

Characteristics of Organic Coffee Consumers

Adi Hariyanto¹, Irmayani Noer^{1*}, Henry Kurniawan¹, Analianasari¹

¹Politeknik Negeri Lampung

Jl. Soekarno Hatta No.10, Rajabasa Raya, Lampung 35144, Indonesia

*Corresponding Email: Irmayani_noer@polinela.ac.id

ARTICLE INFORMATION

Publication information

Research article

HOW TO CITE

Hariyanto, A., Noer, I., Kurniawan, H., & consumers and coffee lovers. This study Analianasari. (2025). Characteristics of aims to describe the characteristics of organic coffee consumers. *Journal of respondents who consume organic coffee. International Conference Proceedings*, 8(1), 215–226.

DOI:

<https://doi.org/10.32535/jicp.v8i1.3967>

Copyright@ 2025 owned by Author(s).
Published by JICP



This is an open-access article.

License:

Attribution-Noncommercial-Share Alike
(CC BY-NC-SA)

Received: 26 April 2025

Accepted: 27 May 2025

Published: 28 June 2025

ABSTRACT

Nowadays, people are starting to realize the importance of health and environmental sustainability. Organic coffee is one of the alternatives chosen to support lifestyle and maintain environmental sustainability for coffee lovers. This study aims to describe the characteristics of respondents who consume organic coffee. The analysis method used in this study is the descriptive analysis method. The sampling method in this study is the accidental sampling technique of 100 respondents. The results of the study show that the majority of organic coffee consumers are men, namely 54% with ages 21-33 years with a percentage of 87% with an unmarried status of 68% with the majority of S1/S2/S3 education of 63% and work as private employees of 41% with an income of Rp 6,000,000 - Rp 9,000,000 of 37%. The primary motivation for consumption is health reasons (78%), followed by environmental concerns (19%). Social media is the primary source of information (53%), and online stores are the most common purchasing channel (52%). These findings indicate that the organic coffee market has significant growth potential, especially through targeted value-based marketing and digital education approaches.

Keywords: Consumer Characteristics; Conjoint Analysis; Healthy Lifestyle; Organic Coffee; Purchase Behavior

INTRODUCTION

Nowadays, people are starting to realize healthy lifestyle patterns. Increased knowledge that the use of chemicals in agriculture can have a negative impact on humans and the environment. Changes in healthy lifestyle patterns are reflected in consumer activities that prefer to consume organic products to maintain and support health.

Organic coffee is considered part of this healthy lifestyle pattern, where consumers are not only looking for good taste, but also health benefits offered by the product. Organic coffee is coffee whose production does not use synthetic substances such as pesticides, herbicides and artificial fertilizers. Wulandari & Miswanto, 2022 stated that organic coffee has many health benefits for its consumers because organic coffee does not contain chemical compounds so it has high antioxidants, minerals and vitamins. The process of organic coffee cultivation prioritizes aspects of natural resource conservation, environmental safety from polluting compounds, crop safety for human health and nutritional value. In addition, organic coffee cultivation has an impact on the socio-economic aspects of farmers because the high price of organic coffee is expected to increase farmers' income. The price of organic coffee tends to be higher than non-organic coffee, but many consumers are willing to pay more to get products that are considered healthier and environmentally friendly.

Research on consumer behavior, especially organic coffee, is very rare, so this research is expected to help organic coffee producers because one of the ways to develop agro-industry is that producers must know the consumers of organic coffee products as a target market. Based on this need, this study will examine the characteristics of organic coffee consumers. Several studies indicate that organic coffee consumers tend to come from highly educated, upper-middle-income groups, and have an awareness of health and environmental issues (Rahman & Putri, 2021). Based on this, a research study was conducted on the behavior of organic coffee consumers in Bandar Lampung City, which aims to make organic coffee products more accepted by the public and help improve health through organic products and support a sustainable agricultural system.

LITERATURE REVIEW

Green Product

Green Product refers to the use of resources with minimal impact and risk to the environment, but there is no absolute standard for green products (Mohd Suki & Mohd Suki, 2019). Green product is a corporate strategy that increases profitability and environmental issues (Ranjan & Jha, 2019). According to Wulandari & Miswanto, (2022) green products have four categories, namely: 1) Products do not contain harmful elements when used and do not damage the environment. 2) The production process does not use excessive energy. 3) Product packaging can be recycled. 4) Products are produced using technology that is environmentally friendly. Green products are believed to be harmless to human health, the environment, and the atmosphere. Consumers hold the belief that products produced by green products will be healthier and will always pay attention to environmental safety (Wulandari & Miswanto, 2022).

Organic Coffee

Organic coffee is coffee that is produced without the help of artificial chemicals, such as certain additives or some pesticides and herbicides. The stimulating agents found in organic coffee increase metabolism and result in rapid weight loss. Organic coffee is also high in antioxidants, minerals, and vitamins (Anhar et al., 2016). Consuming organic coffee daily can significantly reduce the risk of cancer and diabetes. Green coffee drink

is a drink with the basic ingredients of coffee beans that go through a very fast roasting process of approximately 5 minutes with a temperature of 800 C. Some people even process it without going through the roasting process first. As a drink, green coffee has a much lighter taste than coffee that goes through a long roasting process or commonly called black coffee (Freitas et al., 2024).

Consumer Characteristics

According to Suryadi et al. 2023, the characteristics of consumer behavior are all psychological activities that encourage action at the time before buying, when buying, using, spending products and services after doing the above or evaluating activities. According to Kotler and Kelle (2016) Consumer behavior explains how individuals, groups, and organizations choose, buy, use, and how goods, services, ideas, or experiences satisfy their needs and wants. According to Kotler and Armstrong (2016) there are four indicators that influence the characteristics of consumer behavior in the decision-making process to buy, namely product, price, promotion and place (distribution).

RESEARCH METHOD

This research was conducted in Bandar Lampung City, selected purposively based on its relatively high average level of coffee consumption compared to other regions in Lampung Province. The study took place from January to March 2025. The sampling technique employed was accidental sampling, involving 100 respondents who were encountered by chance and met the study's criteria.

Data for this research were obtained from both primary and secondary sources. Primary data were collected through an online questionnaire distributed via social media platforms and online communities of coffee enthusiasts. Secondary data were gathered from relevant literature, previous studies, and official publications supporting the research context.

A descriptive quantitative approach was applied, utilizing a survey method to systematically collect and analyze the data. The research instrument consisted of a structured questionnaire designed to capture the demographic and behavioral characteristics of organic coffee consumers.

The data analysis method employed was descriptive analysis, which serves to present and interpret data based on observed facts without making inferences or predictions. According to Patimah (2016), descriptive analysis provides a detailed overview of phenomena as they are, including existing societal problems, prevailing procedures, and specific situational conditions. In this study, descriptive analysis was used to identify and summarize the general characteristics of organic coffee consumers. The results are presented in the form of simple narratives and tabulated data, allowing for clear interpretation and meaningful insights into consumer profiles and behavior patterns.

RESULTS

Respondents in this study are organic coffee consumers, consumer characteristics are the characteristics of a consumer that are displayed through patterns of thinking, patterns of attitude, and patterns of action towards the environment. Consumer characteristics include knowledge and experience, consumer personality, and consumer demographic characteristics (Sumarwan 2004). Consumer characteristics in this study are seen from gender, age, marital status, income, latest education and occupation.

Table 1. Demographic Characteristics of Organic Coffee Consumers

Variables	Category	Frequency	Percentage
		(n)	(%)
Gender	Men	54	54
	Wome	46	46
Age	21 - 33	87	87
	34 - 46	12	12
	47 - 59	1	1
Marital status	Married	32	32
	Not married	68	68
Education level	HIGH SCHOO	13	13
	D3	24	24
	S1 / S2 / S3	63	63
Job	Student	17	17
	Entrepreneurship	16	16
	Private employee	41	41
	Public Servant (ASN)	18	18
	Housewife	8	8
Monthly Income	IDR 1,000,000 - IDR 3,000,000	25	25
	IDR 3,000,000 - IDR 6,000,000	34	34
	IDR 6,000,000 - IDR 9,000,000	37	37
	IDR 9,000,000 - IDR 12,000,000	1	1
	>Rp 12,000,000	3	3

Source: data processed 2025

DISCUSSION

Demographic Characteristics

Gender

The gender distribution of organic coffee consumers is presented in [Table 1](#). The data indicate that the majority of respondents are male, comprising 54 individuals (54%), while female respondents total 46 individuals (46%). These findings suggest a relatively balanced gender distribution, with a slight male predominance. According to [Armada \(2008\)](#), the habit of consuming coffee is associated with increased adrenaline levels, which may contribute to heightened alertness and improved physical performance. This may explain why men, who often engage in more physically demanding or high-energy activities, tend to consume coffee more frequently. Moreover, coffee consumption among men is often linked to social habits such as relaxing with peers, enhancing motivation, and fostering a productive work environment. In contrast, although women also consume coffee, their motivations may differ, often associated with lifestyle preferences, taste, and relaxation. Understanding the gender-based patterns of coffee consumption provides valuable insights into consumer behavior, which can inform targeted marketing strategies and the development of gender-sensitive promotional campaigns in the organic coffee industry.

Age

Respondents who consume organic coffee can be divided into three groups. The first group is respondents aged between 21 to 33 years old at 87 percent. The second group was 34 to 46 years old at 12 percent. The third group is respondents aged between 47 and 59 years, amounting to 1 percent (Table 1). Respondents who consume organic coffee are generally aged 21-33 years, this is because at that age the age group is mature so, pay attention to drinking patterns to maintain a healthy body. In this case, the age of consumers is very important because there are differences in the age of consumers, so consuming a product will be different. Age differences are influenced by differences in tastes or interests as well as differences in information and knowledge about organic coffee, people of productive age are more selective in choosing higher quality products for consumption. According to Sumarwan (2004), age affects consumer tastes in choosing the goods or services used. Consumers who have different ages will consume different products and services, differences in age can result in differences in tastes and preferences for brands. This research is in line with that conducted by Rachmaningtyas (2023) which shows that the majority of respondents of Baliem Blue Coffee organic coffee at Baliem Arabica Multipurpose Cooperative, Yogyakarta City are between the ages of 25-40 years, namely 22 people (50%).

Marital Status

According to the data presented in Table 1, consumer characteristics based on marital status reveal that 68% of organic coffee consumers are unmarried, while only 32% are married. This significant difference suggests that organic coffee is more appealing to younger individuals who are not yet burdened by family responsibilities. A plausible explanation for this pattern lies in the age distribution of respondents; most participants in this study fall within the early productive age range of 21 to 33 years, a demographic typically dominated by unmarried individuals. This age group is generally more receptive to emerging health trends, including the consumption of organic food and beverages. Furthermore, unmarried individuals tend to be more digitally engaged, frequently accessing social media and online platforms that promote organic and sustainable products. Unlike married consumers who often prioritize household and family-related expenses, unmarried consumers may allocate a larger portion of their income toward lifestyle and wellness choices. Additionally, they tend to have more discretionary time to explore various beverages and social venues such as cafes and coffee shops. This social and exploratory behavior contributes to a heightened interest in organic coffee, which is often perceived as both a healthier and more environmentally conscious alternative to conventional coffee. Consequently, marital status appears to be a meaningful factor in shaping organic coffee consumption patterns.

Education Level

The characteristics of respondents based on their level of education in this study are grouped into three groups based on their level of education. The division of this group is based on the last education completed by the respondent, which consists of: 1) HIGH SCHOOL; 2) D3; and 3) S1 / S2 / S3. Based on Table 1, it can be seen that respondents who buy organic coffee mostly have a final education of S1 / S2 / S3 with a percentage of 63 percent. Furthermore, followed by D3 by 24 percent and SMA by 13 percent. This shows that the majority of consumers of organic coffee products have a final education level of S1 / S2 / S3. These results show that the higher the education of a consumer, the more selective a person will be in choosing a product, so that the need for health is prioritized and influences consumer decisions. This is in line with research conducted by Berlianto (2015) in Malang City. In his research, the majority of organic spinach and organic tomato consumers have an undergraduate education, namely around 16 people (53.33%) for organic spinach consumers and 20 people (66.66%) for organic tomato consumers. Facts in the field, education greatly influences the mindset of each individual,

but environmental factors also support each individual in the process of purchasing organic coffee.

Jobs

A person's occupation significantly influences their purchasing decisions for goods and services (Simamora, 2003). Employment not only serves as a primary source of income for meeting daily needs but also acts as an indicator of an individual's socioeconomic status and level of welfare. Based on the data presented in Table 1, the majority of respondents are private employees (41%), followed by civil servants (ASN) at 18%, students at 17%, entrepreneurs at 16%, and housewives at 8%. The predominance of private-sector employees suggests that most consumers of Baliem Blue Coffee belong to the economically active segment, engaged in both formal and informal sectors. These individuals typically possess greater purchasing power, financial literacy, and exposure to health-related information. The findings align with research by Berlianto (2015) in Malang, which revealed that the majority of organic product consumers, including organic spinach and tomatoes, were also private employees. This trend highlights a strong correlation between employment type and health-conscious consumption behavior. Employed individuals, particularly those in the private sector, are generally more informed about the benefits of organic products and have the disposable income to support such purchasing choices. Their awareness and financial capacity contribute positively to the growing demand for organic coffee as a part of a healthy lifestyle.

Revenue

The income level of a person or each individual has a big influence on the purchase of a product as well as organic coffee because the price is more expensive than coffee in general. The greater a person's income level, a person tends to buy goods according to the quality of these goods. The amount of family income in this study is all income earned, both as a husband, wife and child who has worked and has an income that is used to shop for daily needs in family. Based on the research conducted, the amount of income owned by each respondent varies greatly. The level of consumer income will affect their choice in choosing a product that suits their income (Nafisah, 2013). Based on the results of data processing from questionnaires distributed to respondents, it was found that the monthly income of organic coffee consumers was IDR 6,000,000 - IDR 9,000,000 / month with a percentage of 37% or 37 respondents. This shows that the majority of respondents are at the upper middle income level with high income and have a good level of education, which can affect their perspective and behavior towards organic coffee.

Psychographic Characteristics and Consumption Behavior

Motivation for organic coffee consumption

Figure 1. Motivation for Organic Coffee Consumption

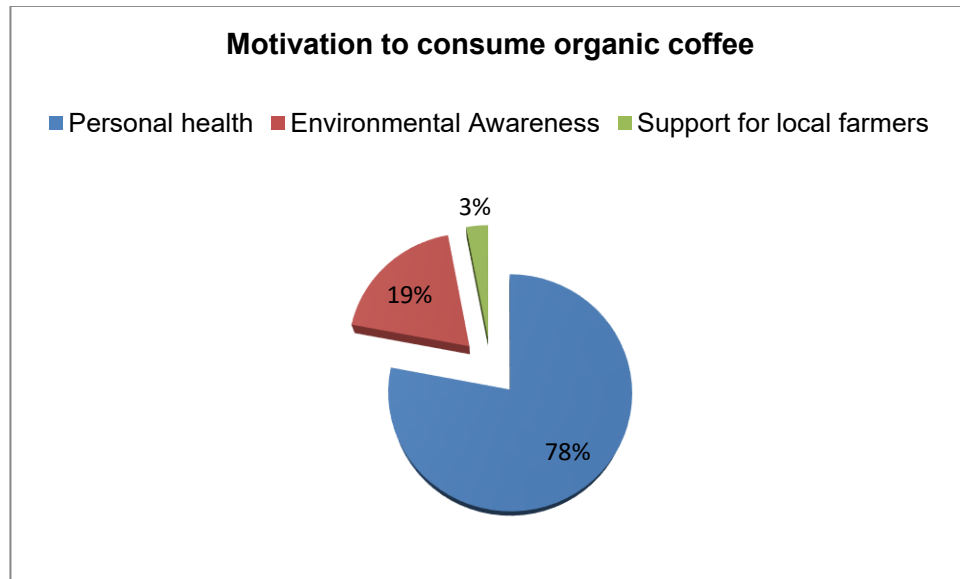
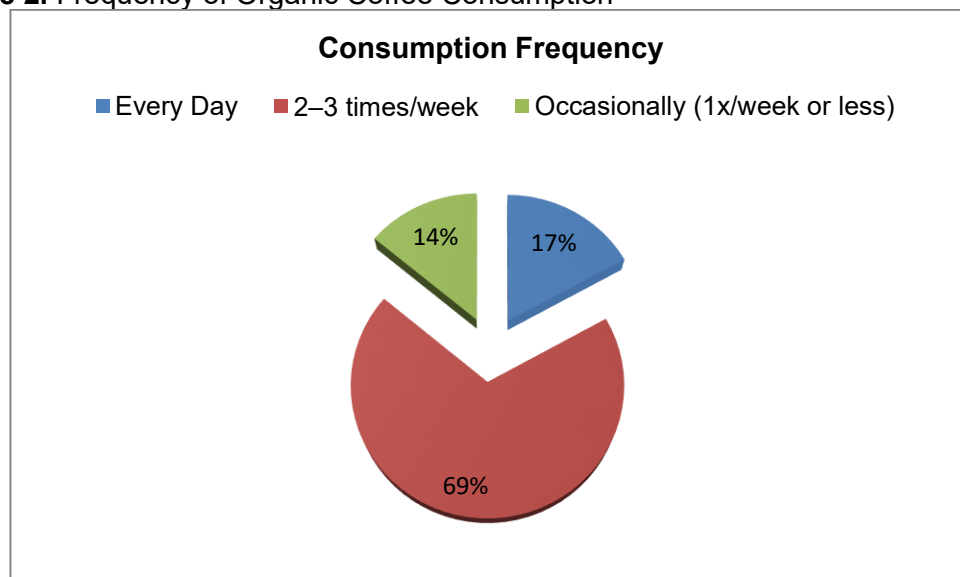


Figure 1 shows that consumers' main motivation in consuming organic coffee is personal health factors with a percentage of 78 percent, concern for the environment being the second highest motivation, chosen by 19 percent of respondents and support for local farmers being the third motivation with 49 percent. This indicates that most consumers consider organic coffee to be safer and healthier than conventional coffee. The main motivation related to personal health also shows that organic coffee is not only seen as a beverage product, but also as part of a healthy lifestyle. This research is in line with the results of research by Lee et al. (2015) which states that health motives have a significant positive influence on purchase intentions, especially among price-sensitive consumers. Likewise, research conducted by Maulida & Agustina (2022) states that 50 percent of respondents chose organic coffee for health reasons, 36 percent were influenced by relatives and 14 percent just tried it, thus showing that health is the main motivation in purchasing organic coffee in the Jember Regency area.

Frequency of Consumption

Figure 2. Frequency of Organic Coffee Consumption



The frequency of consumers consuming organic coffee is divided into three groups, namely first every day, second 2-3 times / week and third occasionally (1x / week or less). Figure 2 shows that the highest frequency of consumption is 69 percent of respondents consuming organic coffee 2-3 times per week, 17 percent of respondents consume organic coffee every day and 14 percent of respondents consume organic coffee occasionally (1x/week or less) so it appears that although organic coffee has a value that is viewed positively, there are still segments of consumers who have not made it their main choice regularly. This can be caused by several factors such as product price, availability, or preference for other products. This research in line with the results of Laos-Espinoza et al. (2024) who stated that consumers have positive intentions towards organic coffee mainly for health reasons, but their consumption intensity is also influenced by price, accessibility, and habits. , although they are willing to buy, the frequency is not always every day. The varying frequency of consumption indicates that the organic coffee market still has growth potential, especially among consumers who have not yet made it a regular consumption. The right educational and promotional approach can encourage an increase in consumption frequency.

Main source of information

Figure 3. Main sources of information

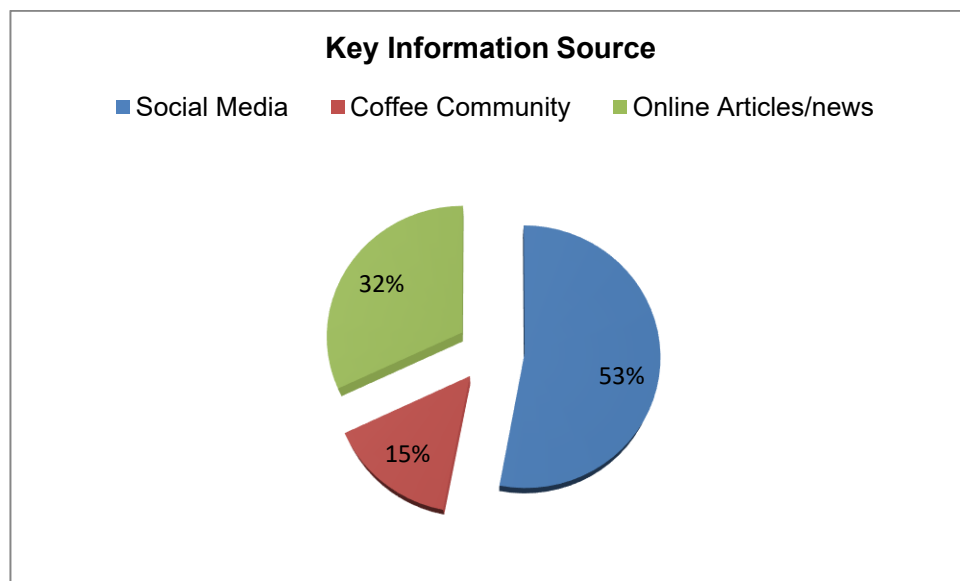


Figure 3 shows that the main source of information about organic coffee most accessed by consumers is social media with a percentage of 53 percent. Online articles or news are the second source of information at 32 percent and the last source is the coffee community at 15 percent. This shows that digital platforms, especially social media such as Instagram, Facebook, and TikTok, have a major influence in shaping consumer perceptions and knowledge of organic coffee products. This study is in line with the results of Andes and Sunaryanto's (2020) research which states that social media, such as Instagram, is the main source of information for consumers looking for organic products. This is because social media offers easy and quick access to a variety of information about organic products, their benefits, and their impact on the environment. Consumers also feel more comfortable and facilitated in accessing information and making purchases through social media

Key points of purchase

Figure 4. Place of purchase

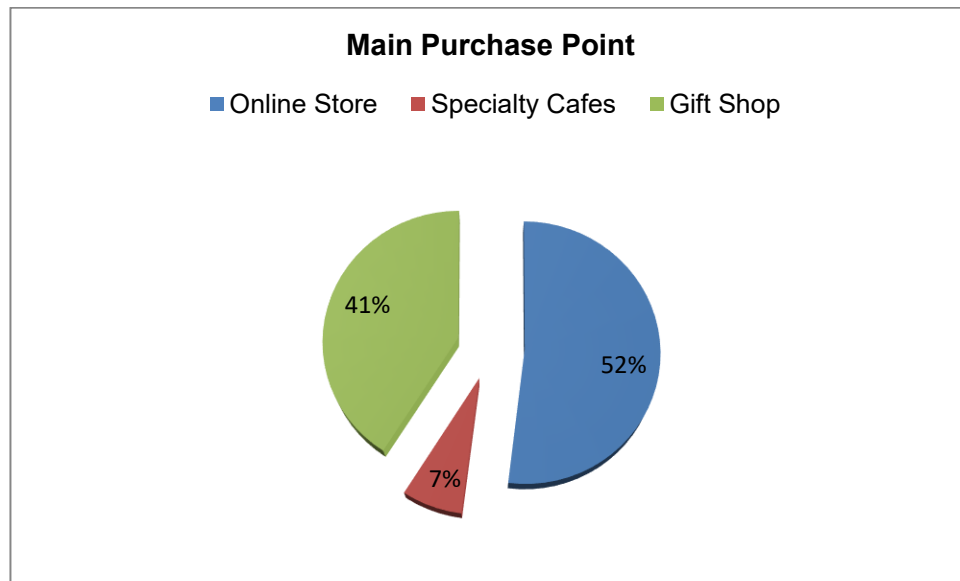


Figure 4. shows that online stores are the main distribution channel with a percentage of 52 percent. Furthermore, souvenir shops are the second most common place of purchase at 41 per cent and 7 per cent of consumers who buy at specialty cafes. This shows that organic coffee consumers tend to seek convenience and comfort in purchasing products, which is facilitated by e-commerce or marketplaces. This research is in line with the results of Andrilia (2022) which states that online stores are considered more practical and are a dominating factor because the many busy activities experienced by each consumer make them not have time to buy products directly.

CONCLUSION

This study examined the demographic and psychographic characteristics as well as consumption behavior of organic coffee consumers, particularly Baliem Blue Coffee. The findings provide valuable insights for marketers, producers, and stakeholders in the organic coffee industry.

From the demographic aspect, male consumers slightly dominated the sample (54%), suggesting that men, often driven by physical activity and social habits, consume more coffee than women. In terms of age, most respondents (87%) were 21–33 years old, a group highly receptive to health trends. The marital status data showed that 68% of consumers were unmarried, indicating more flexible spending and openness to lifestyle changes.

Educational attainment also played a role, with 63% of consumers holding undergraduate or postgraduate degrees, suggesting a strong link between education and health-oriented purchasing decisions. Regarding employment, private-sector employees dominated (41%), reflecting income stability and health awareness. The income level (mostly IDR 6–9 million per month) supports their ability to purchase premium products like organic coffee.

From the psychographic and behavioral side, the main motivation for consuming organic coffee was health (78 percent), followed by environmental concerns and support for local farmers. Most respondents (69 percent) consumed organic coffee 2–3 times per week, showing that while interest is high, regular consumption is still growing.

Social media was the leading information source (53 percent), highlighting the power of digital influence, while online stores (52 percent) were the preferred distribution channel, showing the importance of convenience and digital access.

In conclusion, organic coffee consumers are typically young, educated, unmarried individuals with stable income and health-conscious mindsets. Their purchasing behavior is shaped by digital exposure, health motivations, and convenience. These insights should inform marketing strategies aimed at strengthening digital engagement, health messaging, and expanding product accessibility across platforms.

ACKNOWLEDGMENT

The authors extend their sincere gratitude to Politeknik Negeri Lampung for the valuable support and facilities provided throughout the research process. Special appreciation is also directed to all respondents who willingly participated and completed the questionnaire, enabling the successful collection of essential data. The authors are equally thankful to colleagues and all individuals who contributed constructive feedback and assistance during the preparation of this article. Their contributions were instrumental in enhancing the quality of the research. It is hoped that the findings of this study will offer meaningful insights and contribute positively to the advancement of the organic coffee agroindustry in Indonesia.

DECLARATION OF CONFLICTING INTERESTS

The authors have declared no potential conflicts of interest concerning the study, authorship, and/or publication of this article.

REFERENCES

- Andes, R. J., & Sunaryanto, L. T. (2020). The role of sales promotion through Instagram on organic vegetable sales at PO. Sayur Organik Merbabu (SOM). *Journal of Agricultural Social Economics*, 16(1), 27–36.
- Andrilia, Y. R. (2022). *The effect of price and consumer trust on purchasing decisions for organic vegetables through the WhatsApp application at PT Agro Organik Indonesia, South Tangerang City* (Bachelor's thesis, UIN Syarif Hidayatullah Jakarta, Faculty of Science and Technology).
- Anhar, A., Rasyid, U. A., Muslih, A., Baihaqi., Romano, & Abubakar, Y. (2016). Sustainable Arabica coffee development strategies in Aceh, Indonesia. *The 2nd International Conference on Agriculture and Bio-Industry*. <https://doi.org/10.1088/1755-1315/667/1/012106>
- Armada. (2008). *Factors that influence the purchase of instant ground coffee* [Undergraduate thesis, IPB University]. *Journal No. VII*, IPB.
- Berlianto, B. (2015). *Analysis of factors affecting household consumer demand for organic tomatoes and spinach in Malang* [Undergraduate thesis, Universitas Brawijaya].
- Freitas, V. V., Borges, L. L. R., Vidigal, M. C. T. R., dos Santos, M. H., & Stringheta, P. C. (2024). Coffee: A comprehensive overview of origin, market, and the quality process. *Trends in Food Science & Technology*, 104411. <https://doi.org/10.1016/j.tifs.2024.104411>
- Kotler, P., & Armstrong, G. (2016). *Fundamentals of marketing* (Vol. 1, 9th ed.). Erlangga.
- Kotler, P., & Keller, K. L. (2016). *Marketing management* (12th ed.). Erlangga.
- Laos-Espinoza, J., Juaneda-Ayensa, E., García-Milon, A., & Olarte-Pascual, C. (2024). Why do you want an organic coffee? Self-care vs. world-care: A new SOR model

- approach to explain organic product purchase intentions of Spanish consumers. *Food Quality and Preference*, 118, 105203. <https://doi.org/10.1016/j.foodqual.2024.105203>
- Lee, K. H., Bonn, M. A., & Cho, M. (2015). Consumer motives for purchasing organic coffee: The moderating effects of ethical concern and price sensitivity. *International Journal of Contemporary Hospitality Management*, 27(6), 1157–1180. <https://doi.org/10.1108/IJCHM-02-2014-0074>
- Maulida, N. S., & Agustina, T. (2022). Analysis of consumer behavior of organic Robusta coffee products of Koperasi Serba Usaha (KSU) Buah Ketakasi in Jember Regency. *Mediagro*, 18(2).
- Mohd Suki, N., & Mohd Suki, N. (2019). Examination of peer influence as a moderator and predictor in explaining green purchase behavior in a developing country. *Journal of Cleaner Production*, 228, 833–844. <https://doi.org/10.1016/j.jclepro.2019.04.218>
- Nafisah. (2013). *Consumer perceptions and attitudes towards local oranges and imported oranges in Bagor City modern market* [Undergraduate thesis, Agricultural University].
- Patimah, S. (2016). *Analysis of the level of consumer satisfaction with the Cigeulis rice seed business at the Rice and Palawija Seed Center (BBIP) in Kepahiang Regency, Bengkulu Province* [Undergraduate thesis, Faculty of Agriculture, Universitas Bengkulu].
- Rachmaningtyas, L. (2023). Intention, Impact and Commitment in Geographical Indication of Origin: The Case of Kintamani Bali Arabica Coffee. <http://dx.doi.org/10.53846/goediss-9853>
- Rahman, F., & Putri, L. D. (2021). Analysis of organic coffee consumer behavior in Indonesia. *Indonesian Agribusiness Journal*, 9(1), 12–23. <https://doi.org/10.21082/agribisnis.v9n1.2021.12-23>
- Ranjan, A., & Jha, J. K. (2019). Pricing and coordination strategies of a dual-channel supply chain considering green quality and sales effort. *Journal of Cleaner Production*, 218, 409–424. <https://doi.org/10.1016/j.jclepro.2019.01.297>
- Simamora, B. (2003). *Winning the market with effective and profitable marketing*. Gramedia Pustaka Utama.
- Sumarwan, U. (2004). *Perilaku konsumen*. Ghalia Indonesia.
- Suryadi, N., Parwati, K. Y., Hakim, A., Firdausiah, R. A., & Fosieh, M. F. I. (2023). Exploring health consumer behavior during COVID-19: A bibliometric analysis. *Asia Pacific Journal of Management and Education*, 6(1), 46–58. <https://doi.org/10.32535/apjme.v6i1.2216>
- Wulandari, R., & Miswanto, M. (2022). Factors affecting green product purchasing decisions. *EKUITAS: Jurnal Ekonomi dan Keuangan*, 6(2), 224–242. <https://doi.org/10.24034/j25485024.y2022.v6.i2.5139>

ABOUT THE AUTHOR(S)

1st Author

Adi Hariyanto is a Master's Program student in Applied Food Security at the Politeknik Negeri Lampung, Indonesia.

2nd Author

Irmayani Noer is lecturer of the Master's Program in Applied Food Security at the Politeknik Negeri Lampung, Indonesia. His ORCID ID is <https://orcid.org/0000-0002-4509-7999>. He can be contacted by email: Irmayani_noer@polinela.ac.id.

3rd Author

Hennry Kurniawan is lecturer of the Master's Program in Applied Food Security at the Politeknik Negeri Lampung, Indonesia.

4th Author

Analianasari is lecturer of the Master's Program in Applied Food Security at the Politeknik Negeri Lampung, Indonesia.