



The Effect of Green Marketing on Purchase Intention and Actual Purchase Behavior of Organic Rice Products

Taufiq Hidayat ^a, Sri Rahayu Tri Astuti ^b Panji Mulya Rahman ^c Elsa Atika Archenia ^c

^aIndustrial Management, Politeknik Bisnis LPP Quantum, Sampit, Indonesia; ^bDepartement of Management, Diponegoro University, Semarang, Indonesia; ^cStudent of Industrial Managemet, Politeknik Bisnis LPP Quantum, Sampit, Indonesia

ABSTRACT

The growing global awareness of environmental sustainability has encouraged agribusiness actors to adopt green marketing strategies, particularly in promoting organic rice products. This study aims to analyze the effect of green marketing on purchase intention and its subsequent influence on actual purchase behavior among organic rice consumers in Semarang, Indonesia. Quantitative explanatory survey approach was employed using purposive sampling with 150 respondents who had purchased or were familiar with organic rice products. Data were analyzed using Partial Least Squares-Structural Equation Modeling (PLS-SEM) with SmartPLS. The results indicate that all constructs meet the criteria for validity and reliability, with outer loadings above 0.70, composite reliability above 0.70, and AVE above 0.50. Structural model testing reveals that green marketing has a positive and significant effect on purchase intention ($\beta = 0.170$; $p = 0.045$), while purchase intention significantly influences actual purchase behavior ($\beta = 0.407$; $p < 0.001$). The model explains 2.9% of the variance in purchase intention and 16.6% of the variance in actual purchase behavior, indicating that green marketing contributes to intention formation but should be complemented by other factors such as price, availability, trust, and product knowledge. Practically, organic rice marketers should strengthen credible environmental claims, certification information, accessible distribution, and visual social media communication to increase intention and convert it into actual purchases. This study contributes to green marketing literature in staple food agribusiness by linking marketing communication, intention, and actual buying behavior in an emerging organic rice market

ARTICLE HISTORY

Received March 20, 2024

Revised April 29, 2024

Accepted May 10, 2024

Available online May 31, 2024

KEYWORDS

Green Marketing,
Purchase Intention,
Actual Purchase,
Organic Rice

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent

INTRODUCTION

The increasing global awareness of environmental issues has driven changes in food production and consumption patterns towards more sustainable systems (FAO, 2023; Irfan & Bryła, 2025). The agribusiness sector, particularly in staple food commodities, faces pressure to meet food demand while also considering the ecological impact of production, distribution, and consumption processes (FAO, 2023; Zidan et al., 2025). This trend is increasingly evident in developing countries, where urbanization, health awareness, environmental concern, and trust in food claims influence consumer preferences toward healthier and environmentally friendly food products (Bazhan et al., 2024; Al Falah et al., 2024). One agribusiness product experiencing this shift in preference is organic rice, which is associated with production practices that reduce the use of synthetic chemical inputs and support more sustainable food consumption (Willer et al., 2023; Irfan & Bryła, 2025).

As a major staple food commodity, rice plays a strategic role in the national food security system (FAO, 2022). However, the growing attention to health and sustainability issues has led to the emergence of a new market segment that is more selective about the food products they consume (Bazhan et al., 2024; Garg et al., 2024b). Recent studies show that consumers increasingly consider food safety, nutritional value, environmental concern, convenience, and trust when evaluating organic food products (Al Falah et al., 2024; Li & Shan, 2025). This phenomenon opens opportunities for the development of the organic rice market, although price premiums, limited availability, and uncertainty regarding organic claims remain important barriers to expanding market share (Garg et al., 2024a; Zidan et al., 2025).

Semarang, as the economic and trade center in Central Java, has a dynamic and heterogeneous market (Badan Pusat Statistik [BPS], 2023). The growth of modern retail and the development of digital commerce platforms have driven the diversification of food products available to consumers (Nielsen, 2022; Euromonitor International, 2023). This situation creates opportunities for organic rice products to enter a broader market, particularly among urban consumers with relatively higher health awareness, environmental concern, and access to digital marketing information (Al Falah et al., 2024; Bazhan et al., 2024). Additionally, recent organic food studies in developing-country contexts indicate that lifestyle changes, health consciousness, consumer trust, and product accessibility can shape the demand for organic food products (Kamboj et al., 2023; Garg et al., 2024b).

Data from the Central Statistics Agency (BPS) show that household expenditures on high-quality and healthy food products have tended to increase in recent years (BPS, 2023). On the other hand, FAO reports emphasize the importance of developing sustainable food systems as part of the global strategy to maintain food security and environmental sustainability (FAO, 2023). This reinforces the urgency of research related to the marketing of sustainable food products, including organic rice (Irfan & Bryła, 2025; Zidan et al., 2025).

Green marketing has become a relevant strategic approach for communicating product sustainability values to consumers (García-Salirrosas & Rondon-Eusebio,

2022; Irfan & Bryła, 2025). Effective green marketing can strengthen consumers' positive perceptions, build green brand trust, and encourage purchase intention toward environmentally friendly products (Tan et al., 2022; Hengboriboon et al., 2022). Recent reviews also show that green marketing research in sustainable food is developing rapidly, but still requires stronger empirical evidence across specific food categories, cultural contexts, and purchasing behavior outcomes (Irfan & Bryła, 2025; Aldaihani et al., 2024).

However, the success of green marketing is also influenced by consumers' psychological characteristics, such as environmental concern, health consciousness, perceived value, and trust in environmental claims (Al Falah et al., 2024; Li & Shan, 2025). Environmental concern is an important factor that can strengthen consumers' evaluation of organic food products and shape their purchase intention, particularly when marketing communication is perceived as credible and informative (Bazhan et al., 2024; Garg et al., 2024b).

Although the potential market for organic rice is substantial, its market penetration remains relatively limited (Willer et al., 2023). One of the reasons for this is the lack of consumer understanding regarding the benefits of organic rice and the low level of trust in environmental and organic claims (Al Falah et al., 2024; Li & Shan, 2025). In addition, recent literature continues to highlight the gap between consumers' favorable evaluations of sustainable or organic food and their actual purchasing behavior, especially when price, accessibility, and trust barriers are present (Irfan & Bryła, 2025; Zidan et al., 2025). This phenomenon indicates the need for a deeper understanding of the factors influencing consumers' purchasing decisions regarding organic rice products.

Although previous studies have examined green marketing, organic food purchase intention, and green consumption behavior, several gaps remain. First, recent reviews indicate that many green marketing studies still focus on general green products or broad sustainable food categories rather than staple food products such as organic rice (García-Salirrosas & Rondon-Eusebio, 2022; Irfan & Bryła, 2025). Second, prior studies often emphasize purchase intention, while fewer studies connect green marketing, intention, and actual purchase behavior in a single empirical model (Dinc-Cavlak & Ozdemir, 2024; Kamboj et al., 2023). Third, empirical evidence from urban consumers in developing-country contexts remains important because price sensitivity, product availability, certification trust, and limited knowledge often constrain organic food purchasing behavior (Garg et al., 2024a; Zidan et al., 2025).

Organic rice was selected as the research object because rice is a staple food commodity in Indonesia, while the organic rice market represents the intersection between food security, health consciousness, and environmental sustainability (FAO, 2022; Willer et al., 2023). By focusing on organic rice consumers in Semarang, this study offers a specific contribution to green marketing literature by examining whether sustainability-oriented marketing communication can shape purchase intention and whether such intention is translated into actual purchase behavior in a local urban agribusiness market. Accordingly, the conceptual framework positions Green Marketing as the exogenous construct influencing Purchase Intention, and

Purchase Intention as the antecedent of Actual Purchase Behavior. This framework is consistent with the Theory of Planned Behavior, which explains that intention is a central predictor of actual behavior (Ajzen, 1991), and is also consistent with recent organic food research using intention-based behavioral models (Dinc-Cavlak & Ozdemir, 2024; Bazhan et al., 2024).

RESEARCH METHOD

This Graduate employability has become a central concern in higher education as institutions seek to prepare students for an evolving labor market. This article reviews the concept of graduate employability, presents its key definitions, and discusses the major perspectives that influence employability research and practice, highlighting the importance of both technical competencies and transferable skills in enhancing graduates' career prospects. [Tahoma, 10pt, normal, 1.15 spacing, justify].

Indonesia and its graduate employability agenda [Heading 3]

Indonesia has placed graduate employability as a strategic priority in strengthening the quality and competitiveness of its higher education system. Through curriculum reforms, industry partnerships, work-integrated learning, and initiatives such as the Merdeka Belajar–Kampus Merdeka (MBKM) program, universities are encouraged to equip graduates with relevant knowledge, practical skills, and professional competencies that meet the evolving demands of the labor market. This agenda reflects the country's commitment to developing a highly skilled workforce capable of supporting sustainable economic growth and global competitiveness. [Tahoma, 10pt, normal, 1.15 spacing, justify].

Indonesia and its graduate employability agenda [Heading 4]

Indonesia has placed graduate employability as a strategic priority in strengthening the quality and competitiveness of its higher education system. Through curriculum reforms, industry partnerships, work-integrated learning, and initiatives such as the Merdeka Belajar–Kampus Merdeka (MBKM) program, universities are encouraged to equip graduates with relevant knowledge, practical skills, and professional competencies that meet the evolving demands of the labor market. This agenda reflects the country's commitment to developing a highly skilled workforce capable of supporting sustainable economic growth and global competitiveness. [Tahoma, 10pt, normal, 1.15 spacing, justify].

THEORETICAL FRAMEWORKS [Heading 1]

Theoretical frameworks provide the conceptual foundation for understanding graduate employability by explaining the relationships between education, skills development, individual capabilities, and labor market outcomes. Various theories, including Human Capital Theory, Employability Theory, Career Development Theory, Social Capital Theory, and the Capability Approach, offer different perspectives on how graduates acquire and apply the competencies required for successful

employment. These frameworks help researchers and policymakers analyze the factors influencing employability and design strategies to enhance graduates' readiness for an increasingly dynamic and competitive workforce. [Tahoma, 10pt, normal, 1.15 spacing, justify].

METHOD

Participants

The participants in this study consisted of **250 undergraduate students** from several public and private universities in Indonesia. Participants were selected using a **convenience sampling** technique because of their accessibility and willingness to participate in the study. Eligibility criteria included being actively enrolled as an undergraduate student and providing informed consent before completing the questionnaire.

The sample comprised **102 male students (40.8%)** and **148 female students (59.2%)**, with ages ranging from **18 to 24 years** ($M = 20.7$, $SD = 1.42$). Participants represented various academic disciplines, including business, engineering, education, agriculture, social sciences, and information technology. Most respondents were in their third and fourth years of study, making them appropriate participants for research related to graduate employability.

Participation was voluntary, and respondents were informed about the purpose of the study, the confidentiality of their responses, and their right to withdraw at any time without any consequences. All collected data were anonymized and used solely for academic research purposes. [Tahoma, 10pt, normal, 1.15 spacing, justify].

Table 1. Demographic Characteristics of Participants (N = 250)

Characteristic	Category	Frequency (n)	Percentage (%)
Gender	Male	102	40.8
	Female	148	59.2
Age	18–19 years	58	23.2
	20–21 years	121	48.4
	22–24 years	71	28.4
Year of Study	First year	35	14.0
	Second year	61	24.4
	Third year	82	32.8
	Fourth year or above	72	28.8
Field of Study	Business & Economics	52	20.8
	Engineering	45	18.0
	Agriculture	41	16.4
	Education	39	15.6
	Social Sciences	38	15.2
	Information Technology	35	14.0
Internship Experience	Yes	157	62.8
	No	93	37.2

Data collection and analysis

Describe how the research data were collected, including the data collection period, method (e.g., online survey, face-to-face questionnaire, interview, or observation), sampling procedure, and ethical considerations such as informed consent and confidentiality.

Explain the research instrument used, including the number of sections, variables measured, scale of measurement (e.g., a five-point Likert scale), and the sources or references from which the instrument was adapted or developed.

Describe the procedures used to prepare the data before analysis, such as data screening, handling of missing values, and identification of outliers.

Finally, explain the statistical techniques used to analyze the data. Specify the software employed (e.g., SPSS, AMOS, SmartPLS, R, or STATA), the descriptive and inferential analyses conducted, the reliability and validity tests performed, and the statistical criteria used to evaluate the research hypotheses. [Tahoma, 10pt, normal, 1.15 spacing, justify].

Instrument development and interview protocol

Describe the process of developing the research instrument, including the theoretical framework, literature, or previously validated instruments used as the basis for item development or adaptation. Explain the procedures undertaken to assess the content validity, clarity, and reliability of the instrument, such as expert review, pilot testing, or instrument revision.

If the study includes interviews, describe the interview protocol in detail. Explain the type of interview conducted (e.g., structured, semi-structured, or unstructured), the development of the interview guide, the criteria for participant selection, the interview procedures, duration, mode of administration (e.g., face-to-face or online), and the methods used to record, transcribe, and verify the interview data. If interviews were not part of the study, modify this section to describe only the instrument development process. [Tahoma, 10pt, normal, 1.15 spacing, justify].

FINDINGS

Present the main findings of the study in a logical and systematic manner. Begin with the descriptive results, including participant characteristics and summary statistics of the study variables, where appropriate. Continue by reporting the results of the reliability and validity assessments, followed by the outcomes of the hypothesis testing or other statistical analyses.

Use tables and figures to summarize key results, ensuring that each table or figure is clearly labeled and referenced in the text. Report statistical values (e.g., means, standard deviations, correlation coefficients, regression coefficients, factor loadings, p-values, confidence intervals, or effect sizes) according to the analytical method employed.

This section should present the findings objectively without extensive interpretation. The meaning, implications, and comparison with previous studies should be discussed in the **Discussion** section. [Tahoma, 10pt, normal, 1.15 spacing, justify].

Overview of the contributions of six capitals

Provide an overview of the findings related to the contribution of the six capitals examined in the study. Summarize the role and relative importance of each capital in influencing the research outcomes, supported by descriptive statistics, comparative analyses, or model estimates, as appropriate. Present the results in a logical sequence and refer to relevant tables or figures where necessary.

Highlight the key patterns, similarities, and differences among the six capitals without providing extensive interpretation. If applicable, indicate which capital demonstrates the strongest or weakest contribution based on the statistical or qualitative evidence. Detailed interpretation of these findings and their implications should be reserved for the **Discussion** section. [Tahoma, 10pt, normal, 1.15 spacing, justify].

Table 2. Overview of the Contributions of the Six Capitals to Graduate Employability

Capital	Mean	SD	Standardized Coefficient (β)	t- value	p- value	Contribution Level
Human	4.35	0.51	0.382	7.85	< .001	Very High

Contributions of six employability capitals to graduates' employability in detail

Present a detailed analysis of the contribution of each employability capital to graduates' employability. Report the statistical results or qualitative evidence for each capital separately, including its magnitude, direction, and level of significance. Explain how each capital influences employability by referring to the relevant indicators or dimensions measured in the study.

Where appropriate, compare the relative strength of the six capitals and identify which capital has the greatest and least influence on graduates' employability. Support the findings with tables or figures and present the results objectively without extensive interpretation. The implications of these findings and their relationship to previous studies should be discussed in the **Discussion** section. [Tahoma, 10pt, normal, 1.15 spacing, justify].

Table 3. Self-perceived contributions of human capital.

Self-perceived contributions of human capital	M	SD
Self-perceived contributions of human capital	4.226	0.707
• My expertise and professional skills are in demand by employers.	4.378	0.547
• My degree helps me obtain a specific career that is generally perceived as highly desirable.	4.163	0.893
• My professional skills (e.g., communication, leadership, problem-solving, and time management) have been important to my employment attainment and career success.	4.735	0.466
• My work experience is highly appreciated by employers.	3.888	0.907
• My degree(s) is/are significant to my employment success(es).	3.827	0.942
• I have the ability to acquire new knowledge, skills, and relevant work experience to deal with challenges in my career.	4.367	0.485

Table 3 shows that respondents perceived **human capital** as making a high contribution to their employability ($M = 4.226$, $SD = 0.707$). Among the indicators, professional skills received the highest mean score ($M = 4.735$), while the perceived significance of the degree to employment success received the lowest mean score ($M = 3.827$). [Tahoma, 9pt, normal, 1.15 spacing, justify].

DISCUSSION

Interpret the main findings of the study by explaining how they address the research objectives and answer the research questions. Compare the findings with previous studies and relevant theoretical frameworks, highlighting similarities, differences, and possible explanations for the results.

Discuss the practical and theoretical implications of the findings, particularly their contribution to the existing body of knowledge and their relevance for policymakers, higher education institutions, employers, or other stakeholders.

Explain how the findings may inform future practices, policies, or interventions related to graduate employability.

Acknowledge the limitations of the study, such as sample characteristics, research design, measurement constraints, or contextual factors, and explain how these limitations may affect the interpretation or generalizability of the findings. Finally, provide recommendations for future research to address these limitations and further develop the field of study. [Tahoma, 10pt, normal, 1.15 spacing, justify].

CONCLUSION

Summarize the principal findings of the study by clearly stating how the research objectives were achieved and how the results answer the research questions. Highlight the most important findings without repeating the detailed results presented in the Findings or Discussion sections.

Explain the theoretical contribution of the study by describing how the findings support, extend, or challenge existing theories and previous research on graduate employability. Emphasize the originality or added value of the study in advancing knowledge within the field.

Discuss the practical implications of the findings for key stakeholders, including higher education institutions, policymakers, employers, students, and industry partners. Explain how the results can be used to improve educational policies, curriculum design, career development programs, industry collaboration, and graduate employability initiatives.

Acknowledge the limitations of the study, such as the research design, sample size, geographical coverage, measurement approach, or contextual factors that may influence the interpretation and generalizability of the findings.

Conclude by providing recommendations for future research. Suggest opportunities to examine additional employability capitals or other influencing factors, apply different methodological approaches, compare findings across countries or institutions, or conduct longitudinal studies to better understand the development of graduate employability over time. [Tahoma, 10pt, normal, 1.15 spacing, justify].

DISCLOSURE STATEMENT

No potential conflict of interest was reported by the author(s).

FUNDING

The work was supported by the Universitas Negeri Surabaya.

ORCID

First Author  <http://orcid.org/xxxx-xxxx-xxxx-xxxx>

Second Author  <http://orcid.org/xxxx-xxxx-xxxx-xxxx>

Third Author  <http://orcid.org/xxxx-xxxx-xxxx-xxxx>

REFERENCES

- Bandura, A. (1997). *Self-efficacy: The exercise of control*. W. H. Freeman.
- Becker, G. S. (1993). *Human capital: A theoretical and empirical analysis, with special reference to education* (3rd ed.). University of Chicago Press.
- Bridgstock, R. (2009). The graduate attributes we've overlooked: Enhancing graduate employability through career management skills. *Higher Education Research & Development*, 28(1), 31–44. <https://doi.org/10.1080/07294360802444347>
- Clarke, M. (2018). Rethinking graduate employability: The role of capital, individual attributes and context. *Studies in Higher Education*, 43(11), 1923–1937. <https://doi.org/10.1080/03075079.2017.1294152>
- Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94, S95–S120. <https://doi.org/10.1086/228943>
- Côté, J. E. (1996). Sociological perspectives on identity formation: The culture-identity link and identity capital. *Journal of Adolescence*, 19(5), 417–428. <https://doi.org/10.1006/jado.1996.0040>
- Donald, W. E., Ashleigh, M. J., & Baruch, Y. (2018). Students' perceptions of education and employability: Facilitating career transition from higher education into the labor market. *Career Development International*, 23(5), 513–540. <https://doi.org/10.1108/CDI-09-2017-0171>
- Fugate, M., Kinicki, A. J., & Ashforth, B. E. (2004). Employability: A psycho-social construct, its dimensions, and applications. *Journal of Vocational Behavior*, 65(1), 14–38. <https://doi.org/10.1016/j.jvb.2003.10.005>
- Luthans, F., Youssef-Morgan, C. M., & Avolio, B. J. (2015). *Psychological capital and beyond*. Oxford University Press.
- Pool, L. D., & Sewell, P. (2007). The key to employability: Developing a practical model of graduate employability. *Education + Training*, 49(4), 277–289. <https://doi.org/10.1108/00400910710754435>
- Rothwell, A., Herbert, I., & Rothwell, F. (2008). Self-perceived employability: Construction and initial validation of a scale for university students. *Journal of Vocational Behavior*, 73(1), 1–12. <https://doi.org/10.1016/j.jvb.2007.12.001>
- Tomlinson, M. (2017). Forms of graduate capital and their relationship to graduate employability. *Education + Training*, 59(4), 338–352. <https://doi.org/10.1108/ET-05-2016-0090>
- Tomlinson, M. (2017). Introduction: Graduate employability in context. In M. Tomlinson & L. Holmes (Eds.), *Graduate employability in context: Theory, research and debate* (pp. 1–40). Palgrave Macmillan.
- Yorke, M. (2006). *Employability in higher education: What it is – What it is not*. Higher Education Academy.