

# Analysis of Factors That Influence Consumers in Shopping for Fresh Vegetables in Traditional Markets in Jambi City

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## ABSTRACT

*This study aims to analyze the factors influencing consumer behavior in purchasing fresh vegetables in traditional markets in Jambi City. This study was conducted in traditional markets in Jambi City. The research location was selected using a purposive sampling method. Data analysis used in this study utilized primary data and a descriptive approach. Partial Least Square - Structural Equation Model (PLS-SEM). The results of the study show 1) Based on Age, it shows that most consumers are aged >36 years as much as (45%), priority shopping places in traditional markets as much as (100%), Consumers consider consuming vegetables very important as much as (76.66%), consumers consume fresh vegetables as Fulfilling nutritional needs (90%), wives are the decision makers for shopping for vegetables in traditional markets as much as (80%), consumers decide to shop for fresh vegetables in traditional markets in a planned manner as much as (91.66%), The frequency of consumers shopping for fresh vegetables in traditional markets is twice a week as much as (60%), the types of vegetables that are often consumed are types of fruit vegetables as much as (90%). 2). Internal factors with manifest variables of education level, occupation, and income level have a positive and significant effect on consumer behavior. External factors with manifest variables of community habits, family, environment, and location have a positive and significant effect on consumer behavior, while internal factors with moderating variables of consumer perception have a positive but not significant effect on consumer behavior. Likewise, external factors with moderating variables of consumer perception have a positive but not significant effect on consumer behavior.*

## KEYWORDS

*Consumer behavior; fresh vegetables; internal factors; external factors; traditional markets.*

## INTRODUCTION

Fresh vegetables are an important part of people's daily consumption. Vegetables serve as a source of vitamins, minerals, and fiber, essential for maintaining health. The need for vegetable consumption is increasingly pressing as public awareness of a healthy lifestyle increases. However, according to data from the Indonesian Ministry of Health (2020), the average vegetable consumption of Indonesians is still below the WHO recommended standard of 250 grams per person per day. This situation indicates a mismatch between knowledge about the importance of vegetables and actual consumption behavior. In urban contexts such as Jambi City, traditional markets remain the primary source for people to

meet their daily fresh vegetable needs. Traditional markets persist despite the growing presence of modern markets. This is because traditional markets offer fresher products, relatively affordable prices, and foster an emotional connection between sellers and buyers (Astuti et al., 2021). However, consumer preferences in purchasing vegetables are not solely based on price or location but are also influenced by various internal factors such as age, education, income, as well as external factors such as social environment, community habits, and market accessibility (Schiffman & Kanuk, 2010; Engel et al., 2015). Furthermore, product attributes such as freshness, variety of vegetables, and price stability are important determinants in the purchasing decision-making process. Consumers tend to form perceptions of product quality based on these attributes, which then influence their purchasing behavior (Kotler & Keller, 2016). Therefore, analyzing these factors is crucial for a more comprehensive understanding of consumer behavior.

Sukirno S (2019) stated that the determinants of consumer perception are price, product quality, and availability. Meanwhile, Rahardja and Manurung (2019) stated that the determinants of consumer perception of a product are determined by the socio-economic environment, income, and price of the product. Zahara and Anwar (2020) stated that consumer characteristics, type of employment, income, and education level. Furthermore, consumer perception of a product is a determinant factor in consumer behavior in purchasing a product (Sukirno, 2019; Rahardja & Manurung, 2019; Zahara & Anwar, 2020)

This study aims to analyze consumer behavior in making decisions about purchasing fresh vegetables in traditional markets in Jambi City. The main focus is on the influence of internal and external factors on purchasing decisions, as well as the role of consumer perception as a moderating variable. The approach used is Partial Least Squares - Structural Equation Modeling (PLS-SEM), which is considered appropriate for analyzing complex relationships between latent variables (Hair et al., 2014). It is hoped that the results of this study can contribute to the development of more effective agribusiness marketing strategies.

## **RESEARCH METHODS**

Jambi City's traditional markets (Aurduri Market, Simpang Pulai Market, and Talang Banjar Market) were purposively selected as sample areas for this study. This research was conducted from September to December 2024. Primary data was obtained directly from consumer respondents through direct interviews. Consumers who cultivate potatoes use a questionnaire that has been prepared based on observation variables and other data deemed necessary in this study.

Secondary data was collected from informants, by copying, processing, and studying data from related agencies, literature studies, and previous research results related to the research. Determining the number of samples in the analysis Partial Least Squares (PLS) was conducted based on Gefen et al., (2000) recommendation, where the minimum sample size required is at least 10 times the number of indicators in the most complex construct. This means that for latent variables with the largest number of indicators, the recommended minimum sample size is 10 times the number of indicators. In this study, the latent variable has the largest number of indicators, namely 4. Therefore, the minimum sample size for the study is 40. Therefore, the number of samples or respondents that the researcher will take is 60. The sampling method used is Simple Random Sampling. The distribution and number of respondents can be seen in Table 1.

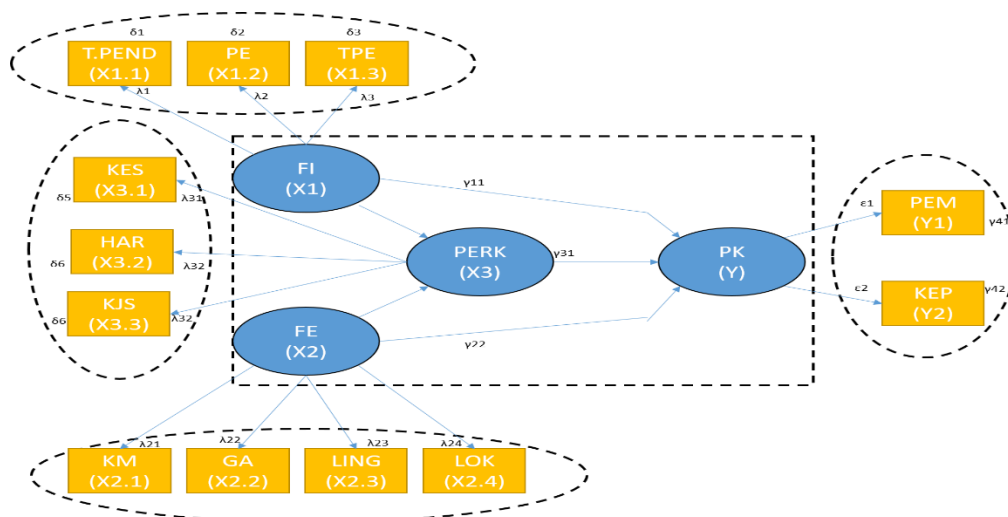
**Table 1.** Distribution and Number of Respondents in Traditional Markets in Jambi City

Tradisional Markets	Samples
Aurduri Tradisional Markets	20
Simpang Pulai Tradisional Markets	20
Talang Banjar Tradisional Markets	20
<b>Totals</b>	<b>60</b>

Source: Primary Data, 2024 (processed data)

**Data Analysis Method**

The data analysis method used in this study is Partial Least Squares - Structural Equation Modeling (PLS-SEM). This method was chosen because it is capable of analyzing complex relationships between latent variables, is suitable for relatively small sample sizes, and does not require strict multivariate normality assumptions (Hair et al., 2014). PLS-SEM is also effective for testing predictive and exploratory theoretical models, particularly in consumer behavior studies (Nurchaini et al., 2023). The SEM-PLS model has also been widely applied by several researchers; Nainggolan et al., (2021). Factors that affect the productivity of palm oil plantations self-help patterns in Jambi province; Fitri & Nainggolan (2022). Model of increasing productivity and sustainability of lowland rice farming in Tanjung Jabung Barat District - Indonesia (With a SEM Partial Least Square approach); Nainggolan et al., (2022). Analysis of factors affecting the behavior of coffee shop consumers in Jambi City; and Nurchaini et al., (2023). Analysis of the influence of internal and external factors on consumer behavior of fresh vegetables in the modern market in Jambi City. Therefore, the model estimation used in this study is Structural Equation Model-Partial Least Square (SEM-PLS) was performed with Structural Model as follows.



**Figure 1.** PLS SEM Model

Information:

- |                          |                                       |
|--------------------------|---------------------------------------|
| FI = Internal Factors    | PERK = Consumer Perception            |
| T.PEND = Education Level | KES = Freshness of Vegetables         |
| PE = Employment          | HAR = Price of Vegetable              |
| TPE = Income Level       | KJS = Completeness of Vegetable Types |
| KM = Community Habits    | PK = Consumer Behavior                |
| GA = Family              | PEM = Product Selection               |
| LING = Environment       | KEP = Shopping Decision               |
| LOK = Location           | FE = Eksternal Factors                |

### Model Fit Test (Goodness of Fit)

#### Outer Model

Measurement model(outer model) shows how indicators (observations) or manifests represent latent constructs that are measured by testing validity and reliability with the aim of ensuring that the measurement model is free from measurement errors. There are 3 ways of evaluating outer model that is convergent validity, discriminant validity, And composite validity. The following conditions must be met in the construct validity and reliability test, as can be seen in Table 2.

**Table 2.** Requirements for Meeting Validity and Reliability Tests

Validity and Reability	Parameter	Rule of Thumb
<i>Validitas Covergent</i>	<i>Loading Faktor Average</i>	• > 0,7
	<i>Variance Extraced (AVE)</i>	• > 0,5
<i>Validity of Discriminant</i>	<i>Cross loading</i>	• Loading indicator > allcross loading
	<i>Square root of AVE and correlation between latent constructs</i>	• Square root of AVE > correlation between constructsto leave
<i>Reability</i>	<i>Cronbach's Alpha</i>	• > 0,7
	<i>Composite Reliability</i>	• > 0,7

*Source: Ghozali (2014), Gunarto (2018).*

#### Inner Model

(Jaya and Sumertajaya (2008)), *Goodnessof Fit Model* seen from  $Q^2$  predictive relevance. When the value  $Q$ -Square the closer to 1 the better the model.

## RESULTS AND DISCUSSION

### Measurement Model Fit Test (Outer Model)

Table 2 shows the requirements that must be met in validity and reliability tests. Validity and reliability tests are measuring tools used in outer model which has good quality. The results of the validity and reliability testing of the research results can be seen in Table 3.

**Table 3.** Validity and Reliability of the Influence of Internal and External Factors on Decision Making for Fresh Vegetable Shopping in Jambi City , 2025

Instrumens	Validity		Reliability	
	Loading Factors	AVE	Cronbach's Alpha	Composite Realibiliy
Internal Factors (FI)				
- Education Level (T.PEND)	0.888			
- Employment (PE)	0.909	0.804	0.878	0.804
- Income level (TPE)	0.893			
Eksternal Factors (FE)				
- Community Habits (KM)	0.859			
- Family (GA)	0.834	0.744	0.885	0.744
- Environment (LING)	0.874			
- Location (LOK)	0.882			
Consumer Perception (PERK)				
- Freshness of Vegetables (KES)	0.745			
- Price of Vegetable (HAR)	0.907	0.730	0.812	0.730
- Completeness of Vegetable	0.902			

Types (KJS)				
Consumer Behavior (PK)				
- Product Selection (PEM)	0.896	0.778	0.715	0.778
- Shopping Decision (KEP)	0.867			

*Source: Smart PLS Processed Data Results Version 3.0, 202*

Table 3 explains the Test convergent validity through values outer loading greater than 0.7 and AVE above 0.5. The algorithm calculation results show that all indicator loading values for their latent constructs are greater than 0.7. Occupation, income level, and education level are stronger in reflecting latent internal factors. The average AVE value for the five research variables is above 0.5. Descriptive data from observations explains that internal factors with the reflective variable age consumers are in the productive age range with a range of >36 years, 68% have a high school education, 37% have an income level in the range of 2.6-3.5 million, with the average consumer occupation being a housewife 44%.

External factors (FE); External factors in this study are formed from four main indicators, namely community habits, family influence, environment, and market location.. The questionnaire results showed that 53.33% of respondents agreed that local customs encourage them to buy fresh vegetables at traditional markets. Furthermore, 36.66% stated that they somewhat agreed with the influence of family in making shopping decisions. Interestingly, 46.33% of respondents disagreed that the environment has an influence, and 45% disagreed that market location was their main consideration. Although some indicators had a low level of agreement, the results of the PLS-SEM analysis showed that external factors overall had a positive and significant effect on consumer behavior, with a path coefficient value of 0.248, t-statistic of 2,555, and p-value of 0.011. This finding aligns with research by Nurchaini et al. (2023) which states that collective behavior and cultural norms play a significant role in household shopping decisions, and is supported by Nurchaini et al., (2023) who emphasize the importance of social context in local market consumer shopping preferences.

The moderating variable in this study is consumer perception (PERK), which is constructed from three main indicators: freshness of vegetables, price, and completeness of vegetable types. Based on the results of the analysis outer model, these three indicators have a value loading factor > 0.7, indicating good construct validity and reliability, with the strongest indicator being vegetable prices with a factor loading of 0.907. Although PERK was designed as a moderating variable between internal and external factors on consumer behavior, the results of the structural analysis indicate that PERK does not act as a significant moderator of the relationship. This is indicated by the value t-statistic  $1.562 < 1.96$  and p-value  $0.118 > 0.05$  internal factors and external factors value t-statistic  $1.608 < 1.96$  and p-value  $0.108 > 0.05$ . The higher the value outer loading, then it shows that the indicator is the most important in the latent variable or the strongest measurement (Pirouz, 2006).

### **Structural Model Fit Test (Inner Model)**

Testing inner model aims to see the relationship between other construct (latent) variables. Evaluation inner model test conducted R-squared (R<sup>2</sup>) to measure the level goodness of fit a structural model and path coefficient estimation test to determine the extent of the influence of the independent (exogenous) variable on the dependent (endogenous) variable. The R value<sup>2</sup> in this study can be seen in Table 4.

**Table 4.** Coefficient of Determination of Internal and External Factor Variables in Decision Making for Shopping for Fresh Vegetables in Jambi City, 2025

	R square	R square adjusted
PERK	0,226	0,198
PK	0,594	0,572

*Source: Processed data from Smart PLS Version 3.0, 2025*

Table 4 shows that the consumer perception variable (PERK) has R2 of 0.226, these results indicate that the Consumer Perception (PERK) variables, namely Vegetable Freshness (KES), Vegetable Price (HAR), and Completeness of Vegetable Types (KJS) are jointly influenced by education level (T.PEND), occupation (PE), income level (TPE), community habits (KM), family (GA), environment (LING), and location (LOK) on internal factors (FI) and external factors (FE) which is 22.6%. The consumer behavior variable (PK) has R2of 0.594, this result shows that the consumer behavior variable (PK) can be influenced simultaneously by internal factors (FI), external factors (FE), and consumer perception (PERK) by 59.4%.

### **Evaluation Goodness of Fit**

After the R value2 known, evaluationgoodness of fit on inner model can be continued by calculating the Q value2which aims to determine the model's ability to predict the relationship between variables. The evaluation resultsgoodness of fit can be seen from the Q<sup>2</sup> Where:

$$\begin{aligned}
 Q^2 &= 1 - [ (1 - R_2^1) \times (1 - R_2^2) ] \\
 &= 1 - [ (1 - 0.226) \times (1 - 0.594) ] \\
 &= 1 - [(0.774) \times (0.406) ] \\
 &= 1 - (0.314) \\
 &= 0.686 = 68,6\%
 \end{aligned}$$

This means that internal factors and external factors havepredictive relevance which has a very high influence on consumer behavior in making decisions about shopping for fresh vegetables in traditional markets in Jambi City.

### **Analysis of Factors That Influence Consumers in Shopping for Fresh Vegetables in Traditional Markets in Jambi City**

#### **Influence Direct**

The direct effect is the effect of the relationship between the independent (exogenous) variable and the dependent (endogenous) variable. The results of the effect are presented in Table 5.

**Table 5.** Path Analysis of the Relationship Between Latent Variables in Decision Making for Shopping for Fresh Vegetables at Traditional Markets in Jambi City, 2025

Relationship between variables	Path coefficient	Mean Samples [M]	Standart Deviation [STDEV]	t- Statistics	P- Value	Evaluation
Internal factors (FI) -> Consumer Behavior (PK)	0.296	0.312	0.131	2.256	<b>0.024</b>	<b>Positive and significant</b>
Internal factors (FI) -> Consumer Perception(PERK)	0.283	0.288	0.142	1.992	<b>0.046</b>	<b>Positive and significant</b>
External factors (FE) -> Consumer Behavior (PK)	0.248	0.242	0.097	2.555	<b>0.011</b>	<b>Positive and significant</b>

External factors (FE) -> Consumer Perception (PERK)	0.245	0.255	0.112	2.183	<b>0.029</b>	<b>Positive and significant</b>
Perception Consumers (PERK) -> Behavior Consumer (PK)	0.407	0.396	0.123	3.309	<b>0.001</b>	<b>Positive and significant</b>

*Source: Processed data results of Smart PLS version 3.0, 2025*

Table 5 shows that first, internal factors have a significant influence on consumer behavior with a path coefficient of 0.296, t-statistic 2,256, and p-value 0.024. These factors include age, education, income, and occupation, which have been shown to influence consumer decisions when purchasing fresh vegetables. Internal factors also significantly influence consumer perception (PERK), with a coefficient value of 0.283, t-statistic 1,992, and p-value 0.046, indicating that consumers' personal characteristics play a role in assessing product attributes. This finding aligns with Schiffman & Kanuk (2010), who explain that consumers' personal characteristics form the basis for forming motives and attitudes in decision-making.

Second, external factors, consisting of the social environment, culture, market location, and community habits, also have a positive and significant influence on consumer behavior, with a coefficient value of 0.248, t-statistic 2,555, and p-value 0.011, and on consumer perception of 0.245, t-statistic 2,183, and p-value 0.029. This strengthens the opinion of Engel et al., (2015) that the local social and cultural environment plays an important role in shaping consumer shopping habits and perceptions of a product, especially in the context of traditional markets.

Third, consumer perception (PERK) of product attributes, which include freshness, price, and completeness of vegetable types, has the strongest direct influence on consumer behavior, with a coefficient of 0.407, t-statistic 3,309, and p-value 0.001. This finding indicates that positive perceptions of product attributes significantly influence consumer purchasing tendencies. This is consistent with the theory of Kotler & Keller (2016) which states that perceptions of product quality shape consumer preferences and loyalty. It is also supported by the findings of Nurchaini et al., (2023) which emphasize that freshness and variety of vegetables are key determinants of horticultural product purchasing in local markets.

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### *Influence Indirect*

In this study, internal and external factors not only directly influence consumer behavior but also indirectly through the moderating variable of production input use. The indirect influence values of internal and external factors are shown in Table 6.

**Table 6.** Indirect Influence of Internal and External Factors on Behavior Traditional Market

Relationship between Variables	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistics	P-Value
FI → PERK → PK	0.115	0.116	0.072	1.562	0.118
FE → PERK → PK	0.100	0.106	0.064	1.608	0.108

*Source: Processed data results of Smart PLS version 3.0, 2025*

Analysis of the moderating effect of the consumer perception variable (PERK) shows that PERK does not act as a significant moderating variable between internal factors (FI) and external factors (FE) on consumer behavior (PK). This is indicated by the value p-value > 0.05 and t-statistic < 1.96. In detail, the FI → PERK → PK path has a coefficient value of 0.115, t-statistic 1,562, and p-value 0.118, while the FE → PERK → PK path has

a coefficient of 0.100, t-statistic 1,608, and p-value 0.108. Both paths indicate that consumer perceptions do not significantly strengthen or weaken the relationship between internal and external factors on shopping behavior.

These results indicate that although consumer perceptions of product attributes such as freshness, price, and completeness of vegetables have a direct influence on consumer behavior, these perceptions are not strong enough to moderate the influence of other variables. This finding differs from initial expectations and may be due to consumers already having fixed preferences, so that internal and external influences are relatively stable regardless of perceptions of product attributes. This is in line with the opinion of Engel et al., (2015) who stated that moderating effects are often contextual and do not always appear if consumer perceptions have been strongly formed by personal experience or dominant social influences.

### Total Influence

**Table 7.** Total Influence of Internal and External Factors on Behavior Traditional Market Consumers in Jambi City, 2025

Relationship between variables	Path coefficient	Mean Samples [M]	Standart Deviation [STDEV]	t- Statistics	P- Value	Evaluation
Internal factors (FI) -> Consumer Behavior (PK)	0.412	0.428	0.129	3.185	<b>0.001</b>	<b>Positive and significant</b>
Internal factors (FI) -> Consumer Perception (PERK)	0.283	0.288	0.142	1.992	<b>0.046</b>	<b>Positive and significant</b>
External factors (FE) -> Consumer Behavior (PK)	0.348	0.348	0.108	3.217	<b>0.001</b>	<b>Positive and significant</b>
External factors (FE) -> Consumer Perception (PERK)	0.245	0.255	0.112	2.183	<b>0.029</b>	<b>Positive and significant</b>
Perception Consumers (PERK) -> Behavior Consumer (PK)	0.407	0.396	0.123	3.309	<b>0.001</b>	<b>Positive and significant</b>

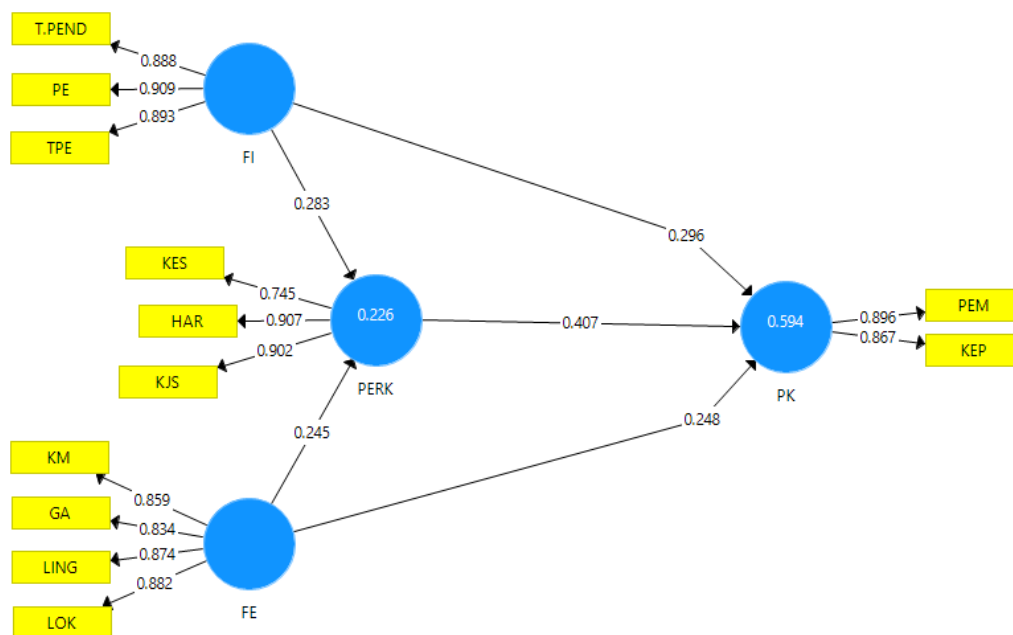
*Source: Processed data results of Smart PLS version 3.0, 2025*

Table 7 The results of the structural model analysis using PLS-SEM show that all relationships between variables in this study are positive and significant, which means that each variable directly and meaningfully influences consumer behavior in shopping for fresh vegetables in traditional markets in Jambi City. In addition, predictive simulations were conducted to determine the potential for changes in consumer behavior if there is a 10% increase (strengthening) in each independent variable. Internal Factors (FI) → Consumer Behavior (PK) The path coefficient of 0.412 indicates that an increase in internal factors such as age, education, income, and shopping experience will increase shopping behavior. If there is a 10% strengthening of internal factors, then consumer behavior is estimated to increase by 4.12%. This shows that internal factors have a fairly strong influence in shaping consumption patterns, supporting the opinion of Schiffman & Kanuk (2010) that personal characteristics are the main determinants of consumer decisions. Internal Factors (FI) → Consumer Perception (PERK) The path coefficient of 0.283 indicates that internal factors also have an impact on consumer perceptions of product attributes. A 10% increase in internal factors is predicted to increase consumer perception by 2.83%, which means that personal experience strengthens consumers' perspectives on freshness, price, and product completeness (Kotler & Keller, 2016). External Factors (FE) → Consumer Behavior (PK) The path coefficient of 0.348 indicates that the social environment, culture, market location, and community habits also

encourage shopping actions. If there is a 10% strengthening of external factors, consumer behavior will increase by 3.48%. This result is in line with the opinion of Engel et al., (2015) that external contexts such as social norms and local culture greatly influence shopping decisions. External Factors (FE) → Consumer Perception (PERK) With a path coefficient of 0.245, external factors also influence consumer perception. This means that if external factors increase by 10%, consumer perception will increase by 2.45%. This shows that social interactions and experiences of the surrounding community influence how consumers perceive product quality. Consumer Perception (PERK) → Consumer Behavior (PK) The path coefficient of 0.407 indicates that consumer perceptions of product attributes have a strong influence on shopping behavior. With a 10% increase in consumer perception, consumer behavior is predicted to increase by 4.07%. This means that consumers who value fresh products, affordable prices, and a complete range of vegetables will more motivated to buy. This strengthens the theory of consumer perception value according to Kotler & Keller (2016) and is proven in a local context by Nurchaini et al. (2023).

**Conversion Diagram Path to Equality**

Conversion diagram path in Inner form and outer model to express influence quality between various construct. Diagram track indicator factors that influence consumers in shopping for fresh vegetables in traditional markets in Jambi City can be seen in the following figure:



**Figure 2.** Path Diagram of Indicator Variables of the Influence of Internal and External Factors on Consumer Behavior in Jambi City, 2025

**Analysis Influence Indicator on Variables Latent**

The latent variables in this study consist of three variables: internal factors, external factors, and consumer perceptions. The influence of indicators on the latent variables is shown in Table 8.

**Table 8.** Relationship between Manifest Variables and Latent Variables of Factors Influencing Consumer Behavior in Shopping for Fresh Vegetables

	<b>Original Sample (O)</b>	<b>Sample Mean (M)</b>	<b>Standard Deviation (STDEV)</b>	<b>T-Statistics (O/STDE)</b>	<b>P-Value</b>
T.PEND <- FI	0.888	0.888	0.039	22.592	<b>0.000</b>
PE <- FI	0.909	0.906	0.034	26.678	<b>0.000</b>
TPE <- FI	0.893	0.891	0.034	26.294	<b>0.000</b>
KM <- FE	0.874	0.874	0.047	18.504	<b>0.000</b>
GA <- FE	0.834	0.835	0.058	14.436	<b>0.000</b>
LING <- FE	0.859	0.859	0.062	13.939	<b>0.000</b>
LOK <- FE	0.882	0.880	0.044	19.952	<b>0.000</b>
KES <- AP	0.745	0.746	0.065	11.424	<b>0.000</b>
HAR <- AP	0.907	0.897	0.056	16.183	<b>0.000</b>
KJS <- AP	0.902	0.897	0.041	21.773	<b>0.000</b>
PEM <- PK	0.896	0.895	0.040	22.600	<b>0.000</b>
KEP <- PK	0.867	0.843	0.095	9.097	<b>0.000</b>

*Source: Results Processed Data Smart PLS Version 3.0, 2024*

Convergent validity testing was conducted to ensure that each indicator in the latent construct accurately represents the variable. Based on the analysis results in Table 7, all indicators have a value outer loading above 0.70, value t-statistic high (more than 9), and p-value of 0.000, so all indicators in this model are declared valid and statistically significant. For the internal factor variables (FI), education level (T.PEND), occupation (PE), and income level (TPE), each has a loading value of 0.888; 0.909; and 0.893. In other words, if there is a 10% increase or strengthening of respondents' understanding or awareness of internal factors, then the contribution of each indicator to the internal factor variable will increase by 8.88% for age, 9.09% for education, and 8.93% for income. This strengthens the view of Schiffman and Kanuk (2010) that personal characteristics such as age and education greatly influence the formation of consumer attitudes in making decisions.

In external factors (FE), the indicators of community habits (KM), family (GA), environment (LING), and market location (LOK) each have loading values of 0.874; 0.834; 0.859; and 0.882. This means that if external influences are increased by 10%, the indicator's contribution to the FE variable will increase by 8.74%, 8.34%, 8.59%, and 8.82%, respectively. These results indicate that local social and cultural interactions in traditional markets also influence consumption patterns, as explained by Engel et al., (2015).

Meanwhile, consumer perceptions of product attributes (PERK), vegetable freshness indicators (KES), vegetable prices (HAR), and completeness of vegetable types (KJS) showed loading values of 0.745; 0.907; and 0.902, respectively. This indicates that a 10% increase in perception will increase the indicator's contribution to perception by 7.45% for freshness, 9.07% for price, and 9.02% for completeness of vegetable types. This finding is consistent with the theory of Kotler and Keller (2016), which states that perceptions of product attributes such as price and completeness play a significant role in shaping consumer preferences.

For the consumer behavior (PK) variable, the product selection (PEM) and shopping decision (KEP) indicators each had loadings of 0.896 and 0.867. This means that a 10% increase in consumer behavior will increase the contribution of the planning indicator by

8.96% and the contribution of shopping frequency by 8.67%. This indicates that planned and routine shopping behavior is a strong reflection of actual consumption decisions in traditional markets, as stated by Nurchaini et al., (2023). Overall, these findings confirm that all indicators in the model meet the convergent validity requirements according to Hair et al., (2014) criteria, so they can be used reliably in further testing the relationships between latent variables.

## CONCLUSION

From the results of the research and discussions that have been carried out, the following conclusions can be drawn:

1. The characteristics of fresh vegetable consumers in traditional markets in Jambi City are dominated by women of productive age, mostly with secondary education, permanent employment, and varying income levels. Consumers generally prefer shopping at traditional markets due to product freshness and price considerations.
2. Internal factors such as education level, occupation, and income have a positive and significant influence on consumer behavior. This means that the higher the level of education, the higher the income. The more internal factors a consumer possesses, the more likely they are to shop for fresh vegetables rationally and in a planned manner. External factors, including social habits, family, environment, and location, also have a positive and significant influence on consumer behavior. This indicates that social environmental conditions and market accessibility also influence consumer decisions in choosing where to shop. Consumer perceptions, including freshness, price, and the variety of vegetables, are the most dominant factors influencing consumer behavior. Consumers strongly consider the physical quality of the product when making shopping decisions, especially in the context of traditional markets.

## REFERENCES

- Astuti, E. P., Masyhuri., & J. H. Mulyo. (2019). Analisis sikap konsumen pasar swalayan terhadap sayuran organik. *Jurnal Ekonomi Pertanian dan Agribisnis*. 3 (1): 183-194. <https://jepa.ub.ac.id/index.php/jepa/article/view/174/93>
- Engel, J. F., Blackwell, R. D., & Miniard, P. W. (2015). *Consumer Behavior* (10th ed.). Cengage Learning.
- Fitri, Y., & Nainggolan, S. (2022). Model increasing productivity and sustainability of lowland rice farming in Tanjung Jabung Barat District - Indonesia (With a SEM Partial Least Square approach). *International Journal of Humanities, Arts and Farming (JHAF)*, 6(3), 1–11. <https://dx.doi.org/10.22161/ijhaf.6.3.3>
- Gefen, D., Straub, D.W., & Boudreau M. C. (2000). Structural Equation Modeling and Regression: Guidelines for Research Practice. *Communications of the Association for Information Systems*, 4(7). <https://doi.org/10.17705/1CAIS.00407>
- Ghozali, I. (2014). *Structural equation modeling: Metode alternatif dengan partial least square (PLS)* (4th ed.). Universitas Diponegoro.
- Gunarto. (2018). Analisis statistika dengan model persamaan struktural (SEM): Teoritis dan praktis.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. SAGE Publications. [https://eli.johogo.com/Class/CCU/SEM/ A%20Primer%20on%20Partial%20Least%20Squares%20Structural%20Equation%20Modeling\\_Hair.pdf](https://eli.johogo.com/Class/CCU/SEM/ A%20Primer%20on%20Partial%20Least%20Squares%20Structural%20Equation%20Modeling_Hair.pdf)
- Indonesian Ministry of Health. (2020). *Panduan Gizi Seimbang Pada Masa Pandemi Covid19*. Jakarta: Kementrian Kesehatan RI. <https://kesmas.kemkes.go.id/konten/105/0/061312-panduan-gizi-seimbang-pada->

[masa-pandemi-covid19](#)

- Jaya, I Gede Nyoman Mindra., & Sumertajaya. I made. (2008). Permodelan Persamaan Struktural Dengan Partial Least Square. Semnas Mat. Dan Pendidik. Mat.
- Kotler, P., & Keller, K. L. (2016). *Marketing Management* (15th ed.). Pearson Education.
- Nainggolan, S., Kernalis, E., & Carolin, D. Z. (2022). Analysis of factors affecting the behavior of coffee shop consumers in Jambi City. *Randwick International of Social Sciences Journal*, 3(1), 53–60. <https://doi.org/10.47175/rissj.v3i1.369>
- Nainggolan, S., Yanita, M., & Leonardo, M. (2021). Factors that affect the productivity of palm oil plantations self-help patterns in Jambi province. *Randwick International of Social Sciences Journal*, 2(4), 404–410. <https://doi.org/10.47175/rissj.v2i4.321>
- Nurchaini, D. S., Nainggolan, S., & Saputra, A. (2023). Analysis of the influence of internal and external factors on consumer behavior of fresh vegetables in the modern market in Jambi City. *GSC Advanced Research and Reviews (GSCARR)*, 15(2), 124–132. <https://doi.org/10.30574/gscarr.2023.15.2.0147>
- Pirouz, Dante, M. (2006). *An Overview of Partial Least Squares*. Irvine: The Paul Merage School of Business University of California. <http://dx.doi.org/10.2139/ssrn.1631359>
- Raharadja Prathama, & Manurung, Mandala. (2019). *Pengantar Ilmu Ekonomi (Mikroekonomi & Makroekonomi)*. Edisi 4. Jakarta: Penerbit Salemba Empat.
- Schiffman, L. G., & Kanuk, L. L. (2010). *Consumer Behavior* (10th ed.). Pearson Prentice Hall. <https://www.scribd.com/document/734400405/Consumer-Behavior-Tenth-Edition-Leon-Schiffman-Leslie-Kanuk-Leon-G-Schiffman-Leslie-201-compressed-halaman-2-compressed-11zon-1?utm>
- Schiffman, L. G., & Kanuk, L. L. (2010). *Consumer behavior*. Pearson Education.
- Sukirno, S. (2019). *Mikroekonomi: Teori pengantar* (Edisi ke-3). Depok: Rajawali Pers. <https://www.scribd.com/doc/312325103/MikroEkonomi-Sadono-Sukirno>
- Zahara, V. M., & Anwar, C. J. (2020). *Mikroekonomi (Sebuah Pengantar)*. Media Sains Indonesia. <https://eprints.untirta.ac.id/6127/1/Buku%20Digital%20%20MIKROEKONOMI.pdf>