

# Technological Innovation and Market Governance for Trader Satisfaction in Traditional Markets: Evidence from Garut Regency

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**Abstract.** *Traditional markets in non-metropolitan regions need to adapt to changing service expectations, retail competition, and digital transaction practices. However, previous studies have often examined market revitalization, service quality, digital payment adoption, or governance separately, while limited attention has been given to how these factors explain trader satisfaction as an evaluation of market management practices. This study examines the influence of infrastructure quality, service quality, government support, technological innovation, and market governance on trader satisfaction in traditional markets in Garut Regency. Market governance is defined in this study as the clarity of rules, fair treatment, transparency, complaint mechanisms, and communication between traders and market managers. Data were collected from 100 active traders using purposive sampling and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 3. The results show that infrastructure quality, service quality, technological innovation, and market governance significantly influence trader satisfaction, while government support does not show a significant effect. Market governance has the strongest effect, and the model explains 64.4% of the variance in trader satisfaction. These findings provide empirical insight that trader satisfaction is shaped by the alignment of physical facilities, service delivery, technological practices, and governance mechanisms. Practically, local governments and market managers should translate support programs into concrete improvements that traders can directly experience.*

**Keywords:** *Infrastructure quality, market governance, service quality, technological innovation, trader satisfaction*

## 1. Introduction

Traditional markets in non-metropolitan regions face a critical challenge. They remain essential as local distribution centers and sources of livelihood for small traders, yet they must adapt to changing shopping behavior, higher service expectations, and the acceleration of digital transactions. In Indonesia, traditional markets have long supported local economies by facilitating daily trade activities and connecting small traders with surrounding communities. However, they also face growing pressure from modern retail competition and changes in market management policies (Purnomo et al., 2018). In Garut Regency, this issue is particularly relevant because traditional markets remain an important part of the regional trade system.

Open Data Jabar provides data on traditional markets across regencies and cities in West Java for the 2019–2023 period, sourced from the Department of Industry and Trade of West Java Province. Meanwhile, BPS Garut Regency reported that in 2021 Garut Regency had 15 traditional markets, 74 village markets, 298 minimarkets, and 12,974 market kiosks. These figures indicate that traditional markets still maintain a strong economic presence, while simultaneously coexisting with the expansion of modern retail facilities (Open Data Jabar, 2024; Badan Pusat Statistik Kabupaten Garut, 2024).

The sustainability of traditional markets is further challenged by the rapid growth of digital commerce platforms and the increasing digitalization of consumer transactions.

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Received: August 26<sup>th</sup>, 2025; Revised: March 3<sup>rd</sup>, 2026; Accepted: June 10<sup>th</sup>, 2026

Doi: <http://dx.doi.org/10.12695/ajtm.2025.18.3.4>. Print ISSN: 1978-6956; Online ISSN: 2089-791X.

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Published by Unit Research and Knowledge- School of Business and Management-Institut Teknologi Bandung

How to cite: Khoerunnisa, I.A., Turipanam D.A., and Nurhayati, D. / *Technological Innovation and Market Governance for Trader Satisfaction in Traditional Markets: Evidence from Garut Regency. The Asian Journal of Technology Management (AJTM)*, 18(3), 233-248. <https://doi.org/10.12695/ajtm.2025.18.3.4>

The e-Conomy SEA 2024 report shows that Indonesia's digital economy reached a Gross Merchandise Value of US\$90 billion in 2024, representing a 13% increase from the previous year, with e-commerce contributing the largest share at US\$65 billion (Google, Temasek, & Bain & Company, 2024). In the payment system sector, Bank Indonesia reported that QRIS had reached 26.7 million merchants as of June 2023, 91.4% of which were MSMEs (Bank Indonesia, 2023). This trend indicates that digitalization is no longer limited to large businesses but has increasingly entered the small business ecosystem. From a service marketing perspective, this shift is important because user satisfaction is formed when service experiences meet or exceed user expectations (Zeithaml et al., 2018). Therefore, the key issue is not only how traditional markets can survive amid changes in the trading environment, but also how infrastructure quality, service quality, government support, technological innovation, and market governance can improve trader satisfaction as a central indicator of market management effectiveness in Garut Regency.

Previous studies have shown that the development of traditional markets is influenced by several interrelated managerial and contextual factors. Kania et al. (2020) and Lubis et al. (2021) found that traditional market revitalization through the improvement of physical facilities, accessibility, and market management can enhance market competitiveness, trader satisfaction, and business performance. Therefore, infrastructure quality is included in this study because market facilities, accessibility, and supporting infrastructure form the basic conditions for traders' comfort and daily business activities. From the service marketing perspective, Zeithaml et al. (2018) explain that user satisfaction is shaped when service experiences meet or exceed expectations. Accordingly, service quality is selected because traders require responsive, clear, and reliable services from market managers in handling operational needs and complaints. Purnomo et al. (2018) further

indicate that Indonesian traditional markets face strong competitive pressure and require institutional support to remain adaptive. For this reason, government support is considered relevant because regulations, assistance, development programs, and facilitation can strengthen the sustainability of traditional markets. In relation to digital adaptation, Nurhapsari and Sholihah (2022) show that the adoption of QRIS among traditional market traders is influenced by perceived usefulness, ease of use, risk, and user readiness. Therefore, technological innovation is included because digital transactions and technology-based services increasingly shape traders' business experiences. In addition, Dellyana et al. (2023) and Wibawa et al. (2024) emphasize that transformation and sustainability require governance mechanisms involving actor coordination, transparency, and stakeholder participation. Thus, market governance is selected because it ensures that infrastructure, services, government support, and technological innovation are managed consistently. Based on these theoretical and contextual considerations, these five variables are considered relevant for explaining trader satisfaction in traditional markets in Garut Regency.

This study views traditional market modernization as a managerial process that requires the alignment of infrastructure quality, service quality, government support, technological innovation, and market governance. In this model, infrastructure quality represents the physical readiness of markets to support daily trading activities. Service quality reflects the ability of market managers to provide responsive, clear, and reliable services for traders. Government support represents the role of public authorities through regulations, assistance, development programs, and market facilitation. Technological innovation reflects the ability of traders and market managers to adapt to digital transactions and technology-based services. Market governance represents the coordination mechanism that ensures infrastructure quality, service quality, government support, and technological

innovation are managed transparently, fairly, and consistently. This model is consistent with the dynamic capabilities perspective, which emphasizes the ability of organizations to integrate, build, and reconfigure resources in response to changes in the business environment (Teece, 2018). In the context of traditional markets, this capability is reflected in how market managers and stakeholders coordinate market management factors to create a more comfortable, efficient, and satisfying trading experience for traders.

The relevance and urgency of this research lie in the need to strengthen traditional markets amid increasing pressure from modern retail, digital commerce, and changing consumer behavior. If market management is not improved, traditional markets in Garut Regency may face difficulties in maintaining trader satisfaction, especially when traders are confronted with limited facilities, slow service responses, unclear governance, and the need to adapt to digital transactions. Therefore, this study aims to identify the key factors influencing trader satisfaction by examining infrastructure quality, service quality, government support, technological innovation, and market governance in traditional markets in Garut Regency. The findings are expected to provide practical insights for local governments and market managers in developing more responsive, transparent, and adaptive market management strategies in the digital era.

This study contributes to the literature by addressing a theoretical and contextual gap in traditional market research. Prior studies have mainly examined market revitalization, digital payment adoption, service quality, or governance as separate issues, while limited attention has been given to how infrastructure quality, service quality, government support, technological innovation, and market governance explain trader satisfaction as a direct evaluation of market management practices. By placing trader satisfaction as the main outcome, this study extends the service marketing perspective, which views satisfaction as the result of users' evaluation of

service experiences, into the context of traditional market management (Zeithaml et al., 2018). At the same time, this study responds to the need for a more contextual understanding of traditional market governance in Indonesia, where market sustainability depends not only on physical improvement but also on coordination, participation, and adaptive management (Wibawa et al., 2024). The academic contribution of this study therefore lies not merely in combining several variables, but in clarifying how infrastructure quality, service quality, government support, technological innovation, and market governance can be used to understand trader satisfaction in traditional markets in a non-metropolitan region such as Garut Regency.

## **2. Literature Review/ Hypotheses Development**

### *2.1 Theoretical Foundation*

This study is grounded in the service marketing perspective and the dynamic capabilities perspective. The service marketing perspective is used to explain trader satisfaction as traders' evaluation of their market service experiences, including infrastructure quality, service quality, clarity of rules, and the responsiveness of market managers to traders' needs. In service marketing, satisfaction is formed when the service experience received by users meets or exceeds their expectations (Zeithaml et al., 2018). Meanwhile, the dynamic capabilities perspective is used to explain the ability of traditional markets to adjust their resources and management practices in response to changes in the trading environment. Teece (2018) emphasizes that organizations need to integrate, build, and reconfigure resources to respond to changes in the business environment. In this study, infrastructure quality, service quality, government support, technological innovation, and market governance are understood as market management factors that may strengthen traditional markets' ability to create a more comfortable, adaptive, and satisfying trading experience for traders.

## *2.2 Traders Satisfaction*

Trader satisfaction in this study is understood as traders' evaluation of their experience in conducting business activities in traditional markets. From the service marketing perspective, satisfaction is formed when the service experience received by users meets or exceeds their expectations (Zeithaml et al., 2018). This concept is relevant to the context of traditional markets because traders do not only evaluate the economic outcomes of their business activities, but also their daily experiences related to market facilities, market comfort, security, accessibility, manager responsiveness, retribution transparency, and the clarity of market rules. Naini et al. (2022) emphasize that customer satisfaction plays an important role in shaping positive evaluations of services and sustainable relationships with service providers. In the context of traditional markets, Kania et al. (2020) and Lubis et al. (2021) show that trader satisfaction is an important aspect in assessing the success of market revitalization because traders are the main actors who directly experience changes in market facilities, accessibility, and management.

## *2.3 Infrastructure Quality*

Infrastructure quality in this study refers to the physical condition of traditional markets that supports trading activities, including public facilities, building conditions, trading facilities, accessibility, and access for goods distribution vehicles. In the service marketing context, the physical service environment, or servicescape, is an important part of user experience because facility conditions can influence comfort, perceived quality, and evaluation of the services received (Wirtz & Lovelock, 2021). In traditional markets, infrastructure quality is not only reflected in the existence of market buildings, but also in the ability of these facilities to support traders' activities safely, comfortably, and efficiently. Yi and Gim (2018) explain that the physical environment of traditional markets plays a role in maintaining market sustainability through its support for economic functions and user experiences. Kania et al. (2020) further emphasize that physical facilities,

accessibility, and market management are key metrics of traditional market revitalization from the tenant's perspective.

## *2.4 Service Quality*

Service quality is closely related to how market managers deliver services that support traders' operational needs. In service marketing, service quality reflects users' evaluation of whether the services received meet their expectations, including reliability, responsiveness, assurance, empathy, and tangible service aspects (Zeithaml et al., 2018). In traditional markets, service quality is not limited to the friendliness of market officers. It also includes the clarity of market information, responsiveness to traders' complaints, the suitability of facilities for business needs, and the ability of market managers to maintain order and support smooth trading activities. Wirtz and Lovelock (2021) emphasize that good service requires clear service processes, capable human resources, and consistent management of user experience.

## *2.5 Government Support*

Government support reflects the role of public authorities in creating conditions that enable business actors and traditional markets to develop more adaptively. In the context of traditional markets, government support may take the form of regulations, training programs, operational assistance, facility provision, and technology facilitation to support trading activities. Chege and Wang (2020) explain that government support can strengthen business capabilities in utilizing technological innovation and improving performance through the provision of resources, policies, and a supportive environment. Prasannath et al. (2024) also emphasize that government support policies can influence entrepreneurial orientation and SME performance when such support is aligned with the actual needs of business actors. In traditional markets, government support is important because traders often have limited resources to improve facilities, access training, or adopt technology independently.

## 2.6 Technological Innovation

Technological innovation is an important aspect of traditional market modernization because it relates to the ability of traders and market managers to use technology to improve the efficiency of trading activities. Schilling (2020) explains that technological innovation involves the application of new tools, methods, or systems that create added value and improve the effectiveness of business processes. In traditional markets, technological innovation is not limited to the use of cashless payment systems. It also includes the use of digital media for information, promotion, communication, and the management of trading activities. Verhoef et al. (2021) emphasize that digital transformation is not only related to technology adoption, but also to changes in processes, interactions, and the way organizations create value for users. This is relevant to traditional markets because technology can help traders accelerate transactions, improve access to information, and adapt to changes in consumer behavior. Susanty et al. (2022) also show that e-payment adoption among traditional market traders is influenced by readiness, perceived benefits, and traders' acceptance of technology.

## 2.7 Market governance

Market governance relates to how market activities are regulated, coordinated, and supervised so that they can operate in an orderly, transparent, and responsive manner to traders' needs. In traditional markets, governance is reflected in the clarity of market rules, information openness, fair treatment of traders, managers' responsibility for cleanliness and security, and the availability of communication channels between traders and market managers. Wibawa et al. (2024) emphasize that the sustainability of traditional markets in Indonesia requires a governance approach involving multiple actors, including government, market managers, and trader communities. In addition, Dellyana et al. (2023) explain that transformation and innovation require governance design that can effectively coordinate actors, policies, and implementation processes.

## *The relationship between each construct*

Infrastructure quality is expected to influence trader satisfaction because physical market facilities are basic elements that support daily business activities. Adequate infrastructure, such as building conditions, accessibility, public facilities, and goods distribution access, can help traders conduct trading activities more safely, comfortably, and efficiently. Kania et al. (2020) and Lubis et al. (2021) show that traditional market revitalization through improvements in physical facilities, accessibility, and market management can increase trader satisfaction, competitiveness, and business performance. Thus, better infrastructure quality is expected to increase trader satisfaction.

**H<sub>1</sub>:** *Infrastructure quality influences trader satisfaction.*

Service quality is also expected to affect trader satisfaction because traders require clear, responsive, and reliable services from market managers. From the service marketing perspective, user satisfaction is formed when the services received meet or exceed expectations (Zeithaml et al., 2018). In traditional markets, good service can be reflected in clear information, responsiveness to complaints, service attitude, and the ability of market managers to support smooth market activities. Therefore, higher service quality is expected to improve trader satisfaction.

**H<sub>2</sub>:** *Service quality influences trader satisfaction.*

Government support is expected to influence trader satisfaction because public authorities play an important role in providing regulations, training, assistance, facilities, and technological support for traditional market development. Such support can help create a more organized market environment and support the sustainability of traders' businesses. Chege and Wang (2020) explain that government support can strengthen business capabilities through the provision of resources and supportive policies. Thus, stronger government support perceived by traders is expected to increase trader satisfaction with market conditions.

**H<sub>3</sub>:** *Government support influences trader satisfaction.*

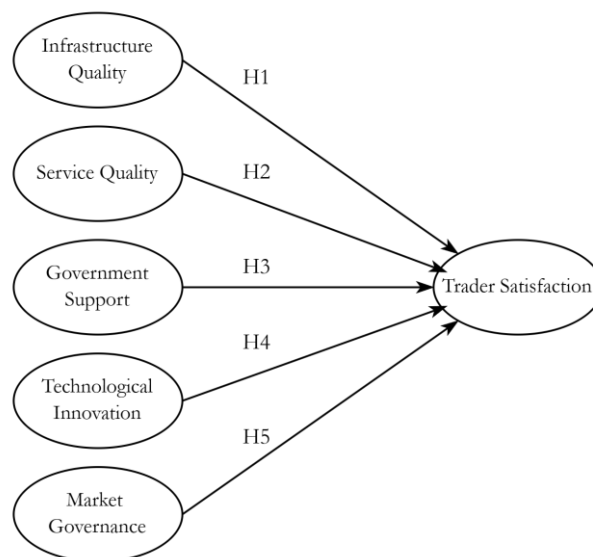
Technological innovation is expected to affect trader satisfaction because technology can accelerate transactions, improve access to information, enhance communication, and support the efficiency of trading activities. In traditional markets, technological innovation may take the form of cashless payments, digital information media, digital promotion, and technology-based services that facilitate traders' activities. Susanty et al. (2022) show that e-payment adoption among traditional market traders is influenced by readiness and perceived benefits of technology. Therefore, technological innovation that fits traders' needs is expected to improve trader satisfaction.

**H<sub>4</sub>:** *Technological innovation influences trader satisfaction.*

Market governance is expected to influence trader satisfaction because governance is related to the clarity of rules, information transparency, fair treatment, managerial responsibility, and communication channels between traders and market managers. Good governance can create certainty, order, and trust in trading activities. Wibawa et al. (2024) emphasize that the sustainability of traditional markets requires governance involving coordination and participation among multiple actors. Thus, better market governance is expected to increase trader satisfaction with market management.

**H<sub>5</sub>:** *Market governance influences trader satisfaction.*

Based on the hypotheses, a conceptual framework is developed and illustrated in Figure 1



**Figure 1.**  
Conceptual Framework

### 3. Methodology

#### 3.1 Data Collection and Sample

The population of this study consisted of traders operating in traditional markets in Garut Regency. Since the study focuses on traders' evaluation of market facilities,

services, government support, technological practices, and market governance, respondents were selected using purposive sampling. The respondent criteria included active traders who conducted routine business activities in traditional markets, had direct experience with market management practices, and were willing to complete the questionnaire based on their actual conditions. To reduce selection bias,

respondents were approached from different market locations and commodity groups, including traders of food staples, vegetables, clothing, household goods, and other daily products. This approach was used to ensure that the sample covered various trader segments within traditional markets.

A total of 100 valid responses were collected and used for data analysis. The sample size was justified based on the prediction-oriented objective of the study and the complexity of the model, which includes five exogenous constructs predicting trader satisfaction. Based on statistical power considerations for a model with five predictors, a medium effect size, a significance level of 0.05, and statistical power of 0.80, the required minimum sample size is considered acceptable for testing the proposed model (Cohen, 1988). In addition, PLS-SEM is appropriate for prediction-oriented research involving multiple latent constructs and indicators, particularly when the objective is to maximize the explained variance of the endogenous construct (Hair et al., 2022). The use of PLS-SEM is also supported by methodological literature that emphasizes statistical power as a more rigorous basis for determining minimum sample size than relying only on the traditional 10-times rule (Kock & Hadaya, 2018). Therefore, 100 valid responses were considered adequate for evaluating the proposed model and examining the relationships among the constructs.

Ethical considerations were applied during data collection. Respondents were informed that their participation was voluntary and that their answers would be used only for academic purposes. They were also assured that their responses would remain

confidential and would be analyzed in aggregate form. This procedure was applied to encourage honest responses and reduce potential response bias in the self-report questionnaire.

### *3.2 Development of Instrument*

The constructs in this study were measured using items adapted from previous studies and adjusted to the context of traditional markets in Garut Regency. Since all constructs were latent variables, the measurement items were developed to capture traders' perceptions and experiences related to market facilities, services, government support, technological practices, market governance, and trader satisfaction. The questionnaire consisted of 41 initial items covering six constructs, namely trader satisfaction, infrastructure quality, service quality, government support, technological innovation, and market governance. A five-point Likert scale was used, ranging from 1 = strongly disagree to 5 = strongly agree, to measure the level of respondents' agreement with each statement.

The questionnaire was prepared in Bahasa Indonesia to ensure that respondents could understand each item clearly. The measurement items were adapted from relevant literature and then adjusted to the empirical context of traditional markets. Before the main data collection, the questionnaire was reviewed for item clarity, language suitability, and contextual relevance. Minor wording adjustments were made to ensure that the statements were easy to understand without changing the conceptual meaning of each construct. The operationalization of the constructs is presented in Table 1.

Table 1.  
Constructs and measurements

| Construct                | Number of Initial Items | Main Indicators                                                                                                                                               | Main References                                                   |
|--------------------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| Trader Satisfaction      | 7                       | accessibility, cleanliness, physical comfort, security, transportation access, manager response, retribution transparency                                     | Zeithaml et al. (2018); Lubis et al. (2021)                       |
| Infrastructure Quality   | 7                       | public facilities, trading facilities, market building condition, road safety, road comfort, market accessibility, goods distribution access                  | Kania et al. (2020); Wirtz and Lovelock (2021); Yi and Gim (2018) |
| Service Quality          | 7                       | service support, facility suitability, responsiveness, complaint handling, friendliness, price information clarity, management information clarity            | Zeithaml et al. (2018); Wirtz and Lovelock (2021)                 |
| Government Support       | 6                       | legal certainty, competitiveness policy, trader assistance, operational burden reduction, facility support, technology support                                | Chege and Wang (2020); Prasannath et al. (2024)                   |
| Technological Innovation | 7                       | digital transactions, cashless payment, product or trading quality improvement, service improvement, management support, transaction ease, trading efficiency | Schilling (2020); Susanty et al. (2022); Verhoef et al. (2021)    |
| Market Governance        | 7                       | rule clarity, fair treatment, cleanliness responsibility, security responsibility, complaint mechanism, trader participation, communication forum             | Wibawa et al. (2024); Dellyana et al. (2023)                      |

### 3.3 Analysis Approach

The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS. PLS-SEM was selected because this study aims to explain and predict trader satisfaction based on several latent constructs, namely infrastructure quality, service quality, government support, technological innovation, and market governance. This method is appropriate for prediction-oriented research and for models involving multiple latent constructs and indicators, particularly when the main objective is to maximize the explained variance of the endogenous construct (Hair et al., 2022). In this study, all constructs were treated as reflective constructs because the indicators were designed to reflect traders' perceptions of each latent variable.

The analysis was conducted in two stages. First, the measurement model was evaluated

to assess the validity and reliability of the constructs. This evaluation included outer loadings, Cronbach's alpha, composite reliability, average variance extracted (AVE), and discriminant validity. Second, the structural model was assessed to examine the relationships among constructs. The structural model evaluation included collinearity assessment using the variance inflation factor (VIF), path coefficients, t-statistics, p-values, and R-square values. The hypotheses were tested using a bootstrapping procedure with a significance level of 0.05.

Since the data were collected using self-report questionnaires, common method bias was also considered. To reduce response bias, respondents were informed that their answers would remain confidential and would only be used for academic purposes. In addition, common method bias was assessed using a collinearity-based diagnostic approach, while

multicollinearity among predictor constructs was examined through inner VIF values. This procedure was applied to ensure that common method bias and collinearity did not become serious concerns in the study.

## 4. Findings and Discussion

### 4.1 Measurement Model Evaluation

Before evaluating the measurement model, common method bias was considered because the data were collected using self-report questionnaires. Common method bias was assessed using a collinearity-based diagnostic approach, while multicollinearity among predictor constructs was examined through inner VIF values. The results showed that all VIF values were below the recommended threshold of 3.3, ranging from 1.069 to 1.158. These values indicate that common method bias was not a serious issue in this study and that multicollinearity among the predictor constructs was not problematic.

The measurement model was evaluated using outer loadings, Cronbach's alpha, composite reliability, and average variance extracted (AVE). In the initial measurement model, two indicators, namely SQ6 from service quality

and GS2 from government support, were removed because their outer loading values did not meet the recommended threshold and did not adequately represent their respective constructs. After removing these indicators, the retained measurement model consisted of 39 items. As shown in Table 2, the outer loading values ranged from 0.567 to 0.864. Although several indicators had outer loading values below 0.700, all retained indicators had values above 0.500. Following Hair et al. (2021), indicators with outer loadings between 0.400 and 0.708 do not need to be automatically removed if the corresponding constructs meet the recommended reliability and convergent validity criteria. Specifically, GS1, GS3, and SQ3 were retained to preserve theoretical coverage and contextual relevance in the traditional market setting, as these indicators represent essential aspects of government support and service quality experienced by traders. The Cronbach's alpha values ranged from 0.824 to 0.876, indicating acceptable internal consistency reliability. The composite reliability values ranged from 0.837 to 0.903, exceeding the recommended threshold of 0.700. In addition, the AVE values ranged from 0.514 to 0.570, which were above the minimum threshold of 0.500. These results indicate that all constructs achieved adequate reliability and convergent validity.

Table 2.  
*Validity and Reliability*

| Construct                     | Item code | Outer loadings | Composite Reliability (CR) | Average Variance Extracted (AVE) |
|-------------------------------|-----------|----------------|----------------------------|----------------------------------|
| Government Support (GS)       | GS1       | 0.567          | 0.837                      | 0.514                            |
|                               | GS3       | 0.579          |                            |                                  |
|                               | GS4       | 0.815          |                            |                                  |
|                               | GS5       | 0.864          |                            |                                  |
|                               | GS6       | 0.710          |                            |                                  |
|                               | GS7       | 0.710          |                            |                                  |
| Technological Innovation (TI) | TI1       | 0.739          | 0.903                      | 0.570                            |
|                               | TI2       | 0.726          |                            |                                  |
|                               | TI3       | 0.735          |                            |                                  |
|                               | TI4       | 0.757          |                            |                                  |
|                               | TI5       | 0.803          |                            |                                  |
|                               | TI6       | 0.751          |                            |                                  |
|                               | TI7       | 0.772          |                            |                                  |

Table 2. (Continued)

| Construct                   | Item code | Outer loadings | Composite Reliability (CR) | Average Variance Extracted (AVE) |
|-----------------------------|-----------|----------------|----------------------------|----------------------------------|
| Trader Satisfaction (TS)    | TS1       | 0.736          | 0.885                      | 0.524                            |
|                             | TS2       | 0.772          |                            |                                  |
|                             | TS3       | 0.756          |                            |                                  |
|                             | TS4       | 0.699          |                            |                                  |
|                             | TS5       | 0.697          |                            |                                  |
|                             | TS6       | 0.648          |                            |                                  |
|                             | TS7       | 0.749          |                            |                                  |
| Infrastructure Quality (IQ) | IQ1       | 0.784          | 0.881                      | 0.516                            |
|                             | IQ2       | 0.748          |                            |                                  |
|                             | IQ3       | 0.665          |                            |                                  |
|                             | IQ4       | 0.698          |                            |                                  |
|                             | IQ5       | 0.677          |                            |                                  |
|                             | IQ6       | 0.704          |                            |                                  |
|                             | IQ7       | 0.744          |                            |                                  |
| Service Quality (SQ)        | SQ1       | 0.630          | 0.864                      | 0.519                            |
|                             | SQ2       | 0.706          |                            |                                  |
|                             | SQ3       | 0.579          |                            |                                  |
|                             | SQ4       | 0.812          |                            |                                  |
|                             | SQ5       | 0.819          |                            |                                  |
|                             | SQ7       | 0.744          |                            |                                  |
| Market Governance (MG)      | MG1       | 0.720          | 0.900                      | 0.562                            |
|                             | MG2       | 0.727          |                            |                                  |
|                             | MG3       | 0.749          |                            |                                  |
|                             | MG4       | 0.768          |                            |                                  |
|                             | MG5       | 0.745          |                            |                                  |
|                             | MG6       | 0.725          |                            |                                  |
|                             | MG7       | 0.811          |                            |                                  |

Source: Processing data with Smart PLS 3.0, 2026

#### 4.2 Discriminant Validity

Discriminant validity was assessed using the Heterotrait-Monotrait Ratio (HTMT), which is recommended for evaluating whether constructs in variance-based structural equation modeling are empirically distinct (Henseler et al., 2015). HTMT was used to ensure that each construct in the model measured a different concept and did not overlap excessively with other constructs. As

shown in Table 3, all HTMT values were below the recommended threshold of 0.90, with values ranging from 0.115 to 0.661. The highest HTMT value was found between market governance and trader satisfaction, but this value remained below the recommended threshold. These results indicate that discriminant validity was established for all constructs in the model

Table 3.  
*Discriminant Validity Using HTMT*

| Construct                     | GS    | IQ    | MG    | SQ    | TI    | TS |
|-------------------------------|-------|-------|-------|-------|-------|----|
| Government Support (GS)       | -     |       |       |       |       |    |
| Infrastructure Quality (IQ)   | 0.163 | -     |       |       |       |    |
| Market Governance (MG)        | 0.149 | 0.193 | -     |       |       |    |
| Service Quality (SQ)          | 0.175 | 0.410 | 0.157 | -     |       |    |
| Technological Innovation (TI) | 0.288 | 0.115 | 0.223 | 0.176 | -     |    |
| Trader Satisfaction (TS)      | 0.188 | 0.431 | 0.661 | 0.205 | 0.444 | -  |

*Source: Processing data with Smart PLS 3.0, 2026*

#### 4.3 Structural Model Evaluation

The structural model was evaluated using collinearity statistics, R-square, f-square, path coefficients, t-statistics, and p-values. The collinearity assessment reported in Section 4.1 showed that all VIF values were below the recommended threshold, indicating that collinearity did not bias the structural model estimation. The R-square value for trader satisfaction was 0.644, with an adjusted R-square of 0.626. This result indicates that infrastructure quality, service quality, government support, technological innovation, and market governance jointly explained 64.4% of the variance in trader

satisfaction.

The f-square values were also examined to assess the contribution of each predictor construct. Market governance showed the largest effect size on trader satisfaction, with an f-square value of 0.595. Technological innovation and infrastructure quality also showed relatively strong contributions, with f-square values of 0.349 and 0.344, respectively. Service quality had an f-square value of 0.174, while government support had an f-square value of 0.141. These results indicate that the predictor constructs contributed differently to explaining trader satisfaction.

Table 4.  
*R-Square*

| Endogenous Construct | R-Square | Adjusted R-Square |
|----------------------|----------|-------------------|
| Trader Satisfaction  | 0.644    | 0.626             |

*Source: Processing data with Smart PLS 3.0, 2026*

Table 5.  
*F-Square*

| Predictor Construct      | f-square |
|--------------------------|----------|
| Government Support       | 0.141    |
| Infrastructure Quality   | 0.344    |
| Market Governance        | 0.595    |
| Service Quality          | 0.174    |
| Technological Innovation | 0.349    |

*Source: Processing data with Smart PLS 3.0, 2026*

The hypothesis testing results are presented in Table 5. Infrastructure quality significantly affected trader satisfaction with a path coefficient of 0.376, t-value of 4.935, and p-value below 0.001. Service quality also significantly affected trader satisfaction with a path coefficient of 0.265, t-value of 2.547, and p-value of 0.011. Government support did not significantly affect trader satisfaction, with a path coefficient of -0.232, t-value of 1.787, and p-value of 0.075. Technological innovation significantly affected trader satisfaction with a path coefficient of 0.367, t-value of 6.279, and p-value below 0.001.

Market governance showed the strongest significant effect on trader satisfaction, with a path coefficient of 0.476, t-value of 8.665, and p-value below 0.001. These results indicate that trader satisfaction is mainly shaped by market-level factors that are directly experienced by traders, particularly governance practices, infrastructure conditions, service delivery, and technological support. In contrast, government support did not show a direct significant effect, suggesting that policy level support may need to be translated into more visible and practical improvements at the market level.

Table 6.  
*Hypothesis Testing*

| Hypothesis | Relationship                                   | Path Coefficient | t-value | p-value | Result          |
|------------|------------------------------------------------|------------------|---------|---------|-----------------|
| H1         | Infrastructure Quality → Trader Satisfaction   | 0.376            | 4.935   | <0.001  | Significant     |
| H2         | Service Quality → Trader Satisfaction          | 0.265            | 2.547   | 0.011   | Significant     |
| H3         | Government Support → Trader Satisfaction       | -0.232           | 1.787   | 0.075   | Not Significant |
| H4         | Technological Innovation → Trader Satisfaction | 0.367            | 6.279   | <0.001  | Significant     |
| H5         | Market Governance → Trader Satisfaction        | 0.476            | 8.665   | <0.001  | Significant     |

*Source: Processing data with Smart PLS 3.0, 2026*

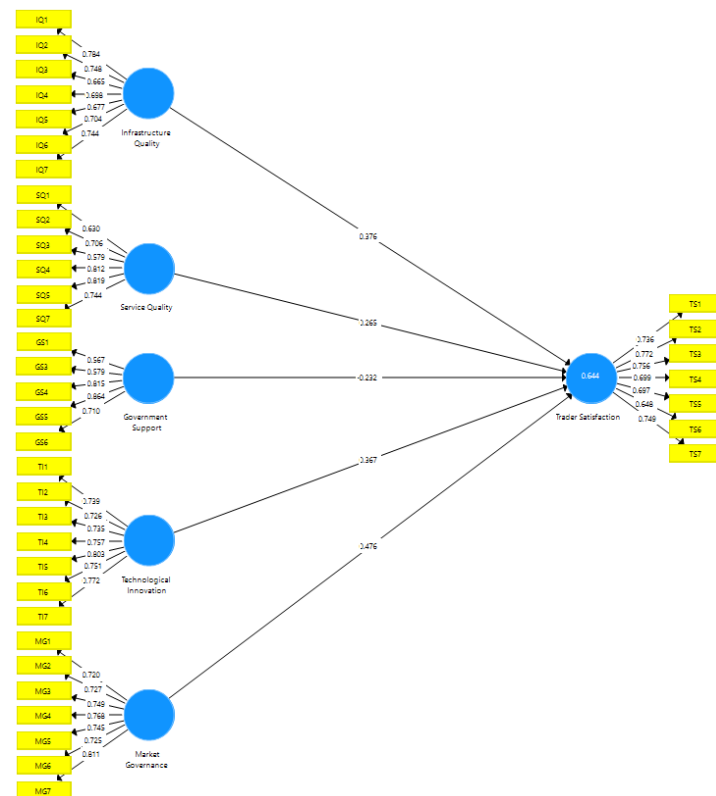


Figure 2.  
Research Result

## Discussion

The findings indicate that infrastructure quality, service quality, technological innovation, and market governance significantly influence trader satisfaction, while government support does not show a significant effect. This pattern suggests that trader satisfaction in traditional markets is mainly shaped by factors that traders directly experience in daily market activities. From the service marketing perspective, satisfaction reflects users' evaluation of the service experience received from a service system (Zeithaml et al., 2018). In this study, traders evaluate the market not only as a place for transactions, but also as a managed service environment that provides facilities, services, technology, and governance mechanisms.

Infrastructure quality and service quality significantly influence trader satisfaction. Adequate facilities, proper building conditions, accessibility, and distribution access help traders conduct business activities more comfortably and efficiently. This

supports Kania et al. (2020) and Lubis et al. (2021), who found that improvements in physical facilities, accessibility, and market management can strengthen trader satisfaction, market competitiveness, and business performance. At the same time, responsive services, clear information, complaint handling, and reliable market management strengthen traders' service experience. This is consistent with the service marketing view that satisfaction is formed when service performance meets or exceeds user expectations (Zeithaml et al., 2018; Wirtz & Lovelock, 2021). Thus, traditional markets should be understood not only as physical trading spaces, but also as service systems for traders.

Technological innovation and market governance also significantly influence trader satisfaction, with market governance showing the strongest effect. The significance of technological innovation indicates that digital practices, such as cashless payments, transaction efficiency, and information access,

have become relevant to traditional market operations. This finding is in line with Susanty et al. (2022), who show that e-payment adoption among traditional market traders is influenced by perceived benefits and readiness. From the dynamic capabilities perspective, technological innovation reflects the ability of markets and traders to adjust to environmental changes (Teece, 2018). However, the stronger effect of market governance suggests that technology needs to be supported by clear rules, fair treatment, transparency, complaint mechanisms, and communication between traders and market managers. This supports Wibawa et al. (2024), who emphasize that traditional market sustainability requires governance based on coordination and participation.

Government support does not significantly influence trader satisfaction. This finding does not mean that government support is unimportant, but indicates that support at the policy level may not directly shape trader satisfaction when it is not translated into concrete improvements experienced by traders. Regulations, assistance, development programs, or technology facilitation may have limited effects if they are not implemented through visible improvements in facilities, services, technology access, or market governance. This interpretation is consistent with the view that institutional support becomes more effective when it is aligned with the actual needs of business actors (Chege & Wang, 2020; Prasannath et al., 2024).

Overall, this study provides a conceptual insight that traditional market modernization in non-metropolitan regions should not be viewed merely as physical revitalization or digital adoption. Trader satisfaction is shaped by the alignment of infrastructure quality, service quality, technological innovation, and market governance. The findings extend the service marketing perspective by positioning traders as users of market management services and strengthen the dynamic capabilities perspective by showing that traditional markets require the capability to

coordinate physical, service, technological, and governance resources in responding to environmental change (Teece, 2018). Therefore, modernization should be understood as an integrated management capability that improves traders' daily business experience.

## **5. Conclusions**

This study examined the influence of infrastructure quality, service quality, government support, technological innovation, and market governance on trader satisfaction in traditional markets in Garut Regency. The findings show that infrastructure quality, service quality, technological innovation, and market governance significantly influence trader satisfaction, while government support does not show a significant effect. Among the significant variables, market governance has the strongest influence, indicating that clear rules, fair treatment, transparency, complaint mechanisms, and communication between traders and market managers are central to shaping trader satisfaction.

### *Theoretical Implications*

Theoretically, this study provides empirical insight into trader satisfaction in the context of traditional market management. The findings indicate that trader satisfaction can be understood as traders' evaluation of market management services, including infrastructure, service delivery, technology use, and governance practices. This study also shows that traditional market modernization should not be understood only as physical revitalization or digital adoption, but as an integrated management process that aligns infrastructure quality, service quality, technological innovation, and market governance. However, these theoretical implications should be interpreted carefully because the study focuses on traditional markets in one regency context.

### *Practical Implications*

Practically, the findings suggest that market managers should prioritize aspects that traders experience directly in their daily activities. Improving market governance should become a key priority through clearer rules, fairer treatment, transparent information, responsive complaint mechanisms, and better communication with traders. Infrastructure improvement, service responsiveness, and technology adoption should also be aligned with traders' operational needs. For local governments, support programs need to be translated into concrete market-level actions so that traders can directly experience their benefits in daily business activities.

#### *Limitations and Future Research*

This study has several limitations. First, the data were collected from 100 traders in traditional markets in Garut Regency, so the findings should be interpreted within this local context. Second, this study used a cross-sectional survey, which limits the ability to capture changes in trader satisfaction over time. Third, the model only examined direct effects and did not test mediation or moderation mechanisms. Future research may expand the sample across different regions, use longitudinal data, or examine additional mechanisms that may explain how market management practices influence trader satisfaction.

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