Factors affecting consumer’s purchasing decision of vegetables during Covid-19 pandemic in Padang, West Sumatera

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Abstract. The human need for healthy food containing sufficient nutrition for health and increases body immunity is essential during the Covid-19 pandemic. Vegetables and fruits are the primary sources of nutrients rich in vitamins and minerals needed for health. However, people are advised to limit outdoor activities to prevent the virus's spread during this pandemic. It will impact people's efforts to meet their various needs, including the need for vegetables and fruit. This study aimed to observe and analyse what factors affect consumer decisions in purchasing vegetables either online or offline during the Covid-19 pandemic in Padang City. The method used is a survey method with a sample of 100 vegetable consumers in Padang city who were selected accidentally. The variables used in the study were product quality, price, easy access to vegetables, the influence of friends and family, age, purchase motivation, and purchase method. The data were analysed quantitatively using multiple regression analysis. The results showed that simultaneously all variables affect purchase decisions. However, partially only four variables significantly influence consumer decisions in buying vegetables during the Covid-19 pandemic, namely ease of access, the influence of friends and family, purchase motivation, and purchasing methods.

Keywords: Pandemic, Covid-19, purchasing, vegetables, health

1. Introduction
During the current Covid-19 pandemic, people are encouraged to maintain their body immunity and healthy. One of the efforts is by consuming vegetables and fruits daily that enrich with Vitamin E and C. The World Health Organization [WHO] recommends consuming 150 grams of vegetables and 250 grams of fruit per day [1].

However, recently, as a response to the pandemic, the government has implemented large-scale social restrictions and urged people to work from home. As a result, people cannot freely fulfill their food needs by shopping directly at the market. This condition raises another alternative in fulfilling needs, namely online shopping.

Based on a survey conducted by the Indonesian Internet Network User Association [APJII, 2017] [2], 54.68% of Indonesia's population is internet users. Besides, the results of a survey conducted by Globalwebindex [2018] [3] show that 60% of internet users in Indonesia have visited two well-known marketplaces in Indonesia, namely Tokopedia and Lazada. The average time Indonesian respondents spend accessing the internet in one day is 8 hours 51, making Indonesia the 4th most online country [4]. It has convinced researchers that research on consumers' behaviour who shops online is significant and will be increasingly important in the future, especially in this pandemic.
Currently, several marketplaces specialize in the sale of vegetables and fruit in the city of Padang that provide conveniences in service and payment methods [5]. Despite the various conveniences offered by marketplaces in online shopping, it turns out that there are still many people who still insist on purchasing vegetables and fruit directly from the market [offline]. It is the consumers’ choice to decide which purchasing method most suitable for them. This research analyzes factors affecting the consumers’ decision to purchase vegetables online or offline during the Covid-19 pandemic in Padang.

2. Material and Method
The research was conducted in the city of Padang, West Sumatra, using a survey method. The survey method is a method to investigate the situation to get the fact and information about social, economic, or political institutions from a group or a region [6]. The respondents were selected as many as 100 people by accidental sampling from consumers who buy and consume vegetables in Padang. The respondents did not differentiate based on their purchasing method, whether in the online or offline market. Meanwhile, primary data were obtained from respondents through direct observation and interviews with a questionnaire guide.

Generally, this study used descriptive qualitative and quantitative research methods to answer the research objectives. Quantitatively the data were analysed using a linear regression function. This study analyses consumers' purchasing decisions of vegetables in Padang based on purchasing indicators compiled by Kotler and Keller [7]. The variables used were product quality [X1], price [X2], accessibility [X3], age [X4], influence of friends and family [X5], purchase motivation [X6], and purchase method [X7]. The linear regression model is as follows:

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + e \]

3. Result and Discussion

3.1. Attributes Evaluation of Purchasing Decision During Covid-19 Pandemic
The study was carried out by assessing consumer responses to 7 variables, consist of; a) product quality, b) price, c) ease of accessing products, d) Age, e) The influence of friends and family, f) Motivation to buy the product, and f) Purchasing method.

3.1.1. Product Quality. The research found that most respondents decided to keep buying vegetables during a pandemic because it would have a health impact on them. In line with the respondent’s answer, 65% of them strongly agree that vegetables contain vitamins beneficial to health. Also, 47% of respondents considered buying vegetables as a habit, so that if the Covid-19 pandemic was present or not, respondents still needed to consume vegetables.

3.1.2. Price. Most of the respondents considered that the price of vegetables during the Covid-19 pandemic was still affordable. It is also in line with their statement that vegetable prices before and after Covid 19 are not different. In total, 67% of respondents agreed and strongly agreed that the price of vegetables was not much different before and after Covid-19

3.1.3. Accessibility. 47% of the respondents strongly agree to buy vegetables because they can easily access the purchasing locations. It is in line with 45% of respondents who stated that there is adequate transportation availability.

3.1.4. Age. Most respondents agree that as they get older, the need for vegetables will also increase. It is in line with 85% of respondents who agree that they can decide for themselves to buy quality vegetables as they get older.
3.1.5. Friends and family’s Influence. 75% of respondents decided to buy vegetables during a pandemic because the family habit. Meanwhile, most respondents disagreed that they bought vegetables during the pandemic because of their social status.

3.1.6. Motivation. 55% of respondents decide to buy vegetables because the nutritional content. 60% of them also aware that consuming vegetables during a pandemic can maintain their health and body immunity.

3.1.7. Purchase Methods. 38% of respondents decided to keep buying vegetables in physical markets such as traditional markets and modern markets. Another 38% of the respondents decided to buy vegetables at the mobile vendor or the nearest food stall. Meanwhile, only 24% of respondents decided to buy vegetables in the online marketplace.

3.2. Factors Affecting Consumers’ Purchasing Decision

3.2.1. Regression Analysis. The results of regression analysis can be seen in Table 1 below:

| Variable                  | Coefficient | T Statistic | Sig    | Decision   |
|---------------------------|-------------|-------------|--------|------------|
| Constant                  | 3.541       | 1.034       | 0.304  | -          |
| Product Quality [X₁]      | 0.301       | 1.387       | 0.169  | Not affecting |
| Price [X₂]                | 0.201       | 0.848       | 0.400  | Not affecting |
| Accessibility [X₃]        | 0.740       | 2.536       | 0.013  | Affecting |
| Age [X₄]                  | 0.278       | 1.015       | 0.313  | Not affecting |
| Friends and family influence [X₅] | 0.594   | 1.999       | 0.049  | Affecting |
| Motivation [X₆]           | -0.268      | -2.034      | 0.045  | Affecting |
| Purchase Methods [X₇]     | 0.305       | 1.974       | 0.050  | Affecting |
| F Statistic               |             | 7.876       |        |            |
| F sig                     |             | 0.000b      |        |            |
| R²                        |             | 0.612       |        | 61.2%      |

The regression equation of the analysis is as follows:

Y = 3.541 + 0.301 X₁ + 0.201 X₂ + 0.740 X₃ + 0.278 X₄ + 0.594 X₅ - 0.268 X₆ + 0.305 X₇ + e

From the equation above, the product quality, price, accessibility, age, friends and family influence, and purchase methods positively affect the consumers’ decision to purchase vegetables during the pandemic. The value shows that the increase of the variables by 1% will increase consumers’ decision to purchase by each variable’s coefficient. Meanwhile, the variable of motivation has a negative sign. It indicates that the increase in motivation by 1% will reduce the consumers’ decision to purchase vegetables during The Covid-19 pandemic.

3.2.2. Coefficient of Determination [R²]. The coefficient of determination [R²] obtained from the model is 0.612. The value indicates that all the equation variables can explain 61.2% of consumers’
decision to purchase vegetables during The pandemic. In comparison, 38.8% could be explained by other factors not included in this study.

3.2.3. F-test. F-test is a statistical test used to identify factors significantly affecting consumers’ purchasing decisions of vegetables. The test finds that the value of F-sig is less than 0.05. It means all variables in the model simultaneously affect consumers’ decisions in purchasing vegetables during the pandemic.

3.2.4. T-test. Partially, four variables significantly affect vegetable purchasing decisions during the Pandemic, which are accessibility, friend and family influence, motivation, and the purchasing method.

Regarding accessibility, 69% of respondents considered the location to buy vegetables during the pandemic is easy to access. This finding is similar to Saodah and Rosda's research finding, where the purchasing location has a significant effect on the purchase of vegetables in traditional markets [8].

Regarding friends and family influence, 75% of respondents decided to buy vegetables during a pandemic because their family had consumed them. It indicates that internal factors, such as the family's needs, make respondents keep purchasing vegetables during the pandemic.

Moreover, regarding motivations, the respondents purchased vegetables because they knew the nutritional content and the benefits of consuming vegetables. Rizkiansah stated that motivation is a psychological factor that strongly correlates with purchasing decisions [9].

Lastly, regarding purchasing method, the study found that the method of purchasing vegetables before and after the pandemic did not change. Even though it was a pandemic period, consumers still prefer to directly purchase vegetables in physical markets, mobile vendors, and nearby stalls. 99% of respondents decided to purchase vegetables in physical markets. It means that only 1% of respondents purchased vegetables in the online marketplace. Besides, only 9% of respondents consider purchasing vegetables in the online marketplace is faster and easier. Based on this finding, it can be assumed that most respondents consider that online shopping is complicated and require specific devices to access it. These findings contradict Rakasyfa's study that stated the online marketplace would make it easier for consumers to buy vegetables [10].

4. Conclusion
Based on findings, simultaneously, all variables used in this study affected the consumers’ decision in purchasing vegetables in Padang during the Covid-19 pandemic. However, partially only four variables significantly influence consumer decisions, namely ease of access, the influence of friends and family, purchase motivation and purchasing methods. Furthermore, the study also found that, during the pandemic, vegetable consumers in Padang still prefer to buy vegetables offline, directly in the physical market such as modern market, traditional market, mobile vendor and nearest food stall.

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