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Optimizing Asset Management of Kota Juang Public Market in Bireuen District: A GIS-Based Approach and Community Engagement

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Abstract

Managing the assets of the public market in Kota Juang, Bireuen District, must be implemented well to provide an overview of regional wealth, clarify ownership status, safeguard regional goods, and increase regional original income. This research aims to analyze the factors that most influence the less-than-optimal management of public market assets in Kota Juang, Bireuen District, in terms of the role of the market community for good operational sustainability in helping to develop traders' businesses and to find out which infrastructure facilities and infrastructure need to be revitalized. The management of public market assets in Kota Juang, Bireuen District, is optimized by implementing the Geographic Information System/GIS. There are four stages in using the GIS application. The first stage is the data input stage, which includes planning, determining goals, collecting data, and entering it into the computer. Then, the data processing and analysis stage, as well as the output stage, which is the final phase, is presented as a hardcopy map, data tabulation, or a website. The data inputted as attributes in this GIS application is obtained from observations at market locations and related agencies in the form of location maps, Figures of the condition/existing market assets, supporting infrastructure data, and data on traders in the market community. This research uses purposive sampling techniques and data analysis using SWOT analysis. From the results of partial hypothesis testing on building conditions where the t-count = 4.769, while the t-count for facilities and infrastructure is 5.756, this value is greater than the t-table, namely 2.014, so it significantly affects market asset management. The final result of the SWOT analysis is to overcome the problems in the public market area by planning the need for facilities and infrastructure or infrastructure that is no longer suitable so that it can be revitalized and increase the role of market managers by preparing standard operating procedures.

Keywords: optimizing, asset management, public market, GIS, SWOT analysis.

Introduction

Efficient asset management is essential for the long-term sustainability of urban markets, especially in areas such as the Bireuen District, where public markets play a key role in the local economy. Kota Juang Public Market is a central point of trade, social interaction, and cultural exchange. Unfortunately, challenges in managing these assets often arise due to a lack of complete data and low public participation. Kota Juang Public Market is vital in trade, cultural exchange, and individual relations. However, inadequate data and community participation can hamper the efficient management of these resources (Morin, 2023). This study aims to enhance asset management in the Public Market of Kota Juang by utilizing Geographic Information Systems (GIS). It highlights the significance of public participation in the process. GIS facilitates comprehensive data analysis, which promotes improved decision-making and ultimately leads to the creation of accurate asset maps. With this, decision-making becomes better, and the distribution of resources can be optimized (Udin & Malek, 2018). By engaging the community in this project, we can ensure that the management strategy will align with market users' needs and expectations. In addition, it will encourage collaboration and togetherness in achieving these goals (Laili et al., 2022).

Using GIS technology in asset management brings excellent advantages in improving the decision-making process. GIS offers an effective tool for displaying geographical data, thus assisting stakeholders in analyzing patterns, discovering trends, and making decisions based on the available data (Lee et al., 2014). With the asset map of Juang City Public Market, information on resource distribution, infrastructure development, and service provision will need to be implemented. In addition, the GIS is also capable of monitoring and assessing the condition of the market in real time so that flexible management strategies that are responsive to changes can be implemented immediately. Incorporating these technologies increases operational efficiency and gives power to the community by providing easily accessible information that can encourage their participation in market management (Braithwaite et al., 2012).

Implementing sustainable practices is highly recommended when managing People's Market assets. This aims to make the use of resources more efficient, and environmental impacts can be reduced. Integrating sustainability principles into asset management strategies can positively affect economic performance, social equity, and environmental management. Implementing sustainable practices in managing the Kota Juang People's Market will positively influence the market's resilience in facing external challenges such as economic crises or climate change (Pilati & Stradis, 2023). This research examines how GIS and community engagement can be used to manage resources sustainably, thus ensuring the market remains an important and active part of the Bireuen District community in the future. In addition, this research provides a comprehensive framework for improving asset management in Kota Juang Public Market to ensure long-term sustainability and support more inclusive economic growth.

Literature Review

Definition of market

According to the Minister of Trade of the Republic of Indonesia No. 53 of 2008, a market is defined as an area where goods are bought and sold with more than one seller, whether referred to as a shopping place, traditional market, shop, plaza, mall, trade center or other names. Meanwhile, what is meant by a Traditional Market is a market built and managed by the Government, Regional Government, Private, State-Owned Enterprises, and Regional-Owned Enterprises, including collaboration with the private sector with business premises in the form of shops, kiosks, stalls, and tents owned or managed by traders. Small, medium, and independent communities or cooperatives with small businesses, small capital, and the process of buying and selling merchandise through bargaining (Khatiwada, 2019).

Asset management

Asset management is an organized process of cost-efficiently maintaining, improving, and operating physical assets (Alhamdani & Sari, 2020). It includes stages such as planning, purchasing, using, and disposing of assets (Izharsyah et al., 2022). The importance of good asset management cannot be overlooked, as it helps improve performance, reduce costs, and extend asset life. It ensures that the asset delivers maximum value during its life phase. It is also concerned with applying the proper means, setting standards of goods and prices, and creating specifications. In addition, this process includes storage, distribution, control, maintenance, security, use, disposal, and inventory recording (incentivizing) (Sinaga & Rochmoeljati, 2024).

Geographic Information Systems

A Geographic Information System (GIS) is a computer-based mapping information system used to enter, store, recall, process, analyze, and produce geographically referenced data or geospatial data to support decision-making in planning and managing land use, natural resources, the environment, transportation, city facilities, and other public services (Valcik, 2012). Geographic Information System technology can also be used for scientific investigations, resource management, development planning, cartography, and route planning. The final result of the GIS process is realized in a map or graph. Maps are very effective for storing, visualizing, and providing geographic information. In using GIS, in general, there are 4 (four) main stages, namely as follows: data input, data storage, data analysis, and data output (Reddy, 2018).

1. Data input stages
   The data input stage is critical in a geographic information system/GIS, consuming 60% of the time and costs. This stage also includes planning, determining goals, collecting data, and entering it into the computer.
2. Data processing stages
   This stage includes data classification and stratification activities, compilation, and geoprocessing (Clip, merge, dissolve). This process will consume time and costs, reaching 20% of the total GIS activities.

3. Data analysis stages
   At this stage, various types of spatial analysis are carried out, such as buffers, overlays, and others. This stage will take up to 10% of time and costs.
4. Output stages
   This stage is the final phase, which will relate to the presentation of the results of the analysis that has been carried out, whether presented in the form of a hardcopy map, data tabulation, information system CD, or a website.

Likert scale

The Likert scale is a bipolar scale method that measures positive and negative responses to a statement. Four-choice scales are also sometimes used for Likert scale questionnaires, forcing people to choose one of the poles because a "neutral" option is unavailable (Likert Scales: Definition, Examples, Tips & Analysis, 2019) (Mishra et al., 2014). A Likert scale is a tool for scaling responses in survey-type studies. This scaling is achieved by averaging the responses of a person or group to several questions on a topic. In creating a Likert scale, there are several procedural steps that researchers must carry out, including:

1. Researchers collect many items relevant to the problem being researched, consisting of items that are pretty clearly liked and disliked.
2. Then, the items are tried on a group of respondents representing the population you want to study.
3. The respondent above was asked to check whether he liked it (+) or didn't like it (-). These responses are collected, and the answer that indicates liking is given the highest score. There is no problem giving a score of 5 for the highest and a score of 1 for the lowest or vice versa. What is important is the consistency of the attitude shown. Likewise, whether the answer "agree" or "disagree" is called the preferred one depends on the content of the question and the content of the items compiled.

Strengths-Weaknesses-Opportunities-Threats analysis

SWOT is an acronym for Strengths, Weaknesses, Opportunities, and Threats. Albert S. Humphrey first introduced the concept in the 1960s through a study at the Stanford Research Institute, which took data from Fortune 500 companies. Since then, this analysis has become a highly recognized tool for strategic planning (Posada, 2010). SWOT analysis is foundational for examining topics and issues from four distinct perspectives. The primary objective of this analysis is to offer guidance and recommendations that enhance existing strengths and opportunities while addressing weaknesses and mitigating threats (Williams & Sheikh, 2022).

Systematically, SWOT analysis identifies the factors necessary to formulate a company's strategy. This method assumes it can strengthen strengths and opportunities while reducing weaknesses and threats. Below is a more in-depth explanation of these components (Šarić & Rosi, 2020):

1. Strengths
   Specific skills provide a business with a competitive advantage. Benefits may include an intense financial situation, a favorable reputation for the brand, a leading position in the industry, and good partnerships with suppliers and consumers.

2. Weaknesses

   These speak of constraints or deficiencies in assets, competencies, and skills that can seriously impair an organization's effectiveness. Potential shortcomings include inadequate infrastructure, lack of funding, inexperienced management, poor marketing tactics, and a negative brand image.

3. Possibilities

   Businesses can grow by utilizing favorable business conditions. Opportunities may arise from seeing hitherto unnoticed market niches, shifts in the competition, new laws, or technological developments.

4. Threats

   Unfavorable environmental circumstances can negatively impact a business's performance. New competitors, slow market expansion, or more substantial negotiating power from suppliers or customers can all pose threats.

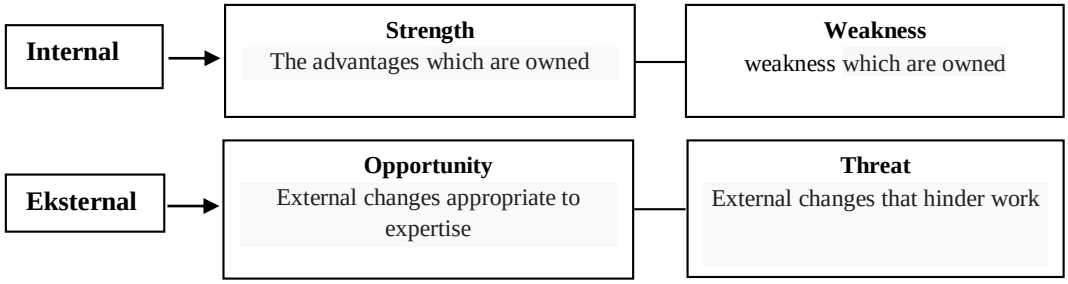

Fig.1 SWOT analysis model
Source: Šarić & Rosi, (2020)

Fig. 1 highlights the essential elements of a SWOT analysis, a strategic tool for assessing an organization's internal strengths and weaknesses about external opportunities and threats. This framework enables businesses to leverage their strengths while effectively addressing environmental challenges.

1. Internal components

   A business unit needs to use its capabilities to take advantage of opportunities. Each business unit's advantages and disadvantages should be regularly assessed (Kamkankaew, 2023).

2. External influences.

   Economic, social, cultural, technological, and political challenges are just a few that business units need to be mindful of. The unit's economic potential is greatly influenced by key microenvironmental entities, including clients and competitors (Roche, 2007).

Table 1 Rank values based on level of importance

Rank	Level of Importance
1	Very Unimportance
2	Unimportance
3	Quite an importance
4	Importance
5	Very Importance

Source: Halim et al., (2020)

When ranking internal and external elements, the total of internal factors (strengths plus weaknesses) must equal 100% or 1. Similarly, all external factors (possibilities and threats) must add up to 100% or 1. The rank values, which range from 1 to 5, are assigned based on their significance level, as shown in Table 1 (Halim et al., 2020).

Research Method

This research uses a quantitative method approach. Quantitative methods examine respondents by collecting questionnaire data and then analyzing the data using a decision-making system. In this research, the first step is to identify problems with market asset management by involving community participation.

Stages of research implementation

In general, there are three stages in this research: The research planning stage includes determining the research title, identifying the problem, formulating the problem, conducting a literature review, defining the research method, determining the type of data, and determining the sample; The research implementation stage includes data collection, analysis, and data processing; and Research reporting stage. The complete presentation of the stages of this research can be seen in the flowchart shown in Fig. 2.

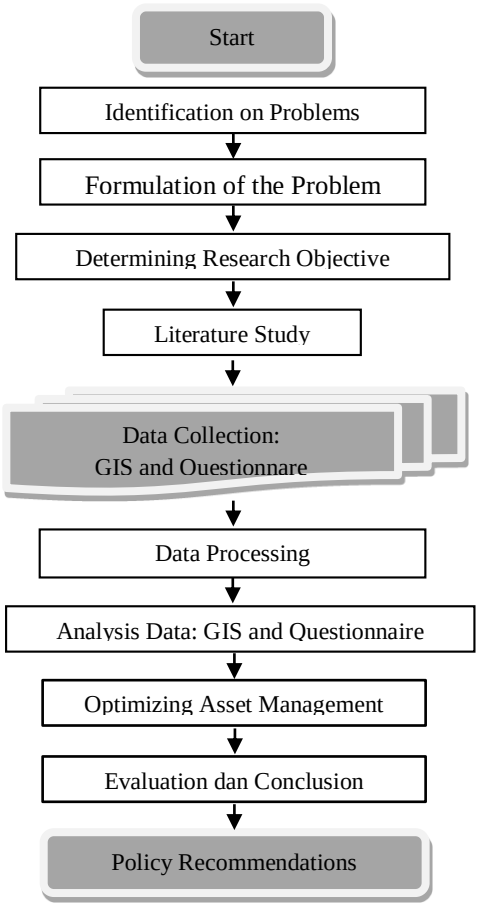

Fig.2 Research flowchart

Research location

The Kota Juang Public Market is located in the rice fields of Geulanggang Village, Kota Juang District, Bireuen District. It is easy to access and about 1 km from the city center, so it is suitable because it does not interfere with busy city activities. Fig. 3 shows a map of the location of the Kota Juang Public Market.

Fig. 3 Map of the Kota Juang Public Market location

Data Collection

In this research, the data used are primary and secondary, with primary data being the source of research data obtained directly from the source. Primary data was collected using four methods: direct field surveys, distributing questionnaires, interviews, and documentation. The direct survey method analyses the management of Public Market assets in Kota Juang, Bireuen District. Meanwhile, secondary data is obtained from existing sources such as related agencies, books, reports, or other relevant sources. The secondary data needed in this research are:

1. Data on buildings or facilities and infrastructure previously built by the government.
2. Data on traders or kiosk building tenants operating at the Kota Juang Public Market, Bireuen District.

Sampling method

This research used purposeful sampling, a technique that used informants with specific considerations who were deemed to understand the research object. It also used data collection techniques, such as interviews and questionnaires, to obtain the information needed for the writing.

Data analysis and processing

Data was processed by factor analysis using the Statistical Product and Service Solution (SPSS 24.0 for Windows) software program.

The steps in data analysis are as follows:

1. Calculate the average score for each respondent or group of respondents on all items measured on a Likert scale.

2. Data quality test: the quality of research data is determined by the instruments used to collect and produce quality data,
3. Create a satisfaction or interest index with validation tests and reliability tests,
4. Data analysis techniques: to analyze the data, the author used the multiple linear regression method, a statistical method used to determine the relationship between independent and dependent variables. This method is assisted by the Statistical Product and Service Solution (SPSS) software program.
5. Perform the F Test, a simultaneous significance test determining how much the independent variables (X1, X2, and X3) affect the dependent variable (Y).
6. Carrying out the T-Test, this partial significance test (t-statistical test) determines how much independent variables X1, X2, and X3 influence the dependent variable (Y), assuming the other variables are constant.
7. Using SWOT analysis to optimize public market asset management based on community participation, considering internal and external factors.

Results and Discussion

Present the results of your work. Use graphs and tables if appropriate, but summarize your main findings in the text. Do NOT discuss the results or speculate why something happened; that goes in the Discussion.

General description

The Kota Juang Public Market is situated among the rice fields in Geulanggang Gampong Village, within the Kota Juang District of Bireuen District. Its strategic location, roughly 1 kilometer from the city center, ensures easy access while minimizing interference with the vibrant activities of the city. The layout of the Public Market is depicted in Figure 4.

Fig. 4 Public Market layout

The trading infrastructure at the Juang Bireuen City Main Market includes a variety of facilities, such as a fish market, meat and poultry market, vegetable market, fruit market, and a cross-legged market, along with additional supporting stalls. There are 158 primary stalls and 450 extra spaces, offering a capacity for 608 stalls dedicated to traders. However, this capacity does not adequately reflect the actual number of traders in the market. The government has restructured the stall allocation better to meet vendors' needs in the older market and boost

market participation. The number of traders is determined by the number of stalls and kiosks that were used and those that were not after the shift.

Table 2 Number of public market traders in Kota Juang

No	Description	Used		Unused	
		Kiosk	Stall	Kiosk	Stall
1	Fish Market	-	134	-	16
2	Meat Market	-	30	-	2
3	Vegetable Market	-	40	-	-
4	Fruit Market	12	81	22	87
5	Lesehan Market	-	43	-	17
6	Supporting Kiosk	99	-	25	-
Amuont		111	328	47	122
Total Kiosk and Stall		439		169	

Source: Dinas Perdagangan, Perindustrian, Koperasi dan UKM Bireuen District

Effective asset management hinges on comprehensive location maps, visual representations of the current state of market assets, detailed descriptions of supporting infrastructure, and relevant information about traders within the market community. For instance, Fig. 5 illustrates the market facilities incorporated into the ArcGIS application. This approach dramatically enhances asset management practices' efficiency and transparency, fostering informed decision-making and encouraging active participation from the community.

This study utilized previously developed maps and enhanced imagery through Geographic Information Systems (GIS). These data are easily accessible to all users through the ArcGIS platform. All stakeholders can visit the Pasar Umum Kota Juang website or the Department of Trade, Industry, Cooperatives, and Small and Medium Enterprises of Bireuen District. This proactive initiative is important to maintain data integrity, enhance privacy for market stakeholders, and reduce the risk of unauthorized access to the system. Leveraging these resources can foster a safe and supportive atmosphere for all participants.

Geospatial data includes computer-assisted mapping information that facilitates data entry, storage, retrieval, processing, and analysis with geographic references. Land use planning, environmental restoration, and transportation development are among the many applications for this valuable resource. It enhances public service delivery by facilitating data entry, storage, retrieval, processing, and analysis with geographic references such as Pasar Umum Kota Juang.

Geographic data utilization allows stakeholders to enhance resource allocation strategies and facilitate informed decision-making that benefits society. Geographic Information Systems (GIS) serve to merge diverse data points with designated physical locations via mapped representations, thereby significantly improving analytical processes and visualization capabilities. One crucial category of data handled by GIS is spatial data, which encompasses location-specific information pertinent to a defined geographic area, referencing a structured coordinate system. Consequently, this methodology fosters efficient governance and encourages sustainable development initiatives.

Multiple linear regression test

Regression constants, or unstandardized coefficients, remain constant as other variables change. As shown in Table 3, these constant values were calculated for each continuous variable in the thorough examination of respondent data using multiple linear regression. This approach allows for a clearer understanding of the variables' relationships.

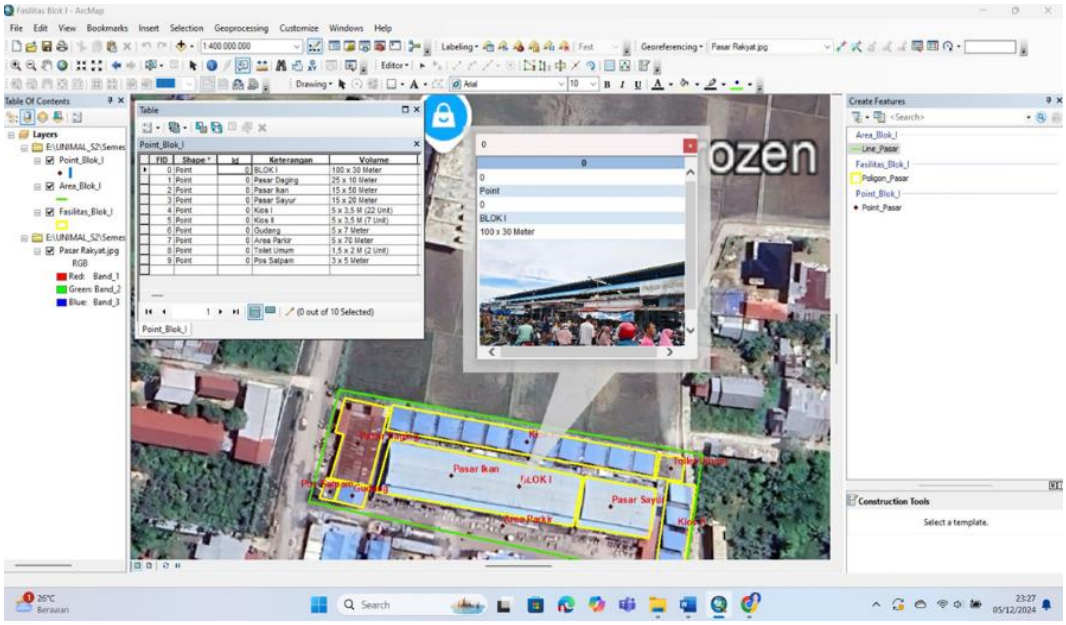

Fig. 5 Block I Market facilities in ArcGIS data

Based on Table 3 above, it can be concluded as follows:

1. Unstandardized Coefficients Variable X_1 is a regression coefficient, meaning that if variable X_1 increases by 1 unit, then variable Y will increase by 0.163.
2. The unstandardized coefficient for variable X_2 indicates that if X_2 increases by 1 unit, variable Y will increase by 1.330 units.
3. The unstandardized coefficient for variable X_3 indicates that if X_3 increases by 1 unit, then variable Y will increase by 0.793 units.

Table 3 Recapitulation of multiple linear regression results

Model	Unstandardised Coefficients
Constant	7.095
Market Location X_1	0.163
Building Condition X_2	1.330
Facilities and Infrastructure X_3	0.793

Strenght-Weakness-Opportunity-Threat analysis

Carrying out a SWOT analysis is crucial in designing a strategy that can take advantage of strengths and opportunities and overcome weaknesses and threats in managing market assets. This shows how important it is to involve the community. This study specifically studied the public market in Juang, Bireuen District.

SWOT analysis evaluates the strengths, weaknesses, opportunities, and threats a company faces in a particular project or line of business. It is a strategic way of planning. This analytical framework addresses possible risks and weaknesses and maximizes the potential use of existing strengths and opportunities. The study can precisely identify various internal and external factors.

Table 4 Strategic Management SWOT matrix

INTERNAL FACTORS	
1. Strength-S	**2. Weakness-W**
1. The traffic lanes in the Bireuen Market area are good, and the entry and exit roads are paved. 2. Availability of ample parking spaces in the Bireuen market area. 3. This is a strategic market area located in the center of the trade and services area, close to office areas and the District Government Center. 4. The main building facilities, such as kiosks, sufficient vendor stalls, and supporting facilities, such as prayer rooms, rubbish dumps, and toilets, are available.	1. There are buildings in the market that are still not functioning or not being used optimally. 2. Arrangement and use of parking lots is ineffective. 3. There are no regulations regarding the use of market areas located at intersections, so it quickly causes traffic jams; 4. Some supporting facilities or infrastructure are inadequate, such as drainage channels, and several toilets do not function because there is no water.
EXTERNAL FACTORS	
3. Opportunity-O	**4. Threat-T**
1. There are efforts on the part of the Bireuen Government to manage the market area in the Bireuen District 2. The population has increased, and traders are increasingly interested in using the Kota Juang market area's location in the Bireuen District. 3. There is desire and support from the community for spatial planning in the market area of Kota Juang, Bireuen District	1. The use of market facilities is not yet optimal, which results in chaos and causes a lack of comfort and tranquillity for market users. 2. There is no firmness on the part of the Bireuen Government in regulating street vendors (PKL) who sell on the side of the road. 3. The availability of parking spaces is not utilized correctly; market users prefer roads and corridors inside the market to park their vehicles. There has been no firm action against shop owners who sell on the sidewalk and motor vehicle owners 4. Buildings that are not under local wisdom because they are in buildings that seem closed, so the air is stuffy and feels hot.
Strategi (S-O)	
1. The Bireuen Government has planned to facilitate the need for facilities and infrastructure that are no longer suitable by revitalizing buildings/infrastructure in the market area so that it can provide easier services for the community to improve the economy; 2. Strengthen the role and function of market managers, namely the relevant stakeholders who are managing the Kota Juang market area, Bireuen District; 3. Increase the awareness of market users to actively participate in maintaining and caring for the various facilities available in the Public Market area of Kota Juang, Bireuen District.	
Strategy (S-T)	
1. Taking advantage of opportunities for government, private, and community collaboration in managing the Bireuen market area; 2. Increasing the functional role of the District and Mosque in managing the Bireuen market; 3. Increasing the role of related parties and other essential policies in efforts.	
Strategy (W-O)	
1. Taking advantage of opportunities for government, private, and community collaboration in managing the Bireuen market area; 2. Increasing the functional role of the District and Mosque in managing the Bireuen market; 3. Increasing the role of related parties and other essential policies in the Effort.	

Strategy (W – T)
1. Carry out continuous outreach to market users so that they play a role in managing facilities and infrastructure; 2. All parties, including the government, the private sector, and the community, must coordinate and be involved in planning, structuring, and utilizing market facilities. 3. Improve supervision of market area facilities and provide better solutions in managing various public facilities and infrastructure for the common good;

From the results of the analysis above, the SWOT results for S-O strategic management can be seen, namely:

1. The Bireuen Government plans to revitalize buildings and infrastructure in the market area to facilitate the need for facilities and infrastructure that are no longer suitable. This will make it easier for the community to provide services and improve the economy.
2. Strengthen the role and function of managers in improving services to the needs of traders and buyers in the Bireuen market area.
3. Increase awareness of market users' need to actively participate in maintaining and caring for various facilities in the Bireuen market area.

The validity assessment results showed that the value of the R-table reached 0.278. Interestingly, the R-value obtained for each variable exceeds this limit, indicating that all the variables used in the study are valid. In addition, reliability analysis showed that all variables had Cronbach's alpha values above 0.6, indicating that each variable has a strong and reliable assessment framework.

The findings from the T-test indicate that the conditions of buildings and infrastructure greatly influence the optimization of market asset management. As a result, enhancing the existing infrastructure and facilities of the public market is essential. Upgrading these elements could attract more traders and customers, ultimately fostering economic growth in the area. Figure 6 displays the outcomes of the t-count and t-table analyses.

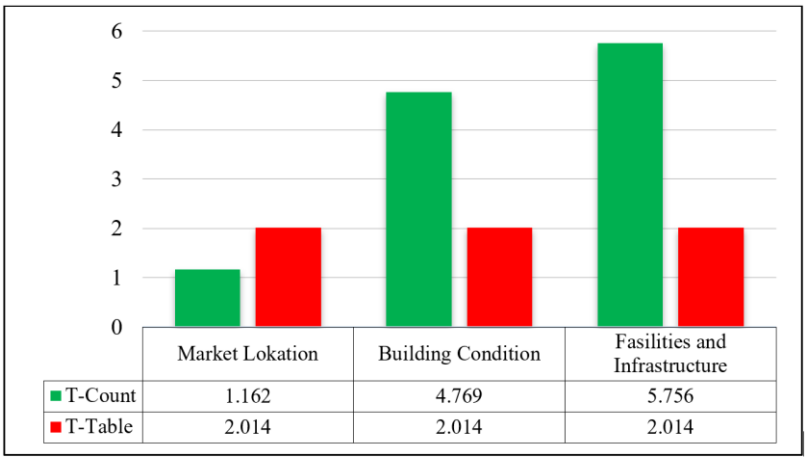

Fig. 6 Simultaneous hypothesis calculation results

When revitalizing the public market, four key principles should be observed:

1. Physical revitalization
   This principle highlights the importance of upgrading and repairing current structures. Key actions include enhancing public open spaces in the region, creating clear signage and

marketing strategies, establishing efficient connectivity networks, and developing eco-friendly landscapes.

2. Management revitalization
   A robust management system is required to monitor the various operational elements in the market. It includes clearly defining vendors' rights and responsibilities, establishing procedures for their placement, considering financial aspects, ensuring the availability of necessary services, and establishing performance standards for running the market.
3. Economic revitalization
   This concept highlights the need for rapid physical improvements to support the economy's formal and informal sectors to promote local economic growth.
4. Social revitalization
   Creating a pleasant environment is essential to improve social relationships and the quality of life of people as a whole. Citizens' positive interaction and active involvement should be encouraged in this context.

Conclusion

Using Geographic Information Systems (GIS) can improve the functioning of public markets in the city of Juang, Bireuen District. These modern computer-based mapping systems improve ways to enter, store, retrieve, process, and analyze geospatial data. As a result, it improves the planning and management of land use, environmental considerations, transportation, Kota Juang Public Market facilities, and various community services. Furthermore, the system is designed to strengthen the responsibilities of market managers while raising awareness among market users. The initiative actively involves these users and encourages them to participate in the maintenance and stewardship of the diverse facilities available in the Bireuen market area.

The Likert scale research provides essential insights into optimization elements related to the general market environment of Kota Juang in Bireuen District. This highlights the urgent need to make improvements to infrastructure and buildings. The building financed by DAK TP in Block IV, the water system, and the necessary ancillary facilities, such as market lanes, public toilets, good parking areas, and garbage dumps, should be addressed immediately. Another drawback revealed in the study is the lack of sanctions for market violators, particularly those traders who do not comply with the existing rules. Based on the SWOT analysis, it is necessary to develop and implement standard operating procedures so that market management can be significantly strengthened and the situation in the Kota Juang market can be improved. This proactive approach can facilitate the creation of a more organized and cooperative market.

Declaration of conflicting interest

The author(s) declared no potential conflicts of interest concerning this article's research, authorship, and/or publication.

References

Alhamdani, M. R., & Sari, D. P. (2020). Performance Evaluation of Pontianak Kapuas Indah Market from Architecture and Behaviour Aspect. Journal of Architectural Research and Education, 1(2), 107. https://doi.org/10.17509/jare.v1i2.22301

Braithwaite, R. L., McKenzie, R., Pruitt, V., Holden, K. B., Aaron, K., & Hollimon, C. (2012). Community-Based Participatory Evaluation. Health Promotion Practice, 14(2), 213. https://doi.org/10.1177/1524839912443241

Halim, S., Mubarokah, I., & Hidayanto, A. N. (2020). Rank Critical Success Factors (CSFs) of Data Warehouse and Business Intelligence (DW/BI) Implementation in Banking Sector Using Analytical Hierarchy Process (AHP). 2022 International Conference on Informatics, Multimedia, Cyber and Information System (ICIMCIS), 313. https://doi.org/10.1109/icimcis51567.2020.9354331

Hung, W.-T., Shang, J.-K., & Wang, F.-C. (2009). Pricing determinants in the hotel industry: Quantile regression analysis. International Journal of Hospitality Management, 29(3), 378. https://doi.org/10.1016/j.ijhm.2009.09.001

Izharsyah, J. R., Pratama, I. A., & Zai, S. M. (2022). Analysis of Participatory-Based Traditional Market Development Planning in Medan City. Advances in Social Science, Education and Humanities Research/Advances in Social Science, Education and Humanities Research. https://doi.org/10.2991/978-2-494069-07-7_15

Kamkankaew, P. (2023). Current Trends in Strategic Management: A Comparative Analysis of Swot and Soar Approaches. Rmutt Global Business Accounting and Finance Review, 7(2), 63. https://doi.org/10.60101/gbafr.2023.269044

Khatiwada, S. K. (2019). Contribution of Petty Trade on Household Income and Poverty Reduction. Dristikon A Multidisciplinary Journal, 9(1), 87. https://doi.org/10.3126/dristikon.v9i1.31159

Laili, N. N., Riswanda, R., & Yulianti, R. (2022). Evaluasi Kebijakan Revitalisasi Pasar Tradisional Dalam Mewujudkan Pengembangan Ekonomi Lokal di Pasar Petir Kabupaten Serang. Jurnal Kebijakan Pembangunan Daerah, 6(1), 27. https://doi.org/10.56945/jkpd.v6i1.162

Likert Scales: Definition, Examples, Tips & Analysis. (2019). https://www.surveymonkey.com/mp/likert-scale/

Mishra, D., Akman, İ., & Mishra, A. (2014). Theory of Reasoned Action application for Green Information Technology acceptance. Computers in Human Behavior, 36, 29. https://doi.org/10.1016/j.chb.2014.03.030

Morin, H. (2023). Revitalization of People's Market: A Case Study of Jibama Market, Jayawijaya District. Formosa Journal of Science and Technology, 2(5), 1179. https://doi.org/10.55927/fjst.v2i5.4286

Pilati, F., & Stradis, F. D. (2023). Social procurement practices in food logistics: A case study of a South European food processing company. Journal of Cleaner Production, 434, 140244. https://doi.org/10.1016/j.jclepro.2023.140244

Posada, E. (2010). Strategic Analysis of Alternatives for Waste Management. In InTech eBooks. https://doi.org/10.5772/8462

Reddy, G. P. O. (2018). Geographic Information System: Principles and Applications. In Geotechnologies and the environment (p. 45). Springer International Publishing. https://doi.org/10.1007/978-3-319-78711-4_3

Roche, C. (2007). Organizational assessment and institutional footprints.

Šarić, M., & Rosi, B. (2020). SWOT Analysis for the Cities of Hamburg and Rijeka. Scholars Journal of Arts Humanities and Social Sciences, 8(9), 508. https://doi.org/10.36347/sjahss.2020.v08i09.012

Sinaga, B., & Rochmoeljati, R. (2024). Analisis Manajemen Risiko Aset Teknologi Informasi dan Pemeliharaan Aset Menggunakan Quantitative Risk Analysis WH-TGR.

Udin, W. S., & Malek, N. A. (2018). Flood risk analysis in Sg. Sam, Kuala Krai, Kelantan using remote sensing and GIS technique. IOP Conference Series Earth and Environmental Science, 169, 12060. https://doi.org/10.1088/1755-1315/169/1/012060

Valcik, N. A. (2012). Using Geospatial Information Systems for Strategic Planning and Institutional Research. In IGI Global eBooks (p. 1502). IGI Global. https://doi.org/10.4018/978-1-4666-2038-4.ch090

Williams, R. A., & Sheikh, N. J. (2022). Technical, Organizational, and Process Impacts of Business Intelligence Implementation Failure. 2022 Portland International Conference on Management of Engineering and Technology (PICMET), 2, 1. https://doi.org/10.23919/picmet53225.2022.9882783