

Efforts to Expand Welfare: The Role of Public Economics in the Essentiality of Pedestrian Friendly City Development in Makassar City

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Abstract

This study investigates the essential role of public economics in achieving pedestrian friendly city development and its subsequent impact on community welfare in Makassar City. Although pedestrian-friendly development is proven crucial for improving public welfare, the current urban spatial reality in Makassar is far from ideal, with sidewalks frequently misused for parking and street vending, and lacking basic inclusive facilities such as disability paths and trash cans. This market failure necessitates public economic intervention, primarily through the local government's role, to distribute resources efficiently and restore the social welfare function. The research aims to analyze the direct influence of the Role of Public Economics (X) on Pedestrian Friendly City Development (Y), the influence of (Y) on Community Welfare (Z), the influence of (X) on (Z), and specifically the mediating role of (Y) between (X) and (Z). Employing a quantitative, causal-associative approach, the study uses Structural Equation Modeling - Partial Least Squares (SEM-PLS) for data analysis. Data will be collected through questionnaires distributed to an expected sample of 100 to 200 users of pedestrian facilities in strategic areas of Makassar, such as Losari Beach and Jalan Penghibur. The findings are expected to demonstrate how effective public policy can support more inclusive and sustainable urban development.

Keywords: *Public Economics; Pedestrian Infrastructure; Community Welfare; Sustainable Urban Development; Makassar City*

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Introduction

Walking is a fairly important part of the transportation system or urban linkage system (Yang et al., 2023). This is because walking allows people to reach all corners of the city that cannot be accessed by vehicle (Xu et al., 2022). There are many issues regarding pedestrian paths that can be observed today, such as the poor condition of pedestrian paths, a lack of supporting facilities for pedestrian paths, and so on (Akrar et al., 2019). Pedestrians are at a disadvantage when they share the same space (intermingle) with motor vehicles because they are considered to disrupt traffic flow and endanger the pedestrians' own safety (Billah et al., 2021; Subedi et al., 2026).

The city of Makassar, as the capital of South Sulawesi Province, is one of the rapidly developing metropolitan cities experiencing rapid economic growth (Liong et al., 2021). Pedestrian paths, also known as sidewalks, are essentially areas designated for pedestrians to carry out activities or other pursuits; they serve as circulation spaces for pedestrians that are separate from other vehicle traffic—whether motorized or not and provide services to pedestrians, thereby enhancing their mobility, safety, and comfort (Abbood & Hussein, 2021; Radjawane et al., 2026). Although the development of pedestrian-friendly cities has proven essential for improving public well-being, the current reality of urban planning in Makassar is still far from ideal (Natalia & Wunas, 2025). Pedestrians are often forced to walk off the designated paths because sidewalks have been repurposed as parking lots and trading areas for street vendors (PKL). This situation is exacerbated by the absence of basic supporting facilities, such as the lack of dedicated lanes for people with disabilities, the scarcity of trash bins, and utility infrastructure (such as utility poles) that has actually been built in the middle of pedestrian walkways (Yandrie & Widyaningsih, 2026). This phenomenon of the usurpation of public rights constitutes a market failure that calls for the implementation of public economic instruments; in this context, the government must immediately intervene through regulation to redevelop the area so that social welfare objectives can be realized (Rohana et al., 2022).

From a public economics perspective, the role of local governments as agents is bound by the obligation to distribute resources efficiently for the benefit of society as a whole (Barus et al., 2024). Pedestrian infrastructure not only enhances community mobility but also contributes to local economic growth, reduces negative externalities such as pollution and traffic congestion, and improves social welfare (Orrego-Oñate et al., 2024). Therefore, development in Makassar City should not be focused solely on large-scale infrastructure projects that are not urgent; rather, it must return to providing basic infrastructure that is inclusive and prioritizes vulnerable communities (pro-poor budgeting), such as pedestrian-friendly urban facilities (Barus et al., 2024). A pedestrian-friendly city can create spaces for healthy social interaction, boost economic activity among MSMEs, and improve the quality of the urban environment (Baobeid et al., 2021).

Local governments play a crucial role in designing urban development policies focused on community well-being (Syafaruddin Syafaruddin, 2024). Therefore, the development of a pedestrian-friendly city in Makassar is an important issue to examine through a public economics approach in order to understand how public policies can support more inclusive and sustainable urban development (Rohana et al., 2022).

Based on the issues identified in the introduction, this study seeks to examine the role of public economics in promoting pedestrian-friendly urban development and its implications for community well-being in Makassar City. Specifically, this study investigates whether the role of public economics has a positive and significant influence on pedestrian-friendly urban development. Furthermore, it examines whether pedestrian-friendly urban development contributes positively and significantly to community well-being. The study also explores whether the role of public economics directly affects community well-being. Finally, this research assesses whether pedestrian-friendly urban development serves as a mediating variable in the relationship between the role of public economics and community well-being in Makassar City.

In line with the research questions, this study aims to analyze the relationships among the role of public economics, pedestrian-friendly urban development, and community well-being in Makassar City. Specifically, the study seeks to examine the effect of the role of public economics on pedestrian-friendly urban development, as well as the effect of pedestrian-friendly urban development on community well-being. In addition, it aims to analyze the direct influence of the role of public economics on community well-being. Furthermore, this study intends to investigate whether pedestrian-friendly urban development mediates the relationship between the role of public economics and community well-being, thereby providing empirical evidence on the importance of pedestrian infrastructure as a mechanism through which public economic policies can enhance social welfare.

Methods

This study employs a quantitative approach using the associative-causal method to test empirical relationships among variables through hypothesis testing. The population of this study consists of individuals who use pedestrian facilities in strategic areas of Makassar City, including Losari Beach, Penghibur Street, and A.P. Pettarani Street. These locations were selected because they represent major urban areas with high pedestrian activity and are among the city's most important public spaces. Consequently, respondents from these areas were considered capable of providing relevant insights into the quality of pedestrian infrastructure and its contribution to community well-being.

The sample was selected using a non-probability sampling technique, specifically purposive sampling. This approach was employed to ensure that only respondents who had experience using pedestrian facilities in Makassar City were included in the study. Such respondents were expected to possess sufficient knowledge and experience to evaluate the effectiveness of public economic policies and pedestrian-friendly urban development. In accordance with the recommendations for Structural Equation Modeling–Partial Least Squares (SEM-

PLS), a sample size ranging from 100 to 200 respondents was considered adequate for the analysis, as it satisfies the minimum requirement of five to ten times the number of observed indicators used in the research model.

Table 1 Operational Definitions and Variable Indicators

Latent Variable	Operational Definition	Indicators (Survey Items)
Public Economic Role (X)	Public perception of the effectiveness of government functions in providing public goods and regulating infrastructure.	1. Government budget allocation for pedestrians (X _{1.1})
		2. Clarity of regulations/land-use planning (X _{1.2})
		3. Strictness of oversight and law enforcement regarding sidewalk misuse (X _{1.3})
Development of a Pedestrian-Friendly City (Y)	Users' perceptions of the physical quality, comfort, and inclusivity of pedestrian facilities in Makassar.	1. Sidewalk width and safety (Y _{1.1})
		2. Availability of accessible pathways (Y _{1.2})
		3. Integration with public transportation (Y _{1.3})
		4. Aesthetics and supporting facilities/green spaces (Y _{1.4})
Community Well-being (Z)	Multidimensional impacts felt by the community as a result of pedestrian-friendly public spaces.	1. Physical Well-being (Increased walking activity/health) (Z _{1.1})
		2. Economic Well-being (Impact on local MSME activities) (Z _{1.2})
		3. Social Well-being (Intensity of safe social interactions) (Z _{1.3})
		4. Environmental Well-being (Perceived reduction in pollution/traffic congestion) (Z _{1.4})

Primary data were collected through online and in-person questionnaires administered to respondents using a five-point Likert scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS. The analysis was conducted in two stages: evaluation of the measurement model and evaluation of the structural model. The measurement model was assessed using

convergent validity, discriminant validity, and construct reliability. Convergent validity was evaluated based on factor loadings above 0.70 and Average Variance Extracted (AVE) values above 0.50, while discriminant validity was assessed using the Fornell–Larcker criterion and the Heterotrait–Monotrait Ratio (HTMT), with HTMT values below 0.90. Construct reliability was examined using Cronbach's Alpha and Composite Reliability, with values above 0.70 considered acceptable. The structural model was subsequently evaluated using the coefficient of determination (R^2) to assess the model's explanatory power, while hypothesis testing was performed through the bootstrapping procedure by examining path coefficients, t-statistics greater than 1.96, and p-values below 0.05.

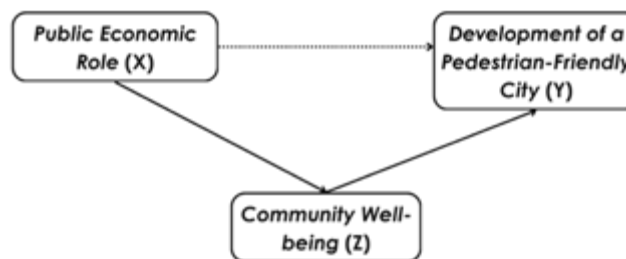


Figure 1 Conceptual Framework

Result and Discussion

Measurement Model Evaluation (Outer Model)

The measurement model was evaluated using convergent validity and reliability tests. Convergent validity was assessed through the Average Variance Extracted (AVE), while reliability was evaluated using Cronbach's Alpha and Composite Reliability values.

Table 2 Measurement Model Evaluation Results

Variable	Cronbach's Alpha	Composite Reliability	AVE
Public Economics Role	0.922	0.951	0.866
Pedestrian-Friendly City Development	0.944	0.960	0.856
Community Welfare	0.903	0.933	0.776

Based on Table above, all constructs achieved Cronbach's Alpha values above 0.70, indicating satisfactory internal consistency. Furthermore, Composite Reliability values exceeded the recommended threshold of 0.70, confirming the reliability of the constructs. The AVE values were all above 0.50, demonstrating adequate convergent validity. Therefore, all measurement indicators were considered valid and reliable for further analysis.

Structural Model Evaluation (Inner Model)

The structural model was assessed through the coefficient of determination (R^2) and hypothesis testing using the bootstrapping procedure.

Table 3 Coefficient of Determination (R^2)

Endogenous Variable	R^2
Pedestrian-Friendly City Development	0.850
Community Welfare	0.462

The R^2 value of 0.850 indicates that the Public Economics Role explains 85.0% of the variance in Pedestrian-Friendly City Development. This suggests that government intervention through budgeting, regulation, and supervision plays a substantial role in improving pedestrian infrastructure.

Meanwhile, the R^2 value of 0.462 indicates that Public Economics Role and Pedestrian-Friendly City Development jointly explain 46.2% of the variance in Community Welfare. The remaining 53.8% may be explained by other factors not included in this study.

Hypothesis Testing

Table 4 Hypothesis Testing Results

Hypothesis	Relationship	Path Coefficient (β)	T-Statistic	P-Value	Result
H1	Public Economics Role → Pedestrian-Friendly City Development	0.922	51.521	0.000	Accepted
H2	Pedestrian-Friendly City Development → Community Welfare	0.688	4.002	0.000	Accepted
H3	Public Economics Role → Community Welfare	-0.009	0.045	0.964	Rejected

The results indicate that H1, H2, while H3 is not supported.

Discussion

The Effect of Public Economics Role on Pedestrian-Friendly City Development

The findings reveal that the Public Economics Role has a positive and significant effect on Pedestrian-Friendly City Development in Makassar City. The path coefficient value of 0.922 indicates a very strong relationship between the two variables. This result suggests that government involvement through public budgeting, urban planning regulations, and enforcement mechanisms contributes significantly to the development of pedestrian-friendly infrastructure. From the perspective of public economics, pedestrian facilities are classified as public goods that require government intervention because market mechanisms alone cannot provide them efficiently. Therefore, effective public policies are essential for creating safe, accessible, and inclusive pedestrian environments. The findings are consistent with public economics theory, which emphasizes the

government's responsibility in allocating resources efficiently to maximize social welfare.

The Effect of Pedestrian-Friendly City Development on Community Welfare

The results show that Pedestrian-Friendly City Development positively and significantly affects Community Welfare. The path coefficient of 0.688 indicates that improvements in pedestrian infrastructure contribute substantially to welfare enhancement. Pedestrian-friendly environments encourage physical activity, improve public health, facilitate social interaction, and support local economic activities. Well-designed pedestrian facilities can also reduce traffic congestion and environmental pollution, creating a healthier and more sustainable urban environment. These findings support previous studies suggesting that pedestrian infrastructure serves as an important component of urban development that promotes both social and economic well-being.

The Effect of Public Economics Role on Community Welfare

The results indicate that the Public Economics Role does not have a direct and significant effect on Community Welfare. The path coefficient is -0.009, with a T-statistic of 0.045 and a P-value of 0.964. This finding implies that government policies alone are insufficient to directly improve community welfare. Although public expenditure and regulations are important, their benefits may not be immediately perceived by society unless they are translated into tangible public services and infrastructure. Therefore, the effectiveness of public economics policies depends on how successfully these policies are implemented through concrete development programs that directly affect people's daily lives.

The Mediating Role of Pedestrian-Friendly City Development

The mediation analysis demonstrates that Pedestrian-Friendly City Development significantly mediates the relationship between Public Economics Role and Community Welfare. The indirect effect is significant with a path coefficient of 0.634. This finding indicates that government intervention contributes to community welfare indirectly through the development of pedestrian-friendly infrastructure. In other words, public economic policies generate welfare improvements only when they are transformed into accessible, safe, and inclusive public facilities. The result highlights the importance of infrastructure development as a mechanism through which public policy can achieve broader welfare objectives. Consequently, local governments should prioritize pedestrian-friendly urban development as part of their strategy for sustainable and inclusive growth.

Conclusion and Recommendations

This study examined the relationships among the role of public economics, pedestrian-friendly city development, and community welfare in Makassar City

using the SEM-PLS approach. The findings indicate that the role of public economics has a positive and significant effect on pedestrian-friendly city development, while pedestrian-friendly city development positively and significantly influences community welfare. However, the role of public economics does not directly affect community welfare. Instead, pedestrian-friendly city development significantly mediates the relationship between public economics and community welfare. These findings suggest that government intervention can improve community welfare more effectively when implemented through the development of quality pedestrian infrastructure.

Based on the findings, the Makassar City Government is encouraged to strengthen investment in pedestrian infrastructure, including accessible sidewalks, green spaces, and supporting facilities, while enforcing regulations to prevent the misuse of pedestrian areas. In addition, pedestrian-oriented planning should be integrated into urban development policies to promote sustainable development and improve community welfare. Future research is recommended to include additional variables, such as environmental quality, public transportation accessibility, and community participation, to provide a broader understanding of the factors influencing community welfare.

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