

Scent Marketing: Exploring the Effect of Coffee Aroma on Consumer Behavior

Maria Papavasileiou^{a*}; Leonidas Hatzithomas^b; Eleni Mavragani^{c*} and Eirini Tsihla^d

^{a} Department of Business Administration, University of Macedonia, Thessaloniki, Greece; ^b Department of Business Administration, University of Macedonia, Thessaloniki, Greece; ^c Department of Accounting and Finance, University of Macedonia, Thessaloniki, Greece; ^d Department of Business Studies, American College of Thessaloniki, Greece.*

* Maria Papavasileiou

Graduate Student, Master of Business Administration

University of Macedonia, Greece

+306984677471

mariapapavasileiou98@gmail.com

Scent Marketing: Exploring the Effect of Coffee Aroma on Consumer Behavior

Abstract

Businesses can forge strong bonds with their audience and outshine competitors by innovating unique products and delivering unforgettable experiences. A product's scent has a pivotal role in shaping customer experiences. This paper delves into the influence of coffee aroma on consumer behavior. Specifically, it examines how memory vividness, desire-related thoughts, purchase intentions, and memory sharing correlate with the intense aroma of coffee. The study involved 202 participants, half of whom were exposed to coffee's aroma during an experimental procedure. Results affirmed research hypotheses, emphasizing aroma's impact on desire-related thoughts, memory vividness, purchase intentions, and memory sharing. Furthermore, the coffee aroma induces more vivid memories and stronger desire resulting in an increase in purchase intention, and an inclination to share the memories with others. Suggestions for further research and practical implications for businesses are provided.

Keywords: desire; memory vividness; memory sharing; purchase intention; coffee's aroma

Introduction

One of the main challenges in the contemporary business environment is the differentiation of products or services in a market that is often described as saturated. At the same time, the role of marketing management in businesses has undergone major

shifts. The digital era has shaped a world in which the rules are constantly changing. Companies need to understand and constantly adapt to these changes, developing innovative offerings that compete for consumers' attention.

By combining the creation of unique products with the delivery of unforgettable experiences, businesses can build a strong relationship with their audience and stand out from the competition for the long term. Creating an overall experience that exudes originality, quality, and value can be the key to successful market integration and retention (Nibbe et al., 2017). Olfaction is our phylogenetically oldest and more primitive sense, and the sense of smell has been found to influence individuals' emotions, memories, and motivations. In particular, emotional associations to odors may influence perceptions of product value, moods elicited by the product and behavioral intentions (Krishna, 2010).

The ability of a product to connect with memories and experiences can make it product special. Furthermore, it can foster a loyal relationship with the consumer (Holbrook & Schindler, 2003). For example, a particular scent can bring back memories of playing at the beach during childhood, a walk in the woods, or even aromas associated with home. This emotional connection to the aroma can make the product take on a different, more personal dimension in the consumer's daily life (Krishna, 2012).

This study considers a very popular and familiar scent, the scent of coffee as a case in point and investigates its effect on consumer behavior. More specifically, the purpose of this paper is to investigate the influence of coffee aroma in consumers' memory sharing and purchase intention. Perceived desire and memory vividness are tested as mediators in the aforementioned relationships.

Literature Review

Scent Marketing

The aroma of a product can be a critical element of the experience it offers (Errajaa et al., 2021). Furthermore, it can be integrated with memories, creating an emotional connection that can ultimately enhance the consumer's everyday life (Morrin, 2011). Scents can evoke strong memories and emotions, associating them with different moments or experiences in our lives (Herz, 2009). A systematic review of prior studies shows that the sense of smell sparked marketing studies in a multitude of contexts including retail, servicescapes and non-profit like museum environments. Scent has been found to create a feeling of greater quality and hence increase consumer spending in commercial environments (Chebat & Michon, 2003). Similarly, Cirrincione et al. (2014) demonstrated that the presence of scent positively impacts the visitors' evaluation of a work of art.

Several scent-induced effects have been identified, such as a strong intention to visit a store (Spangenberg et al., 1996), spending more time in a store (Spangenberg et al., 1996; Morrin & Ratneshwar, 2003), willingness to pay a higher price (Fiore et al., 2000), and searching for products for a longer period (Vinitzky & Mazursky, 2011).

A study by Velasco et al. (2014) highlights the power of scents in changing the perception of taste and the way consumers perceive the taste experience of a product. In addition, scent marketing can influence consumers either if the aroma diffuses into the space or if it comes from the product itself (Bartholmé & Melewar, 2011). Several studies indicate that scent positively influences consumers' attitudes and behaviour (Roschk et al., 2020).

Desire and Memories

According to Caselli and Spada (2011), desire thoughts are characterized as a process of cognitive processing of a desired goal either at the level of individual awareness or at the level of imagined achievement (creating images of the desired goal or consumption thoughts). There are two factors that measure and predict levels of desire: individual awareness (verbal) and imagination (pictorial). The literature suggests that the combined activation of olfaction with other senses, such as sight and hearing, can enhance desire and intensify the overall consumer experience (Barlow et al., 2005).

The association between olfaction and memory is extremely strong, as scent can act as a powerful stimulus that activates stored memories and recollections (Wilkie, 1995). Indeed, several researchers argue that smell can enrich the memory of specific information, especially if it is present during both the encoding and retrieval of information (Ball et al., 2010; Morrin, 2011).

Several studies have examined the effects of scents on memory. However, they have focused solely on the effects of the aroma in the atmosphere rather than the aroma of the product itself (Morrin & Ratneshwar 2000, 2003). The aroma of the product, however, is particularly effective in terms of enhancing memory for information about the product itself due to its ability to reinforce its uniqueness (Krishna et al., 2010). There are physiological and/or neurological reasons for people's ability to remember smells strongly after a long period of time (Buck & Axel, 1991). Empirical results suggest that product scent improves consumer memory of product information and its effects on behavior can be sustained over long periods of time (Krishna et al., 2010).

Purchase Intention and Coffee Aroma

Teller et al. (2012) examined the relationship between scent and buying behaviour in the consumer products sector, concluding that scent can enhance the

customer's positive perception and guide them toward a purchase decision. Furthermore, research that took place in six retail stores suggests that the utilization of scent positively impacts sales depending on the product category (Kivioja, 2017). More specifically, the study shows that there is interest in terms of food and beverages regarding scent and consumer purchase intention and entrepreneurs should take advantage of it to promote their products. In addition, related research has shown that food aroma indirectly influences consumers' purchase intention as it stimulates appetite, taste expectancy, and anticipated pleasure from satisfaction (Moore, 2014).

Coffee is a very popular beverage worldwide. The aromatic element is particularly crucial in coffee as it is the main component of the sensory experience for coffee lovers (Bhumiratana et al., 2011). There are many people who enjoy the aroma of coffee daily: at work, in cafes, in retail stores, in service areas, etc. Indeed, cafés are considered a “third place” where people spend some hours of their daily lives to relax or socialise. Therefore, this environment where they enjoy relaxing or sharing moments with their loved ones is a coffee-scented environment (Oldenburg, 1999; Walton, 2012).

[Table 1 near here]

Research Objectives

The study attempts to investigate whether the coffee aroma is related to memory vividness and desire. In addition, we explore whether it can induce purchase intentions and memory sharing. Based on the aforementioned objectives, we formulated six (6) Hypotheses and the Conceptual Models of the study.

[Figure 1 near here]

H1: Coffee Aroma positively affects desire.

H2: Coffee Aroma positively affects memory vividness.

H3: Coffee Aroma positively affects memory sharing.

H4: Coffee Aroma positively affects purchase intention.

H5: Desire mediates the relationship between coffee aroma and a) memory sharing and b) purchase intention.

H6: Memory vividness mediates the relationship between coffee aroma and a) memory sharing and b) purchase intention.

Methodology and Findings

Overall, 202 questionnaires were distributed online and face-to-face. Participants who completed the questionnaires online were instructed not to drink coffee at the time of completion and not to respond after 19:00 in the afternoon. Participants who took part in the study face-to-face were exposed to coffee aroma (with instructions not to drink) at the time of the completion. The survey also includes a related question, which asks whether participants have consumed coffee in the last two hours and whether they like coffee. This factor may significantly influence their desire to consume or purchase coffee directly, as their recent consumption of the product or their preferences may both deter and influence them in terms of their behaviour.

We had one independent variable, with two levels, presence versus absence of coffee aroma, and two dependent variables, memory sharing and purchase intention. To test the research hypotheses, two bootstrap tests (PROCESS, model 4, Hayes, 2018)

were used with memory vividness and desire as mediators in the relationships between the independent and dependent variables. Coffee aroma exerts positive effects on perceived desire ($b = .39$, $se = .15$, $p < .05$) and memory vividness ($b = .33$, $se = .13$, $p < .05$). Thus, hypotheses 1 and 2 are supported.

The findings revealed direct effects on memory sharing (Bootstrap confidence interval = [0.0495, 0.5063]) and on purchase intention (Bootstrap confidence interval = [0.0928, 0.6253]). Hence hypotheses 3 and 4 are accepted.

They also showed an indirect effect of coffee aroma on positive memory sharing (Bootstrap confidence interval = [0.0537, 0.3427]), mediated by desire (Bootstrap confidence interval = [0.0117, 0.1592]) and memory vividness (Bootstrap confidence interval = [0.0223, 0.2278]). Thus, hypothesis 5a and 6a are accepted. We also found an indirect effect of coffee aroma on positive purchase intention (Bootstrap confidence interval = [0.0884, 0.5416]), mediated by desire (Bootstrap confidence interval = [0.0557, 0.4623]), and memory vividness (Bootstrap confidence interval = [0.0010, 0.1610]). Hence, hypotheses 5b and 6b are also supported.

Discussion

The results of the study show that coffee aroma significantly affects memory vividness and perceived desire. The findings corroborate theories that postulate favorable connections between the aroma of coffee and perceptions of desire and vivid memories. Furthermore, direct effects on purchase intention and shared memory were noted, supporting the corresponding hypotheses. The indirect effects are particularly

interesting, as it seems that the smell of coffee influences positively both memory and intention to buy through perceptions of desire and vivid memories.

The above results are valuable for marketing professionals. It is demonstrated that coffee aroma influences the consumer's behaviour towards the product under investigation. In particular, it influences desire thinking, memories, and purchase intention positively. The potential of scents to affect businesses' sales is obvious and extremely interesting.

Scent is gaining popularity as a means of competitive advantage in shaping the atmosphere of stores. Minor changes in the environment, such as the addition of low-intensity scents of products being offered for sale, may increase desire, and ultimately purchase intention. Of course, it would also contribute to a complete consumer experience which can strengthen the customer's relationship with the company (MSI, 2010). In addition, exposing potential buyers to the scent of the product (especially for foods or drinks) will whet their appetite and remind them of a potential need, propelling purchase intentions.

Another opportunity for managers is the use of technology that could automatically release the intended aroma, with specific parameters such as time, quantity, and frequency. In addition, AI technology can be used to adjust the distribution of aroma based on customer preferences, time of day, or other factors. This could be done through sensors that detect the presence of customers and/or based on data collected from purchases. Finally, AI technology can be used to analyze data from customer reactions to the aroma and make relevant recommendations for improvements or experimental strategies.

Utilizing the aroma of coffee in locations close to the point of sale, as based on this research, can evoke memories, intensify desire thoughts, and increase purchase

intention. However, the increase in purchase intention is multi-factorial, therefore, other aspects relating to coffee should be further investigated.

For greater reliability in the conclusions of the research, the same people should have been selected at different time periods in each group (group with and without exposure to coffee aroma) as we could compare the results with greater certainty. Finally, important for the present research would be the use of a sterile laboratory environment that was protected from external odours/aromas that would probably diffuse during the completion of the questionnaire. The use of a non-sterile environment would likely have influenced the responses of the respondents as there were external factors such as sounds etc. which may have influenced the responses of the participants.

The analysis of the factors that shape the purchase decision consists of complexities beyond the memories and the desire associated with the product. Therefore, it is useful to investigate how coffee price, packaging, promotion, and other marketing factors combined with aroma influence the consumer's final decision.

More specifically, further research is proposed by collecting empirical data through interviews to highlight the importance and overall impact of these factors on coffee purchase intention. However, it must be recognised that the emotional aspects remain important and when combined with the following factors, they form a complete picture of the purchase decision.

References

- Baker, J., Parasuraman, A., Grewal, D., & Voss, G. B. (2002). The influence of multiple store environment cues on perceived merchandise value and patronage intentions. *Journal of Marketing*, 66(2), 120-141.
- Ball, L. J., Shoker, J., & Miles, J. N. (2010). Odour-based context reinstatement effects with indirect measures of memory: The curious case of rosemary. *British Journal of Psychology*, 101(4), 655-678.
- Bartholmé, R. H., & Melewar, T. C. (2011). Exploring the auditory dimension of corporate identity management. *Marketing Intelligence & Planning*, 29(2), 92-107.
- Bhumiratana, N., Adhikari, K., & Chambers IV, E. (2011). Evolution of sensory aroma attributes from coffee beans to brewed coffee. *LWT-Food Science and Technology*, 44(10), 2185-2192.
- Bitner, M. J. (1992). Servicescapes: The impact of physical surroundings on customers and employees. *Journal of Marketing*, 56(2), 57-71.
- Buck, L., & Axel, R. (1991). A novel multigene family may encode odorant receptors: a molecular basis for odor recognition. *Cell*, 65(1), 175-187.
- Caselli, G., & Spada, M. M. (2011). The desire thinking questionnaire: Development and psychometric properties. *Addictive Behaviors*, 36(11), 1061-1067.
- Chebat, J. C., & Michon, R. (2003). Impact of ambient odors on mall shoppers' emotions, cognition, and spending: A test of competitive causal theories. *Journal of Business Research*, 56(7), 529-539.

Cirrinzione, A., Estes, Z., & Caru, A. (2014). The effect of ambient scent on the experience of art: Not as good as it smells. *Psychology & Marketing*, 31(8), 615-627.

Errajaa, K., Legohérel, P., Daucé, B., & Bilgihan, A. (2021). Scent marketing: linking the scent congruence with brand image. *International Journal of Contemporary Hospitality Management*, 33(2), 402-427.

Herz, R. S. (2009). Aromatherapy facts and fictions: a scientific analysis of olfactory effects on mood, physiology and behavior. *International Journal of Neuroscience*, 119(2), 263-290.

Holbrook, M. B., & Schindler, R. M. (2003). Nostalgic bonding: Exploring the role of nostalgia in the consumption experience. *Journal of Consumer Behaviour: An International Research Review*, 3(2), 107-127.

Kivioja, K. (2017). Impact of point-of-purchase olfactory cues on purchase behavior. *Journal of Consumer Marketing*, 34(2), 119-131.

Krishna, A. (2012). An integrative review of sensory marketing: Engaging the senses to affect perception, judgment and behavior. *Journal of Consumer Psychology*, 22(3), 332-351.

Krishna, A., Lwin, M. O., & Morrin, M. (2010). Product scent and memory. *Journal of Consumer Research*, 37(1), 57-67.

Moore, D. J. (2014). Is anticipation delicious? Visceral factors as mediators of the effect of olfactory cues on purchase intentions. *Journal of Business Research*, 67(9), 2045-2051.

Morrin, M. (2011). *Scent marketing. Sensory Marketing—Research on the Sensuality of Products*, 75-86.

Morrin, M., & Ratneshwar, S. (2000). The impact of ambient scent on evaluation, attention, and memory for familiar and unfamiliar brands. *Journal of Business Research*, 49(2), 157-165.

Morrin, M., & Ratneshwar, S. (2003). Does it make sense to use scents to enhance brand memory?. *Journal of Marketing Research*, 40(1), 10-25.

MSI. (2010). 2010-2012 Research Priorities.

Nibbe, N., & Orth, U. R. (2017). *Odor in marketing. Springer handbook of odor*, 141-142.

Oldenburg, R. (1999). *The great good place: Cafes, coffee shops, bookstores, bars, hair salons, and other hangouts at the heart of a community*. Da Capo Press.

Rimkute, J., Moraes, C., & Ferreira, C. (2016). The effects of scent on consumer behaviour. *International journal of Consumer Studies*, 40(1), 24-34.

Roschk, H., & Hosseinpour, M. (2020). Pleasant ambient scents: a meta-analysis of customer responses and situational contingencies. *Journal of Marketing*, 84(1), 125-145.

Spangenberg, E. R., Crowley, A. E., & Henderson, P. W. (1996). Improving the store environment: do olfactory cues affect evaluations and behaviors?. *Journal of Marketing*, 60(2), 67-80.

Teller, C., & Dennis, C. (2012). The effect of ambient scent on consumers' perception, emotions and behaviour: A critical review. *Journal of Marketing Management*, 28(1-2), 14-36.

Turley, L. W., & Milliman, R. E. (2000). Atmospheric effects on shopping behavior: a review of the experimental evidence. *Journal of Business Research*, 49(2), 193-211.

Velasco, C., Balboa, D., Marmolejo-Ramos, F., & Spence, C. (2014). Crossmodal effect of music and odor pleasantness on olfactory quality perception. *Frontiers in Psychology*, 5, 1352.

Vinitzky, G., & Mazursky, D. (2011). The effects of cognitive thinking style and ambient scent on online consumer approach behavior, experience approach behavior, and search motivation. *Psychology & Marketing*, 28(5), 496-519.

Walton, A. G. (2012). Starbucks' power over us is bigger than coffee: It's personal. *Forbes*. Available online at: <https://www.forbes.com/sites/alicegwalton/2012/05/29/starbucks-hold-on-us-is-bigger-than-coffee-its-psychology>. Accessed: 2023-12-10

Wilkie, M. (1995). Scent of a Market: Scents do more than make us smell nice. They also affect our shopping and work habits in ways we are just beginning to understand. *American Demographics*, 17, 40-40.

Tables and Figures

Table 1.

Authors	Variables
Caselli, G. & Spada (2011)	Desire
Sutin, A.R. & Robins, R.W. (2007)	Memory
Anggie, C. & Haryanto, J.O. (2011)	Purchase Intention

Figure 1.

Conceptual Models of the Study

