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CHAPTER 15

Does coffee origin matter? An analysis of consumer behavior based on regional and national origin

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15.1 A consumers' perspective of coffee origin

Until the 1980s, the coffee sector had little to no differentiation in product. However, due to the deregulation of the sector and increased demand for product diversification, there was an increase in differentiation regarding coffee attributes, including origin valorization (Kaplinski and Fitter, 2004; Lewin et al., 2004; Cunha and Saes, 2005; Chagas et al., 2009). Brazil is widely recognized for its large coffee production and its contribution to the supply of coffee worldwide. The country is responsible for more than 30% of the world's coffee production and is the largest coffee producer in the world (ICO, 2019). In 2018, coffee production in the country was up to 61 million 60 kg bags (CONAB, 2018). In 2017, exports of coffee from Brazil totaled US \$5.5 billion (SECEX, 2017). Brazilian coffee is increasingly recognized for its tradition and good quality. Nevertheless, little is known about how individuals process its origin and how this attribute influences coffee choices among consumers in Brazil.

Origin has become an important element in the value creation of agricultural products (Chagas et al., 2009). It refers to the place of production, processing, and/or preparation, and can be identified by the name of a farm, a city, a region, a country, etc. For example, consumers use country-of-origin (COO) as an attribute to evaluate products (Maheswaran, 1994; Moon and Jain, 2002; Usunier, 2006; Felzensztein and Dinnie, 2006; Gudero, 2009). Thus, their attitude toward a country affects their origin perception (Moon and Jain, 2002). Martin and Eroglu (1993) defined a country's image as "the total of all descriptive, inferential, and informational beliefs that an individual has regarding a particular country." These beliefs include political, economic,

and technological dimensions affecting food choice. [Ahmed et al. \(2004\)](#) conducted a study about the influence of origin on coffee choices among consumers from Singapore and concluded that COO had an effect on their behavior.

Origin attribute allows consumers to predict the likelihood that a product from a given location will possess certain characteristics because its origin provides intrinsic and extrinsic characteristics due to soil composition, climate, and topography that confer unique properties to food. In this sense, consumers' interest regarding food origin has increased, motivated by a higher concern about composition of the products, as well as a preoccupation regarding the social, economic, and environmental impact of what they are consuming. Growers and processing industries are meeting this need for information by concentrating efforts to highlight food origin. Furthermore, for them this is an opportunity to aggregate value in the products, as this attribute can be a determinant on food choices. Some products are perceived as typical of a country and those countries viewed as a typical source of products. Origin might offer a competitive advantage allowing growers to use the strategy of differentiation of the product in association with the country of origin ([Felzensztein and Dinnie, 2006](#)). Nevertheless, consumers' perception regarding a product's origin can have a good or bad impact depending on its reputation in a consumer's mind ([Usunier and Cestre, 2007](#)).

The effect of origin on food choices is related to the perception consumers have on products of a particular region based on their previous perception of the strengths and weaknesses of this region ([Roth and Romeo, 1992](#); [Moon and Jain, 2002](#)). However, products also have different intrinsic (e.g., quality, taste) and extrinsic (e.g. price, appearance) characteristics, which may also influence choice. Furthermore, consumers have their own personal characteristics that have an effect on their food choices. Actually, food choice is a process rather than a single act. To save time during this process, people create food routines or habits, defined as behaviors that are repeated over time. For [Van't Riet et al. \(2011\)](#), habits are learned sequences of acts that have been reinforced in the past by means of experiences considered pleasurable. These routines are developed according to people's priority regarding food, which can be taste preferences, family or ethnic traditions, to save money or time, etc. ([Jastran et al., 2009](#)). Routines persist if they appear to be working, but they can also be dynamic, that is, changing over time. However, changing a food routine is energy consuming because, once established, those individuals will likely have to revise their eating behavior routine, which had been developed over time, and until then was the

best-suited solution for their circumstances (Jastran et al., 2009). Van't Riet et al. (2011) suggest that some sort of intervention or change is necessary to change a habit.

In this perspective, this chapter aims to analyze consumers' perception regarding coffee origin in a Brazilian context. To accomplish this goal, we compare coffee origins in two different levels: regional and national. At the regional level, perceptions of coffee from the region of Cerrado Mineiro (in the state of Minas Gerais), a traditional coffee producing region, were compared to the Chapada Diamantina (in the state of Bahia), which was still not a traditional coffee region in Brazil at the moment of this study. To complement this regional analysis, we compared perceptions about coffee from Brazil and from Colombia, both known as producers of good quality coffee in the world. Coffee choice process was analyzed using the conceptual model of food choice process developed by Furst et al. (1996). This framework reveals how consumers create their habits or eating routines. It was developed in the United States and has already been applied in different contexts, but we do not know of its application in Brazil (Devine et al., 1998, 1999; Wilkins et al., 2002).

15.2 Origin recognition through geographical indication

In general, an indication of origin recognizes that geography is associated with the intrinsic characteristics of the product or that geography can be a determinant of the quality of a product (Chagas et al., 2009). Depending on the origin of a product, it can be recognized by the attribution of a geographical indication (GI) label. A GI authenticates and symbolizes the intellectual property right of a label owned collectively by all producers in a region. This type of certification is very widespread in Europe, where there are three different types of GI: protected designation of origin (PDO), protected geographical indication (PGI), and traditional specialty guaranteed (TSG), shown in Figs. 15.1–15.3 (European Commission, 2017).

These certifications represent different levels of attachment to a specific locale. Although PDO covers products that are produced, processed, and prepared in a specific geographical area, PGI concerns products in which at least one of the stages of production, processing, or preparation occurs in that area, whereas the raw material can come from another region. Finally, TSG includes food produced using traditional raw material or production methods, with no restriction as to the product's geographical origin. Port or Bordeaux wine, Roquefort cheese, Parma ham, and Champagne are some



Fig. 15.1 Protected designation of origin. (From: *European Commission, 2017.*)



Fig. 15.2 Protected geographical indication. (From: *European Commission, 2017.*)



Fig. 15.3 Traditional specialty guaranteed. (From: *European Commission, 2017.*)

of the best-known examples of PDO. Even though similar products are produced in other regions, a Champagne can only be named as such if it comes from the Champagne production zone, which lies some 150 km east of Paris (Fig. 15.4).

In Brazil, the focus of this chapter, regions can protect their local products through the GI certification provided by the National Institute of Industrial Property (INPI, 2017). A GI is “an Industrial Property asset characterized by the identification of a product or service related to the place, region, or country of origin in which such an origin has a reputation related to the product or service and/or the origin is positively affected by specific regional characteristics, like natural factors (terroir) and/or the traditional expertise of this location (INPI, 2017).” There are two different GIs in the country: Indication of Source (IS) and Appellation of Origin (often referred to as DO—denomination of origin). The IS refers to a recognized region in producing, extracting, or manufacturing a product or providing a service. The DO, on the other hand, requires proof that there are unique aspects and characteristics, including human and natural factors, that are specific to a region.

The Cerrado Mineiro region was the first Brazilian coffee region to be recognized (in 2005) for coffee origin with the certification “Indication of Source.” The region has production acreage of 210,000 hectares and



Fig. 15.4 The Champagne production zone. (From: Comité Champagne, 2017. *The Champagne Terror*. Available at: <https://www.champagne.fr/> (champagne.fr).)

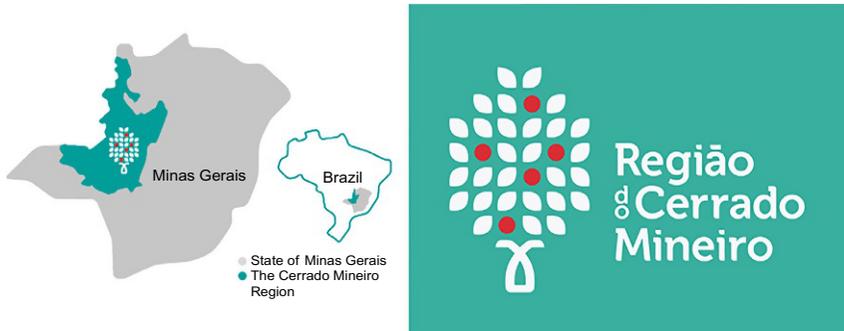


Fig. 15.5 Denomination of origin of coffee from the Cerrado Mineiro region. (From: <https://www.cafedocerrado.org/>.)

contributes to about 12% of the total coffee production in Brazil. Around 4500 coffee growers are installed in this traditional Brazilian region (Café do Cerrado, 2017). Since 2013, coffee production in this part of the region (around 100,000 hectares) received the DO certificate due to its unique climate and geographical characteristics (Fig 15.5.).

15.3 An analysis of consumer behavior regarding coffee origin

To improve scientific understanding of consumer behavior regarding coffee origin, we will apply the Conceptual Model of Food Choice Process (CMFCP) to analyze consumers' coffee choices. This framework, developed by Furst, Connors, Bisogni, Sobal, and Falk in the United States, was published for the first time in 1996 by the journal *Appetite*. The selected model analyzes food choice as a reflective process that has three major components: life course, influences, and personal system (Furst et al., 1996). *Life course* is the base of the process and includes personal issues as well as the social, cultural, and physical environment to which the person was exposed (Devine et al., 1998). In the second stage of the process, there are the top five *influences* that act in food choice processes, which are the ideals, personal factors, resources, social context, and overall context (Falk et al., 1996). Finally, the *personal system*, the third component of the model, comprises the cognitive processes involved in food decisions and is closest to the consumer's behavior when compared to influence or life course. It is in the personal system that people build values to make choices, negotiate and consider these values, classify foods and situations, and create and revise strategies, scripts, and routines (Sobal and Bisogni, 2009).

Consumer perspectives regarding coffee origin were analyzed through qualitative research in which two techniques were applied: a questionnaire with open questions and a focus group discussion. This qualitative research had two main objectives. First, we wanted to understand consumers' perception about coffee origin—how the origin is processed in a food choice. Second, we wanted to compare a traditional with a nontraditional coffee region to analyze the role of this reputation in coffee choices. Thus, we compared two different Brazilian regions: Cerrado Mineiro (Minas Gerais), as a traditional producing region, and Chapada Diamantina (Bahia), as a nontraditional-producing region. We chose Cerrado Mineiro because it is the only region in Brazil in which coffee production has the “Denomination of Origin” certification. The region of Chapada Diamantina was selected because, even though they were still not recognized as a traditional coffee region when we conducted our research,^a many efforts to show nationally and internationally that the region has climate and geographical characteristics that contribute to their coffee quality were taking place by coffee growers in the region. A participant of this research visited a coffee property in Chapada Diamantina and had a meeting with a grower that explained their efforts in this sense. Chapada Diamantina is a region of Bahia state in northeast Brazil.

The qualitative research was conducted in the economic department of the Superior School of Agriculture Luiz de Queiroz (Esalq) in Piracicaba, a city in the state of São Paul, in Brazil. A total of 13 coffee drinkers were selected (10 women and 3 men) to participate in the research, with ages varying between 22 and 40 years. They were randomly divided into three groups: two groups of four and one group of five. First, participants were asked to answer an individual questionnaire with open questions that asked them about their coffee choice process. They had 1 hour to answer the questions individually. Then they were conducted to another room, in which focus group discussions were undertaken. We describe the focus groups planning and organization in [Table 15.1](#).

Three stimuli were used in the questionnaires and focus groups: a picture and description related to coffee from Cerrado Mineiro (state of Minas Gerais); a picture and description related to coffee from Chapada Diamantina (state of Bahia); and a picture and description related to coffee

^a Our research was conducted in the state of Sao Paulo (southeast of Brazil), where coffee from Chapada Diamantina is still not recognized. We think that if the research were conducted in the Northwest region of Brazil it would be different, as the region is already recognized to these consumers.

Table 15.1 Focus group planning

	Description
Team	Responsible researcher (1): participate in every activity (questionnaire and focus group), monitor timing. Moderator (1): conduct every focus group discussion. Research assistant (1): helped in invitations and in the organization of discussions (provision of material, recorders, etc.)
Schedule	Planning (questionnaire elaboration, discussion guide elaboration, material, and structure required): 5 weeks. Invitations: 2 weeks. Research: 1 week. Transcription and analysis: 14 weeks
Groups Data collection	Size: 4–5 people (3 groups). Selection criteria: convenience Focus group discussions lasted around one hour and a half. The moderator had a guide to the discussion, but was free to let participants talk and express their opinions. We recorded the discussions, with the participant's agreement. We used one voice recorder
Analysis	The responsible researcher made the transcriptions of the discussions using the records. Then, the researcher conducted analysis with the use of the software Atlas TI version 6.2. Data analysis includes codification of participants' discussions, an analysis by groups, and a general analysis of the three groups

Modified from Oliveira, M., Freitas, H., 1998. The operational reality of FOCUS GROUP as qualitative research. Feedback from experience. Foz do Iguaçu. Paraná. 22° Enanpad, Anpad, Administração da Informação, p. 39.

without origin identification but with “it is the Brazilian's coffee” appeal. The analysis of results of stages 1 and 2 was done through content analysis by using Atlas TI software version 6.2. To conduct the analysis, we used the transcriptions and videos of the discussions and generated codes that were identified in the discussions. Codes are short texts (usually a word or short phrase) that refer to data collected during the research. These are used as a classification device to create information units.

15.3.1 The coffee choice process

We analyzed the questionnaires and the focus groups to understand the coffee choice process. In this analysis we found codes extracted from the conceptual model of food choice as well as latent codes that emerged during the analysis process. Coffee consumption is motivated by several values, but to our participants pleasure and energy provision seems to be very important.

The consumption of coffee is divided on a number of occasions throughout the day of the participants. In the morning, before leaving home for school or work, they drink coffee usually mixed with milk. Participants also drink coffee during the day at work and on occasions of relaxation and pleasure (at home or in coffee houses). Work is the place where consumption seems to be the largest (both in frequency and in quantity) because it is where participants spend most part of their day. On weekends, consumption is driven by pleasure and can be at home (usually a better quality coffee than the one consumed during the week) or in coffee houses. The following comment, made by one of the participants, describes very well the habits of coffee consumption:

I drink coffee in the morning with milk. Along the day, the coffee that I drink is where I work. At weekends I usually make other types of coffee, so I buy a smaller package of a 100% Arabica gourmet coffee (Participant 1).

In this comment, we can see that at-work participants don't have much choice regarding the coffee they drink. For participants, "how" the food will be consumed is important in choosing the product. For example, when they intend to add milk to it, consumers said they were less demanding regarding the quality of the drink. On the other hand, if they wished to drink it "pure" (without milk), there is an increased exigency concerning the quality of the product. This result is in agreement with the literature on the conceptual model of the process of food choice, which recommends that food choices are situational, that is, they may vary depending on the consumption situation (Connors et al., 2001). In this sense, we observed in the results that gourmet coffee is part of the "good moments" of participants, and it is not a coffee that they consume when they have a short time to do so, because they like to enjoy this moment. The consumer of gourmet coffee seems to drink it as part of a type of ritual in those moments of rest and leisure (see comment of Participant 2).

I drink gourmet coffee on weekends in the morning and after lunch (Participant 2).

One of the questions in our questionnaire asked participants to write and rank the attributes they take into account when choosing coffee. They were asked to rank the attributes from 1 to 5, with 1 being most important and 5 being least important. In the first place, participants cited the quality, the sensorial attributes, and the intensity of the coffee (stronger or weaker). Although consumers have cited them as different attributes, quality is a broad term that encompasses a number of other attributes. Thus, it can be said that the sensorial characteristics and intensity are attributes that are part

of the quality and, thus, the quality would be the main factor considered in the coffee choice. Other attributes cited by the participants included the price, the aroma, and the brand of the coffee.

The analysis separated by group of participants also showed interesting findings. For participants in focus group 1, coffee choices are based on their current context: work routine, income, and time available for consumption; as well as personal factors: preferences and priorities. Their intention to adopt coffee is influenced by four factors: risk aversion, price, taste, and frequency of purchase or consumption. Risk aversion increases or reduces the intention to adopt because, if coffee conveys high consumer uncertainty, this may reduce the propensity for adoption as participants seek to consume something that is “predictable” in some way. This predictability is, for example, information about the coffee including origin or brand. The frequency of consumption influences the intention of adoption, and the price would be a secondary factor that acts together with the frequency in that process. That is, because participants commented that because they do not consume coffee at home so often, they can afford to pay a higher price for it, which will not weigh in the budget at the end of the month. However, if consumption were more frequent, it would be difficult to buy a higher-priced coffee. As for the taste, if consumers do not approve the taste of coffee, the chances of incorporating it into habits are very low. Fig. 15.6 shows the attributes and factors that we found during the analysis of this focus group discussion.

Concerning participants in the second group, their propensity for coffee adoption is motivated by six attributes: taste, price, risk aversion, frequency,

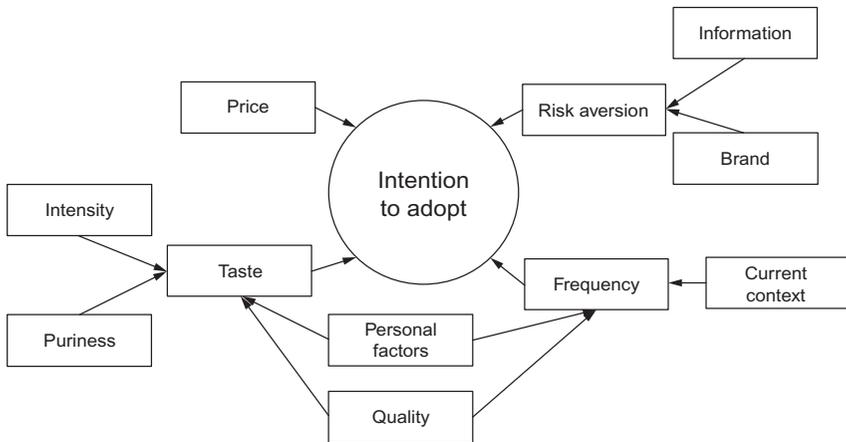


Fig. 15.6 Factors influencing coffee choices (group 1).

experimentation, and availability. The taste relates to whether or not the consumer likes a certain type of coffee and reduces or increases the propensity for adoption. Price is an important factor in the propensity for adoption, and there are other factors related to it, such as the purpose of consumption. The purpose has to do with how coffee will be consumed, that is, the consumption situation, because, according to consumers, it was not advantageous to buy a higher-priced coffee to mix in the milk, because the taste would be masked. However, this is related to the frequency of consumption. For participants who have coffee at home only in the morning or on weekends, it is worth it, and it is worth the expense to buy a more expensive product whereas, for those who consume every day, the price is more decisive. Aversion to risk also influences the intention to adopt because, according to the results, consumers prefer something that does not offer high risks. Finally, availability also influences the intention of adoption and relates to experimentation. Experimentation depends partly on availability, because if the product is not available the consumer will not be able to try it. Even though experimentation can take place in another region (in a trip, for example), the propensity for adoption will only increase if the consumer can find the product available. An example cited was that of a participant who travelled to Minas Gerais, tasted a coffee, and approved of the taste. According to the participant, there was a high propensity to adopt this product, but it was not available in supermarkets in the state of São Paulo. Fig. 15.7 shows the attributes and factors that we found during the analysis of this focus group discussion.

Finally, in the third group, five attributes influence intention of adoption: frequency, taste, experimentation, availability, and differential. The frequency relates to the price, because the more frequent the consumption, the lower the intention to adopt a coffee of greater value, according to the following section:

I'm a person who does not buy much coffee, so maybe I would afford to buy a coffee, as I will not consume every day, I would afford to pay a better price if it was a coffee that I really liked (Participant 9).

Flavor influences the propensity for adoption, because if they like the taste of coffee, consumers are more inclined to adopt it. Experimentation is associated with a propensity for adoption in that, without experimentation, propensity to adopt is low. However, experimentation still depends on the approval of flavors and availability to increase propensity for adoption. Without these, experimentation would not increase the propensity for

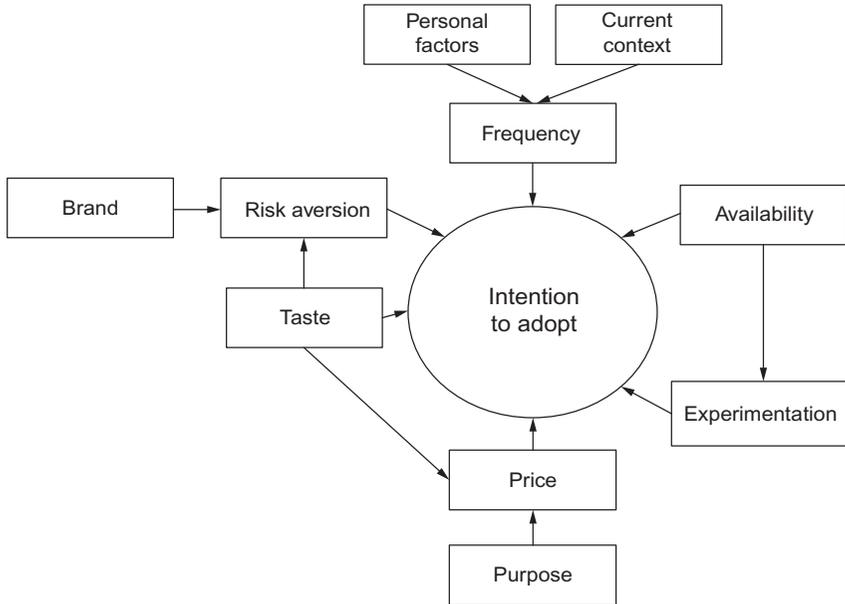


Fig. 15.7 Factors influencing coffee choices (group 2).

adoption. Social factors can also contribute to experimentation, being influenced by someone who is part of the conviviality of the potential consumer. Availability increases or reduces the intention to adopt, because if the product is not available, the propensity for adoption decreases. Availability is associated with experimentation, because the lower the availability, the lower the chances of experimentation. A differential was also pointed out as a cause of the propensity for adoption in this group, as it would be something that could attract them to that product. The origin was cited as a possible coffee differential. The difference, however, would still be tied to availability and would depend on experimentation to increase propensity for adoption. Fig. 15.8 shows the attributes and factors that we found during the analysis of this focus group discussion.

15.3.2 Consumers' perception of coffee from Cerrado Mineiro and Chapada Diamantina

Participants were asked to tell us about their perceptions regarding coffee from Cerrado Mineiro and from Chapada Diamantina by looking at images we gave them (the stimulus). Consumers' perception concerning coffee from Cerrado Mineiro was related to the perception they had about this region's reputation as a traditional coffee producer. To participants, this coffee

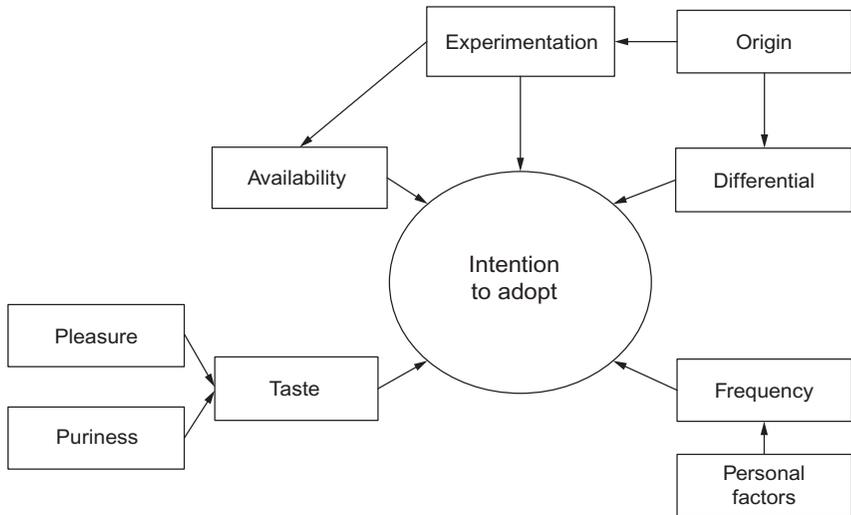


Fig. 15.8 Factors influencing adoption propensities of coffee (group 3).

has a differential attribute, in relation to other standard products, because there was the identification “coffee from Cerrado.” One of the participants commented:

It is coffee with an intense aroma, we can even smell it! (Participant 3)

Some attributes written in the description we gave to them were cited as easy to understand and some were difficult, such as “mild acidity” and “arabic” variety. The word *terroir* (it was in the description) was cited as being difficult for consumers to understand because they did not know exactly what it meant. The fact that it is a coffee from Cerrado was considered easy to understand, because part of the sample already had previous knowledge that it is an important region producing coffee in Brazil. According to consumers, the “good quality” message conveyed by the image and the description, as well as their previous knowledge about this region, could lead consumers to adopt this coffee in their habits. For another participant, the origin would attract consumption, but it is the flavor that would define the adoption:

The consumer would adopt for the flavour, but surely would be attracted by the seal of origin (Participant 4).

An interesting finding concerns expectations about availability and price of this product, both asked in the questionnaire. Neither price nor distribution

information was given to participants in the description or in the image. Nevertheless, the description said that Cerrado Mineiro is a region where “coffee grains mature slowly.” This information gave the impression that it is a difficult product to find in stores, which would make it difficult to adopt in daily habits. In addition, even without price citations at any time, participants understood that this would be an expensive product, and this could hinder the propensity to adopt it.

When it comes to Chapada Diamantina coffee, participants felt there was a lack of more accurate information about this product, both in the description and in the image. The researcher who applied the questionnaire also perceived that participants took a longer time to answer questions about this product, because they spent more time to do so when compared to questions about Cerrado Mineiro coffee. We had the impression that participants had no previous knowledge about this product (opposite to coffee from Cerrado), so they relied only on the information that we gave them (the image and the description) to formulate their perceptions and answers to the questionnaire. Participants’ perception regarding the origin of this coffee was ambiguous. At the same time, although they showed curiosity to try this product, they were afraid it would not be good as it is not a widely recognized coffee region. Interestingly, they linked the climate characteristics of the state of Bahia to the coffee grown in Chapada Diamantina, even though they actually did not know if it was the same; actually, due to its highest altitude, the Chapada Diamantina climate is very different when compared to other parts of Bahia. Moreover, the description we gave to them mentioned the influence of the Bahia sun on production in a positive way, but participants had the impression that it would be a very strong sun, and it would burn the grains. The following sentences represent the view of the participants about this product:

It is not a traditional region. It seems the coffee is not so good (Participant 5).

Bahia sun [in the description]. It seems to be very strong and will roast the beans on the floor (Participant 6).

Although speaking of good quality [the description], it depends a lot on the workers by the text (Participant 7).

Quality is only good if it is well harvested and taken care of [as mentioned in the description] (Participant 8).

Among the hard-to-understand aspects of this product was the influence of radiation on production mentioned in the description. Participants doubted

as to what the influence would be. The gourmet denomination and Arabica variety also cited in the description were considered as difficult to understand, as they did not know exactly what these characteristics meant to the coffee. When asked about what could motivate the adoption of this product, they mentioned the curiosity to try a different product, from a nontraditional region, the quality (if it was good), and interestingly the price. No information regarding the price of this coffee was available to them, but they assumed that it had a lower price in relation to the Cerrado coffee. Thus, their perception about the reputation of a region seems to be linked to their expectations of the price of the product.

To finalize the questionnaire, we gave participants an image and a description of a coffee without origin identification. In the description, we tried to put information that would place this coffee as being a standard product that they can easily find in supermarkets. We had the impression that consumers felt more “comfortable” in answering the questions about this product because they identified it as the most frequently consumed coffee (the one that they drink daily at home). Participants were able to answer the questions regarding this product faster compared to the previous stimulus. They seemed to rely on previous information they had about general standard coffee and seemed not to be very attached to the image or the description. The participants identified themselves with this type of coffee:

The slogan “the Brazilian’s coffee” [in the description] creates an identity with the consumer’s taste and mine (Participant 9).

Consumers mentioned the quality (pleases the palate), availability, fine grinding, homogeneous appearance, purity, a well-known product (less risky), and strong flavor as the main advantages of this product. The fact that it is a common branded coffee was also an advantage, notably to people who do not really know the differences between the products and usually rely on the tradition of the brand, associating it with good quality. The description of the coffee was considered simple and easy to understand. However, some characteristics were not easy to identify, according to them, such as toast points (participants questioned what if there was not a pattern to be followed), homogeneous appearance (they did not understand how the coffee could have heterogeneous appearance, because, after all, it is black), high purity, and full-bodied. All these attributes were in the description that we gave to participants and were taken from a famous and popular coffee brand in Brazil.

The propensity to adopt this coffee related to its ease of purchase (they assumed there was no problem concerning availability), affordable price (even without any mention of the price), the fact that it is a traditional brand product on the market, and a flavor that pleases the whole family. The brand conveys the confidence they need to consume the product, and it is a coffee that does not offer high risks, as everyone likes. The following answer is an example of it:

The image is attractive, and it is a taste that I am already used to, so I will like it more (Participant 10).

On the other hand, for consumers who seek a product with a different attribute, and that are more demanding regarding quality, this would not be the ideal coffee, according to participants. In addition, the question of presenting “strong roasting” gave the impression of being a product that “passed the optimum point of toast.” Another point addressed is the question of flavor intensity, because as the description said strong flavor, consumers who prefer weaker coffee may prefer another type of coffee.

15.3.3 Origin as a source of information

Our analysis of the focus group discussion showed that origin influences coffee choice as a source of information about the product, which would reduce risk aversion, as well as adding a differential of flavor, which would attract the consumer. Because they were already used to, or at least heard about, the Cerrado region, participants already had a notion that this would be a special and good quality product. On the other hand, Chapada Diamantina was not a traditional coffee-producing region in the mind of participants. As a result, participants showed uncertainty about this coffee; because it was not possible to predict its characteristics, they found it to be a risky choice. Besides that, some consumers associated the coffee from Bahia as a low-quality product due to their image of the state, which was the one of a place with very high temperatures all year long, even though they did not know the climate characteristics of the specific region of Chapada.

We can relate these results with the factors that influence adoption, proposed by [Arts et al. \(2011\)](#). To the participants of our study, Cerrado coffee has advantages because of its traditional origin in production and is compatible with the preferences of the consumers, thus raising intention to adopt it. On the other hand, coffee from Bahia presents high uncertainty, because there is not much available information about this product, which would reduce intention to adopt it ([Arts et al., 2011](#)).

15.3.4 A coffee choice process model: How is origin information processed?

In general, origin seems to influence coffee choice in two ways, as a source of information about the product, which would reduce risk aversion, as well as a differential (of flavor, taste), that would attract the consumer. It is possible to parallel the findings regarding origin perception with the conceptual model of the food choice process. *Life course* is the base of the process and includes personal issues as well as the social, cultural, and physical environment to which the person was exposed (Devine et al., 1998). In this sense, the origin attribute is analyzed from the point of view of the tradition of the region producing the coffee, as well as from previous knowledge that the consumers may have about coffee regions.

In the second stage of the process, there are the *influences* that act in food choice processes, which are the ideals, personal factors, resources, social context, and overall context (Falk et al., 1996). In this sense, origin can be analyzed from the point of view of the ideals, as well as from the point of view of the context. Ideals are related to the beliefs and patterns from which a person perceives a product. We observed that origin is analyzed in comparison to the ideals of the participants once they compare the region to their beliefs and ideal patterns. In this sense, a positive image from the ideals' perspective will influence in a positive way. On the other hand, if the image is negative, the origin may produce negative effects on the choice. The "context" includes the physical and cultural environment regarding food choices. In this sense, we observed that participants used coffee origin to analyze the product availability and ease of access. From the context point of view, the origin can be analyzed in relation to the availability/access of the product.

Finally, the *personal system*, the third component of the model, is comprised of the cognitive processes involved in food decision, and it is closer to consumer behavior when compared to the influence or life course. It is in the personal system that people build values to make choices, negotiate and consider these values, classify foods and situations, and create and revise strategies, scripts, and routines (Sobal and Bisogni, 2009). In this part of the model, origin attribute seems to influence consumers ponderation of sensory, cost and relationship management. Sensory aspects include the perception if a specific origin will have taste, aroma and coffee intensity that pleases the consumer. Cost considerations concerns the perception of price about a coffee origin. Finally, relationship management includes the perception if a specific coffee origin will be well accepted by other

family members. Therefore, origin is a complex attribute identified within the whole process of food choices and influences consumption in different ways. Based on these results, we used the conceptual model of food choice to origin considerations in coffee choices. Our adapted model is shown in Fig. 15.9.

We would like to add that in our analysis of coffee choices, we found other elements that are not yet part of the conceptual model from the literature that seemed to influence participants' coffee choices. These factors are

- *Frequency of consumption*: Frequency seems to influence coffee choices, because if it is high, the value (of the model) that corresponds to costs is prioritized once the price of the product impacts the consumer's budget to food purchases. On the other side, if the frequency is low, other values in the model, such as sensory perception, seem to be prioritized.
- *The purpose of consumption*: The purpose of the consumption seems to influence participant's coffee. By purpose, we mean specifically drinking the coffee pure or with milk. In some cases, examples have been cited, such as "If coffee is to be mixed with milk, I will not buy more expensive coffee." In this case, the purpose influences what value will be prioritized at the time of choice.

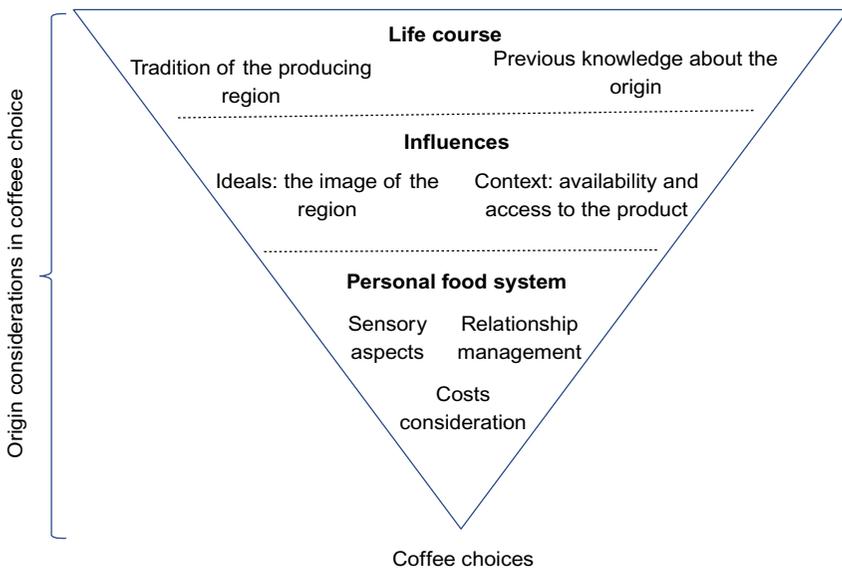


Fig. 15.9 Origin considerations in the conceptual model of coffee choice. (Based on Furst, T. et al., 1996. *Food choice: a conceptual model of the process*. *Appetite* 26(3), 247–265. ISSN:0195-6663.)

- *Involvement with coffee*: Some participants have said that because they do not consume a lot of coffee and do not have much information about the differences in the products, they do not mind consuming a standard product. However, for those who demonstrated greater knowledge about the product, there was a greater interest in a coffee with a difference, such as origin identification. [Marshall and Bell \(2004\)](#) studied the influence of involvement in food choices and concluded that this is an important variable in this process.

15.3.5 A comparison between Brazil and Colombia

To complement this regional analysis, we decided to conduct an online survey to understand origin influences in the intention to adopt coffee from Brazil and Colombia. Adoption is the consumer's decision to incorporate a product into one's habits ([Rogers, 2003](#)). It is a multistep process based on the awareness of the continuous use of a product ([Rogers, 2003](#)). The intention of adoption refers to the desire of the consumer to buy a product and is related to the mental state before the purchase ([Rogers, 2003](#)). The intention of adoption is influenced by individual characteristics, as well as product characteristics.

Thus, we conducted a survey in which the adoption intention of coffee from Brazil and Colombia was evaluated based on four independent variables: the image of the country, the relative advantage of the product, the compatibility, and the uncertainty. We extracted these variables from the literature ([Erickson et al., 1984](#); [Maheswaran, 1994](#); [Arts et al., 2011](#); [Moura et al., 2008](#)). The image of a country influences product evaluation ([Erickson et al., 1984](#); [Maheswaran, 1994](#)). Thus, it is proposed that the image of the country will influence the adoption intention. The other three scales were related to the intention to adopt coffee from Brazil or Colombia in relation to three independent variables: compatibility, relative advantage, and uncertainty, which are characteristics of products that influence adoption intention ([Arts et al., 2011](#); [Moura et al., 2008](#)). Relative advantage is the level that a product is perceived as better than the one it replaces. Uncertainty is the level that functional, social, or financial consequences of purchase and use of a product cannot be established. Compatibility is the level that a product is perceived as consistent with existing values, past experiences, lifestyle, and needs of potential adopters ([Arts et al., 2011](#)).

In total, 552 participants started the survey, however, 307 had to be excluded due to the absence of responses and thus 245 responses were analyzed. Regarding the profile of the participants, 49.8% were male and 50.2% female. The age of the respondents ranged from 17 to 75 years. Ages

between 26 and 35 were predominant (40.8%), followed by 17 to 25 years (24.5%). Results analysis was conducted with the use of SPSS software in which we made comparison of means in pairs.

The analysis of the country image showed that participants have a better country image of Brazil when compared to Colombia. As shown in the following table, Brazil's country image obtained 4.1347 as a means (a Likert scale that varied from 1 to 5), whereas Colombia obtained 3.3469 (Table 15.2).

Then, we compared the means obtained in the adoption intention scales regarding compatibility, relative advantage, and uncertainty (comparison of the scales related to Colombian coffee with the scales for Brazilian coffee). We found that the means are statistically different between the two countries analyzed (Brazil and Colombia) at a 0.05 significance level. The means obtained in the adoption intention scales related to Brazilian coffee are higher than those related to the Colombian coffee. Thus, we infer that the adoption intention was higher for coffee originating in Brazil (considering these variables) than for coffee originating in Colombia (Table 15.3).

Although both countries are traditional in coffee production, participants of the survey preferred coffee from Brazil than from Colombia. This may be linked to the fact that they do not know about Colombian coffee characteristics, or, despite knowing, they prefer the national coffee. Studies conducted in other countries have shown that Colombia is known worldwide for producing good quality coffee. On the other hand, there are also studies on the tradition of Brazil in grain production. Gudero (2009) conducted a survey on the effect of coffee country of origin (from three countries: Brazil, Colombia, and Ethiopia) on consumer behavior in the United States. According to the results, Brazilian coffee was preferred, compared to Colombian, which was second, and Ethiopian coffee last. Still, the author concluded that the participants showed more loyalty to the coffee country brand of a positively stereotyped country. Usunier and Cestre (2007) conducted a study that sought to identify, among other things, associations that

Table 15.2 Country image analysis

Country image	Paired samples statistics			
	Mean	N	Std. deviation	Std. error mean
Colombia	3.3469	245	0.57204	0.03655
Brazil	4.1347	245	0.5716	0.03652

From Research data.

Table 15.3 Intention to adopt coffee from Brazil or from Colombia.

Paired samples statistics				
	Mean	N	Std. deviation	Std. error mean
<i>Pair 1: Intention to adopt regarding compatibility</i>				
Colombia	2.8347	245	0.83391	0.05328
Brazil	3.1582	245	0.75696	0.04836
<i>Pair 2: Intention to adopt regarding relative advantage</i>				
Colombia	3.0643	245	0.78125	0.04991
Brazil	3.2612	245	0.77660	0.04961
<i>Pair 3: Intention to adopt regarding uncertainty</i>				
Colombia	2.9092	245	0.80257	0.05127
Brazil	3.1816	245	0.77662	0.04962

From Research data.

consumers make between countries and products. The authors found that consumers make a strong and exclusive association of Brazil with coffee production. All these scientific studies corroborate our findings, increasing its strength.

15.4 Final considerations

Origin is an attribute that may be directly associated with a geographic location, but its interpretation varies by consumer. This chapter showed that, even when the origin is not cited, consumers might still consider it in their food choice process. Thus, we conclude that origin is a multilevel attribute that influences food choice, even when a direct relationship is not clear. Furthermore, we conclude that origin is always related to a place but not necessarily a country or region. It can also be a purchase or consumption place. Consumers perceive origin as a source of information about coffee from which they can infer characteristics of the products, such as taste expectations or even price expectations. As shown in our adaptation of the conceptual model of food choice, origin can influence consumer behavior all along the process of coffee choices.

We observed that consumers prefer coffee from an origin in which they are aware of the tradition, as it reduces the risk of making a wrong decision. However, they show curiosity to try new coffee from different regions. The relationship with the origin must be made carefully because, as observed in

this chapter, consumers in the southeast of Brazil had considerable uncertainty regarding the sensory aspects of coffee with a nontraditional origin and inferred product characteristics based on their image of the climate in Bahia. In this sense, the image that consumers have about the region or country influences their choice, highlighting the importance of reputation for the valuation of this attribute. In the comparison of coffee produced in two Brazilian regions, participants had an image of Bahia as a place where the sun is too strong, there is a lack of water, and thus they associated this image with coffee produced in the region of Chapada Diamantina, even though the reality in this region is different. When comparing Brazil and Colombia, consumers rated Brazil as the country with a better image and showed greater intention to adopt Brazilian coffee. These two results (Brazilian regions and comparison between Brazil and Colombia) are convergent, and this increases the strength of our findings.

This chapter had some limitations that are important to consider. In the qualitative part, the selected sample was composed mostly of women (10 women and only 3 men), which may have influenced the results obtained in this part of the research. Moreover, participants might have related their perception to coffee consumption at work, because the research (questionnaire and focus group) was conducted in the same building in which they work, although it was explained that the perception should be related to regular consumption at home, work, or elsewhere. Furthermore, as the participants work in an agricultural economy research center, and most of them had previous general knowledge about the main coffee regions in Brazil. Nevertheless, the results found in this chapter are scientifically accurate and contribute to advances in knowledge regarding consumer behavior in relation to coffee origin. Our results contribute to coffee growers and companies that wonder how to integrate the origin attribute in their products, as it shows how the consumers evaluate this factor in their intention to adopt coffee.

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