where, as Richelieu and Korai (2014) describe it, coffee is consumed as an intimate object to be enjoyed alone, which brings personal comfort to the consumer. The second mode, as other studies confirm, is for its social value because having a coffee allows to create a moment of community and sharing with family, friends and colleagues in different locations (home, work, school, coffeehouses) and for different occasions (e.g. for meals, breaks) (Lanfranchi et al., 2016; Spinelli et al., 2017). Similarly, Spinelli et al. (2017) find a consumption behavior, defined as "social ritual" which refers to the ritual of drinking a coffee with colleagues and friends after a meal. This view is supported by results from a comparative study about motives for consuming different caffeinated drinks (coffee, tea, energy drinks), which emphasizes the importance of coffee in situations where people come together for the socializing value. By comparison, data shows that consumers who preferred tea and energy drinks over coffee scored lower on the social factor as a motive compared to coffee consumers (Ágoston et al., 2017). Sousa et al. (2016) emphasize the importance of coffee in work environment, where drinking coffee is perceived as a consumption behavior that facilitates social interaction. Likewise, Richelieu and Korai (2014) suggest that coffee facilitates friendships and interactions between individuals and is part of a routine that allows consumers' being in touch with a social environment. This is true not only for fresh coffee in coffeehouses, but also for other coffee types like prepackaged coffee. Results from a study on ready-to-drink coffee products show that students prefer to have ready-to-drink coffee when they get together with friends, rather than when they are alone (Hsu & Hung, 2005). Furthermore, Aguirre (2016) supports this socializing value of coffee by showing in his results how a modern lifestyle does not leave enough time for consumers to gather in a traditional setting with family and friends and consequentially reduces quantity and frequency of coffee consumption.

3.5.4. Lifestyle

Quite many of the reviewed studies are interested in the question what motivates consumers to drink coffee in coffeehouses. Overall, these studies suggest that consumers drink coffee in coffeehouses not only for the beverage in itself, but for the additional lifestyle experience and atmospheres the consumption offers. These studies focus on consumers' preferences and expectations in coffeehouse chains - especially

Starbucks - and perceive coffeehouses as a third place that offers feelings of being at home away from home and being part of a highly spirited environment (Tumanan & Lansangan, 2012). The increased consumers' interest towards new restaurant and cafeteria formats is relevant and explored for a number of food products (Samoggia & Castellini, 2018; Johns & Pine, 2002; Jung, Sydnor, Lee, & Almanza, 2015; Opolski & Salay, 2013). Richelieu and Korai (2014) conclude that the public consumption of coffee in coffeehouses treats coffee as a collectively shared, symbolic object that is supposed to have the capacity to connect the consumer to a larger social world. Similarly, Tumanan and Lansangan (2012) suggest that for many consumers, coffee is more than just a daily beverage consumed out of habit; consuming coffee has the meaning of a cultural experience. Smith Maguire & Hu (2013) also support this view and argue that consumers receive benefits from the coffee drinking experience at coffee shops. Also for them, consuming at Starbucks means more than just drinking a cup of coffee. Coffee consumption functions as an instrument through which consumers can demonstrate their individual status in terms of social, occupational or educational class. It is a way to show being 'modern' or 'individual' or 'fashionable'. This is confirmed by another consumer survey, where 31% of coffee drinkers went to a Starbucks for its socializing possibilities, whereas 41% went there because of the coffee itself (Huang et al., 2014). Furthermore, data reveal that consumers who prefer coffeehouses as a third place show differences in socio-demographic characteristics. For example, young female customers consider the ethical aspect and mood of upscale cafés an important element of the coffee drinking experience. They visit upscale specialty cafés more frequently than other consumer groups (Lee et al., 2015). Indeed, Tumanan and Lansangan (2012) confirm that the majority of coffeehouse customers are young, female, single and working. According to Van der Merwe and Maree (2016), consumption of specialty coffee in coffeehouses indicates social status and is the favorite consumption behavior of young consumers.

3.6. Socio-demographic factors

There is some evidence that socio-demographic factors have an influence in coffee consumption behavior and preferences, but results are fragmented and controversial.

3.6.1. Gender

The review resulted in one consumer survey (Aguirre, 2016) that found gender to be the most important factor impacting coffee drinking behavior, followed by health consideration and family as source of information. In this case, mothers are important as they "teach" the taste for coffee and how to drink it to new generations. Another study on caffeine consumption motives showed that women have a higher preference in general to consume caffeine compared to men. The survey results reveal that women score higher on importance of the motives, such as "Habit", "Social motives", "Taste" and "Symptom Management" for caffeine consumption (Ágoston et al., 2017). On the other hand, results by Penolazzi et al. (2012) show that daily caffeine intake was significantly higher for males. Van der Merwe and Maree (2016) specifically investigated gender differences in specialty coffee consumption and found that men consume more specialty coffees than women. Arnot et al. (2006), on the other hand, could not find significant differences between males and females on the average number of cups of coffee consumed each day. Giacalone et al. (2016) found that neither age nor gender was significantly related to preference of two coffee examples in a consumer test.

3.6.2. Income

The income factor seems to affect the choice of preferred location, quantity, quality and type of coffee consumed in emerging coffee markets, but it is inconclusive. One consumer study reveals that income is the main reason influencing how often consumers will drink coffee

and what type of coffee they choose. In this case, higher income is related to more out-of-home consumption in coffeehouses and higher quality coffee or branded coffee. Consumers with lower income, like students, prefer to drink instant coffee at home or opt for cheaper coffee types out of home (Harith et al., 2014). These results stand in contrast to evidence from (Lee et al., 2015) where young, female consumers with lower income had the highest frequency of organic coffee drinking at cafés.

4. Conclusions

The present systematic review analyzed and categorized studies on motives and characteristics of consumers' consumption and purchasing behavior towards coffee. The current review identified five main categories of factors determining consumer behavior towards coffee: personal preferences, economic attributes, coffee product attributes, context of consumption, and socio-demographics. The factors in the first two categories "personal preferences" and "economic attributes" can be perceived as drivers as well as barriers of consumption. They help understand the reasons why consumers do or do not consume or purchase coffee, including the quantities and frequency of their purchase. The variables in the third and fourth categories "coffee product attributes" and "consumption context" provide insight into consumers' preferences and choices towards intrinsic and extrinsic coffee qualities, including different occasions, locations and styles of consumption. The category "socio-demographics" highlights possible differences in coffee purchasing and consumption behavior due to age, gender, income, and education.

Considering all of the evidence presented in the review, the scientific knowledge on motives and characteristics of coffee consumption remains fragmented and incomplete since research focused on a limited number of issues. Consumer research demonstrated particular concern towards issues of fair trade and organic coffee consumption and purchasing behavior and towards coffeehouse brands.

Furthermore, the review found that the topics of studies are related to the cultural and geographical context where the studies were conducted. In Western economies, there is a strong focus on sustainability issues. Articles from Asia, which can be considered an emerging coffee market region, focus mainly on consumption behavior and preferences of consumers towards coffeehouse brands. Another area of interest in the emerging Asian market is consumer research on ready-to-drink coffee products. This reflects market trends because Asia is the most important region for ready-to-drink coffee, with over 80% of global sales (Euromonitor International, 2014).

The broad nature of the research question is one of the main contributions of this review as it allows to analyze factors determining consumer behavior towards coffee from different perspectives. On the other hand, the heterogeneity of the approaches and methodologies of the reviewed studies and the variety of different coffee products (e.g. regular coffee, specialty coffee, ready-to-drink coffee, but also coffeehouses) might be a limitation to come to clear conclusions.

The majority of the articles used surveys as a methodology to investigate consumer behavior towards coffee. Some conducted focus groups or in-depth interviews. It is noteworthy that the papers focused on consumers' willingness-to-pay provided detailed information on the applied methods of measurement.

One of the review's conclusions is that it is difficult to determine factors influencing consumers' preferences towards coffee detached from the cultural context in which the consumption behavior occurs. The drivers and barriers of coffee consumption, particularly the sensory and functional motives, are of similar importance, and have comparable effects across cultures. Consumers' preferences for specific coffee types, or occasions and locations of consumption, seem to depend on habits, traditions, and the cultural background of the consumer.

The review's findings suggest that the leading drivers influencing consumer consumption and purchasing behavior towards coffee are the sensory qualities (taste and aroma), the functional (stimulating) motive, and the habit factor and the socializing motive. The most significant barriers of coffee consumption are the dislike in the taste of coffee and the belief that coffee has negative health effects.

The sensory and functional motives are the most significant drivers for coffee consumption. Consumers choose coffee because they like the taste and aroma. If they dislike coffee, the consumers drink less coffee. The sensory motive is related to the concept of personal pleasure that consumers experience during consumption. Similar conclusions can be drawn for the functional motive. The vast majority of the studies shows consistently that the belief in the functional effects of coffee drives consumption. Consumers drink coffee because they want to profit from the functional, energizing effects, to improve alertness, and physical performance.

A further interesting result in this context is that individual physiological characteristics influence whether consumers favor sensory or functional motives for coffee consumption, which ultimately impacts on the pleasure consumers derive from the consumption. This relates to the divide between the connoisseurship coffee consumers and the mass/naive consumers. Connoisseur consumers make a ritual out of coffee drinking, celebrating the experience with favorite specialty coffee types and preparation methods. The naïve coffee consumer mainly drinks coffee out of habit.

Habit is a key driver for coffee consumption. Consumers may drink more or less coffee because they have a strong or weak consumption habit. The review shows that the habit factor is related to the cultural context and traditions of the consumer and impacts also on the preferred location, occasion, context and types of coffee. Still, further research may be desirable to measure the relationship between habit and other situational factors, e.g. cultural factors, food traditions, and family/household influence.

Factors such as location, occasion, social context and lifestyle compose the category "context of consumption". Consumers have different preferences for the surrounding where to drink coffee. Not surprisingly, most important locations for coffee consumption are at home, coffee-bars/coffeehouses, and the workplace. Results on preferred locations for coffee consumption vary, depending on the cultural context where the consumer studies have been carried out. This is true also for the preferred occasion for coffee drinking. The main occasions are for breakfast, after meals (lunch, dinner) and for breaks (mid-morning, afternoon). The preference of different occasions is influenced by the motives functional benefits, sensory liking and socializing capabilities of coffee, but also habit, tradition and culture play a role. Drinking coffee in the morning at home can be a habit and determined by the belief in the functional energizing effect of coffee; similarly, drinking a coffee after a meal can be motivated by the belief in its digestive and energizing effect. Tradition and culture may influence not only the occasion, but also the location, whether consumers prefer to drink coffee at home or at the coffeehouse/bar. The reason for drinking coffee during breaks can be explained by the functional benefits of coffee drinking (e.g. improving mental performance), but also because of the opportunity coffee drinking gives to socialize. Indeed, one study showed that availability of free coffee in the workplace positively influences the frequency and quantity of coffee consumed in this consumption occasion.

The review provides insights into the significance of the factor lifestyle. In this perspective, drinking a particular type of coffee (e.g. connoisseur consumers prefer espresso) and/or brand of coffee (e.g. Starbucks stands for being westernized and urban) is about displaying a certain modern lifestyle and social status. This lifestyle coffee consumption behavior mostly occurs in coffeehouses, and it allows to connect, socialize and feel part of a group. Among the reviewed papers, especially consumer studies from Asia, where coffee consumption is not part of tradition, have addressed and identified this approach to coffee consumption.

The review did not identify studies that strongly focused on the

relation between price and consumer decisions. Economic attributes, like price and promotion, have been addressed mostly in relation to sustainability labeled coffee, where price functions as a barrier towards fair trade coffee purchase. Furthermore, the factor promotion has been addressed mainly in the realm of fair trade coffee consumption. Price promotions contribute as drivers to fair trade coffee purchase, whereas in comparison, more information about fair trade or a moral appeal to consumers for ethical consumption does not stimulate purchase. Great interest has been paid to willingness-to-pay price premiums for fair trade labeled coffee. Evidence from the papers sustains that people with better education and better social status have a higher willingness-topay for fair trade coffee. Still, results from research on ethical consumption suggest that consumer behavior towards fair trade coffee is inconsistent. On the one hand, consumers feel a moral obligation to purchase fair trade coffee, but in the end they do not transmit this moral obligation consequentially to an actual purchase of fair trade coffee products, if other personal preferences like taste and price expectations are not fulfilled.

The present review allows for some preliminary conclusions regarding cross-cultural comparisons of coffee consumption and purchasing behavior. The importance of the two leading motives for coffee consumption - functional benefits and sensory liking - are similar across countries and cultures. In countries with a strong tradition of coffee consumption, like Italy, Costa Rica, Brazil or the USA, the influence of the family, cultural background, tradition and habits on coffee consumption and purchasing behavior is strong. These impact on where and how to purchase and drink coffee. The sustainability issue receives different attention in different countries. Researchers from Europe/USA studied it extensively, whereas the review did not result in many studies from emerging markets, especially Asia, concerning ethical consumption. Preliminary results show that Asian consumer profiles of sustainable coffee drinkers are similar to ethical coffee drinkers from Europe or the USA. Further research on cross-cultural differences towards coffee consumption and purchasing may be desirable in order to point out possible differences in the favorite locations and occasions of coffee consumption and coffee attributes.

4.1. Further areas of research

The production, marketing, and consumption of coffee changed significantly in the current third wave of coffee. Coffee evolved from being an ordinary commodity to a specialty product with value-based (experiential, emotional, ethical) consumption styles, comparable to wine, leading to many new ways of coffee purchase and consumption. Food analysts start conceptualizing a fourth wave of coffee, after the third wave local coffeehouses going global. These analysts begin to view coffee as a beverage (e.g. sparkling coffee), with authentic, high-quality coffee becoming available everywhere (Euromonitor International, 2017).

Further research may explore how consumers' consumption and purchasing behavior change due to these developments in the coffee value chain. A greater focus on changes in purchase and consumption behavior concerning different coffee preparation types (e.g. influence of innovations like single cup preparation method), locations of coffee consumption in different cultural contexts (e.g. at home and out of home consumption) or concerning differentiation strategies (e.g. single country of origin coffee) could be of interest. These focuses would be in line with new market trends and coffee products recently introduced in the market.

Another beneficial area for additional research could be the consumers' perception of the health aspect of coffee. The present review shows that results for the health factor are contradictory. Some studies find that the belief in health benefits of coffee drives consumption, whereas others show that consumers avoid drinking coffee because they fear health risks. Surprisingly, so far consumer research has not explored systematically the issue of what consumers think of the effects of

coffee on their health, and how this influences their consumption and purchasing decision. The exploration would complement recent results from clinical research on coffee, which states that coffee, consumed with moderation, has health benefits (Nawrot et al., 2003; Poole et al., 2017; Wikoff et al., 2017). A greater focus on consumer attitudes and perceptions of the link between coffee and health could reveal new marketing opportunities and strategies for differentiating the coffee industry. Such studies would provide a basis for fully exploiting the currently worldwide increasing consumer interest and sales trend of health and wellness food products.

Appendix A. Supplementary data

Supplementary data related to this article can be found at http://dx. doi.org/10.1016/j.appet.2018.07.002.

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