

ANALYSIS OF CONSUMER CHARACTERISTICS IN ONLINE FRUIT AND VEGETABLE PURCHASES IN THE DIGITAL ERA

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ABSTRACT

The digital era provides various conveniences for society. Technological developments have touched various fields including the business sector and become an important part of business sustainability. One of the strategic steps taken by business actors is to conduct online sales. The agricultural sector is one sector that has been significantly impacted by technological advances. Fruit and vegetable products are one type of product offered through online shops. The purpose of this study is to determine the characteristics of consumers who purchase fruit and vegetable products online. The results of the analysis of consumer characteristics in purchasing fruit and vegetables online in the digital era are dominated by female consumers by gender as much as 63%. Consumers in purchasing fruit and vegetable products online by age are dominated by 20 to 30 years old as much as 53%. Consumers in purchasing fruit and vegetable products online are dominated by high school education levels as much as 57%. Consumers in purchasing fruit and vegetable products online by type of work vary, with a dominance of housewives, students and others as much as 49%. The characteristics of consumers in purchasing fruit and vegetable products online based on monthly income from the research results are dominated by those with incomes of less than Rp. 1,000,000,- as much as 34%.

KEYWORDS

Consumers, Fruit and Vegetable Products, Online Shop



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INTRODUCTION

The digital era offers various conveniences for society. Technological developments have touched various fields, including business, and have become a vital part of business sustainability (Younus *et al*, 2023). The presence of technology in people's lives has brought about changes in people's lifestyles, making them increasingly modern and

practical. The internet penetration rate in Indonesia has increased by 79.5%, resulting in 221,563,479 internet-connected residents (Kementerian Komunikasi dan Informasi Republik Indonesia, 2024). One strategic step for business actors is to conduct online sales. The agricultural sector is one sector that has been significantly impacted by technological advances.

Horticultural crops are a type of plant that contributes to the development of the agricultural sector. Agricultural products have the potential to be marketed online, including horticultural commodities, namely fruit and vegetables. The average Indonesian person consumes 81.14 grams of fruit per capita per day, or 54.09% of the minimum nutritional adequacy limit set by the World Health Organization (WHO) (Kementerian Koordinator Bidang perekonomian Republik Indonesia, 2022). In Indonesia, fruit crop production in 2022 reached 27,712,183 tons (Badan Pusat Statistik, 2023). Increasing population growth in Indonesia and increasing public awareness of the importance of nutritional value through healthy eating have made vegetables one of the most sought-after commodities (Setiadi & Muhammad, 2020).

The presence of online markets can help entrepreneurs market their products, while also making it easier for consumers to meet their needs by conducting online transactions. People have become accustomed to online shopping because of its convenience (Frahianti *et al*, 2024). Online shops make it easier for consumers to shop without wasting time and provide convenience (Masturoh *et al*, 2023). Online shopping increasingly requires consumers to see a wider selection of products offered through e-commerce or online shop websites. E-commerce is a trade or business process that involves transactions of goods and services using electronic media (Raharja & Evi, 2022). Fruit and vegetable products are one type of product offered through online shops. Consumers will search for relevant information related to various product preferences to be purchased, conduct evaluations and make choices. The purpose of this study is to determine the characteristics of consumers who purchase fruit and vegetable products online.

RESEARCH METHOD

The types of data used in this study are primary and secondary data. Primary data were obtained by respondents completing questionnaires. Secondary data were obtained from books and previous research journals. The population in this study was all consumers who purchased fruit and vegetable products online. The sample in this study was consumers who purchased fruit and vegetable products online. The sampling technique used was non-probability sampling, considering that the sample taken was the most appropriate and considered to be representative of the population. The population in this study was not precisely known, so the sample size was calculated using the Unknown Population formula and obtained a sample of 100 consumers as the research sample. The basic method used in this study was descriptive analysis obtained from table analysis. The data used was a questionnaire from interviews with consumer respondents. The data that has been obtained was transformed into a table for easier understanding and analysis.

RESULT AND DISCUSSION

The development of digital technology has driven significant changes in consumer consumption patterns, including the purchase of fresh produce such as fruit and vegetables. Online shopping has become an increasingly popular alternative for consumers who prioritize ease, speed, and convenience in shopping. This change has given rise to the need to understand the characteristics of consumers who choose to buy fruit and vegetables

online and the factors behind their purchasing decisions. This knowledge is crucial for businesses and digital platform developers to develop more targeted marketing strategies and increase consumer satisfaction and loyalty. Respondents in this study were consumers who purchased fruit and vegetables online. Based on the research results, these consumer characteristics were grouped by gender, age, education level, occupation, and monthly income. Consumer characteristics in purchasing fruit and vegetables online by gender are presented in Table 1.

Table 1. Consumer Characteristics in Purchasing Fruit and Vegetables Online by Gender

Gender	Amount	Percentage (%)
Female	63	63
Male	37	37
Total	100	100

Source: Primary Data Analysis (2025)

Based on research results, consumers who purchase fruit and vegetables online are dominated by women, at 63%. In the current digital consumption landscape, women play a central role as primary decision-makers in purchasing household products, including fruits and vegetables online. This role not only reflects the traditional responsibilities still inherent in managing the kitchen and family health, but also demonstrates rapid adaptation to technology and digital platforms. Women as consumers tend to be more thorough, considering the quality, freshness, and hygiene aspects of the products they purchase, especially for daily consumption needs. This aligns with Chairani's (2020) research that women play a role in care work within the family environment and are key to maintaining the health of family members.

Consumer characteristics in purchasing fruit and vegetable products online based on age are presented in Table 2.

Table 2. Consumer Characteristics in Purchasing Fruit and Vegetables Online by Age

Age (Year)	Amount	Percentage (%)
< 20	17	17
20-30	53	53
30-40	12	12
40-50	13	13
>50	5	5
Total	100	100

Source: Primary Data Analysis (2025)

Age is a respondent's identity that can describe their experiences, resulting in diverse behaviors based on their age. The study results show that consumer characteristics in purchasing fruit and vegetable products online based on age are dominated by those aged 20 to 30 years, at 53%. The 20 to 30 age group is now the most dominant consumer segment in purchasing fruit and vegetables online. This generation grew up amidst the development of digital technology and has a natural affinity for various online shopping platforms. Fast-paced lifestyles, busy activities, and increasing awareness of the importance of a healthy diet encourage the search for practical solutions to meet daily needs, including consuming fresh food. Shopping for fruit and vegetables online is not only a matter of convenience, but also part of a modern lifestyle that prioritizes time efficiency without sacrificing quality. At a productive age, a person will generally have good abilities in thinking, making decisions, and also acting.

Consumer characteristics in purchasing fruit and vegetable products online based on education level are presented in Table 3.

Table 3. Consumer Characteristics in Purchasing Fruit and Vegetables Online by Education Level

Education Level	Amount	Percentage (%)
High school graduates	57	57
Undergraduate (S1)	23	23
Master Degree (S2)	16	16
Doctoral Degree (S3)	4	4
Total	100	100

Source: Primary Data Analysis (2025)

Research data shows that consumers purchasing fruit and vegetables online are predominantly high school graduates (57%). The remaining 43% have undergraduate, master's, and doctoral degrees. This reflects the ease of access to technology and increased digital literacy that has reached a broad cross-section of society, not limited to higher education. This group generally possesses sufficient practical skills to utilize online shopping applications, while demonstrating sensitivity to the need for healthy and convenient food amidst dynamic daily activities. Consumers tend to be responsive to price promotions, safe and fast delivery services, and simple application features. This phenomenon demonstrates that the digital transformation in fresh food consumption has become part of the daily lives of various groups, including consumers with secondary education.

Consumer characteristics in purchasing fruit and vegetable products online based on type of work are presented in Table 4.

Table 4. Consumer Characteristics in Purchasing Fruit and Vegetables Online by Type of Work

Typo of Work	Amount	Percentage (%)
Civil Servants	9	9
Private Sector Employees	19	19
Entrepreneurs	17	17
TNI/POLRI	6	6
Others	49	49
Total	100	100

Source: Primary Data Analysis (2025)

Based on research data, consumers purchasing fruit and vegetables online vary by occupation, with housewives, students, and others dominating the market at 49%. Furthermore, consumers include private sector employees, entrepreneurs, civil servants, and members of the Indonesian National Armed Forces (TNI) and the Indonesian National Police (Polri). This diverse range of consumer occupations demonstrates that the digital transformation era has impacted all levels of society, making it easier to shop online, including for fruit and vegetables.

Consumer characteristics in purchasing fruit and vegetable products online based on monthly income are presented in Table 5.

Table 5. Consumer Characteristics in Purchasing Fruit and Vegetables Online by Monthly Income

Monthly Income (Rp.)	Amount	Percentage (%)
<1.000.000	34	34
1.000.000-2.500.000	20	20
2.500.000-5.000.000	17	17
5.000.000-10.000.000	16	16
>10.000.000	13	13
Total	100	100

Source: Primary Data Analysis (2025)

Income is the total income received by workers, laborers, and households, both physical and non-physical, while working for a company (Mappigau, 2023). The characteristics of consumers purchasing fruit and vegetables online, based on monthly income, are dominated by those with incomes of less than IDR 1,000,000, at 34%. Despite limited income, this group demonstrates that the need for healthy and fresh food remains a priority, reflecting trust in digital platforms as an efficient and affordable shopping tool. Consumers can take advantage of promotions, discounts, and free shipping services as a strategy to manage expenses without sacrificing quality. This confirms that the digitalization of fresh food services is no longer the exclusive domain of the upper middle class, but has reached a wider community with diverse economic conditions.

CONCLUSION

The results of the analysis of consumer characteristics in purchasing fruit and vegetables online in the digital era are dominated by female consumers by gender as much as 63%. Consumers in purchasing fruit and vegetable products online by age are dominated by 20 to 30 years old as much as 53%. Consumers in purchasing fruit and vegetable products online are dominated by high school education levels as much as 57%. Consumers in purchasing fruit and vegetable products online by type of work vary, with a dominance of housewives, students and others as much as 49%. The characteristics of consumers in purchasing fruit and vegetable products online based on monthly income from the research results are dominated by those with incomes of less than Rp. 1,000,000,-. as much as 34%.

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